



Department of Infrastructure,
Local Government and Planning

Our reference: SDA-0416-029601

23 August 2016

Maranoa Regional Council
P.O. Box 620
Roma QLD 4455
planning@maranoa.qld.gov.au

Attn: Danielle Pearn

Dear Danielle

Notice of Decision - Development Permit - Operational Works (construction of diversion channel) and Concurrence Environmental Authority for Extractive Activities - ERA 16 2 (b)

2A Tiffin Street, Roma QLD 4455
Miscamble Street, Roma QLD 4455
George Road, Roma QLD 4455
(Given under section 285 of the *Sustainable Planning Act 2009*)

The Department of Infrastructure, Local Government and Planning (DILGP) advises that the development application described below has been approved subject to conditions.

Applicant details

Applicant name: Maranoa Regional Council.

Site details

Lot on plan: Lot 21 & 41 R8614
Lot 96 on M5398
Lot 343 on R8614
Lot 342 on WV219
Local government area: Maranoa Regional Council

Application details

Proposed development: Development Permit for Operational Works (construction of diversion channel) and Concurrence Environmental Authority Extractive Activities - ERA 16 2 (b)

A decision notice for this application is attached.

Copies of the following documents are also attached:

- relevant appeal provisions in the *Sustainable Planning Act 2009*
- any plans and specifications approved in relation to the decision notice.

For further information, please contact Maria Johnson, Planning Officer, SARA Darling Downs South West on 4616 7307, or email maria.johnson@dilgp.qld.gov.au who will be pleased to assist.

Yours sincerely

Sch. 4(4)(6) - Disclosing personal information



Ian McHugh
A/Manager (Planning)

enc: Decision notice
Attachment 1—Assessment manager conditions
Attachment 2—SPA appeal provisions
Attachment 3—Approved plans and specifications

Decision notice(Given under section 334 of the *Sustainable Planning Act 2009*)**Applicant details**

Applicant name: Maranoa Regional Council
 Applicant contact details: P.O. Box 620
 Roma QLD 4455
 planning@maranoa.qld.gov.au

Application details

Level of assessment: Code Assessment
 Properly made date: 19 April 2016

Site details

Street address: 2A Tiffin Street, Roma QLD 4455
 Miscamble Street, Roma QLD 4455
 George Road, Roma QLD 4455

Lot on plan: Lot 21 & 41 R8614
 Lot 96 on M5398
 Lot 343 on R8614
 Lot 342 on WV219

Decision

Date of decision: 23 August 2016
 Decision details: Approved subject to conditions

Conditions

This approval is subject to:

- the assessment manager conditions in Attachment 1

DILGP has, for particular conditions of this approval, nominated an entity to be the assessing authority for that condition under section 255D(3) of the *Sustainable Planning Act 2009*.

Aspects of development and development approval granted

Nature of Development	Approval Type	Brief Proposal of Description	Level of Assessment
Operational Work	Development permit	Development Permit for Operational Works for the construction of a high flow diversion channel associated with stage 2 flood mitigation works for the town of Roma and concurrence Environmental Authority for Extractive Activities - ERA 16 2 (b)	Code Assessment

Rights of appeal

The rights of applicants to appeal to the Planning and Environment Court against decisions about a development application are set out in chapter 7, part 1, division 8 of the *Sustainable Planning Act 2009*. For particular applications, there may also be a right to appeal to the Building and Development Dispute Resolution Committee (see chapter 7, part 2 of the Act).

Copies of the relevant appeal provisions are attached.

Relevant period for the approval

This development approval will lapse if the development is not started within the following period:

- 2 years

Approved plans and specifications

Copies of the following approved plans and specifications are attached:

Drawing/Report Title	Prepared by	Date	Reference no.	Version/Issue
Aspect of development: Development permit for operational works				
Proposed Stage 2 <i>Regional Options Eastern Diversion Channel D</i>	GHD		41-25323-SK105	A
"Red - Clear And Grub Zones" on the plan titled "EASTERN DIVERSION DRAIN GENERAL ARRANGEMENT PLAN"	GHD	27 May 2016	2016-378C-C001	0
Diagram 2 - Aerial & Proposed Vegetation Management Supporting Map	QLD Government	15 August 2016	2016-002280	

Our reference: SDA-0416-029601

Attachment 1—Assessment manager conditions

No.	Conditions of development approval	Condition timing
Concurrence Environmental Authority for Extractive Activities - ERA 16 2 (b)		
Schedule 6, Table 3, Item 1—Pursuant to section 255D of the <i>Sustainable Planning Act 2009</i> , the chief executive administering the Act nominates the Director-General of Department of Environment and Heritage Protection 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.	<p>The development must be carried out generally in accordance with the following plans:</p> <ul style="list-style-type: none"> Proposed Stage 2 <i>Regional Options Eastern Diversion Channel D - Details</i> prepared by GHD reference 41-25323-SK105 revision A. 	At all times.
Development permit for operational works (diversion channel)		
Schedule 6, Table 3, Item 2—Pursuant to section 255D of the <i>Sustainable Planning Act 2009</i> , the chief executive administering the Act nominates the Director-General of Department Natural Resources and Mines 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:		
2.	<p>The clearing of vegetation is limited to the extent identified as area(s):</p> <ul style="list-style-type: none"> “Red - Clear And Grub Zones” on the plan titled “EASTERN DIVERSION DRAIN GENERAL ARRANGEMENT PLAN”, <i>Drawing No. 2016-378C-C001, dated 27 May 2016</i> prepared by GHD for the Maranoa Regional Council. 	At all times.
3.	<p>The development must occur in accordance with the standards and specifications detailed in:</p> <p>a) ‘Maranoa Regional Council Roma Flood Mitigation Project – Stage 2a Eastern Diversion Drain Erosion and Sediment Control Plan, prepared by GHD, dated June 2016’. In particular, maintain sediment control devices to achieve best practice design objectives.</p>	At all times.
4.	<p>Develop and implement a Rehabilitation Plan to be included in the ‘<i>Maranoa Regional Council Roma Flood Mitigation Project – Stage 2a Eastern Diversion Drain Erosion and Sediment Control Plan, prepared by GHD, dated June 2016</i>’.</p>	Prior to the commencement of use and to be maintained at all times.

No.	Conditions of development approval	Condition timing
5.	<p>The permit holder is responsible for ensuring that:</p> <ul style="list-style-type: none"> a) a full copy of the permit is held by; and b) the extent of clearing authorised by this permit is properly understood by, any person(s) engaged or employed to carry out the clearing of the vegetation under this permit. 	At all times.

Our reference: SDA-0416-029601

Attachment 2—SPA Appeal Provisions

Sustainable Planning Act 2009—Representation and appeal provisions

The following relevant appeal provisions are provided in accordance with s336(a) of the *Sustainable Planning Act 2009*.

Chapter 6 Integrated development assessment system (IDAS)

Part 8 Dealing with decision notices and approvals

Division 1 Changing decision notices and approvals during applicant's appeal period

360 Application of div 1

This division applies only during the applicant's appeal period.

361 Applicant may make representations about decision

- (1) The applicant may make written representations to the assessment manager about—
 - (a) a matter stated in the decision notice, other than a refusal or a matter about which a concurrence agency told the assessment manager under section 287(1) or (5); or
 - (b) the standard conditions applying to a deemed approval.
- (2) However, the applicant can not make representations under subsection (1)(a) about a condition attached to an approval under the direction of the Minister.

362 Assessment manager to consider representations

The assessment manager must consider any representations made to the assessment manager under section 361.

363 Decision about representations

- (1) If the assessment manager agrees with any of the representations about a decision notice or a deemed approval, the assessment manager must give a new decision notice (the **negotiated decision notice**) to—
 - (a) the applicant; and
 - (b) each principal submitter; and
 - (c) each referral agency; and
 - (d) if the assessment manager is not the local government and the development is in a local government area—the local government.
- (2) Before the assessment manager agrees to a change under this section, the assessment manager must consider the matters the assessment manager was required to consider in assessing the application, to the extent the matters are relevant.
- (3) Only 1 negotiated decision notice may be given.
- (4) The negotiated decision notice—
 - (a) must be given within 5 business days after the day the assessment manager agrees with the representations; and
 - (b) must comply with section 335; and
 - (c) must state the nature of the changes; and
 - (d) replaces—
 - (i) the decision notice previously given; or
 - (ii) if a decision notice was not previously given and the negotiated decision notice relates to a deemed approval—the standard conditions applying to the deemed approval.

- (5) If the assessment manager does not agree with any of the representations, the assessment manager must, within 5 business days after the day the assessment manager decides not to agree with any of the representations, give written notice to the applicant stating the decision about the representations.

364 Giving new notice about charges for infrastructure

- (1) This section applies if the development approved by the negotiated decision notice is different from the development approved in the decision notice or deemed approval in a way that affects the amount of an infrastructure charge, regulated infrastructure charge or adopted infrastructure charge.
- (2) The local government may give the applicant a new infrastructure charges notice under section 633, regulated infrastructure charges notice under section 643 or adopted infrastructure charges notice under section 648F to replace the original notice.

366 Applicant may suspend applicant's appeal period

- (1) If the applicant needs more time to make the representations, the applicant may, by written notice given to the assessment manager, suspend the applicant's appeal period.
- (2) The applicant may act under subsection (1) only once.
- (3) If the representations are not made within 20 business days after the day written notice was given to the assessment manager, the balance of the applicant's appeal period restarts.
- (4) If the representations are made within 20 business days after the day written notice was given to the assessment manager—
- if the applicant gives the assessment manager a notice withdrawing the notice under subsection (1)—the balance of the applicant's appeal period restarts the day after the assessment manager receives the notice of withdrawal; or
 - if the assessment manager gives the applicant a notice under section 363(5)—the balance of the applicant's appeal period restarts the day after the applicant receives the notice; or
 - if the assessment manager gives the applicant a negotiated decision notice—the applicant's appeal.

Chapter 7 Appeals, offences and enforcement

Part 1 Planning and Environment Court

Division 8 Appeals to court relating to development applications and approvals

461 Appeals by applicants

- (1) An applicant for a development application may appeal to the court against any of the following—
- the refusal, or the refusal in part, of the development application;
 - any condition of a development approval, another matter stated in a development approval and the identification or inclusion of a code under section 242;
 - the decision to give a preliminary approval when a development permit was applied for;
 - the length of a period mentioned in section 341;
 - a deemed refusal of the development application.
- (2) An appeal under subsection (1)(a), (b), (c) or (d) must be started within 20 business days (the **applicant's appeal period**) after—
- if a decision notice or negotiated decision notice is given—the day the decision notice or negotiated decision notice is given to the applicant; or
 - otherwise—the day a decision notice was required to be given to the applicant.
- (3) An appeal under subsection (1)(e) may be started at any time after the last day a decision on the matter should have been made.

462 Appeals by submitters—general

- (1) A submitter for a development application may appeal to the court only against—

- (a) the part of the approval relating to the assessment manager's decision about any part of the application requiring impact assessment under section 314; or
 - (b) the part of the approval relating to the assessment manager's decision under section 327.
- (2) To the extent an appeal may be made under subsection (1), the appeal may be against 1 or more of the following—
- (a) the giving of a development approval;
 - (b) any provision of the approval including—
 - (i) a condition of, or lack of condition for, the approval; or
 - (ii) the length of a period mentioned in section 341 for the approval.
- (3) However, a submitter may not appeal if the submitter—
- (a) withdraws the submission before the application is decided; or
 - (b) has given the assessment manager a notice under section 339(1)(b)(ii).
- (4) The appeal must be started within 20 business days (the **submitter's appeal period**) after the decision notice or negotiated decision notice is given to the submitter.

463 Additional and extended appeal rights for submitters for particular development applications

- (1) This section applies to a development application to which chapter 9, part 7 applies.
- (2) A submitter of a properly made submission for the application may appeal to the court about a referral agency's response made by a concurrence agency for the application.
- (3) However, the submitter may only appeal against a referral agency's response to the extent it relates to—
- (a) development for an aquacultural ERA; or
 - (b) development that is—
 - (i) a material change of use or premises for aquaculture; or
 - (ii) operational work that is the removal, damage or destruction of a marine plant.
- (4) Despite section 462(1), the submitter may appeal against the following matters for the application even if the matters relate to code assessment—
- i. a decision about a matter mentioned in section 462(2) if it is a decision of the chief executive;
 - ii. a referral agency's response mentioned in subsection (2).

464 Appeals by advice agency submitters

- (1) Subsection (2) applies if an advice agency, in its response for an application, told the assessment manager to treat the response as a properly made submission.
- (2) The advice agency may, within the limits of its jurisdiction, appeal to the court about—
- (a) any part of the approval relating to the assessment manager's decision about any part of the application requiring impact assessment under section 314; or
 - (b) any part of the approval relating to the assessment manager's decision under section 327.
- (3) The appeal must be started within 20 business days after the day the decision notice or negotiated decision notice is given to the advice agency as a submitter.
- (4) However, if the advice agency has given the assessment manager a notice under section 339(1)(b)(ii), the advice agency may not appeal the decision.

465 Appeals about decisions relating to extensions for approvals

- (1) For a development approval given for a development application, a person to whom a notice is given under section 389, other than a notice for a decision under section 386(2), may appeal to the court against the decision in the notice.
- (2) The appeal must be started within 20 business days after the day the notice of the decision is given to the person.
- (3) Also, a person who has made a request under section 383 may appeal to the court against a deemed refusal of the request.
- (4) An appeal under subsection (3) may be started at any time after the last day the decision on the matter should have been made.

466 Appeals about decisions relating to permissible changes

- (1) For a development approval given for a development application, the following persons may appeal to the court against a decision on a request to make a permissible change to the approval—
 - (a) if the responsible entity for making the change is the assessment manager for the application—
 - (i) the person who made the request; or
 - (ii) an entity that gave a notice under section 373 or a pre-request response notice about the request;
 - (b) if the responsible entity for making the change is a concurrence agency for the application—the person who made the request.
- (2) The appeal must be started within 20 business days after the day the person is given notice of the decision on the request under section 376.
- (3) Also, a person who has made a request under section 369 may appeal to the court against a deemed refusal of the request.
- (4) An appeal under subsection (3) may be started at any time after the last day the decision on the matter should have been made.

467 Appeals about changing or cancelling conditions imposed by assessment manager or concurrence agency

- (1) A person to whom a notice under section 378(9)(b) giving a decision to change or cancel a condition of a development approval has been given may appeal to the court against the decision in the notice.
- (2) The appeal must be started within 20 business days after the day the notice of the decision is given to the person.

Division 11 Making and appeal to Court**481 How appeals to the court are started**

- (1) An appeal is started by lodging written notice of appeal with the registrar of the court.
- (2) The notice of appeal must state the grounds of the appeal.
- (3) The person starting the appeal must also comply with the rules of the court applying to the appeal.
- (4) However, the court may hear and decide an appeal even if the person has not complied with subsection (3).

482 Notice of appeal to other parties—development applications and approvals

- (1) An appellant under division 8 must give written notice of the appeal to—
 - (a) if the appellant is an applicant—
 - (i) the chief executive; and
 - (ii) the assessment manager; and
 - (iii) any concurrence agency; and
 - (iv) any principal submitter whose submission has not been withdrawn; and
 - (v) any advice agency treated as a submitter whose submission has not been withdrawn; or
 - (b) if the appellant is a submitter or an advice agency whose response to the development application is treated as a submission for an appeal—
 - (i) the chief executive; and
 - (ii) the assessment manager; and
 - (iii) any referral agency; and
 - (iv) the applicant; or
 - (c) if the appellant is a person to whom a notice mentioned in section 465(1) has been given—
 - (i) the chief executive; and
 - (b) the assessment manager for the development application to which the notice relates; and

- (c) any entity that was a concurrence agency for the development application to which the notice relates; and
- (d) the person who made the request under section 383 to which the notice relates, if the person is not the appellant; or
- (d) if the appellant is a person mentioned in section 466(1)—
 - (i) the chief executive; and
 - (ii) the responsible entity for making the change to which the appeal relates; and
 - (iii) the person who made the request to which the appeal relates under section 369, if the person is not the appellant; and
 - (iv) if the responsible entity is the assessment manager—any entity that was a concurrence agency for the development application to which the notice of the decision on the request relates; or
- (e) if the appellant is a person to whom a notice mentioned in section 467 has been given—the entity that gave the notice.
- (2) The notice must be given within—
 - (a) if the appellant is a submitter or advice agency whose response to the development application is treated as a submission for an appeal—2 business days after the appeal is started; or
 - (b) otherwise—10 business days after the appeal is started.
- (3) The notice must state—
 - (a) the grounds of the appeal; and
 - (b) if the person given the notice is not the respondent or a co-respondent under section 485—that the person may, within 10 business days after the notice is given, elect to become a co-respondent to the appeal by filing in the court a notice of election in the approved form.

485 Respondent and co-respondents for appeals under div 8

- (1) Subsections (2) to (8) apply for appeals under sections 461 to 464.
- (2) The assessment manager is the respondent for the appeal.
- (3) If the appeal is started by a submitter, the applicant is a co-respondent for the appeal.
- (4) Any submitter may elect to become a co-respondent for the appeal.
- (5) If the appeal is about a concurrence agency's response, the concurrence agency is a co-respondent for the appeal.
- (6) If the appeal is only about a concurrence agency's response, the assessment manager may apply to the court to withdraw from the appeal.
- (7) The respondent and any co-respondents for an appeal are entitled to be heard in the appeal as a party to the appeal.
- (8) A person to whom a notice of appeal is required to be given under section 482 and who is not the respondent or a co-respondent for the appeal may elect to be a co-respondent.
- (9) For an appeal under section 465—
 - i. the assessment manager is the respondent; and
 - ii. if the appeal is started by a concurrence agency that gave the assessment manager a notice under section 385—the person asking for the extension the subject of the appeal is a co-respondent; and
 - iii. any other person given notice of the appeal may elect to become a co-respondent.
- (10) For an appeal under section 466—
 - (a) the responsible entity for making the change to which the appeal relates is the respondent; and
 - (b) if the responsible entity is the assessment manager—
 - (i) if the appeal is started by a person who gave a notice under section 373 or a pre-request response notice—the person who made the request for the change is a co-respondent; and
 - (ii) any other person given notice of the appeal may elect to become a co-respondent.
- (11) For an appeal under section 467, the respondent is the entity given notice of the appeal.

488 How an entity may elect to be a co-respondent

An entity that is entitled to elect to be a co-respondent to an appeal may do so, within 10 business days after notice of the appeal is given to the entity, by following the rules of court for the election.

490 Lodging appeal stops particular actions

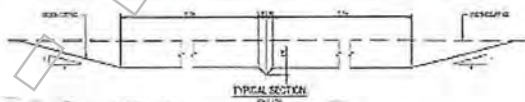
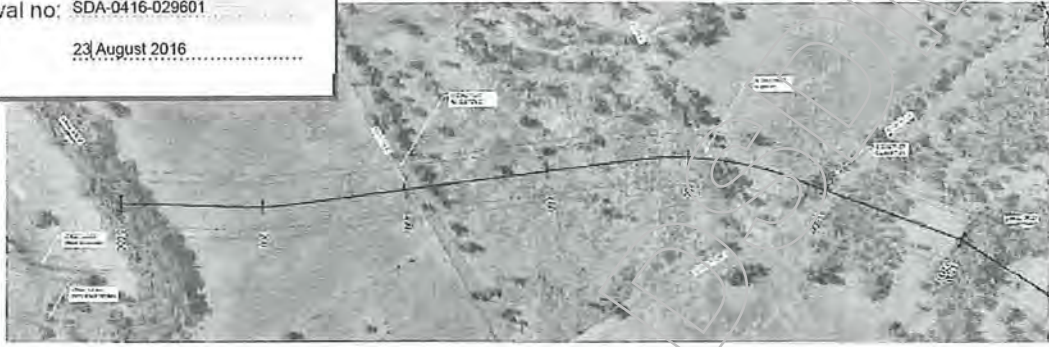
- (1) If an appeal, other than an appeal under section 465, 466 or 467, is started under division 8, the development must not be started until the appeal is decided or withdrawn.
- (2) If an appeal is about a condition imposed on a compliance permit, the development must not be started until the appeal is decided or withdrawn.
- (3) Despite subsections (1) and (2), if the court is satisfied the outcome of the appeal would not be affected if the development or part of the development is started before the appeal is decided, the court may allow the development or part of the development to start before the appeal is decided.

Attachment 3— Approved Plans & Specifications

PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL

Approval no: SDA-0416-029601

Date: 23 August 2016



STATION	1+00	1+20	1+40	1+60	1+80	2+00	2+20	2+40	2+60	2+80	3+00	3+20	3+40	3+60	3+80	4+00
EXISTING SURFACE	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
PROPOSED CHANNEL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
PROPOSED BANK	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
PROPOSED ROAD	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

LONGITUDINAL SECTION - EASTERN DIVERSION CHANNEL D

PRELIMINARY

<p>DO NOT SCALE</p> <p>Scale: As Shown</p> <p>Author: [Name]</p> <p>Check: [Name]</p> <p>Date: [Date]</p>	<p>miranea</p> <p>Engineering & Planning</p>	<p>HARAKIA REGIONAL COUNCIL</p> <p>ROMA FLOOD STUDY</p> <p>PROPOSED STAGE 2 REGIONAL OPTIONS</p> <p>EASTERN DIVERSION CHANNEL D - DETAILS</p> <p>Drawing No: 41-25323-SK105</p> <p>Sheet: A</p>
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Figure 1 Drawing No: 41-25323-SK105 Proposed Stage 2 Regional Options Eastern Diversion Channel D - Details

RTI RELEASED

PLANS AND DOCUMENTS
referred to in the
DEVELOPMENT APPROVAL



Approval no: SDA-0416-029601

Date: 23 August 2016



LEGEND
 [Symbol] EXISTING LOCATION (M 2000)
 [Symbol] EXISTING LOCATION (E 2000)

NOTES:
 1. REFER TO THE DEVELOPMENT APPROVAL FOR THE LOCATION OF EXISTING AND PROPOSED ACCESS POINTS.
 2. REFER TO THE DEVELOPMENT APPROVAL FOR THE LOCATION OF EXISTING AND PROPOSED ACCESS POINTS.
 3. REFER TO THE DEVELOPMENT APPROVAL FOR THE LOCATION OF EXISTING AND PROPOSED ACCESS POINTS.
 4. REFER TO THE DEVELOPMENT APPROVAL FOR THE LOCATION OF EXISTING AND PROPOSED ACCESS POINTS.

ROADWAY DATA				
SECTION	STARTING	ENDING	AL	DEPTH
SECTION 1	100+00.00	100+00.00	2.00	0.30
SECTION 2	100+00.00	100+00.00	2.00	0.30
SECTION 3	100+00.00	100+00.00	2.00	0.30

TYPICAL DATA				
SECTION	STARTING	ENDING	AL	DEPTH
SECTION 1	100+00.00	100+00.00	2.00	0.30
SECTION 2	100+00.00	100+00.00	2.00	0.30
SECTION 3	100+00.00	100+00.00	2.00	0.30
SECTION 4	100+00.00	100+00.00	2.00	0.30
SECTION 5	100+00.00	100+00.00	2.00	0.30

Legend
 [Symbol] Red - Clear And Grub Zones



<p>DATE: 23/08/2016</p> <p>SCALE: 1:500</p> <p>PROJECT NO: SDA-0416-029601</p>	<p>65 Zm-21</p>	<p>100% CONSULTING</p>	<p>PROJECT: POMI FLOOD MITIGATION PROJECT - STAGE 2</p> <p>FOR CONSTRUCTION</p>	<p>DATE: 23/08/2016</p> <p>SCALE: 1:500</p> <p>PROJECT NO: SDA-0416-029601</p>
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RTI RELEASE



PLANS AND DOCUMENTS
referred to in the
DEVELOPMENT APPROVAL



Approval no: SDA-0416-029601

Date: 23 August 2016

Maranoa Regional Council

Maranoa Flood Mitigation Project - Stage 2a Eastern Diversion
Drain

Erosion and Sediment Control Plan

June 2016

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Appendices

Appendix A – Erosion and Sediment Control Plan Drawings

1. Introduction

Maranoa Regional Council (MRC) engaged GHD to undertake the detailed design of a levee extension and diversion drain for Stage 2a of the Roma Flood Mitigation Project. This phase of the Roma Flood Mitigation Project comes after GHD were previously engaged by Council to deliver a series of design, consultation and optioneering outcomes as part of the Regional Flood Study.

This report presents an Erosion and Sediment Control Plan (ESC) for the construction of the eastern diversion drain element of the project as required by the conditional approval of works by the State regulator. This report has been undertaken with reference to the International Erosion Control Association Guidelines (IECA, 2008).

1.1 Project Background

In 2012, GHD Pty Ltd was commissioned by Maranoa Regional Council (MRC) to investigate flood mitigation options to address regional flood risk within the township of Roma. Concept design options to mitigate flooding from the Bungil Creek catchment for 'Stage 1' were subsequently developed as part of these investigations. Stage 1 was followed by Stage 2.

The purpose of the Stage 2 Flood Mitigation Project is to further reduce the risk of above floor flooding to properties within the township of Roma from a flood event equivalent to the 2012 DFE. This is an extension of the overall regional flood mitigation project, from which the following arrangement was selected based on cost-benefit and effectiveness of the solution.

The selected arrangement from the Stage 2 Roma Flood Mitigation Study, Hydrology and Hydraulics for Stage 2 Regional Mitigation Options (GHD, 2014 Rev 1) was the eastern diversion drain and western levee. The eastern diversion drain provides a diversion of the Bungil Creek to the eastern side of the township and the western levee is an extension of the Stage 1 Levee at the southern end, adjacent to Bungil Creek.

The eastern diversion drain alignment is shown in Figure 1 and the western levee alignment is shown in Figure 2 below.

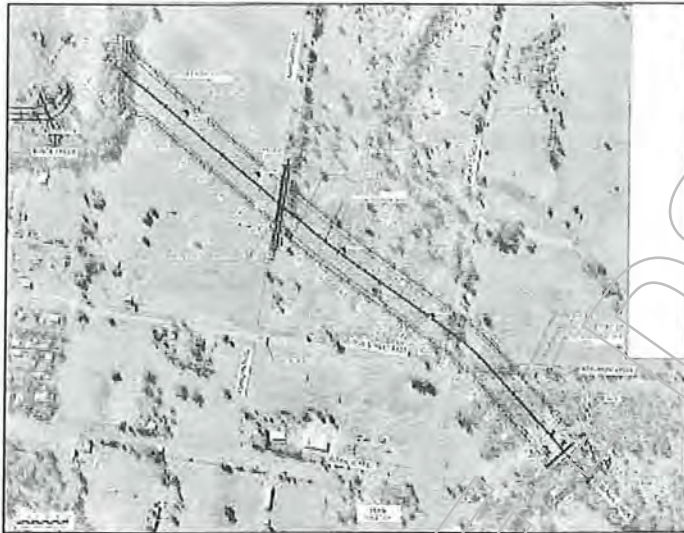


Figure 1 Stage 2 Eastern Diversion Drain Alignment



Figure 2 Stage 2 levee alignment

2 | GHD | Report for Maroon Regional Council - Roma Flood Mitigation Project - Stage 2 Eastern Diversion Drain, 41629431

1.2 Purpose of this report

The purpose of this Roma Stage 2 Flood Mitigation Project Design Report is to develop an Erosion and Sediment Control Plan (ESCP) for the construction phase of the Stage 2 eastern diversion drain element only. The preparation of an ESCP was required by Department of Infrastructure, Local Government and Planning in their Information Request dated 29 April 2016. This report and attached drawings address the requirements of item ERA 16 2 (B) 2.

The determination of the required erosion and sediment control measures outlined in the ESCP is based on assumed conservative values (soil and rainfall data) as sourced from IECA guidelines. The Contractor's preparation of the site/task specific erosion and sediment works instructions should be informed by additional soil data required from appropriate localised site verification and additional geotechnical investigation.

As part of the Environment Management Plan (EMP) for the works, the Contractor should prepare detailed, task specific erosion and sediment control measures to complement this Erosion and Sediment Control Plan (ESCP). Site conditions may require:

- Construction of any or all of the measures described in this report to differ from their on-site application described in this document;
- Design and implementation of additional long or short term controls and designs, consistent with the concepts contained within this ESCP; and
- Geotechnical investigations to support the implementation of the ESCP.

1.3 Scope and Limitations

This report has been prepared by GHD for Maranoa Regional Council and may only be used and relied on by Maranoa Regional Council for the purpose agreed between GHD and the Maranoa Regional Council as set out Section 1 of this report.

GHD otherwise disclaims responsibility to any person other than Maranoa Regional Council arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in this report (refer to Section 1.4). GHD disclaims liability arising from any of the assumptions being incorrect.

GHD has prepared this report on the basis of information provided by Maranoa Regional Council and others who provided information to GHD (including Government authorities), which GHD has not independently verified or checked beyond the agreed scope of work. GHD does not accept liability in connection with such unverified information, including errors and omissions in the report which were caused by errors or omissions in that information.

The opinions, conclusions and any recommendations in this report are based on information obtained from, and testing undertaken at or in connection with, specific sample points. Site conditions at other parts of the site may be different from the site conditions found at the specific sample points.

Investigations undertaken in respect of this report are constrained by the particular site conditions, such as the location of buildings, services and vegetation. As a result, not all relevant site features and conditions may have been identified in this report.

Site conditions (including the presence of hazardous substances and/or site contamination) may change after the date of this Report. GHD does not accept responsibility arising from, or in connection with, any change to the site conditions. GHD is also not responsible for updating this report if the site conditions change.

1.4 Assumptions

The following assumptions have been made in preparation of this report:

- The survey data provided by Bennett & Bennett Surveyors and MRC is sufficiently accurate for the purposes of this report.
- The survey datum used is the Australian Height Datum (AHD). All geospatial references contained within this report are to Map Grid Australia GDA 94.

1.5 Relevant Guidelines

This ESCP has been prepared in reference to the following guidelines:

- Best Practice Erosion and Sediment Control. International Erosion Control Association (Australasia) (IECA 2008)

1.6 Legislative Requirements

A person or persons conducting land-disturbing development must conduct such development in accordance with the requirements of relevant environmental legislation (e.g. *Environmental Protection Act 1994*, and the associated *Environmental Protection (Water) Policy 2009*); and the *Sustainable Planning Act 2009*. Relevant portions of these Acts are listed below.

1.6.1 Environmental Protection Act 1994

All persons have a legal duty under the *Environmental Protection Act 1994* (s319) to take all reasonable and practicable measures to minimise or prevent environmental harm. Such harm can be caused if sediment from building sites enters (washes, blows, falls or otherwise) into stormwater drains, roadside gutters or waterways. Stormwater run-off must be managed so that it is not released into waters, a roadside gutter, or stormwater drain at more than 50 mg/l TSS (Total Suspended Solids). Under s443 of the *Environmental Protection Act 1994* a person must not cause or allow a contaminant to be placed in a position where it could reasonably be expected to cause serious or material environmental harm or environmental nuisance (e.g. placing a stockpile adjacent a waterway).

In addition, people who are concerned with management in a corporation have an additional duty under the *Environmental Protection Act 1994* to ensure that their corporation complies with the Act. This means supervisors need to take reasonable and practicable steps to ensure that the people under their control do not breach environmental laws.

People who become aware of environmental harm in association with their work (e.g. significant loss of sediment from their site-works into a watercourse) have a legal duty under the *Environmental Protection Act 1994* to notify the Department of Environment and Resource Management (DERM).

1.6.2 Environmental Protection (Water) Policy 2009

This policy sits under the *Environmental Protection Act 1994*. The *Environmental Protection (Water) Policy 2009* provides environmental values and water quality objectives for Queensland waters. These are utilised when determining environmental harm and to inform other statutory and non-statutory decisions. The water quality objectives assist in identifying whether the environmental values are protected. These values and objectives should be utilised when determining risk of environmental harm from water releases or run off and appropriate erosion and sediment controls implemented.

1.6.3 The Sustainable Planning Act 2009

The *Sustainable Planning Act 2009* is the mechanism for assessing all developments within Queensland. This act establishes the process for sustainable planning and development assessment in an ecologically sustainable way.

2. Site Analysis

The purpose of the site analysis is to identify the constraints that need to be considered during planning and design.

2.1 Rainfall and Evaporation

The following weather pattern data was obtained from the Bureau of Meteorology (BOM) to assist with the desktop analysis. The closest (open) weather station collecting monthly rainfall and evaporation data is at Roma Airport, QLD. Rainfall data has been recorded from 1985 to 2016. Evaporation data has been recorded from 1992 to 2008. The two sets of data has been provided in Table 1 and Table 2 below.

Table 1 Rainfall Data*

Rainfall	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Mean Rainfall (mm)	71.6	87.5	53.2	34.6	34.4	29.6	22.4	23.9	24	50.9	61.5	82.3	579.8
Mean number of rain days \geq 10mm	2	2.5	1.3	0.8	1.1	1	0.7	0.7	0.7	1.5	2	2.5	16.8
Mean number of rain days \geq 25mm	1.1	1.1	0.7	0.4	0.4	0.3	0.2	0.3	0.2	0.4	0.6	1	6.7
Erosion Risk*	M	M	M	L	L	VL	VL	VL	VL	M	M	M	

*BOM Rainfall data from Roma Airport, Station Number 043091

*Erosion Risk High = H, Moderate = M, Low = L, Very Low = VL

The number of rain days can be used as an indicator of how often runoff, and therefore potential erosion, may occur. The Bureau of Meteorology (BoM) provides monthly rainfall data of depths that occur greater or equal to 10 mm and 25 mm days per month. Storms less than 10 mm are considered to have less potential to cause erosion as much of the water will infiltrate into the soil and run-off is typically minimal.

Table 2 Evaporation Data*

Rainfall	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Mean daily evaporation (mm)	10.3	8.6	7.8	6.2	4.4	3.2	3.5	4.6	7.0	8.6	9.2	9.7	6.9

*BOM Evaporation data from Roma Airport, Station Number 043091

2.2 Soil Loss Estimation

Soils present in the diversion drain vicinity area dispersive in nature and can be classified as clayey sands. Refer to the *Stage 2 Geotechnical Factual Report* (GHD, 2016) for more details.

The Revised Universal Soil Loss Equation RUSLE equation has been applied to estimate the month soil loss from sheet and rill erosion from the site, if no controls were put into place.

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Soil loss is computed through the following equation:

$$A = R \times K \times LS \times P \times C$$

Where:

A = annual soil loss due to erosion (t/ha/yr)

R = rainfall erosivity factor

K = soil erodibility factor

LS = slope length / gradient factor

P = erosion control practice factor

C = ground cover and management factor

The soil loss calculations for the diversion drain have been presented in Table 3.

Table 3 Soil Loss Calculations for Diversion Drain

Parameter	Diversion Drain	Comments
R	1850	Computed from IFD chart for 2 yr 6 hr storm event
K	0,044	Soil erodibility factor for Clayey Sands
LS	0.24	Computed from topographical data
P	1,3	Assumed limited erosion controls (worst case)
C	1	Assumed no ground cover (worst case)
A (t/ha/yr)	26	Soil loss in tons per hectare on an annual basis

Based on the above, without implementation of upstream erosion and sediment control procedures, the estimated potential soil loss over a year for the diversion drain is 26 tonnes per hectare per year respectively.

This translates into 20 m³/ha of sediment volume for a 12-month period from the diversion drain catchment. Therefore, the site will be considered high risk.

2.3 ESC Program and Timeframe for Works

Construction is dependent upon the timing that environmental permitting is approved and the work sequencing that should need to occur to ensure appropriate ESC mitigation measures are installed.

Construction is expected to take up to 12 weeks or 3 months.

For each element within the work stages, detailed ESC work instructions should be developed by the Contractor to outline the specific requirements.

3. Erosion and Sediment Management

3.1 Erosion and Sediment Control Guidelines for Contractor

3.1.1 General

Sediment and erosion controls should be established by the contractor to comply with the requirements of the *Protection of the Environment Operations Act and Best Practice Erosion and Sediment Control*, International Erosion Control Association (IECA, 2008).

The ESC measures on site should be installed generally in the following progression:

- Installation of sediment controls (down slope) and exclusion fencing to nominate areas of work and establishing 'No-Go' zones;
- Installation of stabilised site access, site compound and facilities;
- Undertake clearing and grubbing work;
- Strip and place / stockpile topsoil;
- Temporary access to location of sedimentation trap;
- Construction of sedimentation trap;
- Construction of sediment-baden water diversion drains to direct runoff to the sedimentation trap;
- Installation of diversion drains upslope and sediment fences downstream of stockpile locations; and
- Construction of the remainder of works.

3.1.2 Erosion and Sediment Control Training for Site Personnel

All personnel should attend an induction program.

The project should require a number of training methods including:

- All personnel should attend a project site specific induction prior to commencing any work on the site, where general erosion and sediment control and water quality matters should be highlighted, together with responsibilities under relevant legislation;
- Toolbox meetings should be conducted regularly, at least weekly, to address numerous issues related to operations, safety, the environment etc. Issues relevant to the stage of construction are to be highlighted; and
- Formal training covering awareness of soil and water related issues and additional advanced training should be delivered to relevant personnel.

Measures and controls required to mitigate pollution of receiving waters and unacceptable levels of soil loss during construction are included below.

3.2 Erosion Management

3.2.1 Explanatory Notes and Installation Sequences

In order to reduce on-site erosion and off-site sedimentation, construction sequencing should be undertaken that balances the timing of land disturbance activities and the installation of mitigation measures.

3.2.2 Minimise Disturbance

Where practicable, the soil erosion hazard on the site should be kept as low as possible and as recommended in Table 4. At the commencement of onsite activities, the installation of barrier fencing and sediment fencing should be undertaken to clearly define the limits of works and any 'No-Go' zones. Where possible, existing vegetation strips should be maintained to minimise soil disturbance. The number and size of construction compounds should be minimised as far as practicable. All sediment and erosion controls should be installed within the project boundary (Greenfields Area).

Table 4 Limitations to Access

Land use	Limitation	Comments
Constructions areas	Disturbance to generally be no further than five (preferably two) metres from the edge of any essential construction activity	All site workers should clearly recognise these zones that, where appropriate, are identified with barrier fencing (upslope) and sediment fencing (down slope), or similar methods.
Access areas	Generally limited to a maximum width of 10 m	The site manager/foreman should determine and mark the location of these zones onsite. They may vary in position to best conserve the existing vegetation and protect downstream areas while being considerate of the needs of efficient works' activities. All site workers should clearly recognise their boundaries which, where appropriate, are marked with barrier mesh, sediment fencing, or similar materials.
Remaining lands	Entry prohibited except for essential thinning of plant growth	All site workers clearly recognise this land by marking boundary with barrier fence or similar.

3.2.3 "No Go" Zones

Any areas outside of the clearing limits should be designated as "No Go" zones to minimise or prevent access by personnel or vehicles. Temporary fencing or barricading such as Para webbing or perimeter tape is to be utilised on the cleared perimeter with accompanying signage. Site inductions and toolbox meetings should include the importance of observing "No Go" zones, particularly in areas near to any identified sensitive area.

3.2.4 Vegetation Clearing

Vegetation can only be cleared within approved areas. The limits of the development are to be clearly defined with perimeter tape, security line, Para webbing or similar.

Vegetation outside of the development footprint is not to be removed or damaged. The protection of existing vegetation should be incorporated into site inductions for all project personnel and contractors. This information should also be reiterated at toolbox talks or briefings.

3.2.5 Erosion Control Measures

Earthworks are expected to disturb dispersive and fine soils. The vegetation removal and earthworks are expected to produce appreciable quantities of fine materials that could become entrained in runoff.

Clearly visible barrier fencing shall be installed to assist traffic control and prohibit unnecessary site disturbance. Vehicular access to the site shall be limited to only those essential for construction work and they shall enter the site through the stabilised access points. Erosion

control on the embankment crests, downstream batters and any other exposed areas will be provided by gypsum stabilisation of a 200 mm thick layer of the on-site (dispersive) clays, and by covering with 75 mm of topsoil seeded with grass mix.

Short term erosion control on any exposed areas should be provided by regular application of soil binding polymer product such as *Vital Bon Matt Stonewall* as per manufacturer's recommendations.

3.2.6 Stabilisation

The stabilisation requirements for the project are as follows:

- Disturbed soil surfaces are to be stabilised with soil glue products (*Vital Stonewall* or equivalent) during the works and within 1 day of completion of works within any area of the site;
- All temporary earth banks, flow diversion systems, and embankments where runoff should flow uncontrolled off site are to be stabilised with rock/gravel over geo-textile, or vegetation;
- A success criterion for ground cover is a minimum of 75% cover

3.2.7 Stockpile Management

All stockpiles are to:

- Be separated into soil and use types;
- Be located further than 40 metres from waterways;
- Be located at least one metre from site boundary fencing;
- Not be located against the base of significant trees;
- Be watered and / or protected through effective erosion control emulsions (*Vital Bon-Matt Stonewall* or equivalent), as required, to minimise dust emissions; and
- Have sediment fences and coir logs located down slope to minimise the risk of sediment laden runoff.

3.3 Sediment Management

3.3.1 Dust suppression

Dust suppression and erosion protection on access tracks can be provided by regular application of *Vital Bon Matt HR* or approved equivalent.

3.3.2 Sediment Fence

The sediment fence recommended for this project is *TerraStop TS 1780* or approved equivalent.

3.3.3 Rock Pads

The rock pads at the site entry and exit locations should have the following dimensions

- Rock d_{50} = 100 mm (minimum) over geotextile (*Terratex E1 PP* or approved equivalent); and
- Thickness of rock protection layer = 200 mm (minimum).

3.3.4 Earth Bunds

Earth Bunds can be formed by using excavated material. While forming Earth bunds, care should be taken to separate topsoil from subsoil. Also, as indicated on the Erosion and Sediment Control Drawings, earth bunds shall be utilised to capture dirty water within the drainage channel during construction. The earth bund should be 1 m high with 1:2 side slopes.

The upstream base of the earth bunds should be protected with non-woven geotextile (*TerraStop Non Woven Q Range* or approved equivalent). Erosion control on Earth Bunds should be provided by regular application of soil binding polymer product such as *Vital Bon Matt Stonewall* as per manufacturer's recommendations.

3.3.5 Dirty Water Channels

Dirty water channel dimensions have been conservatively designed to convey up to 1 m³/s flow and their dimensions (minimum) are as follows:

- Base Width: 0.50 m
- Side Slopes: 1 to 2
- Channel Slope: 0.5 %
- Flow depth: 0.58 m
- Discharge: 1.00 m³/s
- Channel Lining: Coconut / Jute fibre mats or Geotextile
- Maximum Acceptable Velocity: 1.7 m/s

3.3.6 Coir Logs

Coir Logs to be used as indicated on Erosion and Sediment Control Drawings (*Ecolog*, 300 mm diameter or approved equivalent). Installation of the coir logs to be as per manufacturer's recommendations.

3.3.7 Sediment Traps and Flocculation

It is noted that during the earthworks for different stages, sediment laden water shall be trapped at the designated points.

Excavated sediment traps have been shown at several locations in the ESC drawings and have been conservatively designed to treat a flow of 1 m³/s during construction. The minimum dimensions of excavated sediment traps are as follows (IECA, 2008):

- Surface area: 750 m²
- Length to Width Ratio: 3:1
- Side slopes: 1V:3H
- Depth: 1 m
- Inflow bank to be protected with Geotextile lining
- Sediment to be removed when it exceeds 30 % of trap volume

Due to presence of dispersive soils, the water contained within the sediment traps will, most likely, not achieve the desired water quality (especially Total Suspended Solids, 50 mg/l). Therefore, appropriate flocculation is obligatory.

Apply Gypsum (CaSO₄) at the rate of 32 kg per 100 m³. In case of increased likelihood of high intensity storms, increase dosage to 70 kg per 100 m³. Gypsum is the least ecologically threatening flocculant as it causes little pH change, however, slight changes in salinity can be experienced. Gypsum needs to be spread evenly across the water surface.

In addition, Filter bags (1380 Filter Bags or approved equivalent) filled with Gypsum should be applied every 20 m in the dirty water channels to aid with Flocculation. It must be noted that Gypsum can cause scum deposits in equipment.

Other flocculation options will require written approval from Department of Environment and Heritage Protection (DEHP). These include:

- Polyacrylamides (PAMS like DamClear Floc Blocks or other product approved by CPESC)
- Aluminium based flocculants

3.3.8 Silt Curtains

Floating silt curtains shall be installed in Bungil Creek (when in flow) near the inlet and outlet of the diversion drain during the construction phase. Silt curtains act to isolate the sediment-laden waters from passing stream flows. This allows sedimentation of the disturbed water body with the area enclosed by the silt curtain. The most effective placement method for silt curtain is in a semicircle or U shape arrangement around the disturbance area.

The following companies supply and install silt curtains in Australia:

- AussieErosion Floating silt curtains
- Polaris Marine Ply Ltd
- Adimas Services Ply Ltd

The installation and maintenance of the silt curtains should be as per manufacturer / supplier requirements.

4. Monitoring and Maintenance

4.1 Monitoring requirements

Appropriate procedures and qualified personnel should be engaged to plan and conduct site inspections and water quality monitoring throughout the construction.

- All ESC measures should be inspected in accordance with the IECA 2008 guidelines.
- All site monitoring data including rainfall records, dates of water quality testing, testing results and records of controlled water releases for the site, should be documented onsite. The documentation should be maintained up to date for the duration of the approved works and be available on-site for inspection by the Assessing Authority on request.
- All environmental incidents should be documented, and should remain accessible to the relevant regulatory authorities on request. When an Environmental Incident (i.e. breach of limits) or exceedance of trigger value occurs, it is the responsibility of the Environmental Manager to investigate and initiate remedial actions commensurate with the severity of the incident.
- A system should be implemented and maintained that monitors and records site compliance and non-compliance with the ESCP requirements.

4.2 Maintenance requirements

All materials removed from ESC devices during maintenance, whether solid or liquid, should be disposed of in a manner that does not cause ongoing soil erosion or environmental harm. Solid materials removed from ESC devices are to be stockpiled onsite in accordance with stockpile guidelines.


Written records of erosion and sediment control monitoring and maintenance activities conducted during the construction and maintenance periods should be maintained on site. Original copies of such records shall be provided on request to the Assessing Authority.


Maintenance of erosion and sediment control measures must occur in accordance with IECA 2008 guidelines.

8.1 Queensland vegetation management state code

Response column key:
 Achieved
 P/S Performance solution

Table 8.1.3: General

Performance outcomes	Acceptable outcomes	Response	Comment
Clearing to reasonably avoid and minimise impacts			
<p>PO1 Clearing only occurs where the applicant has demonstrated that the development has first reasonably avoided, and then reasonably minimised the impacts of development.</p>	<p>No acceptable outcome is prescribed.</p>	<p>✓</p>	<ul style="list-style-type: none"> According to DNRM Regional Ecosystem Mapping the proposed flood levee intersects remnant vegetation at three distinct locations along Bungil Creek. These locations are shown in Figure 1. Remnant vegetation will not be disturbed along the remainder of the levee.  <p>Figure 1 – DNRM Regional Ecosystem Map</p> <ul style="list-style-type: none"> A ground-truthed survey carried out by GHD (below) indicates that of the three areas likely to be impacted by the levee the loss of remnant vegetation will be minimal, if at all.


Performance outcomes	Acceptable outcomes	Response	Comment
			<ul style="list-style-type: none"> The alignment of the levee has been informed by the ground-surveys undertaken by GHD in order to reasonably avoid disturbance to remnant vegetation.  <p data-bbox="1368 879 1998 903">Figure 2 – GHD Ground-truthed survey</p> <ul style="list-style-type: none"> The areas of remnant vegetation likely to be impacted by the proposed levee are classified as Regional Ecosystem 11.3.25. This community is flood tolerant and as such will not deteriorate beyond any required clearing. The impacted community status is identified in the Vegetation Management Act 2009 as species of "Least concern." The community is classified as mid-dense. Any clearing required will be minimised and accord with the Reference Tables contained in Module 8 of the SDAP codes.

Performance outcomes	Acceptable outcomes	Response	Comment
<p>PO2 Clearing in an area must not be inconsistent with or impact on any of the following unless a better environmental outcome can be achieved:</p> <ul style="list-style-type: none"> (1) a declared area, or (2) an exchange area, or (3) unlawfully cleared area, or (4) a restoration notice, or (5) an enforcement notice under the Sustainable Planning Act 2009 issued for a vegetation clearing offence, or (6) a compliance notice containing conditions about the restoration of vegetation, or (7) a Land Act notice, or (8) a trespass notice if the trespass related act under the Land Act 1994 for the notice is the clearing of vegetation on the relevant land, or (9) an area on a PMAV shown to be category A where the chief executive of the VMA reasonably believes that a vegetation clearing offence is being, or has been, committed in relation to the area. 	No acceptable outcome is prescribed.	N/A	The levee does not intersect any of the areas identified in PO2.
Clearing on land that is an environmental offset area			
<p>PO3 Clearing on land that contains an existing environmental offset is consistent</p>	<p>AO3.1 Clearing is consistent with the offset delivery plan or agreement for the environmental offset area.</p> <p>Or</p>	N/A	The levee will not be constructed in an area that contains an existing environmental offset.

Performance outcomes	Acceptable outcomes	Response	Comment
with the delivery plan or agreement for the environmental offset area. Editor's note: Environmental offset agreements may also be described as an 'agreed delivery arrangement' or 'delivery agreement'. Clearing should be consistent with any agreement however described.	AO3.2 An additional environmental offset is provided that is consistent with the relevant Queensland Environmental Offsets Policy.		
No clearing of vegetation as a result of the material change of use or reconfiguration of a lot			
PO4 Clearing as a result of the material change of use or reconfiguration of a lot will not occur.	No acceptable outcome is prescribed.	N/A	Any required clearing is not the result of a material change of use or a reconfiguration of a lot application.
Clearing that could already be done under an exemption			
PO5 All clearing is limited to clearing that could be done under an exemption for the purpose of the development (as prescribed under schedule 24, parts 1 and 2 of the Sustainable Planning Regulation 2009) prior to the material change of use application being approved.	No acceptable outcome is prescribed.	N/A	The proposed levee does not constitute a material change of use.


Table 8.1.4: Public safety, relevant infrastructure and coordinated projects

Performance outcomes	Acceptable outcomes	Response	Comment
Limits to clearing			
PO1 Clearing is limited to the extent that is necessary: (1) for establishing a necessary fence, firebreak, road or vehicular track, or for constructing necessary built infrastructure (each relevant infrastructure), where the clearing	No acceptable outcome is prescribed.	✓	<ul style="list-style-type: none"> The levee has been deemed a relevant purpose for the purpose of clearing vegetation by DNRM. If any vegetation is required to be cleared it will be limited entirely to the levee footprint. The footprint of the levee is shown in Figure 3. Construction will be contained solely within the levee footprint. Plant, machinery and materials associated with construction of the levee will be stored on site within the levee footprint, or

Performance outcomes	Acceptable outcomes	Response	Comment
<p>cannot reasonably be avoided or minimised, or</p> <p>(2) as a natural and ordinary consequence of other assessable development for which a development approval as defined under the repealed <i>Integrated Planning Act 1997</i> was given, or a development application as defined under that Act was made, before 16 May 2003, or</p> <p>(3) to ensure public safety, or</p> <p>(4) for a coordinated project and any associated ancillary works—other than a coordinated project that involves high value agriculture clearing, or irrigated high value agriculture clearing.</p>			<p>alternatively off site at an approved depot. This will avoid any unnecessary clearing.</p> <ul style="list-style-type: none"> It is expected that access to the levee will be provided via a single designated entry point that will avoid all remanant vegetation.  <p>Figure 3 – For Construction drawing.</p>
Wetlands			
<p>PO2 Maintain the current extent of vegetation associated with any natural wetland to protect:</p> <p>(1) water quality by filtering sediments, nutrients and other pollutants</p>	<p>AO2.1 Clearing does not occur in or within 100 metres of any natural wetland.</p> <p>Or:</p> <p>AO2.2 Clearing only occurs within 100 metres of any natural wetland where:</p>	<p>✓</p>	<p>Clearing, if required, will not occur within 100m of a natural wetland.</p>

Performance outcomes	Acceptable outcomes	Response	Comment
(2) aquatic habitat (3) terrestrial habitat.	(1) the clearing does not occur within 50 metres of the defining bank of any natural wetland, or (2) the widths stipulated by table 1 are not exceeded. Or AO2.3 Where it can be demonstrated that clearing cannot be reasonably avoided, and the extent of clearing has been reasonably minimised, an environmental offset is provided for any significant residual impacts from clearing of vegetation associated with a natural wetland. Editor's note: Applications for development should identify whether there is likely to be a significant residual impact and a need for an environmental offset having regard to section 3.3 (Wetlands and watercourses) of the Significant Residual Impact Guideline and the relevant Queensland Environmental Offsets Policy		
Watercourses and drainage features			
PO3 Maintain the current extent of vegetation associated with any watercourse or drainage feature to protect: (1) bank stability by protecting against bank erosion (2) water quality by filtering sediments, nutrients and other pollutants (3) aquatic habitat (4) terrestrial habitat.	AO3.1 Clearing does not occur: (1) in any watercourse or drainage feature, or (2) within the relevant distance stipulated by table 2 of the defining bank of any watercourse or drainage feature. Or AO3.2 Clearing only occurs within any watercourse or drainage feature, or within the relevant distance stipulated by table 2 of the defining bank of any watercourse or drainage feature where: (1) the clearing does not occur within 5 metres of the defining bank, or (2) the widths stipulated by table 1 is not exceeded Or	✓	<ul style="list-style-type: none"> Remnant vegetation in the vicinity of the proposed levee is identified as Regional Ecosystem 11.3.25 and is classified as "mid-dense." The SDAP reference table 1 has a clearing limit of 10 metres in width and 0.5 hectares for vegetation which structure category of "mid-dense". If remnant vegetation is required to be cleared the extent of

Performance outcomes	Acceptable outcomes	Response	Comment
			clearing will not exceed the limits outlined in reference table 1.
	<p>AO3.3 Where it can be demonstrated that clearing cannot be reasonably avoided, and the extent of clearing has been reasonably minimised, an environmental offset is provided for any significant residual impact from clearing of vegetation associated with any watercourse or drainage feature.</p> <p>Editor's note: Applications for development should identify whether there is likely to be a significant residual impact and a need for an environmental offset having regard to section 3.3 (Wetlands and watercourses) of the Significant Residual Impact Guideline and the relevant Queensland Environmental Offsets Policy.</p>		
Connectivity (public safety and relevant infrastructure)			
<p>PO4 In consideration of vegetation on the subject lot(s) and in the landscape adjacent to the subject lot(s), vegetation is retained that:</p> <p>(1) is of sufficient size and configured in a way that maintains ecosystem functioning</p> <p>(2) remains in the landscape despite threatening processes.</p>	<p>AO4.1 Clearing occurs in accordance with table 3.</p>		<ul style="list-style-type: none"> As shown on the For Construction drawing below, if vegetation is required to be cleared it will occur only on the periphery of the corridor and will not result in fragmentation of the corridor. Vegetation that is of sufficient size will be retained and configured in a way that maintains ecosystem functioning. If clearing is required it will not; <ul style="list-style-type: none"> occur in an area of vegetation less than 50 hectares; reduce the extent of vegetation to less than 50 hectares; occur where the extent of vegetation on the subject lot(s) is reduced to or less than 30 per cent of the total area of the lot(s).

Performance outcomes	Acceptable outcomes	Response	Comment
			 <p data-bbox="1375 750 1758 778">Figure 4 – For Construction drawing.</p>
Connectivity (coordinated projects)			
<p data-bbox="136 869 573 973">PO5 In consideration of vegetation on the subject lot(s) and in the landscape adjacent to the subject lot(s), vegetation is retained that:</p> <p data-bbox="136 989 573 1077">(1) is of sufficient size and configured in a way that maintains ecosystem functioning</p> <p data-bbox="136 1093 573 1157">(2) remains in the landscape despite threatening processes</p> <p data-bbox="136 1173 573 1228">or where this is not reasonably possible, maintain the current extent of vegetation.</p>	<p data-bbox="584 869 1200 933">AO5.1 Clearing occurs in accordance with table 3.</p> <p data-bbox="584 941 1200 973">Or</p> <p data-bbox="584 981 1200 1077">AO5.2 Where it can be demonstrated that clearing cannot be reasonably avoided, and the extent of clearing has been reasonably minimised, an environmental offset is provided for any significant residual impact from clearing of vegetation that forms a connectivity area.</p> <p data-bbox="584 1117 1200 1284"><i>Editor's note:</i> Applications for development should identify whether there is likely to be a significant residual impact and a need for an environmental offset having regard to section 3.2 (Connectivity areas) of the Significant Residual Impact Guideline and the relevant Queensland Environmental Offsets Policy.</p>	N/A	The levee is not a coordinated project.
Soil erosion			

Performance outcomes	Acceptable outcomes	Response	Comment
PO6 Clearing does not result in: (1) accelerated soil erosion including, but not limited to - mass movement, gully erosion, rill erosion, sheet erosion, tunnel erosion, stream bank erosion, wind erosion, or scalding (2) any associated loss of chemical, physical or biological fertility—including, but not limited to water holding capacity, soil structure, organic matter, soil biology, and nutrients within or outside the lot(s) that are the subject of the application.	AO6.1 Clearing is undertaken in accordance with a sediment and erosion control plan which includes measures to ensure the rates of soil loss and sediment movement are the same or less than those prior to the proposed development. Or	✓	Attached with this application is an erosion and sediment control plan which includes sediment and erosion control measures.
	AO6.2 The application is a development application where a local government is the assessment manager. Editor's note: For guidance on developing a sediment and erosion control plan please refer to the IECA (2008) Best practice erosion & sediment control document.		
Salinity			
PO7 Clearing does not contribute to land degradation through: (1) waterlogging, or (2) the salinisation of groundwater, surface water or soil.	AO7.1 Clearing does not occur in or within 200 metres of a discharge area or recharge area. Or	✓	If clearing is required it will not occur within 200 metres of a discharge area or a recharge area.
	AO7.2 Clearing is less than: (1) 2 hectares, or (2) 10 metres wide.	✓	If clearing is required, it will be less than 2ha or 10m in width.
Conserving endangered and of concern regional ecosystems			
PO8 Maintain the current extent of endangered regional ecosystems and of concern regional ecosystems.	AO8.1 Clearing does not occur in: (1) an endangered regional ecosystem, or (2) an of concern regional ecosystem. Or	✓	<ul style="list-style-type: none"> Clearing, if required, will not occur in an endangered regional ecosystem, or an area of concern regional ecosystem. The Ecological Assessment Report prepared by GHD identifies remnant vegetation along the section of Bungil Creek where the levee will be constructed as an area of "least concern." (Refer Attachment 7)

Performance outcomes	Acceptable outcomes	Response	Comment
	<p>AO8.2 Clearing in an endangered regional ecosystem or an of concern regional ecosystem does not exceed the width or area prescribed in table 1.</p> <p>Or</p>	✓	<ul style="list-style-type: none"> If clearing is required it will not occur in an area identified as an endangered regional ecosystem or an of concern regional ecosystem. The Ecological Assessment Report prepared by GHD identifies remnant vegetation along the section of Bungii Creek where the levee will be constructed as an area of "least concern."
	<p>AO8.3 Where it can be demonstrated that clearing cannot be reasonably avoided, and the extent of clearing has been reasonably minimised, an environmental offset is provided for any significant residual impact from clearing of endangered regional ecosystems and of concern regional ecosystems.</p> <p>Editor's note: Applications for development should identify whether there is likely to be a significant residual impact and a need for an environmental offset having regard to section 3.1 (Regulated vegetation) of the Significant Residual Impact Guideline and the relevant Queensland Environmental Offsets Policy.</p>		
Essential habitat			
PO9 Maintain the current extent of essential habitat.	<p>AO9.1 Clearing does not occur in an area of essential habitat.</p> <p>Or</p>	✓	<ul style="list-style-type: none"> If clearing is required it will not occur in an area of essential habitat.
	<p>AO9.2 Clearing in essential habitat does not exceed the widths or areas prescribed in table 1.</p> <p>Or</p>		
	<p>AO9.3 Clearing only occurs where an area of essential habitat is isolated and small in size and at risk from threatening processes, for the prescribed species.</p> <p>Or</p>		
	<p>AO9.4 Where it can be demonstrated that clearing cannot be reasonably avoided, and the extent of clearing has been reasonably minimised, an environmental offset is provided</p>		

Performance outcomes	Acceptable outcomes	Response	Comment
	<p>for any significant residual impact from clearing of essential habitat.</p> <p>Editor's note: Applications for development should identify whether there is likely to be a significant residual impact and a need for an environmental offset having regard to section 3.1 (Regulated vegetation) of the Significant Residual Impact Guideline and the relevant Queensland Environmental Offsets Policy.</p>		
Acid sulfate soils			
<p>PO10 Clearing activities do not result in disturbance of acid sulfate soils or changes to the hydrology of the location that will either:</p> <p>(1) aerate horizons containing iron sulfides, or</p> <p>(2) mobilise acid or metals.</p>	<p>AO10.1 Clearing does not occur in land zone 1, land zone 2 or land zone 3.</p> <p>Or</p>	✓	If clearing is required it will not occur in land zone 1, land zone 2 or land zone 3.
	<p>AO10.2 Clearing in land zone 1, land zone 2 or land zone 3 in areas below the 5 metre Australian Height Datum only occurs where:</p> <p>(1) it does not involve mechanical clearing</p> <p>(2) the acid sulfate soils are managed consistent with the State Planning Policy, Department of State Development infrastructure and Planning 2014, and with the Soil Management Guidelines in the Queensland Acid Sulfate Soil Technical Manual, Department of Science, Information Technology, Innovation and the Arts, 2014.</p> <p>Or</p>		
	<p>AO10.3 The application is a development application where a local government is the assessment manager.</p>		



Maranoa Regional Council
Roma Flood Mitigation Study - Stage 2
Ecological Assessment Report

February 2016

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Abbreviations and acronyms

Abbreviation/ acronym	Definition
DEHP	(Queensland) Department of Environment and Heritage Protection
DNRM	(Queensland) Department of Natural Resources and Mines
DotE	(Commonwealth) Department of the Environment
DSDIP	(Queensland) Department of State Development, Infrastructure and Planning
DSITI	(Queensland) Department of Science, Information Technology and Innovation
EO Act	(Queensland) <i>Environmental Offsets Act 2015</i>
EP Act	(Queensland) <i>Environment Protection Act 1994</i>
EPBC Act	(Commonwealth) <i>Environment Protection and Biodiversity Conservation Act 1999</i>
EPP (Water)	(Queensland) <i>Environmental Protection (Water) Policy 2009</i>
Fisheries Act	(Queensland) <i>Fisheries Act 1994</i>
km	kilometre
LP Act	(Queensland) <i>Land Protection (Pest and Stock Route Management) Act 2003</i>
MNES	Matter of National Environmental Significance
MRC	Maranoa Regional Council
MSES	Matter of State Environmental Significance
NC Act	(Queensland) <i>Nature Conservation Act 1992</i>
NC Wildlife Regulation	(Queensland) <i>Nature Conservation (Wildlife) Regulation 2006</i>
RE	Regional Ecosystem
SP Act	(Queensland) <i>Sustainable Planning Act 2009</i>
SP Regulation	(Queensland) <i>Sustainable Planning Regulation 2009</i>
TEC	Threatened Ecological Community
VM Act	(Queensland) <i>Vegetation Management Act 1999</i>
Water Act	(Queensland) <i>Water Act 2000</i>

1. Introduction

1.1 Overview

Following the flood events of 2010, 2011 and 2012, Maranoa Regional Council (MRC) has been assessing and implementing flood mitigation measures for the township of Roma. The mitigation project has been divided into two main stages. Stage 1 has been completed and involved construction of a 5.2 kilometre (km) long levee embankment west of Bungil Creek. Stage 2 is proposed to include a levee adjacent to the western bank of Bungil Creek (termed the 'Western levee') together with a diversion drain to the east of Bungil Creek (termed the 'Eastern diversion').

As part of concept planning for Stage 2, GHD was previously engaged by MRC in 2013 to undertake an initial ecological assessment that included a desktop review and field survey at several targeted locations of potential impact. Subsequently, to provide more specific data to inform detailed design of Stage 2, GHD has been commissioned to undertake a second ecological assessment to ground-truth ecological values within the proposed footprints of the Western Levee and the Eastern Diversion. This report has been prepared to provide the findings of the second ecological assessment.

1.2 Purpose of this report

GHD was engaged by MRC to undertake an ecological assessment of the proposed Stage 2 flood mitigation works for Roma. The area of investigation for this assessment comprised the proposed footprints of the Western levee and the Eastern diversion, referred to as the 'Project footprint.' The specific objectives of the assessment are identified as follows:

- Undertake a desktop review and field survey to identify and describe ecological values within the Project footprint.
- Identify any ecological constraints to the proposed works and provide recommendations for solutions.

Given the time interval between the 2013 assessment and the 2015 assessment, preparation of the current report also provides opportunity to identify implications of changes in environmental legislation that have occurred since preparation of the previous report.

1.3 Limitations

Access to four properties was not granted (Lot 2 on SP110498; Lot 1 on SP110498; Lot 21 on R8614; and Lot 96 on M5398), such that the ecological values on these properties could not be assessed during the field survey.

1.4 Structure of this report

This report provides the following information:

- In Section 1, an overview of the project and key objectives of the assessment
- In Section 2, an overview of the legislation relevant to ecological values
- In Section 3, a description of the methods employed during the assessment
- In Section 4, a description of the existing environment
- In Section 5, identification of ecological constraints and recommendations regarding environmental approvals required for the Project

2. Relevant legislation

2.1 Commonwealth legislation

2.1.1 *Environment Protection and Biodiversity Conservation Act 1999*

The Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) is the principal environmental legislation administered by the Commonwealth Government. Part 3 of the EPBC Act determines that an action that is likely to have a significant impact on Matters of National Environmental Significance (MNES) cannot be undertaken without prior approval from the Minister who administers the EPBC Act. An action that the Minister decides is likely to have a significant impact on MNES is deemed a 'controlled action' and requires assessment under the provisions of the EPBC Act.

MNES protected by the EPBC Act include:

- World heritage properties (section 12 and 15A)
- National heritage places (sections 15B and 15C)
- Wetlands of international importance (under the Ramsar convention)
- Threatened species and ecological communities (sections 18 and 18A)
- Migratory species (sections 20 and 20A)
- Commonwealth marine areas (sections 23 and 24A)
- The Great Barrier Reef Marine Park (section 24B and 24C)
- Nuclear actions
- A water resource, in relation to coal seam gas development and large coal mining developments

The *Matters of National Environmental Significance Significant Impact Guidelines 1.1* (DotE, 2013) identifies criteria to assist in deciding whether or not a proposed action may require a referral under the EPBC Act.

2.2 Queensland legislation

2.2.1 *Sustainable Planning Act 2009*

The purpose of the *Sustainable Planning Act 2009* (SP Act) is to achieve ecological sustainability by:

- Managing the process by which development takes place, including ensuring that the process is accountable, effective and efficient and delivers sustainable outcomes;
- Managing the effects of development on the environment; and
- Providing for the coordination and integration of planning at the local, regional and state levels.

2.2.2 *Vegetation Management Act 1999*

The *Vegetation Management Act 1999* (VM Act) provides a framework for the regulation of woody, terrestrial native vegetation located outside of protected areas. The stated purpose of the VM Act is to regulate the clearing of native vegetation in a way that:

- Conserves remnant vegetation that is an endangered, of concern or least concern RE

- Conserves vegetation in declared areas
- Ensures clearing does not cause land degradation
- Prevents biodiversity loss
- Maintains ecological processes
- Manages the environmental effects of the clearing to ensure the above purposes are obtained
- Reduce greenhouse gas emissions

The VM Act provides for the establishment and mapping of Regional Ecosystems (REs) that encompass vegetation community descriptions within a geological and bioregional context, and for the creation and use of clearing codes (among other things). In addition, it provides a process for applying to change RE mapping and for the investigation and prosecution of clearing offences. Details on what clearing activities require assessment against the various regional clearing codes authorised under the VM Act are provided by the *Sustainable Planning Regulation 2009* (SP Regulation).

2.2.3 Nature Conservation Act 1992

The *Nature Conservation Act 1992* (NC Act) provides for the conservation of nature through protection of all native plants and animals in Queensland. Protection is provided under the NC Act through conservation of land as protected areas and wildlife protection outside of protected areas. Actions impacting on protected native flora and fauna are regulated under the NC Act. Permits for disturbance to native flora and fauna can be administered under the NC Act.

The Queensland *Nature Conservation (Wildlife) Regulation 2006* (NC Regulation) is subordinate to the NC Act and lists flora and fauna species considered to be extinct in the wild, endangered, vulnerable, near threatened or special least concern in Queensland.

2.2.4 Land Protection (Pest and Stock Route Management) Act 2002

The *Land Protection (Pest and Stock Route Management) Act 2002* (LP Act) identifies declared pest plant and animal species, and provides for their control. The LP Act imposes a legal responsibility on all landowners to control declared species on their land (subject to certain conditions). Specific management actions are required by landholders depending on the classification of declared pests under the Act, with three separate categories of declared pest prescribed including Class 1, Class 2 and Class 3. Landowners are required to remove Class 1 and Class 2 pests from their property and prevent them spreading to other areas. Class 3 pests cannot be sold or traded but are required to be controlled only if growing adjacent to an environmentally sensitive area (as declared by local councils).

2.2.5 Environmental Protection Act 1994

The *Environmental Protection Act 1994* (EP Act) provides a regulatory framework for the protection and management of the Queensland environment. The objective of the EP Act is to protect Queensland's environment while allowing for development that is ecologically sustainable.

The environmental values of Queensland's waterways are protected under the EP Act and the *Environmental Protection (Water) Policy 2009* (EPP (Water)).

2.2.6 Environmental Protection (Water) Policy 2009

The EPP (Water) is subordinate legislation that supports the EP Act. The EPP (Water) provides environmental values and water quality objectives for all Queensland waters. Environmental

values are defined by the EPP (Water) as the qualities of waterways that need to be protected to ensure that the ecological, social and economic values and uses of the waterway are maintained.

2.2.7 Water Act 2000

The *Water Act 2000* (Water Act) is the primary statutory document that establishes a system for water planning, allocation and use, and includes allocation of water resources for environmental purposes. The purpose of the Water Act is to advance sustainable management and efficient use of water and other resources. The Water Act provides for a number of activities including the measurement and management of water, construction, control and management of works for conservation and protection, irrigation and water supply, drainage, flood control and prevention, improvement of the flow in, or changes to watercourses, protection and improvement of the physical integrity of watercourses, lakes and springs.

2.2.8 Fisheries Act 1994

The *Fisheries Act 1994* (Fisheries Act) provides for the management, use, development and protection of fisheries resources and fish habitats and the management of aquaculture activities. The Act's objective is to provide for the use, conservation and enhancement of the community's fisheries resources and fish habitats through the application of the principles of ecologically sustainable development.

The Fisheries Act provides legislative guidance with regard to the maintenance of fish movement through waterways, including identification of when there is a requirement to obtain approval prior to construction of a waterway barrier.

2.2.9 Environmental Offset Policy 2014

The Environmental Offset Framework was introduced by the Queensland Government in July 2014 and is aimed at streamlining the State environmental offsets assessment process, in addition to aligning the offsets requirements across the levels of Commonwealth, State and Local government. In accordance with the *Environmental Offsets Act 2015* (EO Act), where a project is likely to have significant residual impacts to Matter of State Environmental Significance (MSES), the proponent can be required to supply compensation for those values. These offsets can comprise a financial contribution, establishment of a land based offset, or a combination of both.

Pursuant to Schedule 2 of the *Environmental Offset Regulation 2014* (the Offset Regulation), a MSES that can require offsets can include:

- Regulated vegetation
- Connectivity areas
- Wetlands and watercourses
- Protected wildlife habitat
- Protected areas
- State marine parks
- Fish habitat areas
- Waterway providing fish habitat
- Marine plants
- Legally secured offset areas

The *Queensland Environmental Offsets Policy: Significant Residual Impact Guideline* (MSES Guideline) (DEHP, 2014) identifies criteria to assist in deciding whether or not a proposed action may require a referral under the EO Act.

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3. Methods

3.1 Desktop assessment

An initial desktop assessment was undertaken to identify ecological characteristics that are known to occur within the Project footprint. The desktop assessment involved a review of the following databases and mapping layers:

- **Protected Matters Search Tool:** The Commonwealth Department of the Environment (DoE) Protected Matters Search tool was used to identify MNES including listed species and communities that are predicted to occur in or adjacent to the Project footprint, based on bioclimatic modelling, knowledge of species' distributions and habitat preferences. The search area was a 2 km buffer around a point that approximated the centre of the Project footprint (-26.5687, 148.8025).
- **Wildlife Online:** The Department of Science, Information Technology and Innovation (DSITI) Wildlife Online database was searched to retrieve historical records of flora and fauna species previously recorded within the vicinity of the Project footprint. The search area was a 2 km buffer around a point that approximated the centre of the Project footprint (-26.5687, 148.8025).
- **Protected Plants Flora Survey Trigger Map:** The Department of Environment and Heritage Protection (DEHP) Flora Survey Trigger Map was viewed to determine the extent of the High Risk Area within the site.
- **Regulated Vegetation Map:** The Queensland Department of Natural Resources and Mines (DNRM) Regulated Vegetation Management Map was viewed to determine the extent of remnant vegetation within and adjacent to the Project footprint, and the Vegetation Management Supporting Map was viewed to determine the types of mapped REs.
- **Essential Habitat Map:** The DEHP Essential Habitat mapping was viewed to determine if vegetation within the Project footprint has been identified as Essential Habitat for a species of wildlife listed as endangered, vulnerable or special least concern under provisions of the NC Act.
- **State Planning Policy Interactive Mapping System:** The Department of State Development, Infrastructure and Planning (DSDIP) State Planning Policy Interactive Mapping System was viewed to determine matters of state interest under the *Sustainable Planning Act 2009* that are of relevance to the Project footprint.
- **Atlas of Living Australia:** The Atlas of Living Australia is a collaborative project of the Federal Government's National Research Infrastructure for Australia, collating native flora and fauna data from the academic, scientific and environmental community. This was reviewed to obtain additional information for significant species records.

3.2 Field assessment

A field assessment was undertaken by a Senior Ecologist on 3 December 2015 to verify the findings of the desktop assessment and collect additional site-specific information. The field survey involved comprehensively traversing the Project footprint on foot whilst assessing the following ecological attributes.

3.2.1 Vegetation communities

The floristic structure and composition of terrestrial vegetation communities within the Project footprint was described in accordance with the Queensland Herbarium's *Methodology for Survey and Mapping of Regional Ecosystems and Vegetation Communities in Queensland* (Neldner *et al.*, 2012). Quaternary level assessments were undertaken and involved recording the following attributes:

- Land zone (geology)
- Land form, slope, aspect and soils
- Dominant flora species composition
- Height and cover of each strata comprising the existing vegetation community
- Presence and abundance of weed species
- Evidence and extent of disturbance

Particular attention was afforded to determining the presence of any threatened ecological communities (TECs) under the EPBC Act, and verification of the status and extent of remnant REs under the VM Act. Where discrepancies were noted between the DNRM mapping and the on-ground extent of remnant vegetation, spatial data for the actual boundary was recorded with a hand-held global positioning system (GPS). Where discrepancies were noted between the DNRM mapping and the on-ground vegetation structure, percent canopy cover was measured along 100 m transects to determine remnant status of vegetation.

3.2.2 Flora species

An inventory of flora species within the Project footprint was recorded during the field survey. Search effort was focussed on detecting the actual or likely presence of flora species that are of conservation significance under the EPBC Act and the NC Act.

3.2.3 Terrestrial fauna habitat

This component involved an assessment of the terrestrial fauna habitat values of vegetation within the Project footprint in terms of describing the structural complexity of habitat together with the type and condition of habitat resources. This included a habitat suitability assessment for species of conservation significance under the EPBC Act and the NC Act.

3.2.4 Aquatic values

An aquatic assessment was undertaken to describe the aquatic ecology values of Bungil Creek. The following information was recorded:

- Substrate type and composition
- Condition of the bed and bank
- Surface water depth
- Type and availability of habitat structure and attributes
- Riparian zone characteristics

- Visual water quality observations
- Existing disturbances

3.3 Likelihood of occurrence assessment

For conservation significant flora and fauna species that were identified by the desktop assessment as potentially occurring in proximity to the Project footprint, a likelihood of occurrence assessment was undertaken to inform the impact identification process. This is a precautionary approach to supplement the opportunistic searches undertaken during the field survey. For each species, this assessment considered information relating to habitat preferences, distribution, and previous records.

The likelihood of occurrence ranking attributed to each species was based on the following framework:

- **Unlikely to occur:** Species has not been recorded in the region (i.e. no records from desktop searches) AND/OR current known distribution does not encompass the Project footprint AND/OR suitable habitat is generally lacking from the Project footprint.
- **May occur:** Species has not been recorded in the region (desktop searches) although species' distribution incorporates Project footprint AND potentially suitable habitat occurs within the Project footprint.
- **Likely to occur:** Species has been recorded in the region (i.e. records detected by desktop searches) AND suitable habitat is present within the Project footprint.
- **Confirmed present:** Species recorded during field surveys within the Project footprint.

4. Existing environment

4.1 Flora species

Results of the desktop assessment are summarised as follows:

- The Protected Matters Search Tool identified that no nationally threatened flora species are predicted to occur within the 2 km search radius (refer Appendix A).
- The Wildlife Online search revealed that no threatened flora species have previously been recorded within the 2 km search radius (refer Appendix B).
- The Protected Plants Flora Survey Trigger Map identified that the Project footprint is not located within a High Risk Area (refer Appendix C). This confirms that no flora species of conservation significance have been recorded in the vicinity.
- No Essential Habitat for any flora species of conservation significance is mapped within, or in proximity to, the Project footprint (refer Appendix D).

The field survey recorded a moderate diversity of flora species within the Project footprint. The highest diversity of flora species was recorded in riparian habitats, with a low diversity recorded where the Project footprint traverses agricultural land. All flora species that were recorded during the field survey have a status of least concern or introduced under the NC Act. No flora species of conservation significance under the EPBC Act or the NC Act were recorded during the field survey or are considered likely to occur.

4.2 Vegetation communities

4.2.1 Threatened ecological communities

The desktop assessment identified that two Threatened Ecological Communities (TECs) listed under the EPBC Act have the potential to occur in proximity to the Project footprint, namely:

- Coolibah - Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions
- Weeping Myall Woodlands

The field survey did not identify the presence of any TECs within the Project footprint. The field survey noted the presence of a community dominated by *Acacia pendula* (weeping myall) within an adjacent property, located approximately 320 m north of the Eastern diversion. Access to this property would be necessary to confirm whether or not this vegetation community meets the criteria necessary to constitute the TEC.



4.2.2 Remnant Regional Ecosystems

The desktop assessment identified that while a large proportion of the Project footprint supports non-remnant vegetation, areas of remnant REs are mapped at three locations along the Western levee and at either end of the Eastern diversion. These areas of remnant REs are also mapped as MSES Regulated Vegetation. A map identifying the spatial extent and identity of REs as mapped by DNRM is provided as Figure 1.

The field survey recorded two RE types within the Project footprint. These are identified in Table 1. The field survey noted that a number of refinements to DNRM's RE map can be made based on the on-ground vegetation characteristics. A map of ground-truthed REs within the Project footprint is provided as Figure 2, and the discrepancies between the DNRM mapping and the ground-truthed mapping are summarised as follows:

- Western levee
 - Riparian vegetation along Bungil Creek is mapped by DNRM as a mixed polygon of remnant RE 11.3.25 and RE 11.3.2. The status of the mixed polygon under the VM Act is of concern sub-dominant. The field survey noted that only RE 11.3.25 is present within the Project footprint, which has a status of least concern under the VM Act.
 - The boundary of DNRM's remnant RE polygon (described above) is more extensive than the on-ground remnant vegetation at several locations. Specifically, areas of parkland vegetation that has been previously cleared are currently mapped as remnant vegetation, but the vegetation community is highly modified and does not support the floristic structure and composition analogous with remnant RE.
- Eastern diversion
 - A mixed polygon of RE 11.3.25 and RE 11.3.2 is mapped by DNRM along the Eastern diversion. Part of this polygon was observed to be non-remnant vegetation as land has been previously cleared for agricultural purposes. Ground-truthing noted that the remainder of the polygon can be split up into two polygons within the Project footprint, specifically, the riparian vegetation was only RE 11.3.25, and a polygon of only RE 11.3.2 was observed on the adjacent floodplain. While historic disturbance of the RE 11.3.2 vegetation was evident, the height of the canopy trees and the percent canopy cover met the requirements to constitute remnant vegetation under the VM Act.

Table 1 Regional Ecosystems within the Project footprint

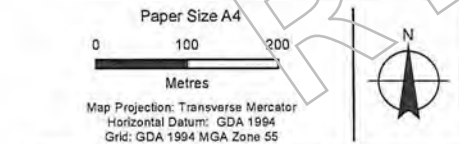
RE identity	VM Act status	Description*	Location	Representative photograph
11.3.25	Least concern	<i>Eucalyptus tereticornis</i> or <i>E. camaldulensis</i> woodland fringing drainage lines	Western levee; Eastern diversion	
11.3.2	Of concern	<i>Eucalyptus populnea</i> woodland on alluvial plains	Eastern diversion	

*Source: Regional Ecosystem Description Database (Queensland Herbarium, 2015)

678,400 678,800 679,200 679,600 680,000 680,400

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LEGEND		Regional Ecosystems - DNRM V8	
	Highway		Category A or B area containing of concern regional ecosystems
	Road		Category A or B area that is a least concern regional ecosystems
	Watercourse		Non Remnant
	Stage 2 Western Levee		
	Stage 2 Eastern Diversion		
	Cadastral		



Maranoa Regional Council
Roma - Stage 2 Detail Design

Job Number 41-29431
Revision 0
Date 09 Feb 2015

DNRM Regional Ecosystem Map Figure 1

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Data Source: © Commonwealth of Australia (Geoscience Australia); Watercourses/2007; DNRM: Locality, Roads/2010, Cadastral, River/2012, Regional Ecosystems/2015; DTMR: Aerial/2011;

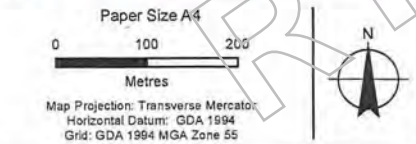
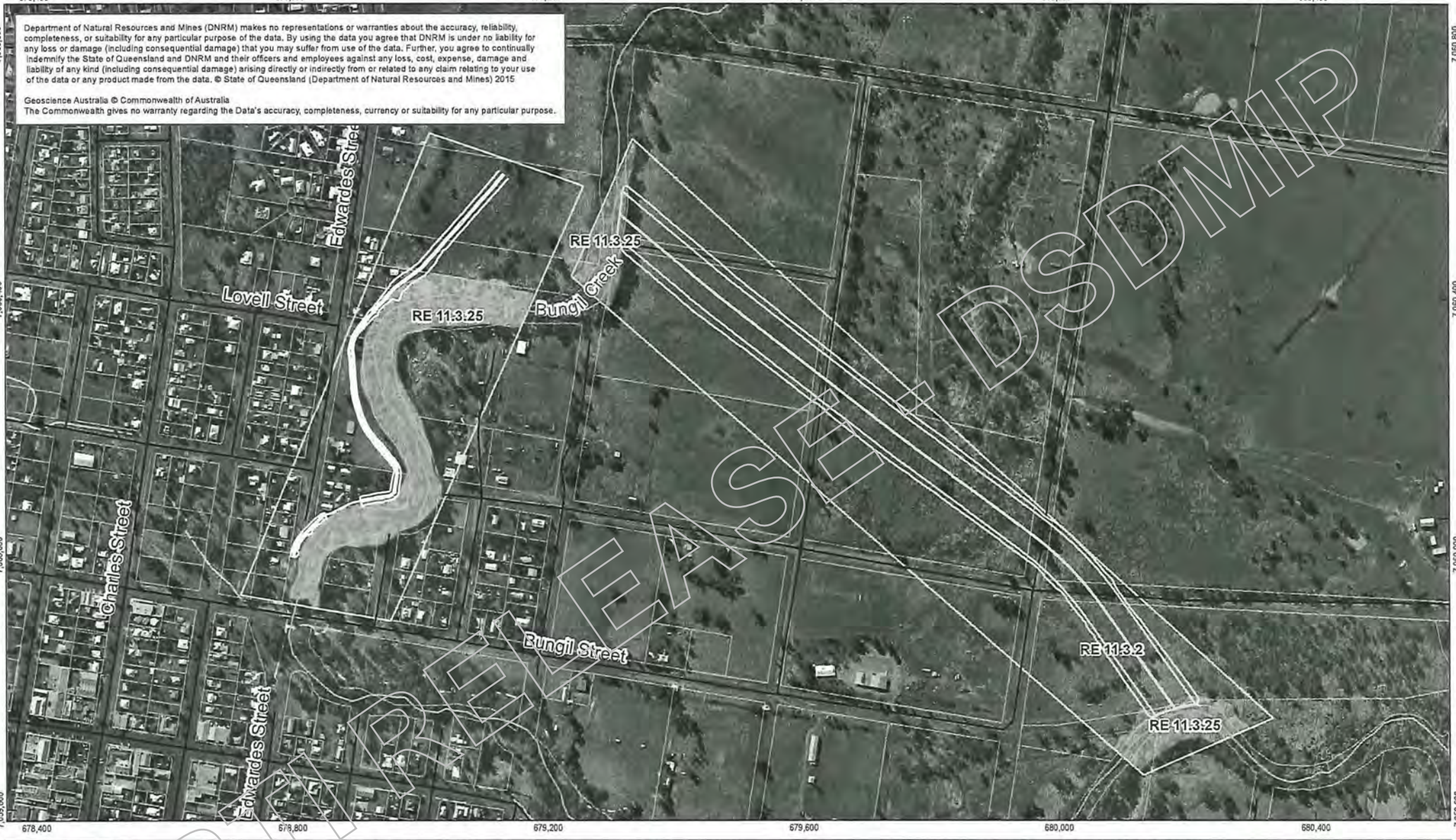
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LEGEND	
	Highway
	Road
	Watercourse
	Stage 2 Western Levee
	Stage 2 Eastern Diversion
	Property Boundary
	Area subject to ground truthing
	Regional Ecosystems - Ground Truthed
	Category A or B area containing of concern regional ecosystems
	Category A or B area that is a least concern regional ecosystems



Maranoa Regional Council
Roma - Stage 2 Detail Design

Job Number | 41-29431
Revision | 0
Date | 09 Feb 2016

Ground-truthed
Regional Ecosystem Map

Figure 2

\\ghdnet\ghd\AU\Brisbane\Projects\41\29431\GIS\Maps\Deliverables\Ecology\4129431_002_rev_a.mxd
145 Ann Street Brisbane QLD 4000 Australia T 61 7 3316 3000 F 61 7 3316 3333 E bne@mail@ghd.com W www.ghd.com

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4.3 Terrestrial fauna

Results of the desktop assessment are summarised as follows:

- The Protected Matters Search Tool identified that 11 nationally threatened terrestrial fauna species are predicted to occur within the 2 km search radius (refer Appendix A).
- The Wildlife Online search revealed that three terrestrial fauna species of conservation significance have previously been recorded within the 2 km search radius (refer Appendix B), namely:
 - Koala (*Phascolarctos cinereus*) that is vulnerable under the EPBC Act and NC Act
 - Yakka skink (*Egernia rugosa*) that is vulnerable under the EPBC Act and NC Act
 - Grey snake (*Hemiaspis damelii*) that is endangered under the NC Act
- The MSES mapping identifies remnant riparian vegetation within the Project footprint is MSES Protected Wildlife Habitat.
- Essential Habitat for yakka skink is mapped along Bungil Creek 280 m upstream from the Project footprint, with the yakka skink record located 1.4 km from the upstream extent of the Project footprint (refer Appendix D).

The field survey noted that terrestrial fauna habitat values are generally restricted to areas of remnant vegetation within the Project footprint. In particular, the riparian vegetation provides a structurally complex habitat, with a diversity of feeding, nesting, sheltering and breeding resources at the canopy, shrub and ground levels. Notable observations included the following:

- The riparian vegetation is composed of mature eucalypt trees that provide potentially suitable habitat for koala. Bark exfoliations potentially consistent with koala use were observed during the field survey. It is likely that the riparian vegetation would function as a habitat corridor that koalas would occasionally transition through, rather than frequent or permanent habitat use.
- Large woody debris and hollow-tree stumps were observed within the riparian vegetation. These features provide potentially suitable habitat for the reptile species of conservation significance that are known to occur in the vicinity (i.e. yakka skink, grey snake).

The likelihood of occurrence assessment for conservation significant fauna that were predicted by the desktop assessment to potentially occur within the Project footprint is provided in Table 2. No additional threatened species are considered likely to occur within the Project footprint. Three migratory species are considered likely to occur based on the availability of potentially suitable habitat together with records of the species:

- Great egret (*Ardea alba*) that is migratory under the EPBC Act and special least concern under the NC Act
- Cattle egret (*Ardea ibis*) that is migratory under the EPBC Act and special least concern under the NC Act
- Rainbow bee-eater (*Merops ornatus*) that is migratory under the EPBC Act and special least concern under the NC Act

Table 2 Likelihood of occurrence for terrestrial threatened and migratory species

Scientific name	Common name	EPBC Act status	NC Act status	Distribution and preferred habitat*	Likelihood of occurrence
Birds					
<i>Erythrorhynchus radiatus</i>	Red goshawk	Vulnerable	Endangered	This species has a very sparse and discontinuous distribution over a wide area, from the Kimberleys, Western Australia, across northern Australia, and down the east coast of Queensland to northern New South Wales. It occupies a range of habitats, often at ecotones, including coastal and sub-coastal tall open forest, tropical savannahs crossed by wooded or forested watercourses, woodlands, the edges of rainforest and gallery forests along watercourses, and wetlands that include melaleuca and casuarina species.	<i>May occur.</i> Potentially suitable habitat is present but no previous records exist within the desktop search extent.
<i>Geophaps scripta scripta</i>	Squatter pigeon (southern)	Vulnerable	Vulnerable	The squatter pigeon (southern) occurs on the inland slopes of the Great Dividing Range; with a distribution that extends from the Burdekin-Lynd divide in central Queensland, west to Charleville and Longreach, east to the coast from Proserpine to Port Curtis, and south to scattered sites in south-eastern Queensland. It inhabits open grassy woodland on sandy soils interspersed with low gravelly ridges, in proximity to water.	<i>May occur.</i> Potentially suitable habitat is present but no previous records exist within the desktop search extent.
<i>Grantiella picta</i>	Painted honeyeater	Vulnerable	Vulnerable	The species is sparsely distributed from south-eastern Australia to north-western Queensland and eastern Northern Territory. The painted honeyeater inhabits mistletoes in habitats that eucalypt forests/woodlands and riparian woodlands of black box and river red gum.	<i>May occur.</i> Potentially suitable habitat is present but no previous records exist within the desktop search extent.
<i>Rostratula australis</i>	Australian Painted Snipe	Endangered; migratory	Vulnerable	The Australian painted snipe has been recorded at scattered wetland locations throughout much of Queensland. It has been recorded from habitats including shallow inland wetlands, including temporary and permanent lakes, swamps and claypans.	<i>May occur.</i> Potentially suitable habitat is present but no previous records exist within the desktop search extent.
Mammals					
<i>Chalinolobus dwyeri</i>	Large-eared pied bat	Vulnerable	Vulnerable	The species' distribution is poorly known. Records exist from Shoalwater Bay in Queensland, through to Ulladulla in New South Wales. It roosts in caves, crevices in cliffs and mines, generally in dry sclerophyll forests and woodlands as well as higher altitude moist rainforest and eucalypt forest.	<i>Unlikely to occur.</i> No suitable habitat is present and no previous records exist within the desktop search extent.

Scientific name	Common name	EPBC Act status	NC Act status	Distribution and preferred habitat*	Likelihood of occurrence
<i>Dasyurus hallucatus</i>	Northern quoll	Endangered	Endangered	In Queensland, the species is known to occur from south of Rockhampton, to Weipa in the north, and extends west to the vicinity of Carnarvon Range National Park. The northern quoll does not have highly specific habitat requirements, however, rocky areas associated with open woodland and open forest are considered optimal habitat for the northern quoll.	<i>Unlikely to occur.</i> No suitable habitat is present and no previous records exist within the desktop search extent.
<i>Nyctophilus corbeni</i>	South-eastern long-eared bat	Vulnerable	Vulnerable	The greater long-eared bat is typically known from south-east Australia, especially the Murray-Darling Basin. It generally inhabits woodland vegetation, including box and ironbark woodlands in arid and semi-arid inland areas.	<i>May occur.</i> Potentially suitable habitat is present but no previous records exist within the desktop search extent.
<i>Phascolarctos cinereus</i>	Koala	Vulnerable	Vulnerable	In Queensland, the species contains scattered populations throughout eucalypt woodlands along watercourses within semi-arid areas further west. The greatest density of koalas occurs in south-east Queensland, with lower densities occurring through central and eastern areas including the Brigalow Belt.	<i>Likely to occur.</i> Potentially suitable habitat is present and previous records exist within the desktop search extent.
Reptiles					
<i>Delma torquate</i>	Collared delma	Vulnerable	Vulnerable	The collared delma is known to occur in central and south-east Queensland. It normally inhabits eucalypt-dominated woodlands and open-forests, with rocks, logs, bark and other coarse woody debris, and mats of leaf litter.	<i>May occur.</i> Potentially suitable habitat is present but no previous records exist within the desktop search extent.
<i>Egernia rugosa</i>	Yakka skink	Vulnerable	Vulnerable	The known distribution of the Yakka skink extends from the coast to the hinterland of sub-humid to semi-arid eastern Queensland. The yakka skink is endemic to dry open forests, woodlands and rocky areas of central and eastern Queensland. Yakka skinks live in communal burrow complexes, and often take refuge among low vegetation or under heaped dead timber, logs, rocks and in deep rock crevices.	<i>Likely to occur.</i> Potentially suitable habitat is present and previous records exist within the desktop search extent.
<i>Furina dunmalli</i>	Dunmall's snake	Vulnerable	Vulnerable	Dunmall's snake occurs primarily in the Brigalow Belt region in the south-eastern interior of Queensland. This species is typically found in areas of Brigalow, riverside woodland and open forest on natural levees. Habitats featuring cracking clay and sandy substrates are known to be utilised by the species.	<i>May occur.</i> Potentially suitable habitat is present but no previous records exist within the desktop search extent.
Migratory species					
<i>Apus pacificus</i>	Fork-tailed swift	Migratory	Special least concern	Habitat preferences include open country from semi-deserts to coasts. Common and widespread across Australia (Pizzey and Knight, 2007).	<i>May occur.</i> Potentially suitable habitat is present but no previous records exist within the desktop search extent.

Scientific name	Common name	EPBC Act status	NC Act status	Distribution and preferred habitat*	Likelihood of occurrence
<i>Ardea alba</i>	Great egret	Migratory	Special least concern	Inhabits shallows of rivers, estuaries, tidal mudflats, freshwater wetlands, sewage ponds, irrigation areas and larger dams. This species is widespread throughout Australia (Pizzey and Knight, 2007).	Likely to occur. Potentially suitable habitat is present and previous records exist within the desktop search extent.
<i>Ardea ibis</i>	Cattle egret	Migratory	Special least concern	Occurs in stock paddocks, croplands, wetlands, tidal mudflats and drains. Widespread distribution in northern and eastern Australia, summer-Autumn migrant to Queensland (Pizzey and Knight, 2007).	Likely to occur. Potentially suitable habitat is present and previous records exist within the desktop search extent.
<i>Cuculus optatus</i>	Oriental cuckoo	Migratory	Special least concern	This species occurs in northern and eastern Australia. It primarily inhabits mixed forests.	May occur. Potentially suitable habitat is present but no previous records exist within the desktop search extent.
<i>Gallinago hardwickii</i>	Latham's snipe	Migratory	Special least concern	Latham's snipe occurs in wetlands in either permanent or ephemeral fresh or saline waters. The types of habitats range from wetlands with low, dense vegetation, grasslands or heaths, bogs, and artificial habitats close to human activity.	May occur. Potentially suitable habitat is present but no previous records exist within the desktop search extent.
<i>Merops ornatus</i>	Rainbow bee-eater	Migratory	Special least concern	The rainbow bee-eater is found in riparian areas containing eucalyptus forests and woodlands, mangroves and coastal forests, dry woodlands and open forests near wetlands and watercourses.	Likely to occur. Potentially suitable habitat is present and previous records exist within the desktop search extent.
<i>Motacilla flava</i>	Yellow wagtail	Migratory	Special least concern	This species occurs in a variety of damp or wet habitats with low vegetation.	May occur. Potentially suitable habitat is present but no previous records exist within the desktop search extent.
<i>Myiagra cyanoleuca</i>	Satin flycatcher	Migratory	Special least concern	Satin flycatchers inhabit heavily vegetated gullies in eucalypt-dominated forests and taller woodlands, and on migration, occur in coastal forests, woodlands, mangroves and drier woodlands and open forests.	Unlikely to occur. No suitable habitat is present and no previous records exist within the desktop search extent.
<i>Rhipidura rufifrons</i>	Rufous fantail	Migratory	Special least concern	In east and south-east Australia, the rufous fantail mainly inhabits wet sclerophyll forests, often in gullies dominated by eucalypts with a dense shrubby understorey often including ferns. When on passage, they are sometimes recorded in drier sclerophyll forests and woodlands often with a shrubby or heath understorey.	Unlikely to occur. No suitable habitat is present and no previous records exist within the desktop search extent.

* Note: The distribution and habitat requirements have been sourced from DotE's Species Profile and Threats (SPRAT) database on 17 December 2015 via <http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl>

4.4 Aquatic values

Results of the desktop assessment are summarised as follows:

- The Protected Matters Search Tool identified that one nationally threatened fish species is predicted to occur within the 2 km search radius (refer Appendix A), namely Murray cod (*Maccullochella peelii*).
- The Wildlife Online search revealed that no fish species of conservation significance have previously been recorded within the 2 km search radius (refer Appendix B):
- The MSES mapping identifies that no declared fish habitat, no high ecological value waters, and no high ecological value significance wetlands are mapped within the Study

The field survey noted that Bungil Creek is a highly disturbed ephemeral watercourse with an extensively cleared catchment and a narrow riparian vegetation zone and cattle grazing. Within the Project footprint, the creek has a primarily sandy substrate with some cobbles present. There was tall, mature riparian vegetation present; however, the width of the riparian vegetation was less than 20 m. Abundant large snags, woody debris, trailing vegetation, undercut banks and pools of water were observed and these characteristics provide a variety of habitat for aquatic fauna including fish when water is present.

The field survey noted that there is potential for Murray cod to be present within Bungil Creek during times of moderate to high flow. Generally, this species is found in waters up to 5 m deep and in areas with complex structural cover including rocks, snags, woody debris or overhanging banks. The Murray cod is most frequently found in main river channels and larger tributaries. It can also be found in floodplain channels when they contain water; although this usage appears limited.

5. Ecological constraints and recommendations

5.1 Overview

Ecological values that were identified within the Project footprint may be subject to two predominant impacts from the Project, namely:

- Direct removal as a result of levee construction or other earthworks
- Changes to the hydrological regime

Key ecological constraints that were identified by the assessment are identified in the sections below, together with corresponding recommendations for the Project, as relevant. A summary of ecological approval requirements for the Project is provided in Table 3.

5.2 Flora species

No constraints with regards to flora species have been identified by this assessment.

5.3 Threatened ecological communities

An area of Weeping Myall Woodland may be present adjacent to the Project footprint¹. Based on the current alignment, no direct impact to this community will occur (i.e. no vegetation clearing is proposed in proximity to the community). However, potential indirect impacts to this community may be experienced through changes to inundation depth, duration and/or frequency as a result of construction of the diversion drain. In this regards, the Commonwealth government's listing advice for this community states that:

"The Weeping Myall Woodlands generally occur on flat areas, shallow depressions or gilgais on raised (relict) alluvial plains. These areas are not associated with active drainage channels and are rarely if ever flooded (White et al. 2002; Keith 2004)."

As such, any proposal to modify the current flooding regime of this community in terms of depth, duration and/or frequency of inundation has the potential to impact this MNES. In order to confirm whether this vegetation meets the criteria necessary to constitute the TEC, permission to access the relevant property would need to be obtained and a survey can be undertaken to quantify the cover and composition of the community. Given the proximity of the vegetation to the alignment and the potential for indirect impact as a result of changes to inundation patterns, it is recommended that the need for an EPBC Referral be assessed following finalisation of the footprint and flood modelling.

5.4 Remnant Regional Ecosystems

Remnant REs are present within the alignment for the Western levee and the Eastern diversion. It is unlikely that the proposal will completely avoid impacts to REs given the extent of remnant vegetation along the entire length of the creek. The footprint within areas of remnant RE identified by Figure 2 should be minimised during Project design and construction.

The remnant REs within and adjacent to the Project footprint are riparian communities that are characteristically tolerant of occasional flooding, and as such it is not anticipated that the Project will lead to deterioration or reduced extent of remnant REs beyond the clearing zone.

¹ Note that access to the relevant property was not possible during the field survey such that it cannot currently be confirmed whether the vegetation meets the criteria to constitute the TEC.

The clearing extent should be clearly demarcated during vegetation removal so as to avoid any accidental clearing. Any ancillary works such as laydown areas should be located within areas that have already been cleared.

5.5 Terrestrial fauna

Terrestrial fauna habitat that may support threatened species (koala, yakka skink, grey snake) is present within the alignment for the Western levee and the Eastern diversion. Given the extent of habitat along the entire length of the creek, it is unlikely that clearing of suitable fauna habitat will be avoided. Similarly to above, the footprint within areas of remnant RE identified by Figure 2 should be minimised during Project design and construction.

With regards to yakka skink, the Commonwealth government's *Draft referral guidelines for the national listed Brigalow Belt reptiles* states that important habitat for this species is defined as:

"Any contiguous patch of suitable habitat, particularly remnant vegetation, where a colony is known or identified."

Given the relatively recent yakka skink record in close proximity to the Project footprint within remnant vegetation that is contiguous with remnant vegetation in the Project footprint, this is likely to constitute important habitat for yakka skink.

With regards to the koala, the Project footprint meets the criteria of Commonwealth government's koala habitat assessment tool to constitute habitat critical to survival of the koala.

An assessment of the potential for significant impacts to MNES is recommended to be undertaken once the proposed clearing extent is known. This will identify whether submission of an EPBC Referral is required.

Preparation of a Significant Species Management Program is recommended to comply with the provisions of the NC Regulations and is to be approved by DEHP prior to the commencement of works.

5.6 Aquatic values

One threatened fish species has the potential to occur within Bungil Creek, namely Murray cod. Works are currently not proposed within the watercourse, such that impacts to this species are unlikely. It is recommended that any works within the defined banks of the watercourse are avoided.

Should any change in design propose construction across Bungil Creek or propose works that will alter the watercourse, an application for a waterway barrier permit under the Fisheries Act may be necessary (unless the applicable self-assessable code can be complied with).

As the Project will alter overland flow, approval under the Water Act will be necessary. Schedule 15B of the *Water Regulation 2002* provides for the construction of levees. The proposed works constitute a Category 3 levee and consequently the State Development Assessment Provisions Module 7 will apply.

Table 3 Summary of ecological constraints and approvals

Legislation	Constraint	Recommendations	Approval required
Commonwealth			
EPBC Act	<ul style="list-style-type: none"> Potential presence of Weeping Myall Woodland TEC adjacent to the Project footprint Potential presence of significant species within the Project footprint (koala; yakka skink). 	<ul style="list-style-type: none"> Seek approval to access the relevant property to confirm the on-ground characteristics of the vegetation. Alternatively, assume that the vegetation does meet the TEC criteria and undertake an assessment against the EPBC Act Significant Impact Guidelines following finalisation of the footprint and flood modelling. Minimise the clearing footprint within areas of remnant REs, as possible. 	<p>Modification of the current flooding regime of this community in terms of depth, duration and/or frequency of inundation has the potential to impact this TEC. Following finalisation of the footprint and flood modelling, an assessment should be made to determine whether preparation of an EPBC Referral is necessary.</p> <p>Given the presence of a relatively recent yakka skink record in close proximity to the proposed works, together with the presence of potentially suitable habitat for yakka skink within the Project footprint, it is recommended that the need for an EPBC referral is considered. The Project may also result in the reduction of habitat critical to the survival of koala, and this should also be considered in terms of whether an EPBC referral is required.</p>
Queensland			
VM Act	<ul style="list-style-type: none"> Mapped RE is intersected by the Project footprint. 	<ul style="list-style-type: none"> Minimise the clearing footprint within areas of remnant REs, as possible. 	<p>Although the proposed works are classified by the SP Regulation as 'community infrastructure' (water cycle management), the clearing exemption for community infrastructure will not apply unless carried out on designated land. The approval options for the Project are:</p> <ul style="list-style-type: none"> Seek formal community infrastructure designation over the affected land;

Legislation	Constraint	Recommendations	Approval required
			<p>OR</p> <ul style="list-style-type: none"> Apply for operational works approval to undertake clearing. <p>Further, as on-ground observations noted discrepancies with the certified RE mapping, MRC may either accept the current mapping or prepare a Property Map of Assessable Vegetation (PMAV) application to refine the type and extent of REs.</p>
NC Act (flora)	Nil. No flora species of conservation significance are known or expected to occur within the Project footprint.	N/A	<p>As the Project footprint is not located within a High Risk Trigger Area (refer Appendix C), there is currently no requirement to undertake a Protected Plants Assessment in accordance requirements identified by the <i>Nature Conservation (Wildlife Management) Regulation 2006</i>. As all flora species to be removed are least concern, there is no requirement for a Protected Plants (Clearing Permit).</p>
NC Act (fauna)	<ul style="list-style-type: none"> Potential animal breeding places are present within the Project footprint. Potential presence of significant species (koala; yakka skink). 	<ul style="list-style-type: none"> Minimise the clearing footprint within areas of remnant REs, as possible. Engage a licensed fauna-spotter catcher when undertaking clearing. 	<p>A Significant Species Management Program is to be prepared and submitted to DEHP for approval to comply with the requirements of the provisions of the NC Regulations.</p>
Water Act	<ul style="list-style-type: none"> Interfering with overland flow 	<ul style="list-style-type: none"> Minimise the clearing footprint within the riparian zone, as possible. Prepare and implement an erosion and sediment control plan. 	<p>Schedule 15B of the <i>Water Regulation 2002</i> provides for the construction of levees. The proposed works constitute a Category 3 levee and consequently the State Development Assessment Provisions Module 7 will apply.</p>

Legislation	Constraint	Recommendations	Approval required
Fisheries Act	<ul style="list-style-type: none"> Watercourse 	<ul style="list-style-type: none"> No works are to be undertaken within the watercourse. 	Works are currently not proposed within the watercourse. Should any change in design propose construction across Bungil Creek or propose works that will alter the watercourse, an application for a waterway barrier permit under the Fisheries Act may be necessary (unless the works can be completed under the relevant self-assessable code).
EO Act	<ul style="list-style-type: none"> MSES Regulated Vegetation 	<ul style="list-style-type: none"> Minimise the clearing footprint within areas of mapped MSES Regulated Vegetation, as possible. 	Provision of an offset under the EO Act may be necessary if significant residual impacts to an MSES are predicted to occur. If clearing of the of concern REs can be limited to a width of 20 m and an area of 3 ha, the MSES <i>Significant Impact Guidelines</i> state that a significant residual impact is unlikely to occur, in which case the project will not require an environmental offset for impacts to MSES Regulated Vegetation.

6. References

Keith, D. (2004) Ocean shores to desert dunes: the native vegetation of New South Wales and the ACT. NSW Department of Environment and Conservation, Sydney.

Queensland Herbarium (2015) Regional Ecosystem Description Database (REDD). Version 9.0, April 2015. Department of Science, Information Technology and Innovation, Brisbane.

White, M., Muir, A.M. and Webster, R. (2002) The reconstructed distribution of indigenous vegetation types across the NSW Riverina. A draft report to the NSW National Parks and Wildlife Service. NSW National Parks and Wildlife Service. Ecology Australia Pty. Ltd., Fairfield

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The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in this report. GHD disclaims liability arising from any of the assumptions being incorrect.

RTI RELEASE - DSDMIP

Appendices

Appendix A – Protected Matters Search Tool results

RTI RELEASE - DSDMIP



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: 20/11/15 14:10:34

[Summary](#)

[Details](#)

[Matters of NES](#)

[Other Matters Protected by the EPBC Act](#)

[Extra Information](#)

[Caveat](#)

[Acknowledgements](#)



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[Coordinates](#)
[Buffer: 2.0Km](#)



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](#).

<u>World Heritage Properties:</u>	None
<u>National Heritage Places:</u>	None
<u>Wetlands of International Importance:</u>	4
<u>Great Barrier Reef Marine Park:</u>	None
<u>Commonwealth Marine Area:</u>	None
<u>Listed Threatened Ecological Communities:</u>	2
<u>Listed Threatened Species:</u>	12
<u>Listed Migratory Species:</u>	9

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>

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.

<u>Commonwealth Land:</u>	1
<u>Commonwealth Heritage Places:</u>	None
<u>Listed Marine Species:</u>	11
<u>Whales and Other Cetaceans:</u>	None
<u>Critical Habitats:</u>	None
<u>Commonwealth Reserves Terrestrial:</u>	None
<u>Commonwealth Reserves Marine:</u>	None

Extra Information

This part of the report provides information that may also be relevant to the area you have nominated.

<u>State and Territory Reserves:</u>	None
<u>Regional Forest Agreements:</u>	None
<u>Invasive Species:</u>	22
<u>Nationally Important Wetlands:</u>	None
<u>Key Ecological Features (Marine):</u>	None

Details

Matters of National Environmental Significance

Wetlands of International Importance (Ramsar)	[Resource Information]
Name	Proximity
<u>Banrock station wetland complex</u>	1100 - 1200km
<u>Narran lake nature reserve</u>	300 - 400km upstream
<u>Riverland</u>	1100 - 1200km
<u>The coorong, and lakes alexandrina and albert wetland</u>	1300 - 1400km

Listed Threatened Ecological Communities

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
<u>Coolibah - Black Box Woodlands of the Darling</u> <u>Riverine Plains and the Brigalow Belt South Bioregions</u>	Endangered	Community may occur within area
<u>Weeping Myall Woodlands</u>	Endangered	Community likely to occur within area

Listed Threatened Species

Name	Status	Type of Presence
Birds		
<u>Erythrorichis radiatus</u> Red Goshawk [942]	Vulnerable	Species or species habitat may occur within area
<u>Geophaps scripta scripta</u> Squatter Pigeon (southern) [64440]	Vulnerable	Species or species habitat may occur within area
<u>Grantiella picta</u> Painted Honeyeater [470]	Vulnerable	Species or species habitat known to occur within area
<u>Rostratula australis</u> Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area
Fish		
<u>Maccullochella peelii</u> Murray Cod [66633]	Vulnerable	Species or species habitat may occur within area
Mammals		
<u>Chalinolobus dwyeri</u> Large-eared Pied Bat, Large Pied Bat [183]	Vulnerable	Species or species habitat may occur within area
<u>Dasyurus hallucatus</u> Northern Quoll [331]	Endangered	Species or species habitat may occur within area
<u>Nyctophilus corbeni</u> Corben's Long-eared Bat, South-eastern Long-eared Bat [83395]	Vulnerable	Species or species habitat may occur within area

Name	Status	Type of Presence
<u>Phascolarctos cinereus</u> (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 known to occur within area
Reptiles		
<u>Delma torquata</u>		
Collared Delma [1656]	Vulnerable	Species or species habitat may occur within area
<u>Egernia rugosa</u>		
Yakka Skink [1420]	Vulnerable	Species or species habitat known to occur within area
<u>Furina dunmali</u>		
Dunmall's Snake [59254]	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		
<u>Apus pacificus</u>		
Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Migratory Terrestrial Species		
<u>Cuculus optatus</u>		
Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat may occur within area
<u>Merops ornatus</u>		
Rainbow Bee-eater [670]		Species or species habitat may occur within area
<u>Motacilla flava</u>		
Yellow Wagtail [644]		Species or species habitat may occur within area
<u>Myiagra cyanoleuca</u>		
Satin Flycatcher [612]		Species or species habitat may occur within area
<u>Rhipidura rufifrons</u>		
Rufous Fantail [592]		Species or species habitat known to occur within area
Migratory Wetlands Species		
<u>Ardea alba</u>		
Great Egret, White Egret [59541]		Species or species habitat known to occur within area
<u>Ardea ibis</u>		
Cattle Egret [59542]		Species or species habitat may occur within area
<u>Gallinago hardwickii</u>		
Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area

Other Matters Protected by the EPBC Act

Commonwealth Land

[Resource Information]

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Name

Defence - ROMA TRAINING DEPOT

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

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

Cuculus saturatus

Oriental Cuckoo, Himalayan Cuckoo [710]

Species or species habitat may occur within area

Gallinago hardwickii

Latham's Snipe, Japanese Snipe [863]

Species or species habitat may occur within area

Haliaeetus leucogaster

White-bellied Sea-Eagle [943]

Species or species habitat likely to occur within area

Merops ornatus

Rainbow Bee-eater [670]

Species or species habitat may occur within area

Motacilla flava

Yellow Wagtail [644]

Species or species habitat may occur within area

Myiagra cyanoleuca

Satin Flycatcher [612]

Species or species habitat may occur within area

Rhipidura rufifrons

Rufous Fantail [592]

Species or species habitat known to occur within area

Rostratula benghalensis (sensu lato)

Painted Snipe [889]

Endangered*

Species or species habitat likely to occur within area

Extra Information

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 Resources Audit, 2001.

Name	Status	Type of Presence
Birds		
<i>Anas platyrhynchos</i> Mallard [974]		Species or species habitat likely to occur within area
<i>Columba livia</i> Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitat likely to occur within area
<i>Passer domesticus</i> House Sparrow [405]		Species or species habitat likely to occur within area
<i>Sturnus vulgaris</i> Common Starling [389]		Species or species habitat likely to occur within area
Frogs		
<i>Rhinella marina</i> Cane Toad [83218]		Species or species habitat likely to occur within area
Mammals		
<i>Bos taurus</i> Domestic Cattle [16]		Species or species habitat likely to occur within area
<i>Felis catus</i> Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
<i>Oryctolagus cuniculus</i> Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
<i>Sus scrofa</i> Pig [6]		Species or species habitat likely to occur within area
<i>Vulpes vulpes</i> Red Fox, Fox [18]		Species or species habitat likely to occur within area
Plants		
<i>Acacia nilotica</i> subsp. <i>indica</i> Prickly Acacia [6196]		Species or species habitat may occur within area
<i>Asparagus africanus</i> Climbing Asparagus, Climbing Asparagus Fern [66907]		Species or species habitat likely to occur within area
<i>Asparagus plumosus</i> Climbing Asparagus-fern [48993]		Species or species habitat likely to occur within area
<i>Dolichandra unguis-cati</i> Cat's Claw Vine, Yellow Trumpet Vine, Cat's Claw Creeper, Funnel Creeper [85119]		Species or species habitat likely to occur

Name	Status	Type of Presence
<p>Lantana camara Lantana, Common Lantana, Kamara Lantana, Large-leaf Lantana, Pink Flowered Lantana, Red Flowered Lantana, Red-Flowered Sage, White Sage, Wild Sage [10892]</p>		<p>within area Species or species habitat likely to occur within area</p>
<p>Lycium ferocissimum African Boxthorn, Boxthorn [19235]</p>		<p>Species or species habitat likely to occur within area</p>
<p>Opuntia spp. Prickly Pears [82753]</p>		<p>Species or species habitat likely to occur within area</p>
<p>Parkinsonia aculeata Parkinsonia, Jerusalem Thorn, Jelly Bean Tree, Horse Bean [12301]</p>		<p>Species or species habitat likely to occur within area</p>
<p>Parthenium hysterophorus Parthenium Weed, Bitter Weed, Carrot Grass, False Ragweed [19566]</p>		<p>Species or species habitat likely to occur within area</p>
<p>Protasparagus plumosus Climbing Asparagus-fern, Ferny Asparagus [11747]</p>		<p>Species or species habitat likely to occur within area</p>
<p>Senecio madagascariensis Fireweed, Madagascar Ragwort, Madagascar Groundsel [2624]</p>		<p>Species or species habitat likely to occur within area</p>
<hr/>		
<p>Reptiles Hemidactylus frenatus Asian House Gecko [1708]</p>		<p>Species or species habitat likely to occur within area</p>

RTI RELEASE - DCS/MP

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

-26.5687 148.8025

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:

- [Office of Environment and Heritage, New South Wales](#)
- [Department of Environment and Primary Industries, Victoria](#)
- [Department of Primary Industries, Parks, Water and Environment, Tasmania](#)
- [Department of Environment, Water and Natural Resources, South Australia](#)
- [Parks and Wildlife Commission NT, Northern Territory Government](#)
- [Department of Environmental and Heritage Protection, Queensland](#)
- [Department of Parks and Wildlife, Western Australia](#)
- [Environment and Planning Directorate, ACT](#)
- [Birdlife Australia](#)
- [Australian Bird and Bat Banding Scheme](#)
- [Australian National Wildlife Collection](#)
- [Natural history museums of Australia](#)
- [Museum Victoria](#)
- [Australian Museum](#)
- [South Australian 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 Forestry Corporation, 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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Appendix B – Wildlife Online results

RTI RELEASE - DSDMIP



Queensland Government

Wildlife Online Extract

Search Criteria: Species List for a Specified Point

Species: All

Type: All

Status: All

Records: All

Date: All

Latitude: -26.5687

Longitude: 148.8025

Distance: 2

Email: megan.ward@ghd.com

Date submitted: Friday 20 Nov 2015 13:11:46

Date extracted: Friday 20 Nov 2015 13:20:03

The number of records retrieved = 205

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 responsibility for this information and all liability (including without limitation, liability in negligence) for all expenses, losses, damages and costs you may incur as a result of the information being inaccurate or incomplete in any way for any reason.

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	amphibians	Bufo	<i>Rhinella marina</i>	cane toad	Y			6
animals	amphibians	Hylidae	<i>Litoria peronii</i>	emerald spotted treefrog		C		1/1
animals	amphibians	Hylidae	<i>Litoria rubella</i>	ruddy treefrog		C		1/1
animals	amphibians	Hylidae	<i>Cyclorana cultripes</i>	grassland collared frog		C		1
animals	amphibians	Hylidae	<i>Cyclorana verrucosa</i>	rough collared frog		C		1
animals	amphibians	Hylidae	<i>Litoria fallax</i>	eastern sedgefrog		C		4
animals	amphibians	Hylidae	<i>Litoria caerulea</i>	common green treefrog		C		25/25
animals	amphibians	Myobatrachidae	<i>Crinia parinsignifera</i>	beeping froglet		C		1
animals	birds	Acanthizidae	<i>Gerygone fusca</i>	western gerygone		C		7
animals	birds	Acanthizidae	<i>Gerygone olivacea</i>	white-throated gerygone		C		15
animals	birds	Acanthizidae	<i>Smicromnis brevirostris</i>	weebill		C		17
animals	birds	Acanthizidae	<i>Acanthiza uropygialis</i>	chestnut-rumped thornbill		C		3
animals	birds	Acanthizidae	<i>Acanthiza chrysorrhoa</i>	yellow-rumped thornbill		C		13
animals	birds	Accipitridae	<i>Elanus axillaris</i>	black-shouldered kite		C		2
animals	birds	Accipitridae	<i>Accipiter fasciatus</i>	brown goshawk		C		1
animals	birds	Accipitridae	<i>Hieraaetus morphnoides</i>	little eagle		C		1
animals	birds	Accipitridae	<i>Accipiter cirrocephalus</i>	collared sparrowhawk		C		1
animals	birds	Accipitridae	<i>Aquila audax</i>	wedge-tailed eagle		C		1
animals	birds	Accipitridae	<i>Milvus migrans</i>	black kite		C		7
animals	birds	Acrocephalidae	<i>Acrocephalus australis</i>	Australian reed-warbler		SL		2
animals	birds	Aegothelidae	<i>Aegotheles cristatus</i>	Australian owl-nightjar		C		1
animals	birds	Anatidae	<i>Biziura lobata</i>	musk duck		C		1
animals	birds	Anatidae	<i>Anas gracilis</i>	grey teal		C		3
animals	birds	Anatidae	<i>Anas sp.</i>					1
animals	birds	Anatidae	<i>Cygnus atratus</i>	black swan		C		1
animals	birds	Anatidae	<i>Aythya australis</i>	hardhead		C		1
animals	birds	Anatidae	<i>Anas superciliosa</i>	Pacific black duck		C		21
animals	birds	Anatidae	<i>Chenonetta jubata</i>	Australian wood duck		C		13
animals	birds	Anatidae	<i>Anas platyrhynchos</i>	northern mallard	Y			9
animals	birds	Anatidae	<i>Dendrocygna eytoni</i>	plumed whistling-duck		C		1
animals	birds	Anhingidae	<i>Anhinga novaehollandiae</i>	Australasian darter		C		3
animals	birds	Apodidae	<i>Hirundapus caudacutus</i>	white-throated needletail		SL		1
animals	birds	Ardeidae	<i>Nycticorax caledonicus</i>	nankeen night-heron		C		2
animals	birds	Ardeidae	<i>Ardea alba modesta</i>	eastern great egret		SL		2
animals	birds	Ardeidae	<i>Ardea intermedia</i>	intermediate egret		C		2
animals	birds	Ardeidae	<i>Ardea pacifica</i>	white-necked heron		C		5
animals	birds	Ardeidae	<i>Egretta novaehollandiae</i>	white-faced heron		C		9
animals	birds	Ardeidae	<i>Ardea ibis</i>	cattle egret		SL		1
animals	birds	Artamidae	<i>Cracticus nigrogularis</i>	piebald butcherbird		C		19
animals	birds	Artamidae	<i>Artamus leucorhynchus</i>	white-breasted woodswallow		C		7
animals	birds	Artamidae	<i>Cracticus torquatus</i>	grey butcherbird		C		12
animals	birds	Artamidae	<i>Strepera graculina</i>	piebald currawong		C		9
animals	birds	Artamidae	<i>Cracticus tibicen</i>	Australian magpie		C		29
animals	birds	Cacatuidae	<i>Nymphicus hollandicus</i>	cockatiel		C		11
animals	birds	Cacatuidae	<i>Cacatua galerita</i>	sulphur-crested cockatoo		C		10
animals	birds	Cacatuidae	<i>Eolophus roseicapillus</i>	galah		C		35

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	birds	Campephagidae	<i>Coracina novaehollandiae</i>	black-faced cuckoo-shrike		C		17
animals	birds	Campephagidae	<i>Lalage tricolor</i>	white-winged triller		C		8
animals	birds	Charadriidae	<i>Vanellus miles miles</i>	masked lapwing (northern subspecies)		C		7
animals	birds	Charadriidae	<i>Vanellus tricolor</i>	banded lapwing		C		1
animals	birds	Charadriidae	<i>Vanellus miles</i>	masked lapwing		C		6
animals	birds	Climacteridae	<i>Climacteris picumnus</i>	brown treecreeper		C		1
animals	birds	Columbidae	<i>Ocyphaps lophotes</i>	crested pigeon		C		33
animals	birds	Columbidae	<i>Geopelia striata</i>	peaceful dove		C		3
animals	birds	Columbidae	<i>Columba livia</i>	rock dove	Y	C		9
animals	birds	Coraciidae	<i>Eurystomus orientalis</i>	dollarbird		C		5
animals	birds	Corcoracidae	<i>Corcorax melanorhamphos</i>	white-winged chough		C		4
animals	birds	Corcoracidae	<i>Struthidea cinerea</i>	apostlebird		C		23
animals	birds	Corvidae	<i>Corvus sp.</i>					1
animals	birds	Corvidae	<i>Corvus orru</i>	Torresian crow		C		33
animals	birds	Corvidae	<i>Corvus bennetti</i>	little crow		C		2
animals	birds	Corvidae	<i>Corvus coronoides</i>	Australian raven		C		7
animals	birds	Cuculidae	<i>Scythrops novaehollandiae</i>	channel-billed cuckoo		C		2
animals	birds	Cuculidae	<i>Cacomantis pallidus</i>	pallid cuckoo		C		1
animals	birds	Cuculidae	<i>Centropus phasianinus</i>	pheasant coucal		C		1
animals	birds	Cuculidae	<i>Eudynamis orientalis</i>	eastern koel		C		2
animals	birds	Estrildidae	<i>Taeniopygia bichenovii</i>	double-barred finch		C		1
animals	birds	Estrildidae	<i>Taeniopygia guttata</i>	zebra finch		C		2
animals	birds	Falconidae	<i>Falco peregrinus</i>	peregrine falcon		C		1
animals	birds	Falconidae	<i>Falco longipennis</i>	Australian hobby		C		4
animals	birds	Falconidae	<i>Falco cenchroides</i>	nankeen kestrel		C		8
animals	birds	Halcyonidae	<i>Dacelo novaeguineae</i>	laughing kookaburra		C		15
animals	birds	Halcyonidae	<i>Todiramphus sanctus</i>	sacred kingfisher		C		5
animals	birds	Hirundinidae	<i>Petrochelidon ariel</i>	fairy martin		C		2
animals	birds	Hirundinidae	<i>Hirundo neoxena</i>	welcome swallow		C		13
animals	birds	Hirundinidae	<i>Petrochelidon nigricans</i>	tree martin		C		4
animals	birds	Maluridae	<i>Malurus leucopterus</i>	white-winged fairy-wren		C		3
animals	birds	Maluridae	<i>Malurus lamberti</i>	variegated fairy-wren		C		3
animals	birds	Maluridae	<i>Malurus cyaneus</i>	superb fairy-wren		C		8/1
animals	birds	Megaluridae	<i>Megalurus gramineus</i>	little grassbird		C		1
animals	birds	Megaluridae	<i>Cincloramphus mathewsi</i>	rufous songlark		C		2
animals	birds	Meliphagidae	<i>Manorina melanocephala</i>	noisy miner		C		25
animals	birds	Meliphagidae	<i>Philemon citreogularis</i>	little friarbird		C		15
animals	birds	Meliphagidae	<i>Acanthagenys rufogularis</i>	spiny-cheeked honeyeater		C		4
animals	birds	Meliphagidae	<i>Plectorhyncha lanceolata</i>	striped honeyeater		C		12
animals	birds	Meliphagidae	<i>Ptilotula penicillata</i>	white-plumed honeyeater		C		8
animals	birds	Meliphagidae	<i>Philemon corniculatus</i>	noisy friarbird		C		3
animals	birds	Meliphagidae	<i>Lichmera indistincta</i>	brown honeyeater		C		11
animals	birds	Meliphagidae	<i>Gavicalis virescens</i>	singing honeyeater		C		1
animals	birds	Meliphagidae	<i>Entomyzon cyanotis</i>	blue-faced honeyeater		C		23
animals	birds	Meliphagidae	<i>Manorina flavigula</i>	yellow-throated miner		C		21
animals	birds	Meropidae	<i>Merops ornatus</i>	rainbow bee-eater		SL		3

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	birds	Monarchidae	<i>Grallina cyanoleuca</i>	magpie-lark		C		43
animals	birds	Monarchidae	<i>Myiagra inquieta</i>	restless flycatcher		C		1
animals	birds	Motacillidae	<i>Anthus novaeseelandiae</i>	Australasian pipit		C		4
animals	birds	Nectariniidae	<i>Dicaeum hirundinaceum</i>	mistletoebird		C		1
animals	birds	Oriolidae	<i>Oriolus sagittatus</i>	olive-backed oriole		C		2
animals	birds	Oriolidae	<i>Sphecotheres vieilloti</i>	Australasian figbird		C		9
animals	birds	Otididae	<i>Ardeotis australis</i>	Australian bustard		C		2
animals	birds	Pachycephalidae	<i>Colluricincla harmonica</i>	grey shrike-thrush		C		1
animals	birds	Pachycephalidae	<i>Pachycephala rufiventris</i>	rufous whistler		C		3
animals	birds	Pardalotidae	<i>Pardalotus punctatus</i>	spotted pardalote		C		1
animals	birds	Pardalotidae	<i>Pardalotus striatus</i>	striated pardalote		C		20
animals	birds	Passeridae	<i>Passer domesticus</i>	house sparrow	Y			21
animals	birds	Pelecanidae	<i>Pelecanus conspicillatus</i>	Australian pelican		C		2
animals	birds	Phaethontidae	<i>Phaethon lepturus</i>	white-tailed tropicbird		SL		2
animals	birds	Phalacrocoracidae	<i>Phalacrocorax sulcirostris</i>	little black cormorant		C		1
animals	birds	Phalacrocoracidae	<i>Phalacrocorax carbo</i>	great cormorant		C		1
animals	birds	Phalacrocoracidae	<i>Microcarbo melanoleucos</i>	little pied cormorant		C		5
animals	birds	Phasianidae	<i>Coturnix ypsilophora</i>	brown quail		C		2
animals	birds	Podargidae	<i>Podargus strigoides</i>	tawny frogmouth		C		4
animals	birds	Podicipedidae	<i>Tachybaptus novaehollandiae</i>	Australasian grebe		C		1
animals	birds	Pomatostomidae	<i>Pomatostomus temporalis</i>	grey-crowned babbler		C		2
animals	birds	Psittacidae	<i>Trichoglossus chlorolepidotus</i>	scaly-breasted lorikeet		C		5
animals	birds	Psittacidae	<i>Barnardius zonarius</i>	Australian ringneck		C		7
animals	birds	Psittacidae	<i>Parvipsitta pusilla</i>	little lorikeet		C		2
animals	birds	Psittacidae	<i>Platycercus adscitus</i>	pale-headed rosella		C		17
animals	birds	Psittacidae	<i>Psephotus haematonotus</i>	red-rumped parrot		C		4
animals	birds	Psittacidae	<i>Melopsittacus undulatus</i>	budgerigar		C		1
animals	birds	Psittacidae	<i>Northiella haematogaster</i>	blue bonnet		C		2
animals	birds	Psittacidae	<i>Trichoglossus haematodus moluccanus</i>	rainbow lorikeet		C		24
animals	birds	Psittacidae	<i>Aprosmictus erythropterus</i>	red-winged parrot		C		6
animals	birds	Ptilonorhynchidae	<i>Ptilonorhynchus maculatus</i>	spotted bowerbird		C		3
animals	birds	Rallidae	<i>Fulica atra</i>	Eurasian coot		C		1
animals	birds	Rallidae	<i>Gallinula tenebrosa</i>	dusky moorhen		C		1
animals	birds	Recurvirostridae	<i>Himantopus himantopus</i>	black-winged stilt		C		2
animals	birds	Rhipiduridae	<i>Rhipidura albiscapa</i>	grey fantail		C		3
animals	birds	Rhipiduridae	<i>Rhipidura leucophrys</i>	willie wagtail		C		32
animals	birds	Sturnidae	<i>Sturnus vulgaris</i>	common starling	Y			26
animals	birds	Threskiornithidae	<i>Threskiornis spinicollis</i>	straw-necked ibis		C		10
animals	birds	Threskiornithidae	<i>Threskiornis molucca</i>	Australian white ibis		C		6
animals	birds	Threskiornithidae	<i>Platalea regia</i>	royal spoonbill		C		1
animals	birds	Timaliidae	<i>Zosterops lateralis</i>	silveryeye		C		2
animals	mammals	Emballonuridae	<i>Saccolaimus flaviventris</i>	yellow-bellied sheath-tail bat		C		2
animals	mammals	Molossidae	<i>Mormopterus lumsdenae</i>	northern free-tailed bat		C		1
animals	mammals	Peramelidae	<i>Isodon macrourus</i>	northern brown bandicoot		C		1
animals	mammals	Phalangeridae	<i>Trichosurus vulpecula</i>	common brushtail possum		C		2
animals	mammals	Phascolarctidae	<i>Phascolarctos cinereus</i>	koala		V	V	5

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	mammals	Pteropodidae	<i>Pteropus alecto</i>	black flying-fox		C		1
animals	mammals	Pteropodidae	<i>Pteropus scapulatus</i>	little red flying-fox		C		9
animals	mammals	Vespertilionidae	<i>Scotorepens greyii</i>	little broad-nosed bat		C		1
animals	mammals	Vespertilionidae	<i>Scotorepens balstoni</i>	inland broad-nosed bat		C		2
animals	ray-finned fishes	Cyprinidae	<i>Carassius auratus</i>	goldfish	Y			1
animals	reptiles	Chelidae	<i>Chelodina expansa</i>	broad-shelled river turtle		C		1
animals	reptiles	Elapidae	<i>Pseudechis australis</i>	king brown snake		C		1/1
animals	reptiles	Elapidae	<i>Demansia psammophis</i>	yellow-faced whipsnake		C		1
animals	reptiles	Elapidae	<i>Furina diadema</i>	red-naped snake		C		1
animals	reptiles	Elapidae	<i>Denisonia devisi</i>	De Vis' banded snake		C		2
animals	reptiles	Elapidae	<i>Hemiaspis damelii</i>	grey snake		E		2/2
animals	reptiles	Gekkonidae	<i>Heteronotia binoei</i>	Bynoe's gecko		C		2/2
animals	reptiles	Gekkonidae	<i>Gehyra dubia</i>			C		1/1
animals	reptiles	Scincidae	<i>Egernia striolata</i>	tree skink		C		1
animals	reptiles	Scincidae	<i>Ctenotus spaldingi</i>			C		1
animals	reptiles	Scincidae	<i>Tiliqua rugosa</i>			C		3/1
animals	reptiles	Scincidae	<i>Cryptoblepharus australis</i>	inland snake-eyed skink		C		1
animals	reptiles	Scincidae	<i>Egernia rugosa</i>	yakka skink		V	V	1
animals	reptiles	Scincidae	<i>Tiliqua scincoides</i>	eastern blue-tongued lizard		C		1/1
animals	reptiles	Scincidae	<i>Anomalopus leuckartii</i>			C		4
animals	reptiles	Typhlopidae	<i>Anilius wiedii</i>	brown-snouted blind snake		C		1
animals	reptiles	Varanidae	<i>Varanus varius</i>	lace monitor		C		3/1
animals	uncertain	Indeterminate	<i>Indeterminate</i>	Unknown or Code Pending		C		2
plants	higher dicots	Acanthaceae	<i>Ruellia simplex</i>		Y			3/3
plants	higher dicots	Anacardiaceae	<i>Schinus terebinthifolius</i>		Y			1/1
plants	higher dicots	Anacardiaceae	<i>Schinus molle var. areira</i>	pepper tree	Y			1/1
plants	higher dicots	Asteraceae	<i>Tridax procumbens</i>	tridax daisy	Y			1/1
plants	higher dicots	Asteraceae	<i>Vittadinia pterochaeta</i>	rough fuzzweed			C	1/1
plants	higher dicots	Asteraceae	<i>Parthenium hysterophorus</i>	parthenium weed	Y			1/1
plants	higher dicots	Asteraceae	<i>Senecio madagascariensis</i>	fireweed	Y			1/1
plants	higher dicots	Asteraceae	<i>Sonchus oleraceus</i>	common sowthistle	Y			1/1
plants	higher dicots	Bignoniaceae	<i>Dolichandra unguis-cati</i>	cat's claw creeper	Y			1/1
plants	higher dicots	Boraginaceae	<i>Cynoglossum australe</i>				C	1/1
plants	higher dicots	Brassicaceae	<i>Rapistrum rugosum</i>		Y			1/1
plants	higher dicots	Brassicaceae	<i>Sisymbrium irio</i>	london rocket	Y			1/1
plants	higher dicots	Campanulaceae	<i>Wahlenbergia gracilis</i>	sprawling bluebell			C	1/1
plants	higher dicots	Chenopodiaceae	<i>Atriplex muelleri</i>	lagoon saltbush			C	1/1
plants	higher dicots	Convolvulaceae	<i>Ipomoea cairica</i>		Y			2/2
plants	higher dicots	Euphorbiaceae	<i>Euphorbia serpens</i>		Y			1/1
plants	higher dicots	Euphorbiaceae	<i>Euphorbia hirta</i>		Y			1/1
plants	higher dicots	Geraniaceae	<i>Erodium crinitum</i>	blue crowfoot			C	1/1
plants	higher dicots	Loranthaceae	<i>Amyema congener subsp. rotundifolia</i>				C	1/1
plants	higher dicots	Moraceae	<i>Morus alba</i>	white mulberry	Y			1/1
plants	higher dicots	Nyctaginaceae	<i>Boerhavia pubescens</i>				C	1/1
plants	higher dicots	Oleaceae	<i>Jasminum didymum subsp. lineare</i>				C	1/1
plants	higher dicots	Onagraceae	<i>Oenothera speciosa</i>		Y			1/1

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
plants	higher dicots	Oxalidaceae	<i>Oxalis thompsoniae</i>				C	1/1
plants	higher dicots	Rosaceae	<i>Prunus persica</i> var. <i>persica</i>		Y			1/1
plants	higher dicots	Rubiaceae	<i>Asperula conferta</i>				C	1/1
plants	higher dicots	Salicaceae	<i>Salix babylonica</i>	weeping willow	Y			1/1
plants	higher dicots	Sapindaceae	<i>Cardiospermum grandiflorum</i>	heart seed vine	Y			1/1
plants	higher dicots	Solanaceae	<i>Cestrum parqui</i>	green cestrum	Y			1/1
plants	higher dicots	Solanaceae	<i>Solanum nodiflorum</i>		Y			1/1
plants	higher dicots	Solanaceae	<i>Lycium ferocissimum</i>	African boxthorn	Y			2/2
plants	higher dicots	Verbenaceae	<i>Phyla canescens</i>		Y			1/1
plants	lower dicots	Ranunculaceae	<i>Clematis microphylla</i>		Y		C	1/1
plants	monocots	Alliaceae	<i>Nothoscordum borbonicum</i>		Y			2/2
plants	monocots	Arecaceae	<i>Phoenix dactylifera</i>		Y			1/1
plants	monocots	Asparagaceae	<i>Asparagus africanus</i>	ornamental asparagus	Y			1/1
plants	monocots	Asparagaceae	<i>Asparagus plumosus</i>	feathered asparagus fern	Y			1/1
plants	monocots	Cyperaceae	<i>Cyperus rotundus</i>	nutgrass	Y			1/1
plants	monocots	Poaceae	<i>Cynodon dactylon</i> var. <i>dactylon</i>		Y			1/1
plants	monocots	Poaceae	<i>Sporobolus coromandelianus</i>		Y			1/1
plants	monocots	Poaceae	<i>Urochloa mosambicensis</i>	sabi grass	Y			1/1
plants	monocots	Poaceae	<i>Rytidosperma tenuius</i>				C	1/1
plants	monocots	Poaceae	<i>Triticum aestivum</i>	wheat	Y			1/1
plants	monocots	Poaceae	<i>Arundo donax</i>		Y			1/1

CODES

I - Y indicates that the taxon is introduced to Queensland and has naturalised.

Q - 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 ().

A - 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).

Records - 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 C – Protected Plant Trigger Map

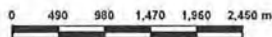
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Protected Plants Flora Survey Trigger Map

Legend

- Coordinates
- High risk area
- Cadastral line
- Property boundaries shown are provided as a locational aid only
- Freeways / motorways / highways
- Secondary roads / streets



This product is projected into:
 GDA 1994 Queensland Albers

This map shows areas where particular provisions of the Nature Conservation Act 1992 apply to the clearing of protected plants.

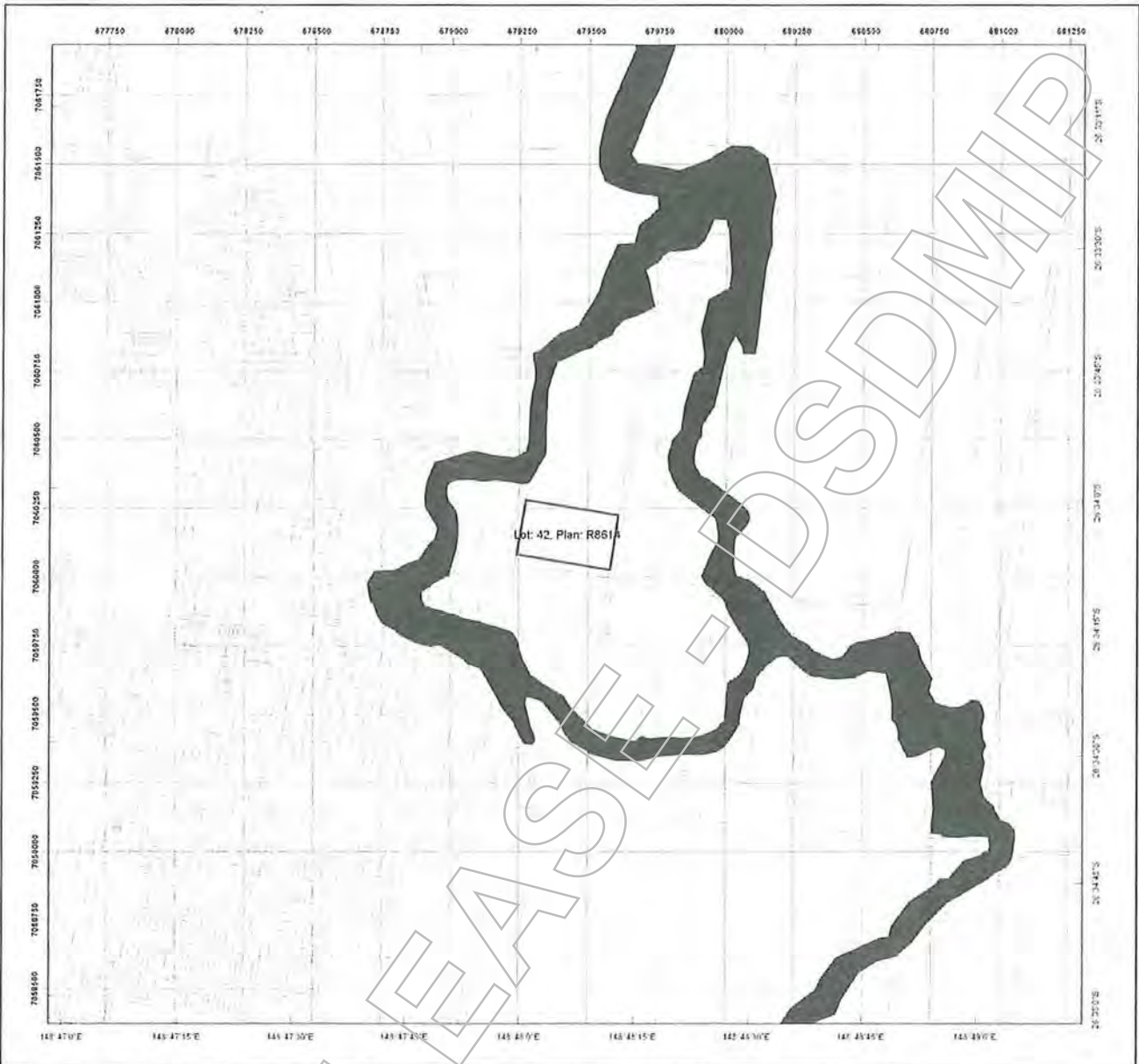
This map is produced at a scale relevant to the size of the area selected and should be printed as A4 size in portrait orientation.

For further information or assistance with interpretation of this product, please contact the Department of Environment and Heritage Protection at palm@ehp.qld.gov.au

Disclaimer:
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Appendix D – Regulated Vegetation Management
Map

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Regulated Vegetation Management Map

Legend

- Lot and Plan
- Category A area (Vegetation offsets compliance notices / Decs)
- Category B area (Remnant vegetation)
- Category C area (High-value regrowth vegetation)
- Category R area (Reef regrowth watersource vegetation)
- Category X area (Vegetation not regulated under the VMA)
- Water
- Area not categorised
- Cadastral line
- Property boundaries shown are provided as a locational aid only



Disclaimer:

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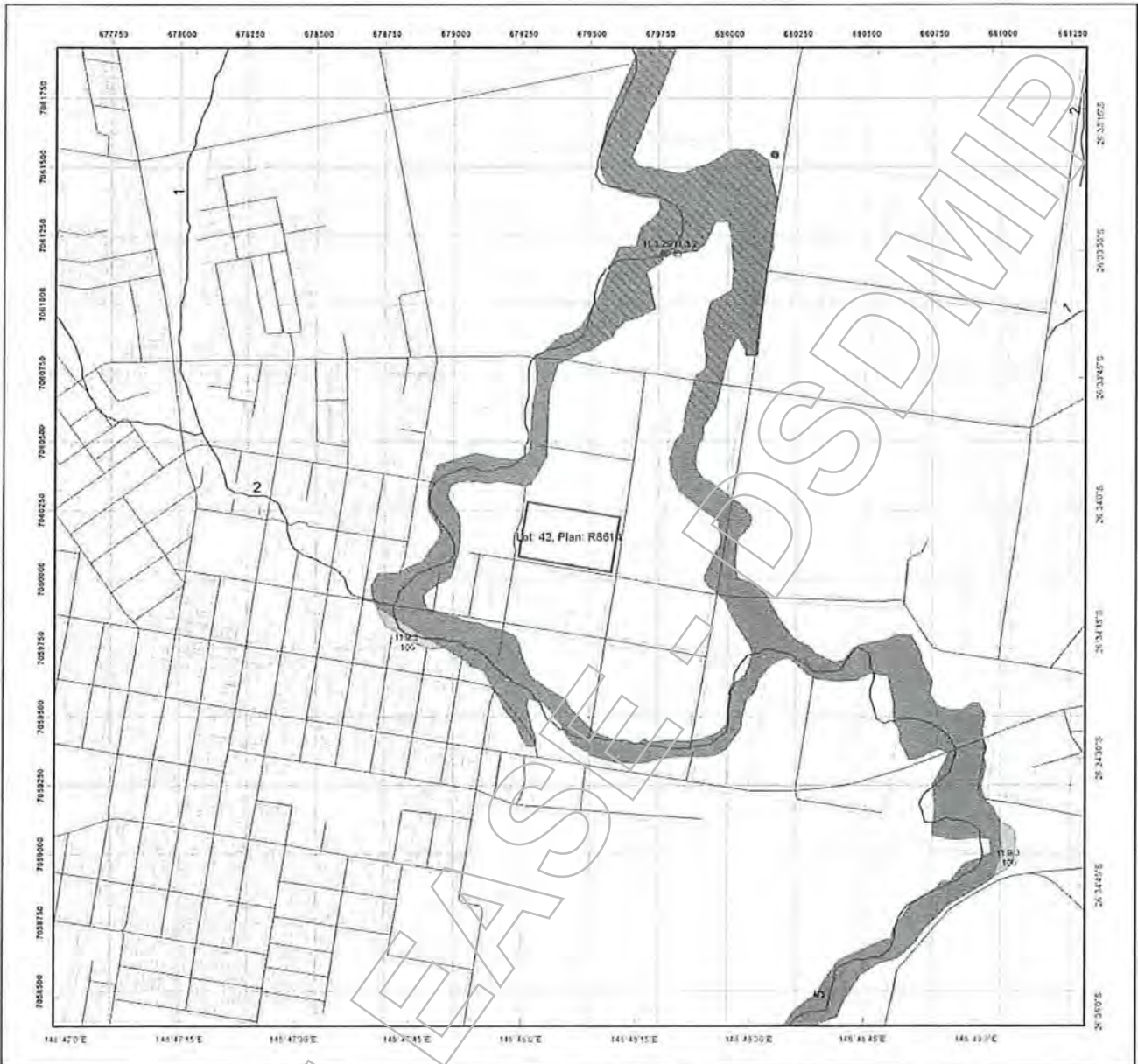
Additional information required for the assessment of vegetation values is provided in the accompanying "Vegetation Management Supporting map". For further information go to the web site: www.dnrm.qld.gov.au or contact the Department of Natural Resources and Mines.

Digital data for the regulated vegetation management map is available from the Queensland Spatial Portal at <http://www.information.qld.gov.au/>

This map is updated on a monthly basis to ensure new PMAVs are included as they are approved.

This product is projected into:
 GDA 1994 MGA Zone 55

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Vegetation Management Supporting Map

Legend

- Lot and Plan
- Category A or B area containing endangered regional ecosystems
- Category A or B area containing of concern regional ecosystems
- Category A or B area that is a least concern regional ecosystem
- Category A or B area containing remnant vegetation
- Category A or B area under Section 20AH
These areas are edged in yellow and filled with the remnant RE Status
- Category C area containing endangered regional ecosystems
- Category C area containing of concern regional ecosystems
- Category C area that is a least concern regional ecosystem
- Category C area containing high value regrowth vegetation
- Category C area under Section 20A
These areas are edged in purple and filled with the remnant RE Status
- Non Remnant
- Water
- Wetland on the vegetation management wetlands map
- Essential habitat on the essential habitat map
- Essential habitat species record
- Watercourse on the vegetation management watercourse and drainage feature map
(Stream order shown as black number against stream where available)
- Roads
- National Parks, State Forest and other reserves
- Cadastral line
- Property boundaries shown as provided as a locational aid only



This product is projected into
 GDA 1994 MGA Zone 55

Labels for Essential Habitat are centred on the area of enquiry

Regional ecosystem linework has been compiled at a scale of 1:100 000, except in designated areas where a compilation scale of 1:50 000 is available. Linework should be used as a guide only. The positional accuracy of RE data mapped at a scale of 1:100 000 is +/- 100 metres

Disclaimer:
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Additional information may be required for the purposes of land clearing or assessment of a regional ecosystem map or PMAV applications. For further information go to the web site: www.dnrm.qld.gov.au or contact the Department of Natural Resources and Mines.

Digital data for the vegetation management watercourse and drainage feature map, vegetation management wetlands map, essential habitat map and the vegetation management remnant and regional ecosystem map are available from the Queensland Spatial Portal at <http://www.information.qld.gov.au/>



Vegetation Management Act 1999 - Extract from the essential habitat database

Essential 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*

Essential 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 map.

This report identifies essential habitat in Category A, B and Category C areas.

The 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.

Essential habitat is compiled from a combination of species habitat models and buffered species records.

The 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: Native vegetation clearing and the *Vegetation Management Act 1999*.

Regional ecosystem is a mandatory essential habitat factor, unless otherwise stated.

Essential 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.

Essential habitat identifies endangered or vulnerable native wildlife prescribed under the *Nature Conservation Act 1994*.

Essential habitat in Category A and B (Remnant vegetation species record) areas:1100m Species Information

(no results)

Essential habitat in Category A and B (Remnant vegetation species record) areas:1100m Regional Ecosystems Information

(no results)

Essential habitat in Category A and B (Remnant vegetation) areas:1100m Species Information

(no results)

Essential habitat in Category A and B (Remnant vegetation) areas:1100m Regional Ecosystems information

(no results)

Essential habitat in Category C (High value regrowth vegetation) areas:1100m Species Information

(no results)

Essential habitat in Category C (High value regrowth vegetation) areas:1100m Regional Ecosystems Information

(no results)

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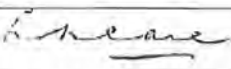

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Maranoa Regional Council

**Roma Flood Mitigation Project - Stage 2 Eastern Diversion
Drain and Western Levee
Erosion and Sediment Control Plan**

August 2016

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Appendix A – Erosion and Sediment Control Plan Drawings

1. Introduction

Maranoa Regional Council (MRC) engaged GHD to undertake the detailed design of a levee extension and diversion drain for Stage 2a of the Roma Flood Mitigation Project. This phase of the Roma Flood Mitigation Project comes after GHD were previously engaged by Council to deliver a series of design, consultation and optioneering outcomes as part of the Regional Flood Study.

This report presents an Erosion and Sediment Control Plan (ESC) for the construction of both the eastern diversion drain and the western levee as required by the conditional approval of works by the State regulator. This report has been undertaken with reference to the International Erosion Control Association Guidelines (IECA, 2008).

1.1 Project Background

In 2012, GHD Pty Ltd was commissioned by Maranoa Regional Council (MRC) to investigate flood mitigation options to address regional flood risk within the township of Roma. Concept design options to mitigate flooding from the Bungil Creek catchment for 'Stage 1' were subsequently developed as part of these investigations. Stage 1 was followed by Stage 2.

The purpose of the Stage 2 Flood Mitigation Project is to further reduce the risk of above floor flooding to properties within the township of Roma from a flood event equivalent to the 2012 DFE. This is an extension of the overall regional flood mitigation project, from which the following arrangement was selected based on cost-benefit and effectiveness of the solution.

The selected arrangement from the Stage 2 Roma Flood Mitigation Study, Hydrology and Hydraulics for Stage 2 Regional Mitigation Options (GHD, 2014 Rev 1) was the eastern diversion drain and western levee. The eastern diversion drain provides a diversion of the Bungil Creek to the eastern side of the township and the western levee is an extension of the Stage 1 Levee at the southern end, adjacent to Bungil Creek.

The eastern diversion drain alignment is shown in Figure 1 and the western levee alignment is shown in Figure 2 below.



Figure 1 Stage 2 Eastern Diversion Drain Alignment



Figure 2 Stage 2 levee alignment

1.2 Purpose of this report

The purpose of this Roma Stage 2 Flood Mitigation Project Design Report is to develop an Erosion and Sediment Control Plan (ESCP) for the construction phase of the Stage 2 eastern diversion drain and the western levee. The preparation of an ESCP was required by Department of Infrastructure, Local Government and Planning in their Information Request dated 29 April 2016. This report and attached drawings address the requirements of item ERA 16 2 (B) 2

The determination of the required erosion and sediment control measures outlined in the ESCP is based on assumed conservative values (soil and rainfall data) as sourced from IECA guidelines. The Contractor's preparation of the site/task specific erosion and sediment works instructions should be informed by additional soil data required from appropriate localised site verification and additional geotechnical investigation.

As part of the Environment Management Plan (EMP) for the works, the Contractor should prepare detailed, task specific erosion and sediment control measures to compliment this Erosion and Sediment Control Plan (ESCP). Site conditions may require:

- Construction of any or all of the measures described in this report to differ from their on-site application described in this document;
- Design and implementation of additional long or short term controls and designs, consistent with the concepts contained within this ESCP; and
- Geotechnical investigations to support the implementation of the ESCP.

1.3 Scope and Limitations

This report has been prepared by GHD for Maranoa Regional Council and may only be used and relied on by Maranoa Regional Council for the purpose agreed between GHD and the Maranoa Regional Council as set out Section 1 of this report.

GHD otherwise disclaims responsibility to any person other than Maranoa Regional Council arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in this report (refer to Section 1.4). GHD disclaims liability arising from any of the assumptions being incorrect.

GHD has prepared this report on the basis of information provided by Maranoa Regional Council and others who provided information to GHD (including Government authorities), which GHD has not independently verified or checked beyond the agreed scope of work. GHD does not accept liability in connection with such unverified information, including errors and omissions in the report which were caused by errors or omissions in that information.

The opinions, conclusions and any recommendations in this report are based on information obtained from, and testing undertaken at or in connection with, specific sample points. Site conditions at other parts of the site may be different from the site conditions found at the specific sample points.

Investigations undertaken in respect of this report are constrained by the particular site conditions, such as the location of buildings, services and vegetation. As a result, not all relevant site features and conditions may have been identified in this report.

Site conditions (including the presence of hazardous substances and/or site contamination) may change after the date of this Report. GHD does not accept responsibility arising from, or in connection with, any change to the site conditions. GHD is also not responsible for updating this report if the site conditions change.

1.4 Assumptions

The following assumptions have been made in preparation of this report:

- The survey data provided by Bennett & Bennett Surveyors and MRC is sufficiently accurate for the purposes of this report.
- The survey datum used is the Australian Height Datum (AHD). All geospatial references contained within this report are to Map Grid Australia GDA 94.

1.5 Relevant Guidelines

This ESCP has been prepared in reference to the following guidelines:

- Best Practice Erosion and Sediment Control. International Erosion Control Association (Australasia) (IECA 2008)

1.6 Legislative Requirements

A person or persons conducting land-disturbing development must conduct such development in accordance with the requirements of relevant environmental legislation (e.g. *Environmental Protection Act 1994*, and the associated *Environmental Protection (Water) Policy 2009*); and the *Sustainable Planning Act 2009*. Relevant portions of these Acts are listed below.

1.6.1 Environmental Protection Act 1994

All persons have a legal duty under the *Environmental Protection Act 1994* (s319) to take all reasonable and practicable measures to minimise or prevent environmental harm. Such harm can be caused if sediment from building sites enters (washes, blows, falls or otherwise) into stormwater drains, roadside gutters or waterways. Stormwater run-off must be managed so that it is not released into waters, a roadside gutter, or stormwater drain at more than 50 mg/l TSS (Total Suspended Solids). Under s443 of the *Environmental Protection Act 1994* a person must not cause or allow a contaminant to be placed in a position where it could reasonably be expected to cause serious or material environmental harm or environmental nuisance (e.g. placing a stockpile adjacent a waterway).

In addition, people who are concerned with management in a corporation have an additional duty under the *Environmental Protection Act 1994* to ensure that their corporation complies with the Act. This means supervisors need to take reasonable and practicable steps to ensure that the people under their control do not breach environmental laws.

People who become aware of environmental harm in association with their work (e.g. significant loss of sediment from their site-works into a watercourse) have a legal duty under the *Environmental Protection Act 1994* to notify the Department of Environment and Resource Management (DERM).

1.6.2 Environmental Protection (Water) Policy 2009

This policy sits under the *Environmental Protection Act 1994*. The *Environmental Protection (Water) Policy 2009* provides environmental values and water quality objectives for Queensland waters. These are utilised when determining environmental harm and to inform other statutory and non-statutory decisions. The water quality objectives assist in identifying whether the environmental values are protected. These values and objectives should be utilised when determining risk of environmental harm from water releases or run off and appropriate erosion and sediment controls implemented.

1.6.3 The Sustainable Planning Act 2009

The *Sustainable Planning Act 2009* is the mechanism for assessing all developments within Queensland. This act establishes the process for sustainable planning and development assessment in an ecologically sustainable way.

2. Site Analysis

The purpose of the site analysis is to identify the constraints that need to be considered during planning and design.

2.1 Catchment Overview

The Bungil Creek catchment is located upstream of Roma which covers an area of approximately 1400 km². The Bungil Creek catchment at Roma extends 65 km to the north and is typically between 20 and 35 km wide. The catchment is located on the southern foothills of the Carnarvon Range. Bungil Creek flows in a fairly constant southerly direction; approximately 70 km further downstream from Roma, Bungil Creek joins with the Balonne River which is part of the greater Murray-Darling Basin System.

The western levee is an extension of the Stage 1 levee at the southern end and is to be located along the western side of Bungil Creek, between Miscamble Street and Bungil Road. The catchment just upstream of the western levee generally falls in a south-easterly direction towards the levee, therefore penstocks and culverts through the levee have been designed to provide cross drainage.

2.1.1 Flora and fauna

A field assessment was undertaken by a GHD Senior Ecologist on 3 December 2015 to verify the findings of a flora and fauna desktop assessment and collect additional site-specific information. The information presented in this section has been derived from the aforementioned study. For more information, please refer to *Roma Flood Mitigation Study – Stage 2, Ecological Assessment Report* (GHD, 2016).

The field survey noted that Bungil Creek is a highly disturbed ephemeral watercourse with an extensively cleared catchment and a narrow riparian vegetation zone and cattle grazing. Within the Project footprint, the creek has a primarily sandy substrate with some cobbles present. There was tall, mature riparian vegetation present; however, the width of the riparian vegetation was less than 20 m. Abundant large snags, woody debris, trailing vegetation, undercut banks and pools of water were observed and these characteristics provide a variety of habitat for aquatic fauna including fish when water is present.

Flora species

The field survey recorded a moderate diversity of flora species within the Project footprint. The highest diversity of flora species was recorded in riparian habitats, with a low diversity recorded where the Project footprint traverses agricultural land. All flora species that were recorded during the field survey have a status of least concern or introduced under the NC Act. No flora species of conservation significance under the EPBC Act or the NC Act were recorded during the field survey or are considered likely to occur.

Vegetation communities

The desktop assessment identified that two Threatened Ecological Communities (TECs) listed under the EPBC Act have the potential to occur in proximity to the Project footprint, namely:

- Coolibah - Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions
- Weeping Myall Woodlands

The desktop assessment identified that while a large proportion of the Project footprint supports non-remnant vegetation, areas of remnant REs are mapped at three locations along the Western levee and at either end of the Eastern diversion. These areas of remnant REs are also mapped as MSES Regulated Vegetation. The field survey recorded two RE types within the project footprint (GHD, 2016).

Terrestrial fauna

The field survey noted that terrestrial fauna habitat values are generally restricted to areas of remnant vegetation within the Project footprint. In particular, the riparian vegetation provides a structurally complex habitat, with a diversity of feeding, nesting, sheltering and breeding resources at the canopy, shrub and ground levels (GHD, 2016).

Aquatic values

The field survey noted that there is potential for Murray cod to be present within Bungil Creek during times of moderate to high flow (GHD, 2016).

2.2 Rainfall and Evaporation

The following weather pattern data was obtained from the Bureau of Meteorology (BOM) to assist with the desktop analysis. The closest (open) weather station collecting monthly rainfall and evaporation data is at Roma Airport, Qld. Rainfall data has been recorded from 1985 to 2016. Evaporation data has been recorded from 1992 to 2008. The two sets of data has been provided in Table 1 and Table 2 below.

Table 1 Rainfall Data*

Rainfall	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Annual
Mean Rainfall (mm)	71.6	87.5	53.2	34.6	34.4	29.6	22.4	23.9	24	50.9	61.5	82.3	579.8
Mean number of rain days \geq 10mm	2	2.5	1.3	0.8	1.1	1	0.7	0.7	0.7	1.5	2	2.5	16.8
Mean number of rain days \geq 25mm	1.1	1.1	0.7	0.4	0.4	0.3	0.2	0.3	0.2	0.4	0.6	1	6.7
Erosion Risk*	M	M	M	L	L	VL	VL	VL	VL	M	M	M	

*BOM Rainfall data from Roma Airport, Station Number 043091

*Erosion Risk: High = H, Moderate = M, Low = L, Very Low = VL

The number of rain days can be used as an indicator of how often runoff, and therefore potential erosion, may occur. The Bureau of Meteorology (BoM) provides monthly rainfall data of depths that occur greater or equal to 10 mm and 25 mm days per month. Storms less than 10 mm are considered to have less potential to cause erosion as much of the water will infiltrate into the soil and run-off is typically minimal.

Table 2 Evaporation Data*

Rainfall	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Mean daily evaporation (mm)	10.3	8.6	7.8	6.2	4.4	3.2	3.5	4.6	7.0	8.6	9.2	9.7	6.9

* BOM Evaporation data from Roma Airport, Station Number 043091

2.3 Soil Loss Estimation

Soils present in the diversion drain vicinity area dispersive in nature and can be classified as clayey sands. Refer to the *Stage 2 Geotechnical Factual Report* (GHD, 2016) for more details.

The Revised Universal Soil Loss Equation RUSLE equation has been applied to estimate the month soil loss from sheet and rill erosion from the site, if no controls were put into place.

Soil loss is computed through the following equation:

$$A = R \times K \times LS \times P \times C$$

Where:

A = annual soil loss due to erosion (t/ha/yr)

R = rainfall erosivity factor

K = soil erodibility factor

LS = slope length / gradient factor

P = erosion control practice factor

C = ground cover and management factor

The soil loss calculations for the diversion drain have been presented in Table 3.

Table 3 Soil Loss Calculations for Diversion Drain

Parameter	Diversion Drain	Comments
R	1890	Computed from IFD chart for 2 yr 6 hr storm event
K	0.044	Soil erodibility factor for Clayey Sands
LS	0.24	Computed from topographical data
P	1.3	Assumed limited erosion controls (worst case)
C	1	Assumed no ground cover (worst case)
A (t/ha/yr)	26	Soil loss in tons per hectare on an annual basis

Based on the above, without implementation of upstream erosion and sediment control procedures, the estimated potential soil loss over a year for the diversion drain is 26 tonnes per hectare per year respectively.

This translates into 20 m³/ha of sediment volume for a 12-month period from the diversion drain catchment. Therefore, the site will be considered high risk.

2.4 ESC Program and Timeframe for Works

Construction is dependent upon the timing that environmental permitting is approved and the work sequencing that should need to occur to ensure appropriate ESC mitigation measures are installed.

Construction for the eastern diversion drain is expected to take up to 12 weeks or 3 months. Construction for the western levee is expected to take up to 4 months.

For each element within the work stages, detailed ESC work instructions should be developed by the Contractor to outline the specific requirements.

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3. Erosion and Sediment Management

3.1 Erosion and Sediment Control Guidelines for Contractor

3.1.1 General

Sediment and erosion controls should be established by the contractor to comply with the requirements of the *Protection of the Environment Operations Act* and *Best Practice Erosion and Sediment Control*, International Erosion Control Association (IECA, 2008).

The ESC measures on site should be installed generally in the following progression:

- Installation of sediment controls (down slope) and exclusion fencing to nominate areas of work and establishing "No-Go" zones;
- Installation of stabilised site access, site compound and facilities;
- Undertake clearing and grubbing work;
- Strip and place / stockpile topsoil;
- Temporary access to location of sedimentation trap;
- Construction of sedimentation trap;
- Construction of sediment-laden water diversion drains to direct runoff to the sedimentation trap;
- Installation of diversion drains upslope and sediment fences downstream of stockpile locations; and
- Construction of the remainder of works.

3.1.2 Erosion and Sediment Control Training for Site Personnel

All personnel should attend an induction program.

The project should require a number of training methods including:

- All personnel should attend a project site specific induction prior to commencing any work on the site, where general erosion and sediment control and water quality matters should be highlighted, together with responsibilities under relevant legislation;
- Toolbox meetings should be conducted regularly, at least weekly, to address numerous issues related to operations, safety, the environment etc. Issues relevant to the stage of construction are to be highlighted; and
- Formal training covering awareness of soil and water related issues and additional advanced training should be delivered to relevant personnel.

Measures and controls required to mitigate pollution of receiving waters and unacceptable levels of soil loss during construction are included below.

3.2 Erosion Management

3.2.1 Explanatory Notes and Installation Sequences

In order to reduce on-site erosion and off-site sedimentation, construction sequencing should be undertaken that balances the timing of land disturbance activities and the installation of mitigation measures.

3.2.2 Minimise Disturbance

Where practicable, the soil erosion hazard on the site should be kept as low as possible and as recommended in Table 4. At the commencement of onsite activities, the installation of barrier fencing and sediment fencing should be undertaken to clearly define the limits of works and any "No-Go" zones. Where possible, existing vegetation strips should be maintained to minimise soil disturbance. The number and size of construction compounds should be minimised as far as practicable. All sediment and erosion controls should be installed within the project boundary (Greenfields Area).

Table 4 Limitations to Access

Land use	Limitation	Comments
Constructions areas	Disturbance to generally be no further than five (preferably two) metres from the edge of any essential construction activity	All site workers should clearly recognise these zones that, where appropriate, are identified with barrier fencing (upslope) and sediment fencing (down slope), or similar methods.
Access areas	Generally limited to a maximum width of 10 m	The site manager/foreman should determine and mark the location of these zones onsite. They may vary in position to best conserve the existing vegetation and protect downstream areas while being considerate of the needs of efficient works' activities. All site workers should clearly recognise their boundaries which, where appropriate, are marked with barrier mesh, sediment fencing, or similar materials.
Remaining lands	Entry prohibited except for essential thinning of plant growth	All site workers clearly recognise this land by marking boundary with barrier fence or similar.

3.2.3 "No Go" Zones

Any areas outside of the clearing limits should be designated as "No Go" zones to minimise or prevent access by personnel or vehicles. Temporary fencing or barricading such as Para webbing or perimeter tape is to be utilised on the cleared perimeter with accompanying signage. Site inductions and toolbox meetings should include the importance of observing "No Go" zones, particularly in areas near to any identified sensitive area.

3.2.4 Vegetation Clearing

Vegetation can only be cleared within approved areas. The limits of the development are to be clearly defined with perimeter tape, security line, Para webbing or similar.

Vegetation outside of the development footprint is not to be removed or damaged. The protection of existing vegetation should be incorporated into site inductions for all project personnel and contractors. This information should also be reiterated at toolbox talks or briefings.

3.2.5 Erosion Control Measures

Earthworks are expected to disturb dispersive and fine soils. The vegetation removal and earthworks are expected to produce appreciable quantities of fine materials that could become entrained in runoff.

Clearly visible barrier fencing shall be installed to assist traffic control and prohibit unnecessary site disturbance. Vehicular access to the site shall be limited to only those essential for construction work and they shall enter the site through the stabilised access points. Erosion

control on the embankment crests, downstream batters and any other exposed areas will be provided by gypsum stabilisation of a 200 mm thick layer of the on-site (dispersive) clays, and by covering with 75 mm of topsoil seeded with grass mix.

Short term erosion control on any exposed areas should be provided by regular application of soil binding polymer product such as *Vital Bon Matt Stonewall* as per manufacturer's recommendations.

3.2.6 Stabilisation

The stabilisation requirements for the project are as follows:

- Disturbed soil surfaces are to be stabilised with soil glue products (*Vital Stonewall* or equivalent) during the works and within 1 day of completion of works within any area of the site;
- All temporary earth banks, flow diversion systems, and embankments where runoff should flow uncontrolled off site are to be stabilised with rock/gravel over geo-textile, or vegetation;
- A success criterion for ground cover is a minimum of 75% cover

3.2.7 Stockpile Management

All stockpiles are to:

- Be separated into soil and use types;
- Be located further than 40 metres from waterways;
- Be located at least one metre from site boundary fencing;
- Not be located against the base of significant trees;
- Be watered and / or protected through effective erosion control emulsions (*Vital Bon-Matt Stonewall* or equivalent), as required, to minimise dust emissions; and
- Have sediment fences and coir logs located down slope to minimise the risk of sediment laden runoff.

3.3 Sediment Management

3.3.1 Dust suppression

Dust suppression and erosion protection on access tracks can be provided by regular application of *Vital Bon Matt HR* or approved equivalent.

3.3.2 Sediment Fence

The sediment fence recommended for this project is *TerraStop TS 1780* or approved equivalent.

3.3.3 Rock Pads

The rock pads at the site entry and exit locations should have the following dimensions

- Rock d50= 100 mm (minimum) over geotextile (*Terratex E1 PP* or approved equivalent); and
- Thickness of rock protection layer = 200 mm (minimum).

3.3.4 Earth Bunds

Earth Bunds can be formed by using excavated material. While forming Earth bunds, care should be taken to separate topsoil from subsoil. Also, as indicated on the Erosion and Sediment Control Drawings, earth bunds shall be utilised to capture dirty water within the drainage channel during construction. The earth bund should be 1 m high with 1:2 side slopes.

The upstream base of the earth bunds should be protected with non-woven geotextile (*Terrastop Non Woven Q Range* or approved equivalent). Erosion control on Earth Bunds should be provided by regular application of soil binding polymer product such as *Vital Bon Matt Stonewall* as per manufacturer's recommendations.

3.3.5 Dirty Water Channels

Dirty water channel dimensions have been conservatively designed to convey up to 1 m³/s flow and their dimensions (minimum) are as follows:

- Base Width: 0.50 m
- Side Slopes: 1 to 2
- Channel Slope: 0.5 %
- Flow depth: 0.58 m
- Discharge: 1.00 m³/s
- Channel Lining: Coconut / jute fibre mats or Geotextile
- Maximum Acceptable Velocity: 1.7 m/s

3.3.6 Coir Logs

Coir Logs to be used as indicated on Erosion and Sediment Control Drawings (*EcoLog*, 300 mm diameter or approved equivalent). Installation of the coir logs to be as per manufacturer's recommendations.

3.3.7 Sediment Traps and Flocculation

It is noted that during the earthworks for different stages, sediment laden water shall be trapped at the designated points.

Excavated sediment traps have been shown at several locations in the ESC drawings and have been conservatively designed to treat a flow of 1 m³/s during construction. The minimum dimensions of excavated sediment traps are as follows (IECA, 2008):

- Surface area: 750 m²
- Length to Width Ratio: 3:1
- Side slopes: 1V:3H
- Depth: 1 m
- Inflow bank to be protected with Geotextile lining
- Sediment to be removed when it exceeds 30 % of trap volume

Due to presence of dispersive soils, the water contained within the sediment traps will, most likely, not achieve the desired water quality (especially Total Suspended Solids, 50 mg/l). Therefore, appropriate flocculation is obligatory.

Apply Gypsum (CaSO₄) at the rate of 32 kg per 100 m³. In case of increased likelihood of high intensity storms, increase dosage to 70 kg per 100 m³. Gypsum is the least ecologically threatening flocculent as it causes little pH change, however, slight changes in salinity can be experienced. Gypsum needs to be spread evenly across the water surface.

In addition, Filter bags (1380 Filter Bags or approved equivalent) filled with Gypsum should be applied every 20 m in the dirty water channels to aid with Flocculation. It must be noted that Gypsum can cause scum deposits in equipment.

Other flocculation options will require written approval from Department of Environment and Heritage Protection (DEHP). These include:

- Polyacrylamides (PAMS like DamClear Floc Blocks or other product approved by CPESC)
- Aluminium based flocculants

3.3.8 Silt Curtains

Floating silt curtains shall be installed in Bungil Creek (when in flow) near the inlet and outlet of the diversion drain and at the outlet of the levee cross drainage pipes during the construction phase. Silt curtains act to isolate the sediment-laden waters from passing stream flows. This allows sedimentation of the disturbed water body with the area enclosed by the silt curtain. The most effective placement method for silt curtain is in a semicircle or U shape arrangement around the disturbance area.

The following companies supply and install silt curtains in Australia:

- AussieErosion Floating silt curtains
- Polaris Marine Pty Ltd
- Adiemas Services Pty Ltd

The installation and maintenance of the silt curtains should be as per manufacturer / supplier requirements.

4. Monitoring and Maintenance

4.1 Monitoring requirements

Appropriate procedures and qualified personnel should be engaged to plan and conduct site inspections and water quality monitoring throughout the construction

- All ESC measures should be inspected in accordance with the IECA 2008 guidelines.
- All site monitoring data including rainfall records, dates of water quality testing, testing results and records of controlled water releases for the site, should be documented onsite. The documentation should be maintained up to date for the duration of the approved works and be available on-site for inspection by the Assessing Authority on request.
- All environmental incidents should be documented, and should remain accessible to the relevant regulatory authorities on request. When an Environmental Incident (i.e. breach of limits) or exceedance of trigger value occurs, it is the responsibility of the Environmental Manager to investigate and initiate remedial actions commensurate with the severity of the incident.
- A system should be implemented and maintained that monitors and records site compliance and non-compliance with the ESCP requirements.

4.2 Maintenance requirements

All materials removed from ESC devices during maintenance, whether solid or liquid, should be disposed of in a manner that does not cause ongoing soil erosion or environmental harm. Solid materials removed from ESC devices are to be stockpiled onsite in accordance with stockpile guidelines.

Written records of erosion and sediment control monitoring and maintenance activities conducted during the construction and maintenance periods should be maintained on site. Original copies of such records shall be provided on request to the Assessing Authority

Maintenance of erosion and sediment control measures must occur in accordance with IECA 2008 guidelines.

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Appendices

Appendix A – Erosion and Sediment Control Plan Drawings

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MARANOA REGIONAL COUNCIL ROMA LEVEE STAGE 2 PROJECT 41-29431



IMAGERY - GOOGLE EARTH PRO (EXTRACTED 04 MARCH 2016)
LOCALITY PLAN
NTS

DRAWING LIST

DRAWING No.	DRAWING TITLE
2016-378C-G201	COVER SHEET, DRAWING LIST AND LOCALITY PLAN
2016-378C-G202	EROSION AND SEDIMENT CONTROL NOTES
CIVIL	
2016-378C-C201	EROSION AND SEDIMENT CONTROL PLAN, SHEET 1 OF 2
2016-378C-C202	EROSION AND SEDIMENT CONTROL PLAN, SHEET 2 OF 2
2016-378C-C203	NOTES AND DETAILS, SHEET 1 OF 4
2016-378C-C204	NOTES AND DETAILS, SHEET 2 OF 4
2016-378C-C205	NOTES AND DETAILS, SHEET 3 OF 4
2016-378C-C206	NOTES AND DETAILS, SHEET 4 OF 4

						1 CARTWRIGHT STREET P.O BOX 42, MITCHELL QLD 4465 Phone: 1300 097 662 Fax: (07) 4624 6690 Email: council@maranoa.qld.gov.au Web: www.maranoa.qld.gov.au <small>© COPYRIGHT BY MARANOA REGIONAL COUNCIL, 2014</small>		CLIENT MARANOA REGIONAL COUNCIL DEPARTMENT OF INFRASTRUCTURE SERVICES		PROJECT ROMA LEVEE STAGE 2 PROJECT		PROJECT NORTH 					
REVISIONS B 29/07/16 RE-ISSUED FOR REVIEW J.P. A 24/05/16 ISSUED FOR REVIEW J.P.		ASSOCIATE CONSULTANT 		TITLE COVER SHEET		STATUS PRELIMINARY		DESIGNED A.K.		DRAWN N.C.		APPROVED J.P.		DATE 24/06		DRAWING NUMBER 2016-378C-G201	
CODE	DATE	REVISION	AUTHORISED	41-29431		DRAWING LIST AND LOCALITY PLAN		WORK ORDER NUMBER 15201		DESIGN NUMBER 378C		SCALE # 1) NTS		REV B			

EROSION AND SEDIMENT CONTROL NOTES:



LIMITATIONS

THIS ESCP HAS BEEN PREPARED BY GHD FOR MARANOVA REGIONAL COUNCIL AND MAY ONLY BE USED AND RELIED ON BY MARANOVA REGIONAL COUNCIL FOR THE PURPOSES AGREED BETWEEN GHD AND THE MARANOVA REGIONAL COUNCIL. GHD OTHERWISE DISCLAIMS RESPONSIBILITY TO ANY PERSON OTHER THAN MARANOVA REGIONAL COUNCIL ARISING IN CONNECTION WITH THIS ESCP. GHD ALSO EXCLUDES IMPLIED WARRANTIES AND CONDITIONS, TO THE EXTENT LEGALLY PERMISSIBLE.

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GENERAL NOTES

- READ THESE DRAWINGS IN CONJUNCTION WITH ENGINEERING DRAWINGS, SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED. REFER TO ROMA EASTERN DIVERSION DRAIN DESIGN DRAWINGS 2016-378C-001 TO 2016-378C-003 AND 2016-378C-001 TO 2016-378C-002.
- NOMINATION OF PROPRIETARY DEVICES DOES NOT INDICATE EXCLUSIVE REFERENCE BUT INDICATES THAT SIMILAR ALTERNATIVES HAVING THE REQUIRED PROPERTIES MAY BE OFFERED FOR APPROVAL BY A SUITABLY QUALIFIED PROFESSIONAL (PREFERABLY WITH CPESC AND/OR RPED ACCREDITATION).
- REFER ANY DISCREPANCY TO THE DESIGNER BEFORE PROCEEDING WITH THE WORK.
- DO NOT OBTAIN DIMENSIONS BY SCALING FROM THE DRAWINGS.
- VERIFY SETTING OUT DIMENSIONS SHOWN ON THE DRAWINGS BEFORE CONSTRUCTION AND FABRICATION IS COMMENCED.
- ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE SAA CODES, SPECIFICATIONS AND BY-LAWS AND ORDINANCES OF THE RELEVANT BUILDING AUTHORITY.
- THE CONTRACTOR SHALL MAINTAIN ACCURATE RECORDS OF LEVELS AND LOCATIONS OF SERVICES TO FULLY COMPLY WITH LOCAL AUTHORITY "AS CONSTRUCTED" INFORMATION REQUIREMENTS.
- IT IS EXPECTED THAT PRIOR TO ANY CONSTRUCTION ACTIVITY AT THE PARK, A DETAILED WORK SPECIFIC ESCP WILL BE DEVELOPED BY THE CONTRACTOR AS PART OF THE CONSTRUCTION ENVIRONMENT MANAGEMENT PLAN (CEMP). THE CONTRACTOR WILL REVISE THIS ESCP TO PROVIDE GREATER DETAIL BASED ON CONSTRUCTION METHODOLOGY AND TIMING OF WORKS BY THE CONTRACTOR.
- THE CONTRACTOR SHALL KEEP RECORD OF RAINFALL FORECAST FOR THE UPCOMING WEEK AS A MINIMUM. IT IS NOTED THAT RAINFALL GREATER THAN 10 MM HAS A HIGHER EROSION POTENTIAL. THEREFORE, APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES MUST BE IN PLACE, ESPECIALLY, IF THERE IS GREATER THAN 50% CHANCE OF RAINFALL GREATER THAN 10 MM.
- THE CONTRACTOR SHALL ENSURE IMPLEMENTATION OF EROSION AND SEDIMENT CONTROL MEASURES.
- TECHNICAL DETAILS OF EROSION AND SEDIMENT CONTROL MEASURES HAVE BEEN OBTAINED FROM THE IECA 2008.

SURVEY

SITE SURVEY HAS BEEN PROVIDED BY MARANOVA REGIONAL COUNCIL. SOILS AND EROSION CONTROL. EARTHWORKS ARE EXPECTED TO DISTURB DISPERSIVE AND FINE SOILS. THE VEGETATION REMOVAL AND EARTHWORKS ARE EXPECTED TO PRODUCE APPRECIABLE QUANTITIES OF FINE MATERIALS THAT COULD BECOME ENTRAINED IN RUNOFF.

EROSION CONTROL ON THE EMBANKMENT CRESTS, DOWNSTREAM BATTERS AND ANY OTHER EXPOSED AREAS SHOULD BE PROVIDED BY GYPSUM STABILISATION (MINIMUM OF 3% BY MASS) OF A 200 MM (MINIMUM) THICK LAYER OF THE ON-SITE (DISPERSIVE) CLAY, AND BY COVERING WITH 75 mm (MINIMUM) OF TOPSOIL SEEDED WITH GRASS MIX.

EROSION CONTROL ON ANY EXPOSED AREAS SHOULD BE PROVIDED BY REGULAR APPLICATION OF SOIL BINDING POLYMER PRODUCT SUCH AS VITAL BON MATT STONEWALL AS PER MANUFACTURER'S RECOMMENDATIONS.

DISTURBANCE MINIMISATION

WHERE PRACTICABLE, THE SOIL EROSION HAZARD ON THE SITE SHOULD BE KEPT AS LOW AS POSSIBLE. AT THE COMMENCEMENT OF ON-SITE ACTIVITIES, THE INSTALLATION OF BARRIER FENCING AND SEDIMENT FENCING SHOULD BE UNDERTAKEN TO CLEARLY DEFINE THE LIMITS OF WORKS AND ANY "NO-GO" ZONES. WHERE POSSIBLE, EXISTING VEGETATION STRIPS SHOULD BE MAINTAINED TO MINIMISE SOIL DISTURBANCE. THE NUMBER AND SIZE OF CONSTRUCTION COMPOUNDS SHOULD BE MINIMISED AS FAR AS PRACTICABLE. ALL SEDIMENT AND EROSION CONTROLS SHOULD BE INSTALLED WITHIN THE PROJECT BOUNDARY (GREENFIELDS AREA).

NO GO ZONE

ANY AREAS OUTSIDE OF THE CLEARING LIMITS SHOULD BE DESIGNATED AS "NO GO" ZONES TO MINIMISE OR PREVENT ACCESS BY PERSONNEL OR VEHICLES. TEMPORARY FENCING OR BARRICADING SUCH AS PARA WEBBING OR PERIMETER TAPE IS TO BE UTILISED ON THE CLEARED PERIMETER WITH ACCOMPANYING SIGNAGE. SITE INDICATIONS AND TOOLBOX MEETINGS SHOULD INCLUDE THE IMPORTANCE OF OBSERVING "NO GO" ZONES, PARTICULARLY IN AREAS NEAR TO ANY IDENTIFIED SENSITIVE AREA.

STABILISATION

- THE STABILISATION REQUIREMENTS FOR THE PROJECT ARE AS FOLLOWS:
- DISTURBED SOIL SURFACES ARE TO BE STABILISED WITH SOIL BLUE PRODUCTS (VITAL STONEWALL OR EQUIVALENT) DURING THE WORKS AND WITHIN 1 DAY OF COMPLETION OF WORKS WITHIN ANY AREA OF THE SITE.
 - ALL TEMPORARY EARTH BANKS, FLOW DIVERSION SYSTEMS, AND EMBANKMENTS WHERE RUNOFF SHOULD FLOW UNCONTROLLED OFF-SITE ARE TO BE STABILISED WITH ROCK/GRAVEL OVER GEO-TEXTILE, OR VEGETATION.
 - A SUCCESS CRITERION FOR GROUND COVER IS A MINIMUM OF 75% COVER.

STOCKPILE MANAGEMENT

- ALL STOCKPILES ARE TO:
- BE SEPARATED INTO SOIL AND USE TYPES;
 - BE LOCATED FURTHER THAN 40 METRES FROM WATERWAYS;
 - BE LOCATED AT LEAST ONE METRE FROM SITE BOUNDARY FENCING;
 - NOT BE LOCATED AGAINST THE BASE OF SIGNIFICANT TREES;
 - BE WATERED AND / OR PROTECTED THROUGH EFFECTIVE EROSION CONTROL EMULSIONS (VITAL BON-MATT STONEWALL OR EQUIVALENT), AS REQUIRED, TO MINIMISE DUST EMISSIONS;
 - HAVE SEDIMENT FENCES AND COIR LOGS LOCATED DOWN SLOPE TO MINIMISE THE RISK OF SEDIMENT LADEN RUNOFF.

DUST SUPPRESSION

DUST SUPPRESSION AND EROSION PROTECTION ON ACCESS TRACKS CAN BE PROVIDED BY REGULAR APPLICATION OF VITAL BON MATT HR OR APPROVED EQUIVALENT.

SEDIMENT FENCE

THE SEDIMENT FENCE RECOMMENDED FOR THIS PROJECT IS TERRASTOP T6 1700 OR APPROVED EQUIVALENT.

ROCK PADS

THE ROCK PADS AT THE SITE ENTRY AND EXIT LOCATIONS SHOULD HAVE THE FOLLOWING DIMENSIONS

- ROCK D50+ 100 mm (MINIMUM) OVER GEOTEXTILE (TERRATEX E1 PP OR APPROVED EQUIVALENT)
- THICKNESS OF ROCK PROTECTION LAYER = 200 mm (MINIMUM)

EARTH BUNDS

EARTH BUNDS CAN BE FORMED BY USING EXCAVATED MATERIAL WHILE FORMING EARTH BUNDS, CARE SHOULD BE TAKEN TO SEPARATE TOPSOIL FROM SUBSOIL. ALSO, AS INDICATED ON THE EROSION AND SEDIMENT CONTROL DRAWINGS, EARTH BUNDS SHALL BE UTILISED TO CAPTURE DIRTY WATER WITHIN THE DRAINAGE CHANNEL DURING CONSTRUCTION. THE EARTH BUND SHOULD BE 1 m HIGH WITH 1:2 SIDE SLOPES.

THE UPSTREAM BASE OF THE EARTH BUNDS SHOULD BE PROTECTED WITH NON-HOVEN GEOTEXTILE (TERRASTOP NON WOVEN 2 RANGE OR APPROVED EQUIVALENT). EROSION CONTROL ON EARTH BUNDS SHOULD BE PROVIDED BY REGULAR APPLICATION OF SOIL BINDING POLYMER PRODUCT SUCH AS VITAL BON MATT STONEWALL AS PER MANUFACTURER'S RECOMMENDATIONS.

DIRTY WATER CHANNELS

DIRTY WATER CHANNEL DIMENSIONS HAVE BEEN CONSERVATIVELY DESIGNED TO CONVEY UP TO 1 M³ FLOW AND THEIR DIMENSIONS (MINIMUM) ARE AS FOLLOWS:

- BASE WIDTH: 0.50 m
- SIDE SLOPES: 1 TO 2
- CHANNEL SLOPE: 0.5 %
- FLOW DEPTH: 0.56 m
- DISCHARGE: 1.00 m³/s
- CHANNEL LINING: COCONUT FIBRE MATS OR GEOTEXTILE
- MAXIMUM ACCEPTABLE VELOCITY: 1.7 m/s

COIR LOGS

COIR LOGS TO BE USED AS INDICATED ON EROSION AND SEDIMENT CONTROL DRAWINGS (COLOG, 300 MM DIAMETER OR APPROVED EQUIVALENT) INSTALLATION OF THE COIR LOGS TO BE AS PER MANUFACTURER'S RECOMMENDATIONS.

SEDIMENT TRAPS AND FLOCCULATION

IT IS NOTED THAT DURING THE EARTHWORKS FOR DIFFERENT STAGES, SEDIMENT LADEN WATER SHALL BE TRAPPED AT THE DESIGNATED POINTS.

EXCAVATED SEDIMENT TRAPS HAVE BEEN SHOWN AT SEVERAL LOCATIONS IN THE ESC DRAWINGS AND HAVE BEEN CONSERVATIVELY DESIGNED TO TREAT A FLOW OF 1 M³S DURING CONSTRUCTION. THE MINIMUM DIMENSIONS OF EXCAVATED SEDIMENT TRAPS ARE AS FOLLOWS:

- SURFACE AREA: 750 m²
- LENGTH TO WIDTH RATIO: 3:1
- SIDE SLOPES: 1V:3H
- DEPTH: 1 m
- INFLOW BANK TO BE PROTECTED WITH GEOTEXTILE LINING
- SEDIMENT TO BE REMOVED WHEN IT EXCEEDS 20 % OF TRAP VOLUME

DUE TO PRESENCE OF DISPERSIVE SOILS, THE WATER CONTAINED WITHIN THE SEDIMENT TRAPS WILL, MOST LIKELY, NOT ACHIEVE THE DESIRED WATER QUALITY (ESPECIALLY TOTAL SUSPENDED SOLIDS, 50 MG/L), THEREFORE APPROPRIATE FLOCCULATION IS OBLIGATORY.

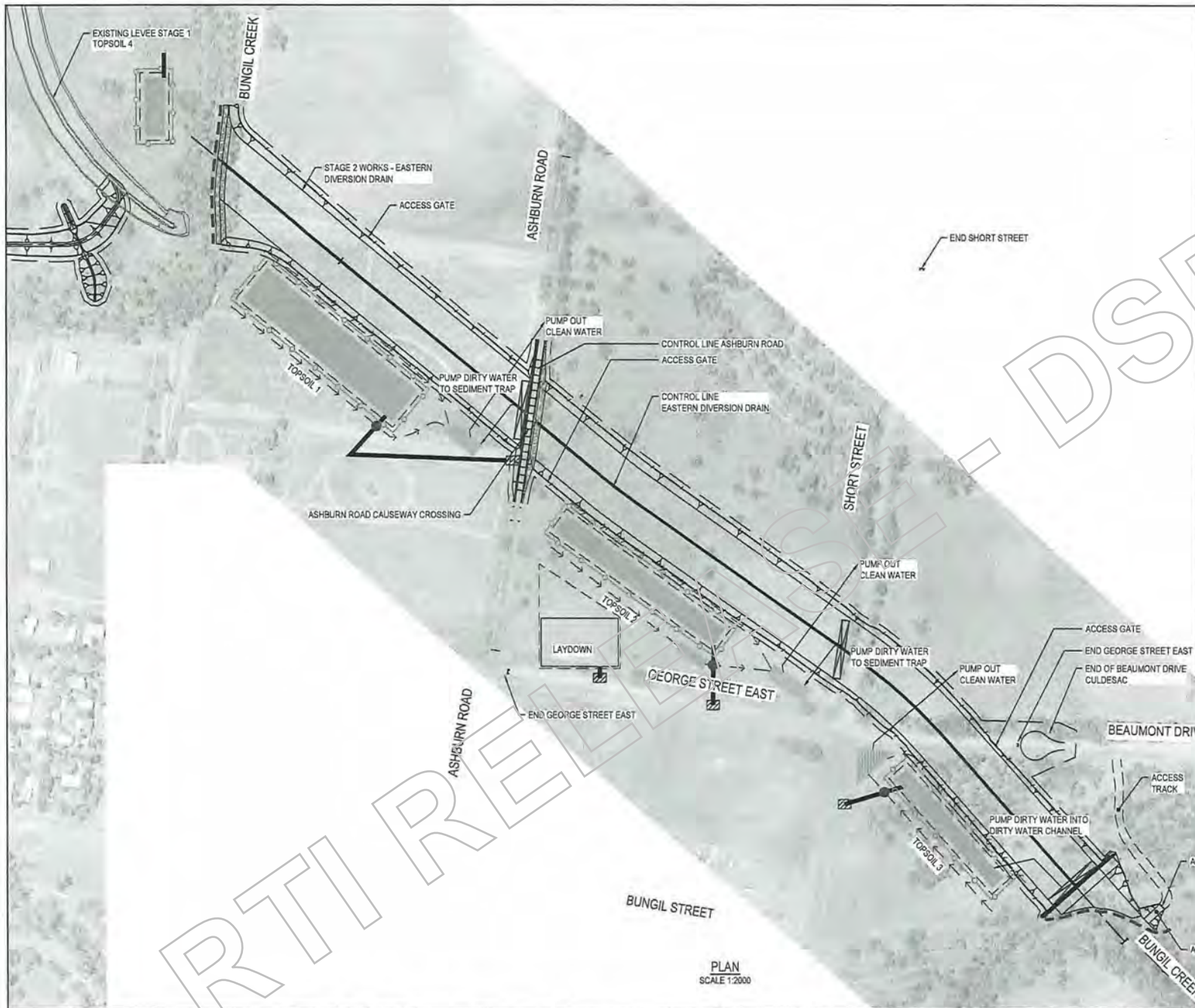
APPLY GYPSUM (CASO₄) AT THE RATE OF 32 KG PER 100 m². IN CASE OF INCREASED LIKELIHOOD OF HIGH INTENSITY STORMS, INCREASE DOSAGE TO 70 KG PER 100 m². GYPSUM IS THE LEAST ECOLOGICALLY THREATENING FLOCCULANT AS IT CAUSES LITTLE PH CHANGE, HOWEVER, SLIGHT CHANGES IN SALINITY CAN BE EXPERIENCED. GYPSUM NEEDS TO BE SPREAD EVENLY ACROSS THE WATER SURFACE.

IN ADDITION, FILTER BAGS (1380 FILTER BAGS OR APPROVED EQUIVALENT) FILLED WITH GYPSUM SHOULD BE APPLIED EVERY 20 M IN THE DIRTY WATER CHANNELS TO AID WITH FLOCCULATION. IT MUST BE NOTED THAT GYPSUM CAN CAUSE SCUM DEPOSITS IN EQUIPMENT.

OTHER FLOCCULATION OPTIONS WILL REQUIRE WRITTEN APPROVAL FROM DEPARTMENT OF ENVIRONMENT AND HERITAGE PROTECTION (DEHP). THESE INCLUDE:

- POLYACRYLAMIDES (PAMS LIKE DAMCLEAR FLOC BLOCKS OR OTHER PRODUCT APPROVED BY CPESC)
- ALUMINIUM BASED FLOCCULANTS

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ISSUE NO: 11 DATE: 27/07/16 CODE:		REVISION:		APPROVED FOR REVIEW: J.P. ISSUED FOR REVIEW: J.P.				TITLE EROSION AND SEDIMENT CONTROL NOTES		STATUS PRELIMINARY		DOKUMENTED: A.K. N.C. DRAWN: J.P. APPROVED: J.P. DATE: 24/08 DRAWING NUMBER: 2016-378C-G202 YOUR OFFICE NUMBER: 15201 DESIGN NUMBER: 378C SCALE: AS SHOWN REV: B	



- LEGEND:**
- BOREHOLE LOCATION (GHD 2015)
 - TEST PIT LOCATION (GHD 2015)
 - SILT CURTAIN
 - ACCESS TRACK/GRAVEL
 - SEDIMENT FENCE
 - COIR LOG/FIBRE ROLL
 - SEDIMENT TRAP
 - VIBRATION GRID AND ROCK PAD/RAMP
 - DIRTY WATER CHANNEL
 - TEMPORARY EARTH BLIND
 - ROCK CAUSEWAY
 - TOPSOIL 1 - 200m x 40m
 - TOPSOIL 2 - 200m x 20m
 - TOPSOIL 3 - 150m x 15m
 - TOPSOIL 4 - 60m x 20m
 - LAYDOWN 80m x 50m

NOTE:
 1. FOR DETAILS AND NOTES, REFER TO DRAWING Nos. 2016-378C-C203 TO 2016-378C-C206.

PLAN
SCALE 1:2000



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 DEPARTMENT OF INFRASTRUCTURE SERVICES

TITLE:
 EROSION AND SEDIMENT
 CONTROL PLAN, SHEET 1 OF 2

PROJECT:
 ROMA LEVEE STAGE 2 PROJECT

STATUS:
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DESIGNED: A.K. 15201
 DRAWN: N.C.
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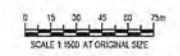
LEGEND:

- BOREHOLE LOCATION (GHD 2015)
- TEST PIT LOCATION (GHD 2015)
- LIMIT OF SITE WORKS
- SILT CURTAIN
- ACCESS TRACK/GRAVEL
- SEDIMENT FENCE
- COIR LOG/FIBRE ROLL
- SEDIMENT TRAP
- VIBRATION GRID AND ROCK PAD/RAMP
- DIRTY WATER CHANNEL
- CLEAN WATER CHANNEL
- TEMPORARY EARTH BUND
- ROCK CAUSEWAY
- FIELD INLET PIT PROTECTION
- TOPSOIL 1 - 200m x 40m
- TOPSOIL 2 - 200m x 20m
- TOPSOIL 3 - 150m x 15m
- TOPSOIL 4 - 80m x 20m
- LAYDOWN 80m x 50m

NOTE:

1. FOR DETAILS AND NOTES, REFER TO DRAWING Nos. 2016-378C-C203 TO 2016-378C-C206.
2. SPACE CONSTRAINTS SHALL NOT ENABLE CONSTRUCTION OF SEDIMENT TRAPS. THEREFORE, IT IS VITAL THAT DURING LEVEE CONSTRUCTION, EXPOSED SOIL SURFACES ARE TO BE STABILISED WITH SOIL GLUE PRODUCTS (VITAL STONEWALL OR EQUIVALENT) DURING THE WORKS AND WITHIN 1 DAY OF COMPLETION OF WORKS WITHIN ANY AREA OF THE SITE. CONTRACTOR SHOULD OBSERVE RAINFALL FORECASTS FOR THE WEEK AND ENSURE THAT ALL EROSION AND SEDIMENT CONTROL MEASURES ARE IN WORKING ORDER ESPECIALLY IF, THERE IS A GREATER THAN 50% CHANCE OF RAINFALL EXCEEDING 10mm.

PLAN
SCALE 1:1500



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DEPARTMENT OF INFRASTRUCTURE SERVICES

TITLE
EROSION AND SEDIMENT
CONTROL PLAN, SHEET 2 OF 2

PROJECT
ROMA LEVEE STAGE 2 PROJECT

STATUS
PRELIMINARY

DESIGNED A.K. / DRAWN N.C. / APPROVED J.P. / DATE 24/06

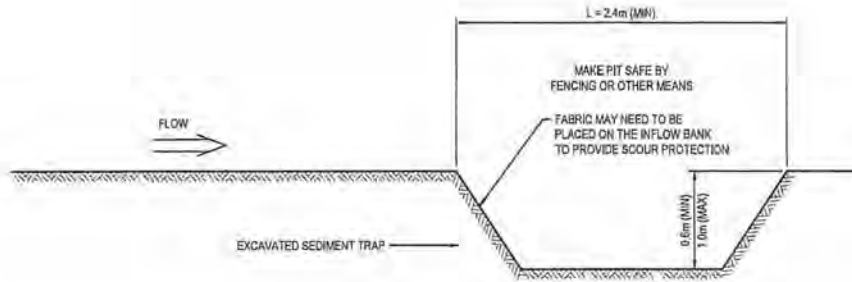
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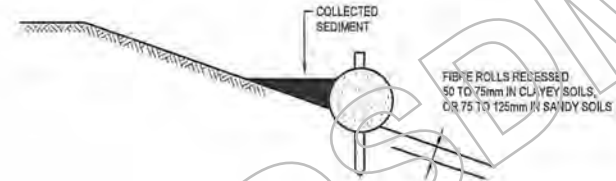
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REV B

PROJECT NORTH



EXCAVATED SEDIMENT TRAP
SCALE: NTS



TYPICAL FIBRE ROLL DETAIL (IECA, 2008)
SCALE: NTS

CONSTRUCTION

- REFER TO APPROVED PLANS FOR LOCATION AND CONSTRUCTION DETAILS. IF THERE ARE QUESTIONS OR PROBLEMS WITH THE LOCATION, OR METHOD OF INSTALLATION, CONTACT THE ENGINEER OR RESPONSIBLE ON-SITE OFFICER FOR ASSISTANCE.
- CLEAR THE FOUNDATION AREA OF THE OUTLET STRUCTURE (IF ANY), AND INSTALL AS PER SEPARATE INSTRUCTIONS.
- EXCAVATE THE SETTLING POND IN ACCORDANCE WITH THE APPROVED PLANS. UNLESS OTHERWISE SPECIFIED, THE EXCAVATED PIT SHOULD HAVE A SIDE SLOPE OF 2:1 (H:V) OR FLATTER.
- APPROPRIATELY STABILISE ANY BANK SUBJECT TO DIRECT INFLOW.
- ESTABLISH ALL NECESSARY UP-SLOPE DRAINAGE CONTROL MEASURES TO ENSURE THAT SEDIMENT-LADEN RUNOFF IS APPROPRIATELY DIRECTED INTO THE SEDIMENT TRAP.
- TAKE ALL NECESSARY MEASURE TO MINIMISE THE SAFETY RISK CAUSED BY THE STRUCTURE.

MAINTENANCE

- CHECK EXCAVATED SEDIMENT TRAPS AFTER EACH RUNOFF EVENT AND MAKE REPAIRS IMMEDIATELY.
- INSPECT THE BANKS FOR SLUMPING OR EXCESSIVE SCOUR.
- IF FLOW THROUGH THE STRUCTURE IS REDUCED TO AN UNACCEPTABLE LEVEL DUE TO BLOCKAGE OF THE OUTLET STRUCTURE (IF ANY), THEN MAKE ALL NECESSARY REPAIRS AND MAINTENANCE TO RESTORE THE DESIRED FLOW CONDITIONS.
- CHECK THE STRUCTURE AND SURROUNDING CHANNEL BANKS FOR DAMAGE FROM OVERTOPPING FLOWS AND MAKE REPAIRS AS NECESSARY.
- REMOVE SEDIMENT AND RESTORE ORIGINAL SEDIMENT STORAGE VOLUME WHEN COLLECTED SEDIMENT EXCEEDS 30% OF THE PIT VOLUME.
- DISPOSE OF SEDIMENT AND DEBRIS IN A MANNER THAT WILL NOT CREATE AN EROSION OR POLLUTION HAZARD.

FIBRE ROLL INSTALLATION

- REFER TO APPROVED PLANS FOR LOCATION AND INSTALLATION DETAILS. IF THERE ARE QUESTIONS OR PROBLEMS WITH THE LOCATION, DIMENSIONS OR METHOD OF INSTALLATION CONTACT THE ENGINEER OR RESPONSIBLE ON-SITE OFFICER FOR ASSISTANCE.
- WHEN PLACED ACROSS NON-VEGETATED OR NEWLY SEEDED SLOPES, THE ROLLS MUST BE PLACED ALONG THE CONTOUR.
- IF PLACED ON OPEN OR LOOSE SOIL, ENSURE THE FIBRE ROLLS ARE TRENCHED 75 TO 125mm IN SANDY SOILS AND 50 TO 75mm IN CLAYEY SOILS.
- ENSURE THE OUTERMOST ENDS OF THE FIBRE ROLL ARE TUNED UP THE SLOPE TO ALLOW WATER TO ADEQUATELY POND UP-SLOPE OF THE ROLL, AND TO MINIMISE FLOW BYPASSING.
- WHEN PLACED ACROSS THE INVERT OF MINOR DRAINS, ENSURE THE SOCKS ARE PLACED SUCH THAT:
 - THE CREST OF THE DOWNSTREAM ROLL IS LEVEL WITH THE CHANNEL INVERT AT THE IMMEDIATE UPSTREAM SOCK (IF ANY);
 - EACH ROLL EXTENDS UP THE CHANNEL BANKS SUCH THAT THE CREST OF THE FIBRE ROLL AT ITS LOWEST POINT IS LOWER THAN THE GROUND LEVEL AT EITHER END OF THE ROLL.
- ENSURE THE ANCHORING STAKES ARE DRIVEN INTO THE END OF EACH ROLL AND ALONG THE LENGTH OF EACH ROLL AT A SPACING NOT EXCEEDING 1.2m OR SIX TIMES THE ROLL DIAMETER, WHICHEVER IS LESSER. A MAXIMUM STAKE SPACING OF 0.3m APPLIES WHEN USED TO FORM CHECK DAMS.
- ADJOINING ROLL MUST BE OVERLAPPED AT LEAST 450mm, NOT ABUTTED.

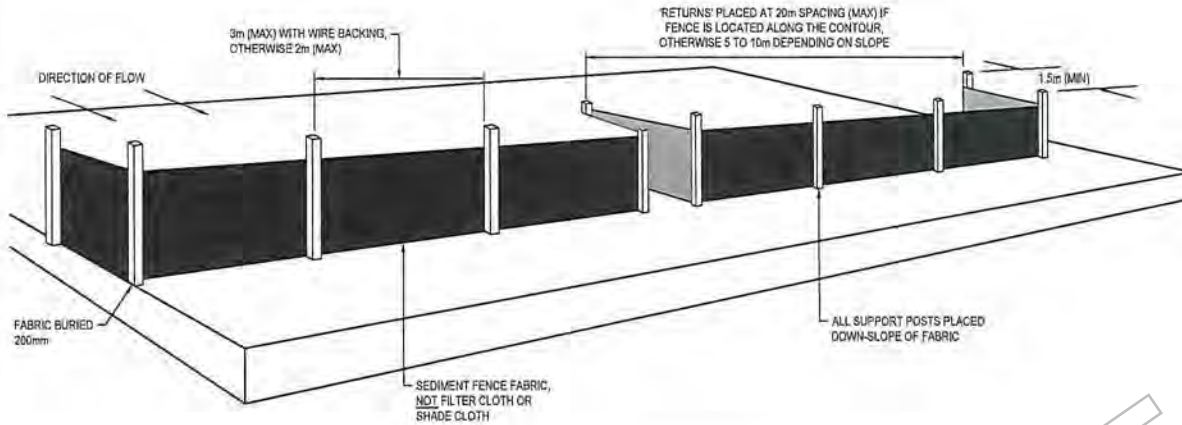
FIBRE ROLL MAINTENANCE

- INSPECT ALL FIBRE ROLLS PRIOR TO FORECAST RAIN, DAILY DURING EXTENDED PERIODS OF RAINFALL. AFTER SIGNIFICANT RUNOFF DURING STORMS OR OTHERWISE AT WEEKLY INTERVALS.
- REPAIR OR REPLACED DAMAGED FIBRE ROLLS.
- REMOVE COLLECTED SEDIMENT AND DISPOSE OF IN A SUITABLE MANNER THAT WILL NOT CAUSE AN EROSION OR POLLUTION HAZARD.

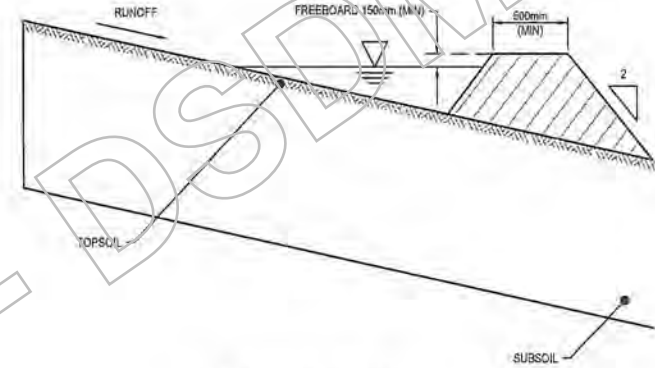
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BASE WIDTH (MIN)	2500mm*
SIDE SLOPE (MAX)	2:1 (H:V)
HYDRAULIC FREEBOARD	150mm (300mm) ²



TYPICAL SEDIMENT FENCE DETAIL (IECA 2008)
SCALE 1:5



EARTH BANKS (IECA, 2008)
SCALE 1:5

SEDIMENT FENCE INSTALLATION

- REFER TO APPROVED PLANS FOR LOCATION, EXTENT, AND REQUIRED TYPE OF FABRIC (IF SPECIFIED). IF THERE ARE QUESTIONS OR PROBLEMS WITH THE LOCATION, EXTENT, FABRIC TYPE, OR METHOD OF INSTALLATION CONTACT ENGINEER OR RESPONSIBLE ON-SITE OFFICE FOR ASSISTANCE.
- TO THE MAXIMUM DEGREE PRACTICAL, AND WHERE THE PLANS ALLOW, ENSURE THE FENCE IS LOCATED:
 - TOTALLY WITHIN THE PROPERTY BOUNDARIES;
 - ALONG A LINE OF CONSTANT ELEVATION WHEREVER PRACTICAL;
 - AT LEAST 2m FROM THE TOE OF ANY FILLING OPERATIONS THAT MAY RESULT IN SHIFTING SOIL/FILL DAMAGING THE FENCE.
- INSTALL RETURNS WITHIN THE FENCE AT MAXIMUM 20m INTERVALS IF THE FENCE IS INSTALLED ALONG THE CONTOUR, OR 5 TO 10m MAXIMUM SPACING (DEPENDING ON SLOPE) IF THE FENCE IS INSTALLED AT AN ANGLE TO THE CONTOUR, THE 'RETURNS' SHALL CONSIST OF EITHER:
 - V-SHAPED SECTION EXTENDING AT LEAST 1.5m UP THE SLOPE, OR
 - SANDBAG OR ROCK AGGREGATE CHECK DAM A MINIMUM 1/3 AND MAXIMUM 1/2 FENCE HEIGHT, AND EXTENDING AT LEAST 1.5m UP THE SLOPE.
- ENSURE THE EXTREME ENDS OF THE FENCE ARE TURNED UP THE SLOPE AT LEAST 1.5m, OR AS NECESSARY, TO MINIMISE WATER BYPASSING AROUND THE FENCE.
- ENSURE THE SEDIMENT FENCE IS INSTALLED IN A MANNER THAT AVOIDS THE CONCENTRATION OF FLOW ALONG THE FENCE, AND THE UNDESIRABLE DISCHARGE OF WATER AROUND THE ENDS OF THE FENCE.
- IF THE SEDIMENT FENCE IS TO BE INSTALLED ALONG THE EDGE OF THE EXISTING TREES, ENSURE CARE IS TAKEN TO PROTECT THE TREES AND THEIR ROOT SYSTEMS DURING INSTALLATION OF THE FENCE. DO NOT ATTACH THE FABRIC TO THE TREES.
- ALONG THE LOWER SIDE OF THE TRENCH, APPROPRIATELY SECURE THE STAKES INTO THE GROUND SPACED NO GREATER THAN 3m IF SUPPORTED BY A TOP SUPPORT WIRE OR WEIR MESH RACKING, OTHERWISE NO GREATER THAN 2m.
- IF SPECIFIED, SECURELY ATTACH THE SUPPORT WIRE OR MESH TO THE UP-SLOPE SIDE OF THE STAKES WITH THE MESH EXTENDING AT LEAST 200mm INTO THE EXCAVATED TRENCH, ENSURE
- THE MESH AND FABRIC IS ATTACHED TO THE
- UP-SLOPE SIDE OF THE STAKES EVEN WHEN DIRECTING A FENCE AROUND A CORNER OR SHARP CHANGE OF DIRECTION.
- WHEREVER POSSIBLE, CONSTRUCT THE SEDIMENT FENCE FROM A CONTINUOUS ROLL OF FABRIC, TO JOIN FABRIC EITHER:
 - 11.1. ATTACH EACH END TO TWO OVERLAPPING STAKES WITH THE FABRIC FOLDING AROUND THE ASSOCIATED STAKE ONE TURN, AND WITH THE TWO STAKES TIED TOGETHER WITH WIRE (METHOD 1); OR
 - 11.2. OVERLAP THE FABRIC TO THE NEXT ADJACENT SUPPORT POST (METHOD 2).
- SECURELY ATTACH THE FABRIC TO THE SUPPORT POSTS USING 25 x 12.5mm STAPLES, OR TIE WIRE AT MAXIMUM 150mm SPACING.
- SECURELY ATTACH THE FABRIC TO THE SUPPORT WIRE/MESH (IF ANY) AT A MAXIMUM SPACING OF 1m.
- ENSURE THE COMPLETED SEDIMENT FENCE IS AT LEAST 450mm, BUT NO MORE THAN 700mm HIGH. IF A SPILL-THROUGH WEIR IS INSTALLED, ENSURE THE CREST OF THE WEIR IS AT LEAST 300mm ABOVE GROUND LEVEL.
- BACK FILL THE TRENCH AND TAMP THE FILL TO FIRMLY ANCHOR THE BOTTOM OF THE FABRIC AND MESH TO PREVENT WATER FROM FLOWING UNDER THE FENCE.
- IF IT IS NOT POSSIBLE TO ANCHOR THE FABRIC IN AN EXCAVATED TRENCH, THEN USE A CONTINUOUS LAYER OF SAND OR AGGREGATE TO HOLD THE FABRIC FIRMLY ON THE GROUND.

INSTALLATION

- REFER TO APPROVED PLANS FOR LOCATION, EXTENT, AND CONSTRUCTION DETAILS. IF THERE ARE QUESTIONS OR PROBLEMS WITH THE LOCATION, EXTENT, OR METHOD OF INSTALLATION, CONTACT THE ENGINEER OR RESPONSIBLE ON-SITE OFFICER FOR ASSISTANCE.
- CLEAR THE LOCATION FOR THE BANK, CLEARING ONLY THE AREA THAT IS NEEDED TO PROVIDE ACCESS FOR PERSONNEL AND EQUIPMENT.
- REMOVE ROOTS, STUMPS, AND OTHER DEBRIS AND DISPOSE OF THEM PROPERLY. DO NOT USE DEBRIS TO BUILD THE BANK.
- FORM THE BANK FROM THE MATERIAL, AND TO THE DIMENSION SPECIFIED IN THE APPROVED PLANS.
- IF EARTH IS USED, THEN ENSURE THE SIDES OF THE BANK ARE NO STEEPER THAN A 2:1 (H:V) SLOPE, AND THE COMPLETED BANK MUST BE AT LEAST 500mm HIGH.
- IF FORMED FROM SANDBAGS, THEN ENSURE THE BAGS ARE TIGHTLY PACKED SUCH THAT WATER LEAKAGE THROUGH THE BAGS IS MINIMISED.
- CHECK THE BANK ALIGNMENT TO ENSURE POSITIVE DRAINAGE IN THE DESIRED DIRECTION.
- THE BANK SHOULD BE VEGETATED (TURFED, SEEDED AND MULCHED), OR OTHERWISE STABILISED IMMEDIATELY, UNLESS IT WILL OPERATE FOR LESS THAN 30 DAYS OR IF SIGNIFICANT RAINFALL IS NOT EXPECTED DURING THE LIFE OF THE BANK.
- ENSURE THE EMBANKMENT DRAINS TO A STABLE OUTLET, AND DOES NOT DISCHARGE TO AN UNSTABLE FILL SLOPE.

MAINTENANCE

- INSPECT FLOW DIVERSION BANKS AT LEAST WEEKLY AND AFTER RUNOFF-PRODUCING RAINFALL.
- INSPECT THE BANK FOR ANY SLUMPS, WHEEL TRACK DAMAGE OR LOSS OF FREEBOARD. MAKE REPAIRS AS NECESSARY.
- CHECK THAT FILL MATERIAL OR SEDIMENT HAS NOT PARTIALLY BLOCKED THE DRAINAGE WITH UP-SLOPE OF THE EMBANKMENT. WHERE NECESSARY, REMOVE ANY DEPOSITED MATERIAL TO ALLOW FREE DRAINAGE.
- DISPOSE OF ANY COLLECTED SEDIMENT OR FILL IN A MANNER THAT WILL NOT CREATE AN EROSION OR POLLUTION HAZARD.
- REPAIR ANY PLACES IN THE BANK THAT ARE WEAKENED OR IN RISK OF FAILURE.

B	23/07/18	RE-CISSUED FOR REVIEW	J.P.
A	24/06/16	ISSUED FOR REVIEW	J.P.
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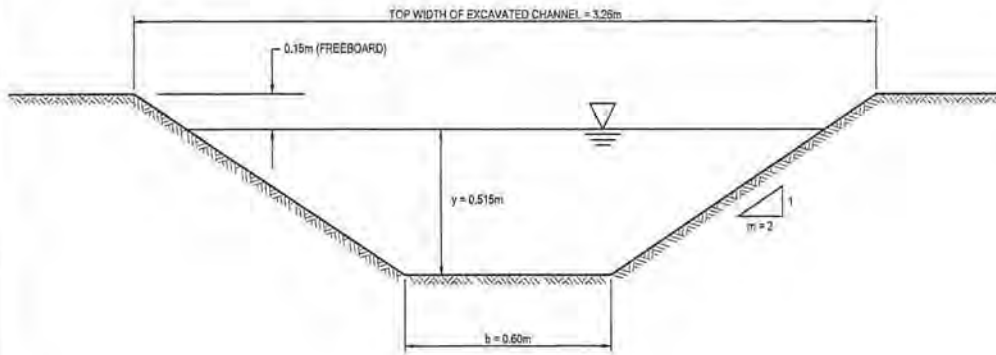
TITLE:
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SHEET 2 OF 4

PROJECT:
ROMA LEVEE STAGE 2 PROJECT

STATUS:
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PROJECT NORTH:



DIRTY WATER CHANNELS (IECA, 2008)
SCALE: N.T.S.

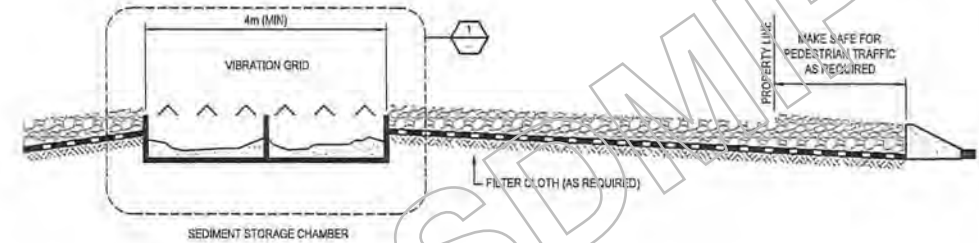


FIGURE 2 - TYPICAL LAYOUT OF VIBRATION GRID WITH ROCK RAMPS
TYPICAL SITE ACCESS TRACK DETAIL (IECA, 2008)
SCALE: N.T.S.

INSTALLATION

- REFER TO APPROVED PLANS FOR LOCATION, EXTENT, AND CONSTRUCTION DETAILS. IF THERE ARE QUESTIONS OR PROBLEMS WITH THE LOCATION, EXTENT, OR METHOD OF INSTALLATION, CONTACT THE ENGINEER OR RESPONSIBLE ON-SITE OFFICER FOR ASSISTANCE.
- ENSURE ALL NECESSARY SOIL TESTING (E.G. SOIL pH, NUTRIENT LEVELS) AND ANALYSIS HAS BEEN COMPLETED, AND REQUIRED SOIL ADJUSTMENTS PERFORMED PRIOR TO PLANTING.
- CLEAR THE LOCATION FOR THE CHANNEL, CLEARING ONLY WHAT IS NEEDED TO PROVIDE ACCESS FOR PERSONNEL AND CONSTRUCTION EQUIPMENT.
- REMOVE ROOTS, STUMPS, AND OTHER DEBRIS AND DISPOSE OF THEM PROPERLY. DO NOT USE DEBRIS TO BUILD ANY ASSOCIATED EMBANKMENTS.
- EXCAVATE THE DIVERSION CHANNEL TO THE SPECIFIED SHAPE, ELEVATION AND GRADIENT. THE SIDES OF THE CHANNEL SHOULD BE NO STEEPER THAN A 2:1(H:V) IF CONSTRUCTED IN EARTH, UNLESS SPECIFICALLY DIRECTED WITHIN THE APPROVED PLANS.
- STABILISE THE CHANNEL AND BANKS IMMEDIATELY UNLESS IT WILL OPERATE FOR LESS THAN 30 DAYS. IN EITHER CASE, TEMPORARY EROSION PROTECTION (MATTING, ROCK, ETC.) WILL BE REQUIRED AS SPECIFIED WITHIN THE APPROVED PLANS OR AS DIRECTED.
- ENSURE THE CHANNEL DISCHARGES TO A STABLE AREA.

MAINTENANCE

- DURING THE SITE'S CONSTRUCTION PERIOD, INSPECT THE DIVERSION CHANNEL WEEKLY AND AFTER ANY INCREASE IN FLOWS WITHIN THE CHANNEL. REPAIR ANY SLUMPS, WHEEL TRACK DAMAGE OR LOSS OF FREEBOARD.
- ENSURE FILL MATERIAL OR SEDIMENT IS NOT PARTIALLY BLOCKING THE CHANNEL. WHERE NECESSARY, REMOVE ANY DEPOSITED MATERIAL TO ALLOW FREE DRAINAGE.
- DISPOSE OF ANY COLLECTED SEDIMENT OR FILL IN A MANNER THAT WILL NOT CREATE AN EROSION OR POLLUTION HAZARD.

VIBRATION GRID AND ROCK RAMPS INSTALLATION

- REFER TO APPROVED PLANS FOR LOCATION AND DIMENSIONAL DETAILS. IF THERE ARE QUESTIONS OR PROBLEMS WITH THE LOCATION, DIMENSIONS OR METHOD OF INSTALLATION CONTACT THE ENGINEER OR RESPONSIBLE ON-SITE OFFICER FOR ASSISTANCE.
- CLEAR THE LOCATION OF THE VIBRATION GRID REMOVING STUMPS, ROOTS AND OTHER VEGETATION TO PROVIDE A FIRM FOUNDATION SO THAT THE ROCK IS NOT PRESSED INTO SOFT GROUND. CLEAR SUFFICIENT WIDTH TO ALLOW FOR PASSAGE OF LARGE VEHICLES, BUT CLEAR ONLY THAT NECESSARY FOR THE EXIT. DO NOT CLEAR ADJACENT AREAS UNTIL THE REQUIRED EROSION AND SEDIMENT CONTROL DEVICES ARE IN PLACE.
- GRADE THE LOCATION OF THE VIBRATION GRID SO THAT RUNOFF FROM THE UNIT WILL NOT FLOW INTO THE STREET, BUT WILL FLOW TOWARDS AN APPROPRIATE SEDIMENT-TRAPPING DEVICE.
- ENSURE THAT THE INSTALLATION OF THE VIBRATION GRID INCLUDES ADEQUATE SEDIMENT STORAGE VOLUME UNDER THE GRID. WHERE NECESSARY, INSTALL SUITABLE PRECAST SEDIMENT COLLECTION CHAMBERS.
- PLACE A ROCK PAD/RAMP FORMING A MINIMUM 200mm THICK LAYER OF CLEAN, OPEN-VOID ROCK OVER THE ROADWAY BETWEEN THE VIBRATION GRID AND THE SEALED STREET TO PREVENT TYRES FROM PICKING UP MORE SOIL AFTER THEY HAVE BEEN CLEANED.
- THE TOTAL LENGTH OF THE VIBRATION GRID AND ROCK RAMPS SHOULD BE AT LEAST 15m WHERE PRACTICABLE, AND AS WIDE AS THE FULL WIDTH OF THE ENTRY OR EXIT AND AT LEAST 3m. THE ROCK RAMP SHOULD COMMENCE AT THE EDGE OF THE OFF-SITE SEALED ROAD OR PAVEMENT.
- FLARE THE END OF THE ROCK PAD WHERE IT MEETS THE PAVEMENT SO THAT THE WHEELS OF THE TURNING VEHICLES DO NOT TRAVEL OVER UNPROTECTED SOIL.
- IF THE FOOTPATH IS OPEN TO PEDESTRIAN MOVEMENT, THEN COVER THE COARSE ROCK WITH FINE AGGREGATE OR GRAVEL, OR OTHERWISE TAKE WHATEVER MEASURES ARE NEEDED TO MAKE THE AREA SAFE.

CODE	DATE	ISSUED FOR REVIEW	REVISION	AUTHORISED
B	25/07/16	RE-ISSUED FOR REVIEW		J.P.
A	24/06/16	ISSUED FOR REVIEW		J.P.

ARBITRAGE CONSULTANT:

41-29431

1 CARTWRIGHT STREET
P.O. BOX 42, MITCHELL QLD 4465
Phone: 1300 007 852
Fax: (07) 4624 6690
Email: council@maranoa.qld.gov.au
Web: www.maranoa.qld.gov.au
A DIVISION OF MARANOA REGIONAL COUNCIL, 2014

CLIENT:
MARANOA REGIONAL COUNCIL
DEPARTMENT OF INFRASTRUCTURE SERVICES

TITLE:
NOTES AND DETAILS
SHEET 3 OF 4

PROJECT:
ROMA LEVEE STAGE 2 PROJECT

STATUS:
PRELIMINARY

DESIGNED	DRAWN	APPROVED	DATE	DRAWING NUMBER
A.K.	N.C.	J.P.	24/06	2016-3780-C205
WORK ORDER NUMBER: 15201	DESIGN NUMBER: 3780	SCALE @ A1: NTS	KEY: B	

GHD

145 Ann Street Brisbane QLD 4000

GPO Box 668 Brisbane QLD 4001

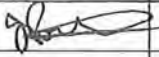

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Document Status

Revision	Author	Reviewer		Approved for Issue		
		Name	Signature	Name	Signature	Date
0	A. Kamal	J. Postlethwaite		J. Postlethwaite		5/9/16

RTI RELEASE - DSDMIP

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Department of Infrastructure,
Local Government and Planning

Our reference: SDA-1216-035497
Your reference: D16/111247

19 December 2016

Maranoa Regional Council
PO Box 620
ROMA QLD 4455
planning@maranoa.qld.gov.au

Dear Sir/Madam

Notice of Decision – Development Permit – Operational Works (clearing native vegetation associated with the construction of a flood levee)

1 Tiffin Street, Roma QLD 4455
230, 234, 236, 256 & 262 Edwardes Street, Roma QLD 4455
(Given under section 285 of the *Sustainable Planning Act 2009*)

The Department of Infrastructure, Local Government and Planning (DILGP) advises that the development application described below has been approved subject to conditions.

Applicant details

Applicant name: Maranoa Regional Council

Site details

Lot on plan: Lot 2 on R863
Lot 2 on SP110498
Lot 1 & 2 on RP4380
Lot 1 on R8684
Lot 1 on WV1882

Local government area: Maranoa Regional Council

Application details

Proposed development: Development Permit – Operational Works (clearing native vegetation associated with the construction of a flood levee)

A decision notice for this application is attached.

Copies of the following documents are also attached:

- relevant appeal provisions in the *Sustainable Planning Act 2009*
- any plans and specifications approved in relation to the decision notice.

For further information, please contact Maria Johnson, Planning Officer, SARA Darling Downs South West on 4616 7307, or email maria.johnson@dilgp.qld.gov.au who will be pleased to assist.

Yours sincerely

Sch. 4(4)(6) - Disclosing personal information



Nathan Rule
Director, Southern Region

enc: Decision notice
Attachment 1—Assessment manager conditions
Attachment 2—SPA appeal provisions
Approved plans and specifications

Decision notice(Given under section 334 of the *Sustainable Planning Act 2009*)**Applicant details**

Applicant name: Maranoa Regional Council
 Applicant contact details: PO Box 620
 Roma QLD 4455
 planning@maranoa.qld.gov.au

Application details

Level of assessment: Code assessment
 Properly made date: 5 December 2016

Site details

Street address: 1 Tiffin Street, Roma QLD 4455
 230, 234, 236, 256 & 262 Edwardes Street, Roma
 Lot on plan: Lot 2 on R863
 Lot 2 on SP110498
 Lot 1 & 2 on RP4380
 Lot 1 on R8684
 Lot 1 on WV1882
 Name of owner: Maranoa Regional Council

Decision

Date of decision: 19 December 2016
 Decision details: Approved subject to conditions

Conditions

This approval is subject to:

- the assessment manager conditions in Attachment 1.

DILGP has, for particular conditions of this approval, nominated an entity to be the assessing authority for that condition under section 255D(3) of the *Sustainable Planning Act 2009*.

Aspects of development and development approval granted

Nature of Development	Approval Type	Brief Proposal of Description	Level of Assessment
Operational Work	Development permit	Clearing native vegetation associated with the construction of a flood levee	Code Assessment

Rights of appeal

The rights of applicants to appeal to the Planning and Environment Court against decisions about a development application are set out in chapter 7, part 1, division 8 of the *Sustainable Planning Act 2009*. For particular applications, there may also be a right to appeal to the Building and Development Dispute Resolution Committee (see chapter 7, part 2 of the Act).

Copies of the relevant appeal provisions are attached.

Relevant period for the approval

This development approval will lapse if the development is not started within the following period:

- 2 years.

Approved plans and specifications

Copies of the following approved plans and specifications are attached:

Drawing/Report Title	Prepared by	Date	Reference no.	Version/Issue
Aspect of development: Operational Works				
"Western Levee General Arrangement Plan"	GHD	27 May 2016	Drawing No. 2016-378C-C101	
Maranoa Regional Council Roma Flood Mitigation Project – Stage 2 Eastern Diversion Drain and Western Levee – Erosion and Sediment Control Plan	GHD	August 2016		

Our reference: SDA-1216-035497

Your reference: D16/111247

Attachment 1—Assessment manager conditions

No.	Conditions of development approval	Condition timing
Development Permit – Operational Works (clearing native vegetation associated with the construction of a flood levee)		
Schedule 7, Table 3, Item 2—Pursuant to section 255D of the <i>Sustainable Planning Act 2009</i> , the chief executive administering the Act nominates the Director-General of the Department of Natural Resources and Mines 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.	<p>The clearing of vegetation is limited to the extent identified as area(s):</p> <ul style="list-style-type: none"> • “Red – Clear And Grub Zones” on the plan titled “Western Levee General Arrangement Plan”, Drawing No. 2016-378C-C101, dated 27 May 2016 prepared by GHD. 	At all times
2.	<p>The development must occur in accordance with the standards and specifications detailed in:</p> <ul style="list-style-type: none"> • “Maranoa Regional Council Roma Flood Mitigation Project – Stage 2 Eastern Diversion Drain and Western Levee – Erosion and Sediment Control Plan, prepared by GHD, dated August 2016”, and any amendments consistent with best practice. 	At all times
3.	<p>The permit holder must ensure that:</p> <ol style="list-style-type: none"> (a) a full copy of the permit is held by; and (b) the extent of clearing authorised by this permit is properly understood by any person(s) engaged or employed to carry out the clearing of the vegetation under this permit. 	At all times

Our reference: SDA-1216-035497

Your reference: D16/111247

Attachment 2—SPA Appeal Provisions

Sustainable Planning Act 2009—Representation and appeal provisions

The following relevant appeal provisions are provided in accordance with s336(a) of the *Sustainable Planning Act 2009*.

Chapter 6 Integrated development assessment system (IDAS)

Part 8 Dealing with decision notices and approvals

Division 1 Changing decision notices and approvals during applicant's appeal period

360 Application of div 1

This division applies only during the applicant's appeal period.

361 Applicant may make representations about decision

- (1) The applicant may make written representations to the assessment manager about—
 - (a) a matter stated in the decision notice, other than a refusal or a matter about which a concurrence agency told the assessment manager under section 287(1) or (5); or
 - (b) the standard conditions applying to a deemed approval.
- (2) However, the applicant can not make representations under subsection (1)(a) about a condition attached to an approval under the direction of the Minister.

362 Assessment manager to consider representations

The assessment manager must consider any representations made to the assessment manager under section 361.

363 Decision about representations

- (1) If the assessment manager agrees with any of the representations about a decision notice or a deemed approval, the assessment manager must give a new decision notice (the ***negotiated decision notice***) to—
 - (a) the applicant; and
 - (b) each principal submitter; and
 - (c) each referral agency; and
 - (d) if the assessment manager is not the local government and the development is in a local government area—the local government.
- (2) Before the assessment manager agrees to a change under this section, the assessment manager must consider the matters the assessment manager was required to consider in assessing the application, to the extent the matters are relevant.
- (3) Only 1 negotiated decision notice may be given.
- (4) The negotiated decision notice—
 - (a) must be given within 5 business days after the day the assessment manager agrees with the representations; and
 - (b) must comply with section 335; and
 - (c) must state the nature of the changes; and
 - (d) replaces—
 - (i) the decision notice previously given; or
 - (ii) if a decision notice was not previously given and the negotiated decision notice relates to a deemed approval—the standard conditions applying to the deemed approval.

- (5) If the assessment manager does not agree with any of the representations, the assessment manager must, within 5 business days after the day the assessment manager decides not to agree with any of the representations, give written notice to the applicant stating the decision about the representations.

364 Giving new notice about charges for infrastructure

- (1) This section applies if the development approved by the negotiated decision notice is different from the development approved in the decision notice or deemed approval in a way that affects the amount of an infrastructure charge, regulated infrastructure charge or adopted infrastructure charge.
- (2) The local government may give the applicant a new infrastructure charges notice under section 633, regulated infrastructure charges notice under section 643 or adopted infrastructure charges notice under section 648F to replace the original notice.

366 Applicant may suspend applicant's appeal period

- (1) If the applicant needs more time to make the representations, the applicant may, by written notice given to the assessment manager, suspend the applicant's appeal period.
- (2) The applicant may act under subsection (1) only once.
- (3) If the representations are not made within 20 business days after the day written notice was given to the assessment manager, the balance of the applicant's appeal period restarts.
- (4) If the representations are made within 20 business days after the day written notice was given to the assessment manager—
- if the applicant gives the assessment manager a notice withdrawing the notice under subsection (1)—the balance of the applicant's appeal period restarts the day after the assessment manager receives the notice of withdrawal; or
 - if the assessment manager gives the applicant a notice under section 363(5)—the balance of the applicant's appeal period restarts the day after the applicant receives the notice; or
 - if the assessment manager gives the applicant a negotiated decision notice—the applicant's appeal.

Chapter 7 Appeals, offences and enforcement

Part 1 Planning and Environment Court

Division 8 Appeals to court relating to development applications and approvals

461 Appeals by applicants

- (1) An applicant for a development application may appeal to the court against any of the following—
- the refusal, or the refusal in part, of the development application;
 - any condition of a development approval, another matter stated in a development approval and the identification or inclusion of a code under section 242;
 - the decision to give a preliminary approval when a development permit was applied for;
 - the length of a period mentioned in section 341;
 - a deemed refusal of the development application.
- (2) An appeal under subsection (1)(a), (b), (c) or (d) must be started within 20 business days (the **applicant's appeal period**) after—
- if a decision notice or negotiated decision notice is given—the day the decision notice or negotiated decision notice is given to the applicant; or
 - otherwise—the day a decision notice was required to be given to the applicant.
- (3) An appeal under subsection (1)(e) may be started at any time after the last day a decision on the matter should have been made.

462 Appeals by submitters—general

- (1) A submitter for a development application may appeal to the court only against—

- (a) the part of the approval relating to the assessment manager's decision about any part of the application requiring impact assessment under section 314; or
 - (b) the part of the approval relating to the assessment manager's decision under section 327.
- (2) To the extent an appeal may be made under subsection (1), the appeal may be against 1 or more of the following—
- (a) the giving of a development approval;
 - (b) any provision of the approval including—
 - (i) a condition of, or lack of condition for, the approval; or
 - (ii) the length of a period mentioned in section 341 for the approval.
- (3) However, a submitter may not appeal if the submitter—
- (a) withdraws the submission before the application is decided; or
 - (b) has given the assessment manager a notice under section 339(1)(b)(ii).
- (4) The appeal must be started within 20 business days (the **submitter's appeal period**) after the decision notice or negotiated decision notice is given to the submitter.

463 Additional and extended appeal rights for submitters for particular development applications

- (1) This section applies to a development application to which chapter 9, part 7 applies.
- (2) A submitter of a properly made submission for the application may appeal to the court about a referral agency's response made by a concurrence agency for the application.
- (3) However, the submitter may only appeal against a referral agency's response to the extent it relates to—
 - (a) development for an aquacultural ERA; or
 - (b) development that is—
 - (i) a material change of use of premises for aquaculture; or
 - (ii) operational work that is the removal, damage or destruction of a marine plant.
- (4) Despite section 462(1), the submitter may appeal against the following matters for the application even if the matters relate to code assessment—
 - i. a decision about a matter mentioned in section 462(2) if it is a decision of the chief executive;
 - ii. a referral agency's response mentioned in subsection (2).

464 Appeals by advice agency submitters

- (1) Subsection (2) applies if an advice agency, in its response for an application, told the assessment manager to treat the response as a properly made submission.
- (2) The advice agency may, within the limits of its jurisdiction, appeal to the court about—
 - (a) any part of the approval relating to the assessment manager's decision about any part of the application requiring impact assessment under section 314; or
 - (b) any part of the approval relating to the assessment manager's decision under section 327.
- (3) The appeal must be started within 20 business days after the day the decision notice or negotiated decision notice is given to the advice agency as a submitter.
- (4) However, if the advice agency has given the assessment manager a notice under section 339(1)(b)(ii), the advice agency may not appeal the decision.

465 Appeals about decisions relating to extensions for approvals

- (1) For a development approval given for a development application, a person to whom a notice is given under section 389, other than a notice for a decision under section 386(2), may appeal to the court against the decision in the notice.
- (2) The appeal must be started within 20 business days after the day the notice of the decision is given to the person.
- (3) Also, a person who has made a request under section 383 may appeal to the court against a deemed refusal of the request.
- (4) An appeal under subsection (3) may be started at any time after the last day the decision on the matter should have been made.

466 Appeals about decisions relating to permissible changes

- (1) For a development approval given for a development application, the following persons may appeal to the court against a decision on a request to make a permissible change to the approval—
 - (a) if the responsible entity for making the change is the assessment manager for the application—
 - (i) the person who made the request; or
 - (ii) an entity that gave a notice under section 373 or a pre-request response notice about the request;
 - (b) if the responsible entity for making the change is a concurrence agency for the application—the person who made the request.
- (2) The appeal must be started within 20 business days after the day the person is given notice of the decision on the request under section 376.
- (3) Also, a person who has made a request under section 369 may appeal to the court against a deemed refusal of the request.
- (4) An appeal under subsection (3) may be started at any time after the last day the decision on the matter should have been made.

467 Appeals about changing or cancelling conditions imposed by assessment manager or concurrence agency

- (1) A person to whom a notice under section 378(9)(b) giving a decision to change or cancel a condition of a development approval has been given may appeal to the court against the decision in the notice.
- (2) The appeal must be started within 20 business days after the day the notice of the decision is given to the person.

Division 11 Making and appeal to Court**481 How appeals to the court are started**

- (1) An appeal is started by lodging written notice of appeal with the registrar of the court.
- (2) The notice of appeal must state the grounds of the appeal.
- (3) The person starting the appeal must also comply with the rules of the court applying to the appeal.
- (4) However, the court may hear and decide an appeal even if the person has not complied with subsection (3).

482 Notice of appeal to other parties—development applications and approvals

- (1) An appellant under division 8 must give written notice of the appeal to—
 - (a) if the appellant is an applicant—
 - (i) the chief executive; and
 - (ii) the assessment manager; and
 - (iii) any concurrence agency; and
 - (iv) any principal submitter whose submission has not been withdrawn; and
 - (v) any advice agency treated as a submitter whose submission has not been withdrawn; or
 - (b) if the appellant is a submitter or an advice agency whose response to the development application is treated as a submission for an appeal—
 - (i) the chief executive; and
 - (ii) the assessment manager; and
 - (iii) any referral agency; and
 - (iv) the applicant; or
 - (c) if the appellant is a person to whom a notice mentioned in section 465(1) has been given—
 - (i) the chief executive; and
 - (b) the assessment manager for the development application to which the notice relates; and

- (c) any entity that was a concurrence agency for the development application to which the notice relates; and
- (d) the person who made the request under section 383 to which the notice relates, if the person is not the appellant; or
- (d) if the appellant is a person mentioned in section 466(1)—
 - (i) the chief executive; and
 - (ii) the responsible entity for making the change to which the appeal relates; and
 - (iii) the person who made the request to which the appeal relates under section 369, if the person is not the appellant; and
 - (iv) if the responsible entity is the assessment manager—any entity that was a concurrence agency for the development application to which the notice of the decision on the request relates; or
- (e) if the appellant is a person to whom a notice mentioned in section 467 has been given—the entity that gave the notice.
- (2) The notice must be given within—
 - (a) if the appellant is a submitter or advice agency whose response to the development application is treated as a submission for an appeal—2 business days after the appeal is started; or
 - (b) otherwise—10 business days after the appeal is started.
- (3) The notice must state—
 - (a) the grounds of the appeal; and
 - (b) if the person given the notice is not the respondent or a co-respondent under section 485—that the person may, within 10 business days after the notice is given, elect to become a co-respondent to the appeal by filing in the court a notice of election in the approved form.

485 Respondent and co-respondents for appeals under div 8

- (1) Subsections (2) to (8) apply for appeals under sections 461 to 464.
- (2) The assessment manager is the respondent for the appeal.
- (3) If the appeal is started by a submitter, the applicant is a co-respondent for the appeal.
- (4) Any submitter may elect to become a co-respondent for the appeal.
- (5) If the appeal is about a concurrence agency's response, the concurrence agency is a co-respondent for the appeal.
- (6) If the appeal is only about a concurrence agency's response, the assessment manager may apply to the court to withdraw from the appeal.
- (7) The respondent and any co-respondents for an appeal are entitled to be heard in the appeal as a party to the appeal.
- (8) A person to whom a notice of appeal is required to be given under section 482 and who is not the respondent or a co-respondent for the appeal may elect to be a co-respondent.
- (9) For an appeal under section 465—
 - i. the assessment manager is the respondent; and
 - ii. if the appeal is started by a concurrence agency that gave the assessment manager a notice under section 385—the person asking for the extension the subject of the appeal is a co-respondent; and
 - iii. any other person given notice of the appeal may elect to become a co-respondent.
- (10) For an appeal under section 466—
 - (a) the responsible entity for making the change to which the appeal relates is the respondent; and
 - (b) if the responsible entity is the assessment manager—
 - (i) if the appeal is started by a person who gave a notice under section 373 or a pre-request response notice—the person who made the request for the change is a co-respondent; and
 - (ii) any other person given notice of the appeal may elect to become a co-respondent.
- (11) For an appeal under section 467, the respondent is the entity given notice of the appeal.

488 How an entity may elect to be a co-respondent

An entity that is entitled to elect to be a co-respondent to an appeal may do so, within 10 business days after notice of the appeal is given to the entity, by following the rules of court for the election.

490 Lodging appeal stops particular actions

- (1) If an appeal, other than an appeal under section 465, 466 or 467, is started under division 8, the development must not be started until the appeal is decided or withdrawn.
- (2) If an appeal is about a condition imposed on a compliance permit, the development must not be started until the appeal is decided or withdrawn.
- (3) Despite subsections (1) and (2), if the court is satisfied the outcome of the appeal would not be affected if the development or part of the development is started before the appeal is decided, the court may allow the development or part of the development to start before the appeal is decided.

PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL



Approval no: SDA-1216-035497

Date: 19 December 2016



LEGEND

- ⊕ BOREHOLE (ON 4/10/2016)
- ⊖ TEST HOLE (ON 4/10/2016)

NOTE

1. REFER TO DRAWINGS AND SPECIFICATIONS FOR GENERAL NOTES.

2016 INVESTIGATION BOREHOLE				
BOREHOLE	EASTING	NORTHING	HL	DEPTH
BH001	57826.000	756400.000	237.000	7.50m
BH002	57826.000	756400.000	237.000	7.50m
BH003	57826.000	756400.000	237.000	7.50m
BH004	57826.000	756400.000	237.000	7.50m
BH005	57826.000	756400.000	237.000	7.50m
BH006	57826.000	756400.000	237.000	7.50m
BH007	57826.000	756400.000	237.000	7.50m

2016 INVESTIGATION TEST PITS				
POINT	EASTING	NORTHING	ELEVATION	SOIL TYPE
TP001	57826.000	756400.000	237.000	2.10m
TP002	57826.000	756400.000	237.000	2.20m

Legend	
	Red - Clear and Grub Zones

<p>DATE: 19/12/2016</p> <p>SCALE: 1:1000</p> <p>PROJECT: SDA-1216-035497</p>			<p>1. EAST WIND STREET</p> <p>2. GEORGE STREET</p> <p>3. GEORGE STREET EAST</p> <p>4. BLUNGIT STREET</p> <p>5. WESTERN LEVEL</p>	<p>MARANOA REGIONAL COUNCIL</p> <p>DEPARTMENT OF INFRASTRUCTURE SERVICES</p> <p>WESTERN LEVEL</p> <p>GENERAL ARRANGEMENT PLAN</p>	<p>ROWA FLOOD MITIGATION PROJECT - STAGE 2</p> <p>FOR CONSTRUCTION</p> <p>2016-2020-C101</p>
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Department of Infrastructure,
Local Government and Planning

Our reference: SDA-1216-035497
Your reference: D16/111247

19 December 2016

Maranoa Regional Council
PO Box 620
ROMA QLD 4455
planning@maranoa.qld.gov.au

Dear Sir/Madam

Notice of Decision – Development Permit – Operational Works (clearing native vegetation associated with the construction of a flood levee)

1 Tiffin Street, Roma QLD 4455
230, 234, 236, 256 & 262 Edwardes Street, Roma QLD 4455
(Given under section 285 of the *Sustainable Planning Act 2009*)

The Department of Infrastructure, Local Government and Planning (DILGP) advises that the development application described below has been approved subject to conditions.

Applicant details

Applicant name: Maranoa Regional Council

Site details

Lot on plan: Lot 2 on R863
Lot 2 on SP110498
Lot 1 & 2 on RP4380
Lot 1 on R8684
Lot 1 on WV1882
Local government area: Maranoa Regional Council

Application details

Proposed development: Development Permit – Operational Works (clearing native vegetation associated with the construction of a flood levee)

A decision notice for this application is attached.

Copies of the following documents are also attached:

- relevant appeal provisions in the *Sustainable Planning Act 2009*
- any plans and specifications approved in relation to the decision notice.

For further information, please contact Maria Johnson, Planning Officer, SARA Darling Downs South West on 4616 7307, or email maria.johnson@dilgp.qld.gov.au who will be pleased to assist.

Yours sincerely

Sch. 4(4)(6) - Disclosing personal information

Nathan Rule
Director, Southern Region

enc: Decision notice
Attachment 1—Assessment manager conditions
Attachment 2—SPA appeal provisions
Approved plans and specifications

Decision notice(Given under section 334 of the *Sustainable Planning Act 2009*)**Applicant details**

Applicant name: Maranoa Regional Council
 Applicant contact details: PO Box 620
 Roma QLD 4455
 planning@maranoa.qld.gov.au

Application details

Level of assessment: Code assessment
 Properly made date: 5 December 2016

Site details

Street address: 1 Tiffin Street, Roma QLD 4455
 230, 234, 236, 256 & 262 Edwardes Street, Roma
 Lot on plan: Lot 2 on R863
 Lot 2 on SP110498
 Lot 1 & 2 on RF4380
 Lot 1 on R8684
 Lot 1 on WV1882
 Name of owner: Maranoa Regional Council

Decision

Date of decision: 19 December 2016
 Decision details: Approved subject to conditions

Conditions

This approval is subject to:

- the assessment manager conditions in Attachment 1.

DILGP has, for particular conditions of this approval, nominated an entity to be the assessing authority for that condition under section 255D(3) of the *Sustainable Planning Act 2009*.

Aspects of development and development approval granted

Nature of Development	Approval Type	Brief Proposal of Description	Level of Assessment
Operational Work	Development permit	Clearing native vegetation associated with the construction of a flood levee	Code Assessment

Rights of appeal

The rights of applicants to appeal to the Planning and Environment Court against decisions about a development application are set out in chapter 7, part 1, division 8 of the *Sustainable Planning Act 2009*. For particular applications, there may also be a right to appeal to the Building and Development Dispute Resolution Committee (see chapter 7, part 2 of the Act).

Copies of the relevant appeal provisions are attached.

Relevant period for the approval

This development approval will lapse if the development is not started within the following period:

- 2 years.

Approved plans and specifications

Copies of the following approved plans and specifications are attached:

Drawing/Report Title	Prepared by	Date	Reference no.	Version/Issue
Aspect of development: Operational Works				
"Western Levee General Arrangement Plan"	GHD	27 May 2016	Drawing No. 2016-378C-C101	
Maranoa Regional Council Roma Flood Mitigation Project – Stage 2 Eastern Diversion Drain and Western Levee – Erosion and Sediment Control Plan	GHD	August 2016		

Our reference: SDA-1216-035497
 Your reference: D16/111247

Attachment 1—Assessment manager conditions

No.	Conditions of development approval	Condition timing
Development Permit – Operational Works (clearing native vegetation associated with the construction of a flood levee)		
Schedule 7, Table 3, Item 2—Pursuant to section 255D of the <i>Sustainable Planning Act 2009</i> , the chief executive administering the Act nominates the Director-General of the Department of Natural Resources and Mines 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.	<p>The clearing of vegetation is limited to the extent identified as area(s):</p> <ul style="list-style-type: none"> • “Red – Clear And Grub Zones” on the plan titled “Western Levee General Arrangement Plan”, Drawing No. 2016-378C-C101, dated 27 May 2016 prepared by GHD. 	At all times
2.	<p>The development must occur in accordance with the standards and specifications detailed in:</p> <ul style="list-style-type: none"> • “Maranoa Regional Council Roma Flood Mitigation Project – Stage 2 Eastern Diversion Drain and Western Levee – Erosion and Sediment Control Plan, prepared by GHD, dated August 2016”, and any amendments consistent with best practice. 	At all times
3.	<p>The permit holder must ensure that:</p> <p>(a) a full copy of the permit is held by; and</p> <p>(b) the extent of clearing authorised by this permit is properly understood by any person(s) engaged or employed to carry out the clearing of the vegetation under this permit.</p>	At all times

Our reference: SDA-1216-035497
 Your reference: D16/111247

Attachment 2—SPA Appeal Provisions

Sustainable Planning Act 2009—Representation and appeal provisions

The following relevant appeal provisions are provided in accordance with s336(a) of the *Sustainable Planning Act 2009*.

Chapter 6 Integrated development assessment system (IDAS)

Part 8 Dealing with decision notices and approvals

Division 1 Changing decision notices and approvals during applicant's appeal period

360 Application of div 1

This division applies only during the applicant's appeal period.

361 Applicant may make representations about decision

- (1) The applicant may make written representations to the assessment manager about—
 - (a) a matter stated in the decision notice, other than a refusal or a matter about which a concurrence agency told the assessment manager under section 287(1) or (5); or
 - (b) the standard conditions applying to a deemed approval.
- (2) However, the applicant can not make representations under subsection (1)(a) about a condition attached to an approval under the direction of the Minister.

362 Assessment manager to consider representations

The assessment manager must consider any representations made to the assessment manager under section 361.

363 Decision about representations

- (1) If the assessment manager agrees with any of the representations about a decision notice or a deemed approval, the assessment manager must give a new decision notice (the **negotiated decision notice**) to—
 - (a) the applicant; and
 - (b) each principal submitter; and
 - (c) each referral agency; and
 - (d) if the assessment manager is not the local government and the development is in a local government area—the local government.
- (2) Before the assessment manager agrees to a change under this section, the assessment manager must consider the matters the assessment manager was required to consider in assessing the application, to the extent the matters are relevant.
- (3) Only 1 negotiated decision notice may be given.
- (4) The negotiated decision notice—
 - (a) must be given within 5 business days after the day the assessment manager agrees with the representations; and
 - (b) must comply with section 335; and
 - (c) must state the nature of the changes; and
 - (d) replaces—
 - (i) the decision notice previously given; or
 - (ii) if a decision notice was not previously given and the negotiated decision notice relates to a deemed approval—the standard conditions applying to the deemed approval.

- (5) If the assessment manager does not agree with any of the representations, the assessment manager must, within 5 business days after the day the assessment manager decides not to agree with any of the representations, give written notice to the applicant stating the decision about the representations.

364 Giving new notice about charges for infrastructure

- (1) This section applies if the development approved by the negotiated decision notice is different from the development approved in the decision notice or deemed approval in a way that affects the amount of an infrastructure charge, regulated infrastructure charge or adopted infrastructure charge.
- (2) The local government may give the applicant a new infrastructure charges notice under section 633, regulated infrastructure charges notice under section 643 or adopted infrastructure charges notice under section 648F to replace the original notice.

366 Applicant may suspend applicant's appeal period

- (1) If the applicant needs more time to make the representations, the applicant may, by written notice given to the assessment manager, suspend the applicant's appeal period.
- (2) The applicant may act under subsection (1) only once.
- (3) If the representations are not made within 20 business days after the day written notice was given to the assessment manager, the balance of the applicant's appeal period restarts.
- (4) If the representations are made within 20 business days after the day written notice was given to the assessment manager—
- if the applicant gives the assessment manager a notice withdrawing the notice under subsection (1)—the balance of the applicant's appeal period restarts the day after the assessment manager receives the notice of withdrawal; or
 - if the assessment manager gives the applicant a notice under section 363(5)—the balance of the applicant's appeal period restarts the day after the applicant receives the notice; or
 - if the assessment manager gives the applicant a negotiated decision notice—the applicant's appeal.

Chapter 7 Appeals, offences and enforcement

Part 1 Planning and Environment Court

Division 8 Appeals to court relating to development applications and approvals

461 Appeals by applicants

- (1) An applicant for a development application may appeal to the court against any of the following—
- the refusal, or the refusal in part, of the development application;
 - any condition of a development approval, another matter stated in a development approval and the identification or inclusion of a code under section 242;
 - the decision to give a preliminary approval when a development permit was applied for;
 - the length of a period mentioned in section 341;
 - a deemed refusal of the development application.
- (2) An appeal under subsection (1)(a), (b), (c) or (d) must be started within 20 business days (the **applicant's appeal period**) after—
- if a decision notice or negotiated decision notice is given—the day the decision notice or negotiated decision notice is given to the applicant; or
 - otherwise—the day a decision notice was required to be given to the applicant.
- (3) An appeal under subsection (1)(e) may be started at any time after the last day a decision on the matter should have been made.

462 Appeals by submitters—general

- (1) A submitter for a development application may appeal to the court only against—

- (a) the part of the approval relating to the assessment manager's decision about any part of the application requiring impact assessment under section 314; or
 - (b) the part of the approval relating to the assessment manager's decision under section 327.
- (2) To the extent an appeal may be made under subsection (1), the appeal may be against 1 or more of the following—
- (a) the giving of a development approval;
 - (b) any provision of the approval including—
 - (i) a condition of, or lack of condition for, the approval; or
 - (ii) the length of a period mentioned in section 341 for the approval.
- (3) However, a submitter may not appeal if the submitter—
- (a) withdraws the submission before the application is decided; or
 - (b) has given the assessment manager a notice under section 339(1)(b)(ii).
- (4) The appeal must be started within 20 business days (the **submitter's appeal period**) after the decision notice or negotiated decision notice is given to the submitter.

463 Additional and extended appeal rights for submitters for particular development applications

- (1) This section applies to a development application to which chapter 9, part 7 applies.
- (2) A submitter of a properly made submission for the application may appeal to the court about a referral agency's response made by a concurrence agency for the application.
- (3) However, the submitter may only appeal against a referral agency's response to the extent it relates to—
 - (a) development for an aquacultural ERA; or
 - (b) development that is—
 - (i) a material change of use of premises for aquaculture; or
 - (ii) operational work that is the removal, damage or destruction of a marine plant.
- (4) Despite section 462(1), the submitter may appeal against the following matters for the application even if the matters relate to code assessment—
 - i. a decision about a matter mentioned in section 462(2) if it is a decision of the chief executive;
 - ii. a referral agency's response mentioned in subsection (2).

464 Appeals by advice agency submitters

- (1) Subsection (2) applies if an advice agency, in its response for an application, told the assessment manager to treat the response as a properly made submission.
- (2) The advice agency may, within the limits of its jurisdiction, appeal to the court about—
 - (a) any part of the approval relating to the assessment manager's decision about any part of the application requiring impact assessment under section 314; or
 - (b) any part of the approval relating to the assessment manager's decision under section 327.
- (3) The appeal must be started within 20 business days after the day the decision notice or negotiated decision notice is given to the advice agency as a submitter.
- (4) However, if the advice agency has given the assessment manager a notice under section 339(1)(b)(iii), the advice agency may not appeal the decision.

465 Appeals about decisions relating to extensions for approvals

- (1) For a development approval given for a development application, a person to whom a notice is given under section 389, other than a notice for a decision under section 386(2), may appeal to the court against the decision in the notice.
- (2) The appeal must be started within 20 business days after the day the notice of the decision is given to the person.
- (3) Also, a person who has made a request under section 383 may appeal to the court against a deemed refusal of the request.
- (4) An appeal under subsection (3) may be started at any time after the last day the decision on the matter should have been made.

466 Appeals about decisions relating to permissible changes

- (1) For a development approval given for a development application, the following persons may appeal to the court against a decision on a request to make a permissible change to the approval—
 - (a) if the responsible entity for making the change is the assessment manager for the application—
 - (i) the person who made the request; or
 - (ii) an entity that gave a notice under section 373 or a pre-request response notice about the request;
 - (b) if the responsible entity for making the change is a concurrence agency for the application—the person who made the request.
- (2) The appeal must be started within 20 business days after the day the person is given notice of the decision on the request under section 376.
- (3) Also, a person who has made a request under section 369 may appeal to the court against a deemed refusal of the request.
- (4) An appeal under subsection (3) may be started at any time after the last day the decision on the matter should have been made.

467 Appeals about changing or cancelling conditions imposed by assessment manager or concurrence agency

- (1) A person to whom a notice under section 378(9)(b) giving a decision to change or cancel a condition of a development approval has been given may appeal to the court against the decision in the notice.
- (2) The appeal must be started within 20 business days after the day the notice of the decision is given to the person.

Division 11 Making and appeal to Court**481 How appeals to the court are started**

- (1) An appeal is started by lodging written notice of appeal with the registrar of the court.
- (2) The notice of appeal must state the grounds of the appeal.
- (3) The person starting the appeal must also comply with the rules of the court applying to the appeal.
- (4) However, the court may hear and decide an appeal even if the person has not complied with subsection (3).

482 Notice of appeal to other parties—development applications and approvals

- (1) An appellant under division 8 must give written notice of the appeal to—
 - (a) if the appellant is an applicant—
 - (i) the chief executive; and
 - (ii) the assessment manager; and
 - (iii) any concurrence agency; and
 - (iv) any principal submitter whose submission has not been withdrawn; and
 - (v) any advice agency treated as a submitter whose submission has not been withdrawn; or
 - (b) if the appellant is a submitter or an advice agency whose response to the development application is treated as a submission for an appeal—
 - (i) the chief executive; and
 - (ii) the assessment manager; and
 - (iii) any referral agency; and
 - (iv) the applicant; or
 - (c) if the appellant is a person to whom a notice mentioned in section 465(1) has been given—
 - (i) the chief executive; and
 - (b) the assessment manager for the development application to which the notice relates; and

- (c) any entity that was a concurrence agency for the development application to which the notice relates; and
- (d) the person who made the request under section 383 to which the notice relates, if the person is not the appellant; or
- (d) if the appellant is a person mentioned in section 466(1)—
 - (i) the chief executive; and
 - (ii) the responsible entity for making the change to which the appeal relates; and
 - (iii) the person who made the request to which the appeal relates under section 369, if the person is not the appellant; and
 - (iv) if the responsible entity is the assessment manager—any entity that was a concurrence agency for the development application to which the notice of the decision on the request relates; or
- (e) if the appellant is a person to whom a notice mentioned in section 467 has been given—the entity that gave the notice.
- (2) The notice must be given within—
 - (a) if the appellant is a submitter or advice agency whose response to the development application is treated as a submission for an appeal—2 business days after the appeal is started; or
 - (b) otherwise—10 business days after the appeal is started.
- (3) The notice must state—
 - (a) the grounds of the appeal; and
 - (b) if the person given the notice is not the respondent or a co-respondent under section 485—that the person may, within 10 business days after the notice is given, elect to become a co-respondent to the appeal by filing in the court a notice of election in the approved form.

485 Respondent and co-respondents for appeals under div 8

- (1) Subsections (2) to (8) apply for appeals under sections 461 to 464.
- (2) The assessment manager is the respondent for the appeal.
- (3) If the appeal is started by a submitter, the applicant is a co-respondent for the appeal.
- (4) Any submitter may elect to become a co-respondent for the appeal.
- (5) If the appeal is about a concurrence agency's response, the concurrence agency is a co-respondent for the appeal.
- (6) If the appeal is only about a concurrence agency's response, the assessment manager may apply to the court to withdraw from the appeal.
- (7) The respondent and any co-respondents for an appeal are entitled to be heard in the appeal as a party to the appeal.
- (8) A person to whom a notice of appeal is required to be given under section 482 and who is not the respondent or a co-respondent for the appeal may elect to be a co-respondent.
- (9) For an appeal under section 465—
 - i. the assessment manager is the respondent; and
 - ii. if the appeal is started by a concurrence agency that gave the assessment manager a notice under section 385—the person asking for the extension the subject of the appeal is a co-respondent; and
 - iii. any other person given notice of the appeal may elect to become a co-respondent.
- (10) For an appeal under section 466—
 - (a) the responsible entity for making the change to which the appeal relates is the respondent; and
 - (b) if the responsible entity is the assessment manager—
 - (i) if the appeal is started by a person who gave a notice under section 373 or a pre-request response notice—the person who made the request for the change is a co-respondent; and
 - (ii) any other person given notice of the appeal may elect to become a co-respondent.
- (11) For an appeal under section 467, the respondent is the entity given notice of the appeal.

488 How an entity may elect to be a co-respondent

An entity that is entitled to elect to be a co-respondent to an appeal may do so, within 10 business days after notice of the appeal is given to the entity, by following the rules of court for the election.

490 Lodging appeal stops particular actions

- (1) If an appeal, other than an appeal under section 465, 466 or 467, is started under division 8, the development must not be started until the appeal is decided or withdrawn.
- (2) If an appeal is about a condition imposed on a compliance permit, the development must not be started until the appeal is decided or withdrawn.
- (3) Despite subsections (1) and (2), if the court is satisfied the outcome of the appeal would not be affected if the development or part of the development is started before the appeal is decided, the court may allow the development or part of the development to start before the appeal is decided.

DILGP assessment report—assessment manager

DILGP reference: SDA-1216-035497
DILGP regional office: SARA Darling Downs South West

1.0 Application details

Lot on plan	Street address
Lot 2 on R863	1 Tiffin Street, Roma QLD 4455
2SP110498	230 Edwardes Street, Roma QLD 4455
2RP4380	234 Edwardes Street, Roma QLD 4455
1RP4380	236 Edwardes Street, Roma QLD 4455
1R8684	256 Edwardes Street, Roma QLD 4455
1WV1882	262 Edwardes Street, Roma QLD 4455

Local government area: Maranoa Regional Council
Applicant name: Maranoa Regional Council
Applicant contact details: planning@maranoa.qld.gov.au
PO Box 620
Roma Queensland 4455

2.0 Aspects of development and type of approval being sought

Nature of Development	Approval Type	Brief Proposal of Description	Level of Assessment
Operational Work	Development permit	Clearing native vegetation associated with the construction of a flood levee.	Code Assessment

3.0 Matters of interest to the state

The development application has the following matters of interest to the state under the following provisions of the *Sustainable Planning Regulation 2009*:

Table 3.1—Schedule 6 matters of interest

Trigger reference	Relevant technical agency
Schedule 6, Table 3, Item 2: If tables 1 and 2 do not apply and the application is for - (a) operational work for the clearing of native vegetation; and (b) no other assessable development.	Department of Natural Resources and Mines (DNRM)

4.0 Assessment by technical agencies

This application was referred to DNRM for their assessment under the State Development Assessment Provisions (SDAP). Consideration and assessment occurred through the following modules:

Table 8.1.2 – Development and relevant provisions of the code- operational work

Table 8.1.3 General – PO 2 & PO 3

Clearing on land in particular circumstances

Assessment 1:

- It is noted that the development complies with the code.
 - DNRM have identified that clearing will not occur in an area where compliance notice, enforcement notice or offset exists.
- DILGP has no objection to this assessment.

Clearing on land that is an environmental offset area

Assessment 2:

- It is noted that the development complies with the code.
 - DNRM have identified that clearing will not occur in an area where an environment offset exists.
- DILGP has no objection to this assessment.

Table 8.1.4– Public safety, relevant infrastructure and coordinated projects – PO 1 – PO 10

Limits to clearing

Assessment 3:

- It is noted that the development complies with the code.
 - DNRM have identified that the proposed clearing is required as part of the construction of a category three (3) levee for flood mitigation works.
 - Regulated vegetation is situated within the length of Bungil Creek.
- No conditions are recommended.

Wetlands

Assessment 4:

- It is noted that the development complies with the code.
 - DNRM identified there are no wetlands identified.
- DILGP has no objection to this assessment.

Watercourses and drainage features.

Assessment 5:

- It is noted that the development complies with the code, a condition will be applied.
 - DNRM investigated the type of vegetation to be cleared and the exact location of clearing.
 - It was determined that certain AOs of the Performance Outcome would not comply.
 - To ensure compliance, DNRM determined that the overall PO was able to comply with conditions attached.
- A condition is recommended.

Connectivity (public safety and relevant infrastructure)**Assessment 6:**

- It is noted that the development complies with the code, a condition will be applied.
 - DNRM investigated the type of vegetation to be cleared and the exact location of clearing.
 - It was determined that certain AOs of the Performance Outcome would not comply.
 - DNRM determined that the amount of clearing to be conducted was not significant.
 - To ensure compliance, DNRM determined that the overall PO was able to comply with conditions attached.
- A condition is recommended.

Soil erosion**Assessment 7:**

- It is noted that the development complies with the code.
 - DNRM notes that the applicant submitted a soil erosion and sediment control plan.
- A condition is recommended.

Salinity**Assessment 8:**

- It is noted that the development complies with the code.
 - Total clearing is less than 5ha.
- No conditions are recommended.

Conserving endangered and of concern regional ecosystems**Assessment 9:**

- It is noted that the development complies with the code.
 - DNRM have noted in mapping that the proposed development does not contain endangered and of concern regional ecosystems.
- No conditions are recommended.

Essential habitat**Assessment 10:**

- It is noted that the development complies with the code.
 - DNRM have noted in mapping that the proposed development does not contain essential habitat.
- No conditions are recommended.

Acid sulfate soils**Assessment 11:**

- It is noted that the development complies with the code.
 - DNRM have noted in mapping that the proposed development does not contain acid sulphate hazard or risk areas.
- No conditions are recommended.

5.0 Recommendation

8.1. It is recommended that DILGP as assessment manager:

- (a) Approve all of the application subject to the conditions as included in the decision notice. The decision notice also includes a statement of reasons for this decision.

No.	Conditions of Development	Condition Timing
1.	The clearing of vegetation is limited to the extent identified as area(s): <ul style="list-style-type: none"> • "Red – Clear And Grub Zones" on the plan titled "<i>Western Levee General Arrangement Plan</i>", Drawing No. 2016-378C-C101, dated 27 May 2016 prepared by GHD for the Maranoa Regional Council. 	At all times
2.	The development must occur in accordance with the standards and specifications detailed in the: <ul style="list-style-type: none"> • '<i>Maranoa Regional Council Roma Flood Mitigation Project – Stage 2 Eastern Diversion Drain and Western Levee – Erosion and Sediment Control Plan, prepared by GHD, dated August 2016</i>', and any amendments consistent with best practice. 	At all times
3.	The permit holder must ensure that: <ol style="list-style-type: none"> a full copy of the permit is held by; and the extent of clearing authorised by this permit is properly understood by any person(s) engaged or employed to carry out the clearing of the vegetation under this permit. 	At all times

1. DILGP Considerations

6.1 Timeframes

Application Received	5 December 2016
Technical Advice Agency Advice Received	9 December 2016
Concurrence Agency Response Sent to Manager	12 December 2016
Concurrence Agency Response sent to Director	12 December 2016
Concurrence Agency Response sent to Applicant	

6.2 Consideration of DNRM's recommended condition:

DNRM has provided three (3) conditions to be included in the Decision Notice:

- Condition 1 is to ensure that all works are in accordance with specified plans. DILGP has no objection to this condition.
- Condition 2 is to ensure that all works are in accordance with the specifications and standards. DILGP has no objections to this condition.
- Condition 3 is to ensure that the development application is held in full and that all works conducted in accordance with same. DILGP has no objections to this condition.

2. Conclusion

DILGP has reviewed the recommendations provided by DNRM and concludes that the assessment is valid and appropriately reflects DILGP's state interest.

3. Endorsements

Case officer	Maria Johnson	Planning Officer	4616 7307
Manager	Andrew Foley	Manager (Planning)	4616 7307
Approver	Nathan Rule	Director (Planning)	4616 7307

Maria Johnson

From: Maria Johnson <Maria.Johnson@dilgp.qld.gov.au>
Sent: Wednesday, 7 December 2016 12:16 PM
To: Christopher Tickner
Subject: FW: Native Title Assessment - SDA-1216-035497

Hi Chris,

Thank you for assisting with this.

Please see questions below.

Talk soon

Maria Johnson

Planning Officer
Regional Services - South
Department of **Infrastructure, Local Government and Planning**
Queensland Government

tel 07 4616 7302 (ext 67302)
post PO Box 825, Toowoomba Qld 4350
visit 128 Margaret Street, Toowoomba
maria.johnson@dilgp.qld.gov.au

From: SARA NativeTitle
Sent: Tuesday, 6 December 2016 10:02 AM
To: Hayley O'Brien
Subject: Native Title Assessment - SDA-1216-035497

Hi Hayley,

Do you happen to have a plan that outlines where the vegetation clearing will take place and how much?

Can you also confirm that none of the clearing will be marine plants?

Thanks,
Sophie

Sophie Smith
Native Title Officer
p. 07 3452 7680 | e. Sophie.Smith@dilgp.qld.gov.au

Maria Johnson

From: Hayley O'Brien <Hayley.O'Brien@dilgp.qld.gov.au>
Sent: Wednesday, 7 December 2016 11:37 AM
To: Maria Johnson
Subject: FW: Native Title Assessment - SDA-1216-035497

Hi Maria,
As discussed.
Thanks Hayley

From: SARA NativeTitle
Sent: Tuesday, 6 December 2016 10:02 AM
To: Hayley O'Brien
Subject: Native Title Assessment - SDA-1216-035497

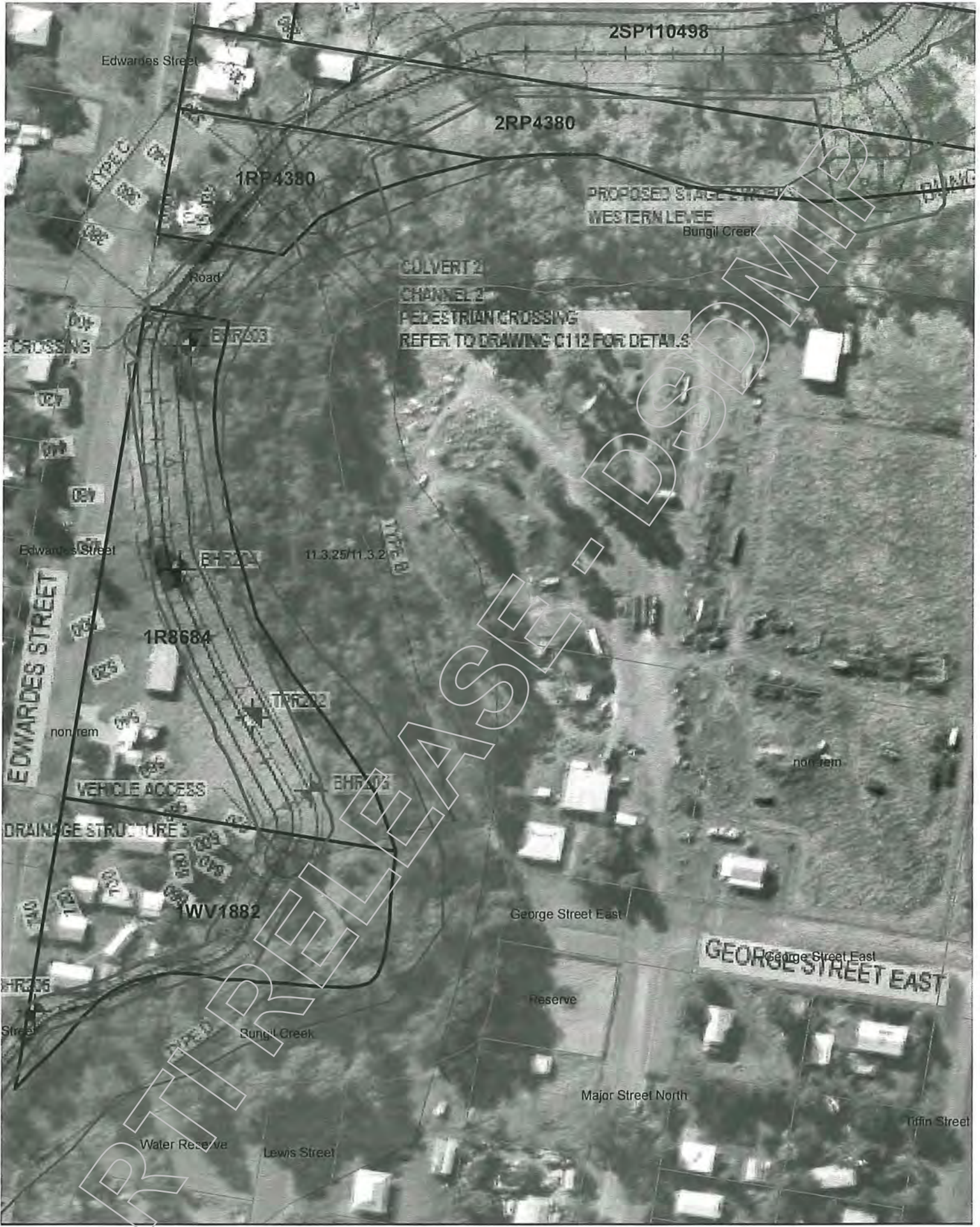
Hi Hayley,

Do you happen to have a plan that outlines where the vegetation clearing will take place and how much?

Can you also confirm that none of the clearing will be marine plants?

Thanks,
Sophie

Sophie Smith
Native Title Officer
p. 07 3452 7680 | e. Sophie.Smith@dilgp.qld.gov.au



Map Date: 9 December 2016
 Author: Patrina Birt, Ipswich DNRM
 DNRM Ref: 2016/006451
 SARA Ref: SDA-1216-035497

Figure 2 - Aerial overlaid with Veg Supporting Map and proposed devel



Department of Infrastructure,
Local Government and Planning

Our reference: SDA-1216-035497
Your reference: D16/111247

5 December 2016

Maranoa Regional Council
PO Box 620
ROMA QLD 4455

Dear Sir

Notice of Receipt of Development Application

216-218, 230, 234, 236, 238-256 and 258-262 Edwardes Street, ROMA, QLD, 4455

(Given under section 272 of the *Sustainable Planning Act 2009*)

The Department of Infrastructure, Local Government and Planning (DILGP), acknowledges receipt of your development application under section 260 of the *Sustainable Planning Act 2009* on 2 December 2016.

Site details

Street address: 216-218, 230, 234, 236, 238-256 and 258-262 Edwardes Street, ROMA, QLD, 4455

Real property description: Lot 22 R863, Lot 2 SP110498, Lot 1 and 2 RP4380, Lot 1 R8684 and Lot 1 WV1882

Local government area: Maranoa Regional Council

Application details

Proposed development: Operational Work – Clearing Native Vegetation associated with the Construction of a Flood Levee

Referral triggers

The development application was referred to DILGP under the following provisions of the *Sustainable Planning Regulation 2009*:

Referral trigger: Schedule 6, Table 3, Item 2 - Vegetation Clearing
If tables 1 and 2 do not apply and the application is for –

- (a) Operational work for the clearing of native vegetation; and
- (b) No other assessable development

DILGP is proceeding with its assessment of the development application.

For more information, please contact Hayley O'Brien, Senior Planning Officer, on 4616 7303 or via email at hayley.obrien@dilgp.qld.gov.au.

Yours sincerely

Sch. 4(4)(6) - Disclosing personal information


Hayley O'Brien
Senior Planning Officer

RTI RELEASE - DSDMIP

SARA technical agency assessment response

Technical agency (TA) — Department of Natural Resources & Mines

DSDIP reference: SDA-1216-035497
DSDIP Role: referral agency
DSDIP regional office: SARA Darling Downs South West
DSDIP email: ToowoombaSARA@dilqp.qld.gov.au
[NB. All responses are to be returned to this email address]
TA reference: 2016/006451
TA contact name: Patrina Birt
TA contact details: 3894 8120; patrina.birt@dnrm.qld.gov.au
TA approver: Andrew Collins

1.0 Application details

Street address: 1 Tiffin Street - Roma, Maranoa Regional - QLD; 230 Edwardes Str
Roma, Maranoa Regional - QLD; 234 Edwardes Street - Roma,
Maranoa Regional - QLD; 236 Edwardes Street - Roma, Maranoa
Regional - QLD; 256 Edwardes Street - Roma, Maranoa Regional -
QLD; 262 Edwardes Street - Roma, Maranoa Regional - QLD
Lot on plan: 2; 2; 2; 1; 1; 1 R863; SP110498; RP4380; RP4380; R8684; WV188;
Local government area: Maranoa Regional
Applicant name: Maranoa Regional Council
Applicant contact details: planning@maranoa.qld.gov.au

2.0 Aspects of development and type of approval being sought

Nature of Development	Approval Type	Brief Proposal of Description	Level of Assessment
Operational Work	Development permit	Clearing native vegetation associated with the construction of a flood levee	Code Assessment

3.0 Matters of interest to the state

The development application has the following matters of interest to the state under the following provisions of the Sustainable Planning Regulation 2009¹:

Schedule 6 Assessment manager for development applications and Schedule 7 Referral agencies and their jurisdictions — matters of interest specific to technical agency

Trigger ID	Description	Technical Agency
6.3.2	If tables 1 and 2 do not apply and the application is for - (a) operational work for the clearing of native vegetation; and (b) no other assessable development	NRM

¹ MyDAS does not collect data on assessable development aspects under Schedule 3—this is a matter confirmed by DSDIP during the validation process.

RTI RELEASE - DSDMIP

4.0 Assessment

4.1 Evidence

- 4.1.1 Application and common material included therein received by DNRM 2 December 2016.
- 4.1.2 Smartmap (SMIS).
- 4.1.3 Electronic Land and Vegetation Administration System (eLVAS).
- 4.1.4 Statute including:
 - 4.1.4.1 *Vegetation Management Act 1999 (VMA)*;
 - 4.1.4.2 *Vegetation Management Regulation 2009 (VMR)*;
 - 4.1.4.3 *Sustainable Planning Act 2009 (SPA)*;
 - 4.1.4.4 *Sustainable Planning Regulation 2009 (SPR)*.
- 4.1.5 Module 8: Native vegetation clearing – State Development Assessment Provisions (SDAP), v1.7.
- 4.1.6 DNRM datasets including:
 - 4.1.6.1 Assessable Vegetation (VEGMGT.QLD_VEG_RVM_100K_CUR and VEGMGT.QLD_VEG_RVMREREM_CODE_CUR)
 - 4.1.6.2 Property Map of Assessable Vegetation - VEGMGT.QLD_VEG_PMAV
 - 4.1.6.3 Aerial Ortho Imagery
 - 4.1.6.4 Essential Habitat Mapping - VEGMGT.QLD_VEG_EHAB_CODE_CUR
 - 4.1.6.5 Watercourse mapping - VEGMGT.QLD_VEG_REMNANTDRN_CUR
 - 4.1.6.6 Wetland mapping - VEGMGT.QLD_VEG_REMNANTWETL_100K_CUR
 - 4.1.6.7 Wildnet Data and Commonwealth Protected Matters Data.
- 4.1.7 Spatial information Network (bore log data Bore card 58277, 58291 & 58061).
- 4.1.8 Significant Residual Impact Guideline (for MSES and prescribed activities assessable under SPA).
- 4.1.9 Aerial Photography.
- 4.1.10 Regional Ecosystem Technical Descriptions, Queensland Herbarium – Department of Science, Information technology, Innovation and the Arts.
- 4.1.11 Applicant's response to the Information Request received 28 June 2016.
- 4.1.12 Further information submitted by applicant received 20 July 2016.
- 4.1.13 Maranoa Regional Council Planning Scheme.

4.2 Considerations and assessment

- 4.2.1 The operational works application is for clearing vegetation to facilitate the construction of a levee for flood mitigation.
- 4.2.2 The application received confirmation from DNRM that the clearing was for a section 22A VMA relevant purpose on 30 November 2016.
- 4.2.3 The application is over land tenured as freehold but also includes Bungil Creek and Road (Edwardes Street and part of un-named road) (refer Figure 2).
- 4.2.3.1 Lots 22/R863, 2/SP/110498, 2/RP4380, 1/RP4380, 1/R8684 and 1/WV1882;
 - 4.2.3.2 Edwardes Street (segpar 10704/012), un-named Road (segpar 10700/010);
 - 4.2.3.3 Bungil Creek (segpars 10700/008 and 10704/036)
- 4.2.4 The regulated vegetation management map identifies the impact area is mapped as containing category B and X areas (refer Figure 2).
- 4.2.5 The vegetation management supporting map identifies the category B areas contain:
- 4.2.5.1 Mixed polygon of Of Concern regional ecosystem RE11.3.2 and Least Concern RE11.3.25, associated with a Stream order five (5) watercourse at 100K.
 - 4.2.5.2 Category X native vegetation.
- 4.2.6 The application indicates an assessment of the Category B areas was undertaken to delineate the boundaries of the least concern and of concern regional ecosystems on ground within the mixed polygon. These new boundaries were accepted by DNRM (refer Figure 1 and the applicant's submitted Ecological Report prepared by GHD).
- 4.2.7 There are no current exemptions that enable clearing to be undertaken without a permit.
- 4.2.7.1 Lots 1/RP8684 and 1/WV1882 are zoned residential, the intent of which as described in the planning scheme is consistent with the definition of urban area in Schedule 26 SPR. However, it is currently considered that the levee itself does not comply with the definition of urban purpose in Schedule 26 SPR. As such it is considered the urban purpose/urban area exemption provided in Schedule 24 SPR cannot be applied.
 - 4.2.7.2 It was determined the clearing did not comply with the criteria for the Self-assessable Code for Necessary environmental works as there would be no regional ecosystem rehabilitation of the area once cleared.
- 4.2.8 An aerial photograph overlaid with the vegetation management supporting map (taking into consideration the amended boundaries proposed by the applicant) and the submitted plan of development (refer Figure 2) indicates:
- 4.2.8.1 Clearing of category B areas containing Least concern RE11.3.25 will be cleared as a result of the development. However, some of these areas do not contain any vegetation on ground; and

- 4.2.8.2 Clearing of category X areas will occur as a result of the development on land tenured as State land.

Based on the above findings, the total extent of the clearing footprint within <u>assessable vegetation</u> is as follows:			
RE	VMA status	RE description	Clearing area (ha)
11.3.25	Least concern Structure category: mid-dense	Eucalyptus tereticornis or E. camaldulensis woodland fringing drainage lines	0.8
Total clearing area:			0.8

- 4.2.9 The operational works application is assessable against the Performance Outcomes (PO) of SDAP Module 8 Native vegetation clearing.

4.2.9.1 Table 8.1.3 PO2 & PO3; and

4.2.9.2 Table 8.1.4 PO1 to PO10

4.3 Findings of material questions of fact

4.3.1 Table 8.1.3 (General) – PO2 to PO3

- a. **PO2 – Compliant:** Clearing will not occur in an area where a compliance notice, enforcement notice or offset exists.
- b. **PO3 – Compliant:** Clearing will not occur in an area that contains an existing environment offset.

4.3.2 Table 8.1.4 (Public safety, relevant infrastructure and co-ordinated projects) – PO1 to PO10.

- a. **PO1 – Compliant:** The proposed clearing is required as part of the construction of a category three (3) levee for flood mitigation works in Roma. Regulated vegetation runs the length of Bungil Creek; as such it was not possible to locate the channel to completely avoid impacts to vegetation. Further, due to the location of the town in relation to Bungil Creek it was not possible to locate the levee in an alternative position.
- b. **PO2 Wetlands – Compliant:** The vegetation management wetland map does not identify a wetland in the relevant subject area.
- c. **PO3 Watercourses & Drainage Features – Compliant, with conditions:**
 - i. The development is proposing to clear vegetation within the 100m of the defining bank of a stream order 5 watercourse so does not comply with AO3.1.
 - ii. The development is proposing to clear vegetation within 5m of the defining bank of the watercourse so does not comply with AO3.2(1).
 - iii. The development is proposing to clear widths greater than 10m, which is the allowable width within the 100m buffer for a mid-dense regional ecosystem, so does not comply with AO3.2(2).
 - iv. The development is proposing to clear approximately 0.8-0.9Ha. Pursuant to both the DILGP and EHP Significant Residual Impact Guidelines, the clearing within the 100 buffer of the watercourse for

the development is unlikely to have significant residual impact (SRI) because the action will result in 'clearing of a least concern regional ecosystem not containing essential habitat up to 1Ha for lineal infrastructure'.

- The levee is considered to be linear infrastructure.
 - The vegetation is not mapped as containing Essential habitat.
 - The on-ground vegetation has been accepted by DNRM as a Least concern rather than the mapped Of concern in accordance with data provided by GHD.
- v. As such the application complies with AO3.3 and therefore PO3.
- d. **PO4 Connectivity (public safety and relevant infrastructure) – Compliant, with conditions:**
- i. Clearing does not meet the requirements of AO4.1 because:
 - Clearing will occur in areas of vegetation that are less than 200 metres wide.
 - ii. The application complies with the elements of PO4 based on the following:
 - Ecosystem function takes account of all of the ecological processes in which the assessable vegetation participates including the watercourse.
 - Clearing is proposed in a relatively disturbed environment and will occur generally on the periphery of the assessable vegetation.
 - Clearing is in two disjunct areas, minimising the impact of clearing on the subject area.
 - Clearing of approximately 0.8 hectares in total is not considered to impact significantly on ecosystem functioning given the extent of retained regulated vegetation along the length of Bungil Creek. Clearing will result in local disturbance however is unlikely to result in a significant disturbance to landscape ecosystem functioning.
 - The erosion and sediment control plan will ensure the impact of the development on adjacent assessable vegetation in terms of water quality, bank stability, and terrestrial and aquatic habitat is mitigated.
- e. **PO5 Connectivity (Coordinated projects) – N/A.**
- f. **PO6 Soil Erosion - compliant, with conditions:**
- i. The application submitted a soil erosion and sediment control plan. The approval will be conditioned to this plan to ensure compliance with PO6, particularly as the development is occurring on and adjacent to a stream order five (5) watercourse.
- g. **PO7 Salinity – Compliant:**
- i. Clearing is less than two (2) hectares.
- h. **PO8 Endangered and Of Concern REs – Compliant:**
- i. There will be no clearing of an Of concern or Endangered RE.
 - ii. This is based on acceptance of the transect data presented by GHD that identified the vegetation onground is Least concern RE11.3.25 rather than Of concern RE11.3.2.

- i. **PO9 Essential Habitat – Compliant:** The assessable vegetation is not mapped as containing Essential Habitat.
- j. **PO10 Acid Sulphate Soils – Compliant:** Although clearing will occur on land zone 3, the land is above 5m AHD and is not identified as being in an acid sulphate hazard or risk area.

5.0 Recommendations

5.1 Technical agency advice for SARA as assessment manager

Our department, in administering the Vegetation Management Act 1999:

- (a) recommends the following conditions be attached to any development approval (SPA section 324(1)(b)):

SARA Model Conditions Version:		
Aspect of development: Operational Works		
Compliance timing Unless specified in the issues below the timing for all conditions should be: at all times		
No.	Condition ID	Issues to be addressed or variations to model condition
Vegetation Clearing		
1.	AD01	<p>The clearing of vegetation is limited to the extent identified as area(s):</p> <p>(a) "Red – Clear And Grub Zones" on the plan titled "<i>Western Levee General Arrangement Plan</i>", Drawing No. 2016-378C-C101, dated 27 May 2016 prepared by GHD for the Maranoa Regional Council.</p> <p>Reason for condition: To ensure the development maintains general consistency with plans of development assessed by DNRM as complying with Module 8 of the SDAP, in particular PO1 Avoid and minimise, PO3 Watercourses, PO4 Connectivity and PO6 Soil Erosion.</p>
2.		<p>The development must occur in accordance with the standards and specifications detailed in the '<i>Maranoa Regional Council Roma Flood Mitigation Project – Stage 2 Eastern Diversion Drain and Western Levee – Erosion and Sediment Control Plan, prepared by GHD, dated August 2016</i>', and any amendments consistent with best practice.</p> <p>Reason for condition: To ensure the development maintains general consistency with plans of development assessed by DNRM as complying with Module 8 of the SDAP, in particular PO1 Avoid and minimise, PO3 Watercourses, PO4 Connectivity and PO6 Soil Erosion.</p>
3.	NV02	<p>The permit holder must ensure that:</p> <p>(a) a full copy of the permit is held by; and</p> <p>(b) the extent of clearing authorised by this permit is properly understood by, any person(s) engaged or employed to carry out the clearing of the vegetation under this permit.</p>

5.2 Approved plans and specifications

Our department recommends that the following plans and specifications should be referenced in the response:

Drawing/Report Title	Prepared by	Date	Reference no.	Version/Issue
Aspect of development: Operational Works				
Western Levee General Arrangement Plan	GHD	27 May 2016	2016-378C-C101	0

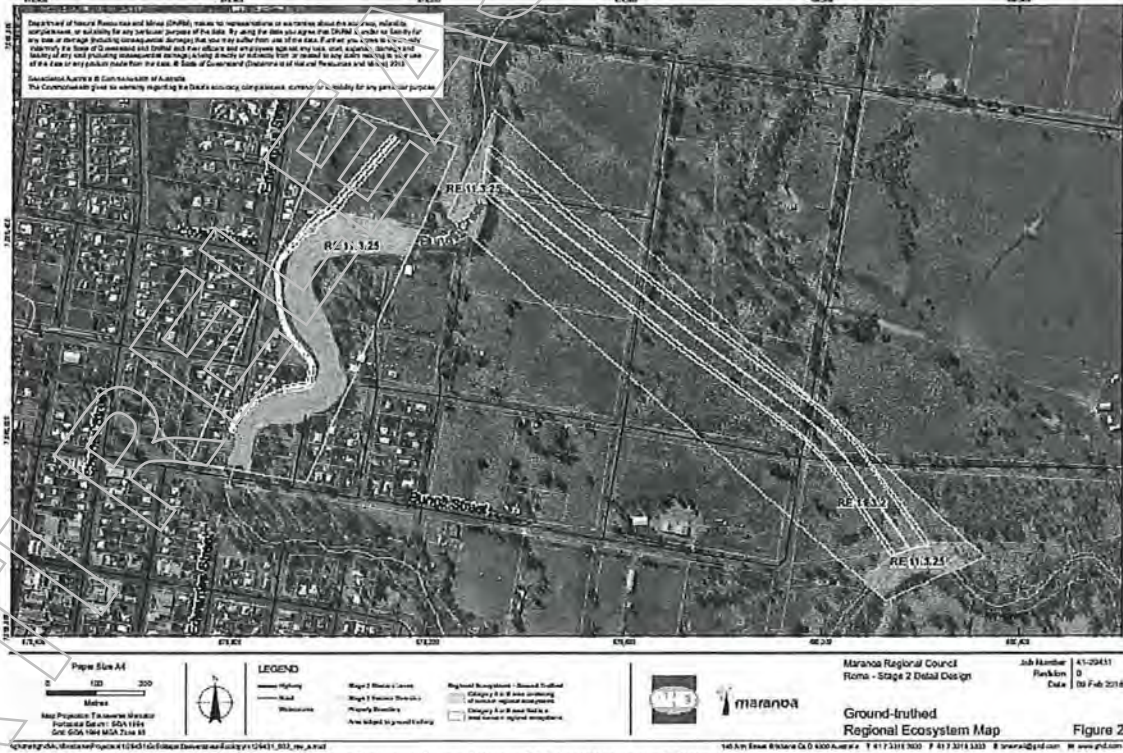
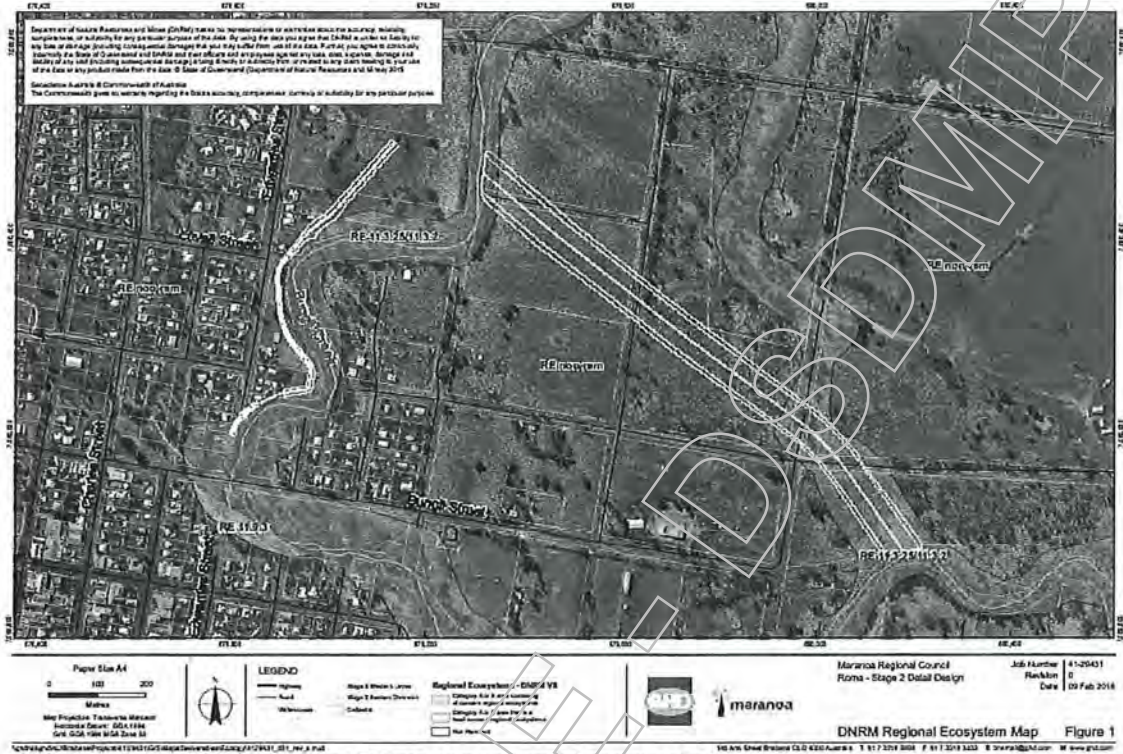
6.0 Endorsement

Assessment Officer	Patrina Birt	Natural Resource Management Officer	3894 8120
Approver	Andrew Collins	Senior Natural Resource Management Officer	5480 5348

Attachments:

1. Figure 1 – Applicant-derived RE and Amended RE Maps.
2. Figure 2 – DNRM Veg TAR 2016/006451.
3. Plan titled '*Western Levee General Arrangement Plan*', Drawing No. 2016-378C-C101, dated 27 May 2016 prepared by GHD for the Maranoa Regional Council.

Figure 1 – Applicant-derived RE and Amended RE maps for the SUBJECT area



RT

SARA technical agency assessment response

Technical agency (TA) — Department of Natural Resources & Mines

DSDIP reference: SDA-1216-035497
DSDIP Role: referral agency
DSDIP regional office: SARA Darling Downs South West
DSDIP email: ToowoombaSARA@dilgp.qld.gov.au
[NB. All responses are to be returned to this email address]
TA reference: 2016/006451
TA contact name: Patrina Birt
TA contact details: 3894 8120; patrina.birt@dnrm.qld.gov.au
TA approver: Andrew Collins

1.0 Application details

Street address: 1 Tiffin Street - Roma, Maranoa Regional - QLD; 230 Edwardes Str
Roma, Maranoa Regional - QLD; 234 Edwardes Street - Roma,
Maranoa Regional - QLD; 236 Edwardes Street - Roma, Maranoa
Regional - QLD; 256 Edwardes Street - Roma, Maranoa Regional -
QLD; 262 Edwardes Street - Roma, Maranoa Regional - QLD
Lot on plan: 2; 2; 2; 1; 1; 1 R863; SP110498; RP4380; RP4380; R8684; WV188;
Local government area: Maranoa Regional
Applicant name: Maranoa Regional Council
Applicant contact details: planning@maranoa.qld.gov.au

2.0 Aspects of development and type of approval being sought

Nature of Development	Approval Type	Brief Proposal of Description	Level of Assessment
Operational Work	Development permit	Clearing native vegetation associated with the construction of a flood levee	Code Assessment

3.0 Matters of interest to the state

The development application has the following matters of interest to the state under the following provisions of the Sustainable Planning Regulation 2009¹:

Schedule 6 Assessment manager for development applications and Schedule 7 Referral agencies and their jurisdictions — matters of interest specific to technical agency

Trigger ID	Description	Technical Agency
6.3.2	If tables 1 and 2 do not apply and the application is for - (a) operational work for the clearing of native vegetation; and (b) no other assessable development	NRM

¹ MyDAS does not collect data on assessable development aspects under Schedule 3—this is a matter confirmed by DSDIP during the validation process.

RTI RELEASE - DSDIP

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- 4.2.5.2 Category X native vegetation.
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Total clearing area:			0.8

- 4.2.9 The operational works application is assessable against the Performance Outcomes (PO) of SDAP Module 8 Native vegetation clearing:

4.2.9.1 Table 8.1.3 PO2 & PO3; and

4.2.9.2 Table 8.1.4 PO1 to PO10

4.3 Findings of material questions of fact

4.3.1 Table 8.1.3 (General) – PO2 to PO3

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- b. **PO3 – Compliant:** Clearing will not occur in an area that contains an existing environment offset.

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- a. **PO1 – Compliant:** The proposed clearing is required as part of the construction of a category three (3) levee for flood mitigation works in Roma. Regulated vegetation runs the length of Bungil Creek; as such it was not possible to locate the channel to completely avoid impacts to vegetation. Further, due to the location of the town in relation to Bungil Creek it was not possible to locate the levee in an alternative position.
- b. **PO2 Wetlands – Compliant:** The vegetation management wetland map does not identify a wetland in the relevant subject area.
- c. **PO3 Watercourses & Drainage Features – Compliant, with conditions:**
 - i. The development is proposing to clear vegetation within the 100m of the defining bank of a stream order 5 watercourse so does not comply with AO3.1.
 - ii. The development is proposing to clear vegetation within 5m of the defining bank of the watercourse so does not comply with AO3.2(1).
 - iii. The development is proposing to clear widths greater than 10m, which is the allowable width within the 100m buffer for a mid-dense regional ecosystem, so does not comply with AO3.2(2).
 - iv. The development is proposing to clear approximately 0.8-0.9Ha. Pursuant to both the DILGP and EHP Significant Residual Impact Guidelines, the clearing within the 100 buffer of the watercourse for

the development is unlikely to have significant residual impact (SRI) because the action will result in 'clearing of a least concern regional ecosystem not containing essential habitat up to 1Ha for lineal infrastructure'.

- The levee is considered to be linear infrastructure.
 - The vegetation is not mapped as containing Essential habitat.
 - The on-ground vegetation has been accepted by DNRM as a Least concern rather than the mapped Of concern in accordance with data provided by GHD.
- v. As such the application complies with AO3.3 and therefore PO3.
- d. **PO4 Connectivity (public safety and relevant infrastructure) -- Compliant, with conditions:**
- i. Clearing does not meet the requirements of AO4.1 because:
 - Clearing will occur in areas of vegetation that are less than 200 metres wide.
 - ii. The application complies with the elements of PO4 based on the following:
 - Ecosystem function takes account of all of the ecological processes in which the assessable vegetation participates including the watercourse.
 - Clearing is proposed in a relatively disturbed environment and will occur generally on the periphery of the assessable vegetation.
 - Clearing is in two disjunct areas, minimising the impact of clearing on the subject area.
 - Clearing of approximately 0.8 hectares in total is not considered to impact significantly on ecosystem functioning given the extent of retained regulated vegetation along the length of Bungil Creek. Clearing will result in local disturbance however is unlikely to result in a significant disturbance to landscape ecosystem functioning.
 - The erosion and sediment control plan will ensure the impact of the development on adjacent assessable vegetation in terms of water quality, bank stability, and terrestrial and aquatic habitat is mitigated.
- e. **PO5 Connectivity (Coordinated projects) – N/A.**
- f. **PO6 Soil Erosion - compliant, with conditions:**
- i. The application submitted a soil erosion and sediment control plan. The approval will be conditioned to this plan to ensure compliance with PO6, particularly as the development is occurring on and adjacent to a stream order five (5) watercourse.
- g. **PO7 Salinity – Compliant:**
- i. Clearing is less than two (2) hectares.
- h. **PO8 Endangered and Of Concern REs – Compliant:**
- i. There will be no clearing of an Of concern or Endangered RE.
 - ii. This is based on acceptance of the transect data presented by GHD that identified the vegetation onground is Least concern RE11.3.25 rather than Of concern RE11.3.2.

- i. **PO9 Essential Habitat – Compliant:** The assessable vegetation is not mapped as containing Essential Habitat.
- j. **PO10 Acid Sulphate Soils – Compliant:** Although clearing will occur on land zone 3, the land is above 5m AHD and is not identified as being in an acid sulphate hazard or risk area.

5.0 Recommendations

5.1 Technical agency advice for SARA as assessment manager

Our department, in administering the Vegetation Management Act 1999:

- (a) recommends the following conditions be attached to any development approval (SPA section 324(1)(b)):

SARA Model Conditions Version:		
Aspect of development: Operational Works		
Compliance timing Unless specified in the issues below the timing for all conditions should be: at all times		
No.	Condition ID	Issues to be addressed or variations to model condition
Vegetation Clearing		
1.	AD01	<p>The clearing of vegetation is limited to the extent identified as area(s):</p> <p>(a) "Red – Clear And Grub Zones" on the plan titled "<i>Western Levee General Arrangement Plan</i>", Drawing No. 2016-378C-C001, dated 27 May 2016 prepared by GHD for the Maranoa Regional Council.</p> <p>Reason for condition: To ensure the development maintains general consistency with plans of development assessed by DNRM as complying with Module 8 of the SDAP, in particular PO1 Avoid and minimise, PO3 Watercourses, PO4 Connectivity and PO6 Soil Erosion.</p>
2.		<p>The development must occur in accordance with the standards and specifications detailed in the '<i>Maranoa Regional Council Roma Flood Mitigation Project – Stage 2 Eastern Diversion Drain and Western Levee – Erosion and Sediment Control Plan, prepared by GHD, dated August 2016</i>', and any amendments consistent with best practice.</p> <p>Reason for condition: To ensure the development maintains general consistency with plans of development assessed by DNRM as complying with Module 8 of the SDAP, in particular PO1 Avoid and minimise, PO3 Watercourses, PO4 Connectivity and PO6 Soil Erosion.</p>
3.	NV02	<p>The permit holder must ensure that:</p> <p>(a) a full copy of the permit is held by; and</p> <p>(b) the extent of clearing authorised by this permit is properly understood by, any person(s) engaged or employed to carry out the clearing of the vegetation under this permit.</p>

5.2 Approved plans and specifications

Our department recommends that the following plans and specifications should be referenced in the response:

Drawing/Report Title	Prepared by	Date	Reference no.	Version/Issue
Aspect of development: Operational Works				
Western Levee General Arrangement Plan	GHD	27 May 2016	2016-378C-C001	0

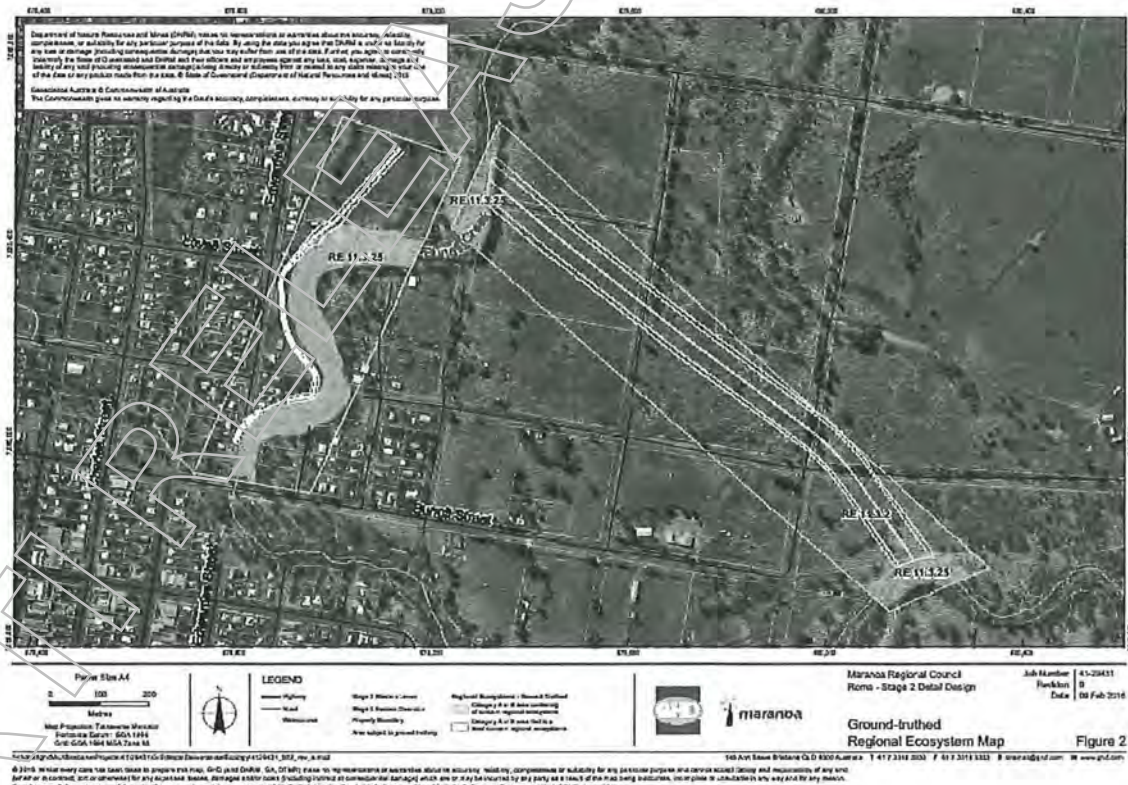
6.0 Endorsement

Assessment Officer	Patrina Birt	Natural Resource Management Officer	3894 8120
Approver	Andrew Collins	Senior Natural Resource Management Officer	5480 5348

Attachments:

1. Figure 1 – Applicant-derived RE and Amended RE Maps.
2. Figure 2 – DNRM Veg TAR 2016/006451.
3. Plan titled '*Western Levee General Arrangement Plan*', Drawing No. 2016-378C-C001, dated 27 May 2016 prepared by GHD for the Maranoa Regional Council.

Figure 1 – Applicant-derived RE and Amended RE maps for the SUBJECT area




Annexure 7.1

Native Title Assessment Form

This annexure provides a template Native Title Assessment Form to record your native title assessment for a proposed dealing.

To help you complete this Native Title Assessment Form, some of the Modules (eg. Module BA) contain example extracts of this form.

If you have any queries in relation to using this form, please contact your NTCO. If your NTCO is unsure how to proceed, Indigenous Services should be contacted for advice.

 **QNTIME**

Remember to –

- record your tenure and use findings as **research items** in the research layer in QNTIME; and
- request a **conclusion** be published in QNTIME for any research item you have assessed to be a previous exclusive possession act (PEPA).

Native Title Assessment Form

Information about this Form –

1. This form is mainly based upon the *Path through Native Title Assessment*.
2. To correctly complete this form, you will need to have read the relevant Modules of the Procedures.
3. Complete each part of the **Assessment Section** until you reach a **Go to Reason for Decision**, and then complete the **Decision Section** at the end of this form.
4. Where there is a check box, make your selection by clicking on the box. Insert all relevant information in the appropriate table field.
5. Where a Module only applies to part of your proposed dealing area, ensure you have ticked the "Part of the proposed dealing area" box. Proceed through the form for the balance of your proposed dealing area. In this instance, a diagram should be attached to identify and to distinguish between the different areas.



Please ensure this assessment is still correct at the time you do the dealing.

Assessment Section

Module AA. Proposed Dealing

A Development Application under the *Sustainable Planning Act 2009*, has been lodged by Maranoa Regional Council for the clearing of remnant of lease concern native vegetation (0.617ha) associated with the construction of the Stage 2 Maranoa Flood Levee.

Proposed Dealing Area

Lot(s)/Plan(s): Lot 22 on R863, Lot 2 on SP110498, Lots 1 & 2 on RP4380, Lot 1 on R8684 and Lot 1 on WV1882

Parish: Roma **County:** Waldegrave

Current Status: Freehold

Locality Description: 216-218, 230, 234, 236, 256 & 262 Edwardes Street, Roma

Attached Plan/Map: As per submitted application

Module AB. Is this a dealing that can proceed without further reference to native title?

- Yes
- Dealing is within a QNTIME conclusion boundary
[C/]. Go to Module BB (if conclusion based on Module BA).
- Dealing is not a future act, ie. it is listed in Part 2
- Activities done in accordance with a valid lease, licence, permit or authority
- Emergency action

Go to Reason for Decision

No

Module AC. Is there a registered ILUA that covers the proposed dealing?

- Yes – Go to Reason for Decision Part of the proposed dealing area
- No

Module AD. Is there a determination of native title that covers the proposed dealing area?

- Yes – Go to Reason for Decision Part of the proposed dealing area
- No

IF YES, does the determination state that native title does not exist over the proposed dealing area?

- Yes – Go to Reason for Decision
- No - Go to **Modules F to N** section of this Form as native title exists over the proposed dealing area unless subsequently extinguished by a later act.

Module BA. Is there or has there been a valid grant or vesting of exclusive possession over the proposed dealing area?

- Yes – Go to **Module BB** Part of the proposed dealing area
- No – Go to **Module CA**

Module BB. Can the extinguishing effect of the PEPA / QNTIME Conclusion be relied upon?

- Yes – Go to Reason for Decision
- No

Module CA. Is there or has there been a valid public work over the proposed dealing area?

- Yes – Go to Reason for Decision Part of the proposed dealing area
- No

Module CB. Is there or has there been an area dedicated or declared as road over the proposed dealing area?

- Yes Part of the proposed dealing area
- No

IF YES, can the dedication/declaration be relied upon to carry out the proposed dealing?

Yes – Go to Reason for Decision

No

Module D. Is the area subject to other works that were done under the authority of the Crown, ie. (private works)?

Yes Part of the proposed dealing area

No

IF YES, can I proceed with my dealing on the basis of the works?

Yes – Go to Reason for Decision

No

Module E. Information Module ONLY regarding past and intermediate period acts

Proceed to Modules F to N.

Modules F to N. Do the future act sections apply to your proposed dealing?

Yes Part of the proposed dealing area

Which future act provision and Module applies

Section/s: Modules:

Go to Reason for Decision

- No Your only options now are –
- an ILUA (Module Q); or
 - a non-claimant application (Module R).

Can a non-claimant application be made?

Yes

No – Your only option is an ILUA.
Go to Reason for Decision

Decision Section

Reason for Decision

A Development Application under the *Sustainable Planning Act 2009*, has been lodged by Maranoa Regional Council for the clearing of remnant of lease concern native vegetation (0.617ha) associated with the construction of the Stage 2 Maranoa Flood Levee.

Lot 22 on R863 – A check of the tenure for the subject property reveals that this lot is freehold, and deed of grant 10107143 was issued 21 January 1867.

Lot 2 on SP110498, Lots 1 & 2 on RP4380 – A check of the tenure for the subject property reveals that these lots are freehold, and deed of grant 10374120 was issued 02 July 1880.

Lot 1 on R8684 – A check of the tenure for the subject property reveals that this lot is freehold, and deed of grant 14484075 was issued 20 August 1970.

Lot 1 on WV1882 – A check of the tenure for the subject property reveals that this lot is freehold, and deed of grant 10883143 was issued 05 October 1894.

The portion of the proposed dealing located within the boundaries of the above mentioned lots can therefore proceed without further reference to Native Title as the whole area is subject to a previous grant of exclusive tenure (PEPA).

Separate assessments have been completed for any works taking place within the adjoining the road reserve and Bungil Creek.

Native Title Parties & Procedural Rights (if relevant)

Types of native title parties	Names of native title parties	Procedural rights to be provided to the native title parties
Registered Native Title Claimants	Mandandanji People	No
Native Title Representative Body	Queensland South Native Title Services Ltd	No

Proceed (first providing any relevant procedural rights)

Send to NTCO

Send to Indigenous Services through NTCO

Name, title and signature of officer making this assessment –

Name: Sophie Smith
Title: Native Title Officer
Department/Agency: DILGP– DA Projects

Signature:

Sch. 4(4)(6) - Disclosing personal information

Don't forget to:

1) Enter your research into QNTIME.

RB / _____

RI / _____

2) Request a conclusion be published where you found

Date:

07 December 2016

a PEPA.

RTI RELEASE - DSDMIP

Annexure 7.1

Native Title Assessment Form

This annexure provides a template Native Title Assessment Form to record your native title assessment for a proposed dealing.

To help you complete this Native Title Assessment Form, some of the Modules (eg. Module BA) contain example extracts of this form.

If you have any queries in relation to using this form, please contact your NTCO. If your NTCO is unsure how to proceed, Indigenous Services should be contacted for advice.



QNTIME

Remember to –

- record your tenure and use findings as **research items** in the research layer in QNTIME; and
- request a **conclusion** be published in QNTIME for any research item you have assessed to be a previous exclusive possession act (PEPA).

Native Title Assessment Form

Information about this Form –

1. This form is mainly based upon the *Path through Native Title Assessment*.
2. To correctly complete this form, you will need to have read the relevant Modules of the Procedures.
3. Complete each part of the **Assessment Section** until you reach a **Go to Reason for Decision**, and then complete the **Decision Section** at the end of this form.
4. Where there is a check box, make your selection by clicking on the box. Insert all relevant information in the appropriate table field.
5. Where a Module only applies to part of your proposed dealing area, ensure you have ticked the "Part of the proposed dealing area" box. Proceed through the form for the balance of your proposed dealing area. In this instance, a diagram should be attached to identify and to distinguish between the different areas.



Please ensure this assessment is still correct at the time you do the dealing.

Assessment Section

Module AA. Proposed Dealing

A Development Application under the *Sustainable Planning Act 2009*, has been lodged by Maranoa Regional Council for the clearing of remnant of lease concern native vegetation (0.617ha) associated with the construction of the Stage 2 Maranoa Flood Levee.

Proposed Dealing Area

Lot(s)/Plan(s): Adjacent to Lot 22 on R863, Lot 2 on SP110498, Lots 1 & 2 on RP4380, Lot 1 on R8684 and Lot 1 on WW1882

Parish: Roma **County:** Waldegrave

Current Status: Road Reserve

Locality Description: Lovell Street and Edwardes Street, Roma

Attached Plan/Map: As per submitted application

Module AB. Is this a dealing that can proceed without further reference to native title?

- Yes Dealing is within a QNTIME conclusion boundary
[C/]. Go to Module BB (if conclusion based on Module BA).
- Dealing is not a future act, ie. it is listed in Part 2
- Activities done in accordance with a valid lease, licence, permit or authority
- Emergency action

Go to Reason for Decision

No

Module AC. Is there a registered ILUA that covers the proposed dealing?

- Yes – Go to Reason for Decision Part of the proposed dealing area
 No

Module AD. Is there a determination of native title that covers the proposed dealing area?

- Yes – Go to Reason for Decision Part of the proposed dealing area
 No

IF YES, does the determination state that native title does not exist over the proposed dealing area?

- Yes – Go to Reason for Decision
 No - Go to **Modules F to N** section of this Form as native title exists over the proposed dealing area unless subsequently extinguished by a later act.

Module BA. Is there or has there been a valid grant or vesting of exclusive possession over the proposed dealing area?

- Yes – Go to Module BB Part of the proposed dealing area
 No – Go to Module CA

Module BB. Can the extinguishing effect of the PEPA / QNTIME Conclusion be relied upon?

- Yes – Go to Reason for Decision
 No

Module CA. Is there or has there been a valid public work over the proposed dealing area?

- Yes – Go to Reason for Decision Part of the proposed dealing area
 No

Module CB. Is there or has there been an area dedicated or declared as road over the proposed dealing area?

- Yes Part of the proposed dealing area
 No

IF YES, can the dedication/declaration be relied upon to carry out the proposed dealing?

Yes – Go to Reason for Decision

No

Module D. Is the area subject to other works that were done under the authority of the Crown, ie. (private works)?

Yes Part of the proposed dealing area

No

IF YES, can I proceed with my dealing on the basis of the works?

Yes – Go to Reason for Decision

No

Module E. Information Module ONLY regarding past and intermediate period acts

Proceed to Modules F to N.

Modules F to N. Do the future act sections apply to your proposed dealing?

Yes Part of the proposed dealing area

Which future act provision and Module applies

Section/s: Modules:

Go to Reason for Decision

No Your only options now are –

- an ILUA (Module Q); or
- a non-claimant application (Module R).

Can a non-claimant application be made?

Yes

No – Your only option is an ILUA.

Go to Reason for Decision

Decision Section

Reason for Decision

A Development Application under the *Sustainable Planning Act 2009*, has been lodged by Maranoa Regional Council for the clearing of remnant of lease concern native vegetation (0.617ha) associated with the construction of the Stage 2 Maranoa Flood Levee.

Plans R8684 and R861 clearly depict the proposed dealing area as road. Deed of Grant Reference 14484075 was granted over portion 18 of R8684 on 20 August 1970 (being the Executive Authority action) makes reference to the above plan. Deed of Grant Reference 10883143 was granted over portion 3A of R861 on 05 October 1894 (being the Executive Authority action) makes reference to the above plan.

Native Title is wholly extinguished over the full width of the road as depicted on the above mentioned plan.

Separate assessments have been completed for any works taking place within the adjoining freehold lots and Bungil Creek.

Native Title Parties & Procedural Rights (if relevant)

Types of native title parties	Names of native title parties	Procedural rights to be provided to the native title parties
Registered Native Title Claimants	Mandandanji People	No
Native Title Representative Body	Queensland South Native Title Services Ltd	No

Proceed (first providing any relevant procedural rights)

Send to NTCO

Send to Indigenous Services through NTCO

Name, title and signature of officer making this assessment –

Name: Sophie Smith

Title: Native Title Officer

Department/Agency: DILGP– DA Projects

Signature:

Sch. 4(4)(6) - Disclosing personal information

Date: 07 December 2016

Don't forget to:

1) Enter your research into QNTIME.

RB / _____

RI / _____

2) Request a conclusion be published where you found a PEPA.

Annexure 7.1

Native Title Assessment Form

This annexure provides a template Native Title Assessment Form to record your native title assessment for a proposed dealing.

To help you complete this Native Title Assessment Form, some of the Modules (eg. Module BA) contain example extracts of this form.

If you have any queries in relation to using this form, please contact your NTCO. If your NTCO is unsure how to proceed, Indigenous Services should be contacted for advice.



Remember to –

- record your tenure and use findings as **research items** in the research layer in QNTIME; and
- request a **conclusion** be published in QNTIME for any research item you have assessed to be a previous exclusive possession act (PEPA).

Native Title Assessment Form

Information about this Form –

1. This form is mainly based upon the *Path through Native Title Assessment*.
2. To correctly complete this form, you will need to have read the relevant Modules of the Procedures.
3. Complete each part of the **Assessment Section** until you reach a **Go to Reason for Decision**, and then complete the **Decision Section** at the end of this form.
4. Where there is a check box, make your selection by clicking on the box. Insert all relevant information in the appropriate table field.
5. Where a Module only applies to part of your proposed dealing area, ensure you have ticked the "Part of the proposed dealing area" box. Proceed through the form for the balance of your proposed dealing area. In this instance, a diagram should be attached to identify and to distinguish between the different areas.



Please ensure this assessment is still correct at the time you do the dealing.

Assessment Section

Module AA. Proposed Dealing

A Development Application under the *Sustainable Planning Act 2009*, has been lodged by Maranoa Regional Council for the clearing of remnant of lease concern native vegetation (0.617ha) associated with the construction of the Stage 2 Maranoa Flood Levee.

Proposed Dealing Area

Lot(s)/Plan(s): Adjacent to Lot 22 on R863, Lot 2 on SP110498, Lots 1 & 2 on RP4380, Lot 1 on R8684 and Lot 1 on WV1882

Parish: Roma **County:** Waldegrave

Current Status: Unallocated State Land

Locality Description: Bungil Creek – 216-218, 230, 234, 236, 256 & 262 Edwardes Street, Roma

Attached Plan/Map: As per attached location map and drawings supplied

Module AB. Is this a dealing that can proceed without further reference to native title?

- Yes
- Dealing is within a QNTIME conclusion boundary [C/], Go to Module BB (if conclusion based on Module BA).
- Dealing is not a future act, ie. it is listed in Part 2
- Activities done in accordance with a valid lease, licence, permit or authority
- Emergency action

Go to Reason for Decision

No

Module AC. Is there a registered ILUA that covers the proposed dealing?

- Yes – Go to Reason for Decision Part of the proposed dealing area
 No

Module AD. Is there a determination of native title that covers the proposed dealing area?

- Yes – Go to Reason for Decision Part of the proposed dealing area
 No

IF YES, does the determination state that native title does **not** exist over the proposed dealing area?

- Yes – Go to Reason for Decision
 No - Go to **Modules F to N** section of this Form as native title exists over the proposed dealing area unless subsequently extinguished by a later act.

Module BA. Is there or has there been a valid grant or vesting of exclusive possession over the proposed dealing area?

- Yes – Go to **Module BB** Part of the proposed dealing area
 No – Go to **Module CA**

Module BB. Can the extinguishing effect of the PEPA / QNTIME Conclusion be relied upon?

- Yes – Go to Reason for Decision
 No

Module CA. Is there or has there been a valid public work over the proposed dealing area?

- Yes – Go to Reason for Decision Part of the proposed dealing area
 No

Module CB. Is there or has there been an area dedicated or declared as road over the proposed dealing area?

- Yes Part of the proposed dealing area
 No

IF YES, can the dedication/declaration be relied upon to carry out the proposed dealing?

Yes – Go to Reason for Decision

No

Module D. Is the area subject to other works that were done under the authority of the Crown, ie. (private works)?

Yes

Part of the proposed dealing area

No

IF YES, can I proceed with my dealing on the basis of the works?

Yes – Go to Reason for Decision

No

Module E. Information Module ONLY regarding past and intermediate period acts

Proceed to Modules F to N.

Modules F to N. Do the future act sections apply to your proposed dealing?

Yes

Part of the proposed dealing area

Which future act provision and Module applies

Section/s: 24MD

Module: M

Go to Reason for Decision

No Your only options now are –

an ILUA (Module Q); or

a non-claimant application (Module R).

Can a non-claimant application be made?

Yes

No – Your only option is an ILUA.

Decision Section

Reason for Decision

A Development Application under the *Sustainable Planning Act 2009*, has been lodged by Maranoa Regional Council for the clearing of remnant of lease concern native vegetation (0.617ha) associated with the construction of the Stage 2 Maranoa Flood Levee.

As there is no evidence that Native Title has been extinguished for works within Bungii Creek, and the works do not involve using water as a resource, this application has been assessed under section 24MD of the *Native Title Act 1993*. The proposed dealing area is considered to be an onshore place (any lands or waters within the territorial limits of a state or territory); the future act is a non-legislative act (legislative act - the making of new legislation, amending existing legislation or repealing existing legislation); the proposed dealing area is within water; and the proposed dealing could be done in relation to the water concerned if the native title holders instead held freehold title to the land adjoining, or surrounding, the water.

Separate assessments have been completed for any works taking place within the adjoining freehold lots and the Edwardes Street road reserve.

Native Title Parties & Procedural Rights (if relevant)

Types of native title parties	Names of native title parties	Procedural rights to be provided to the native title parties
Registered Native Title Claimants	Mandandanji People	No
Native Title Representative Body	Queensland South Native Title Services Ltd	No

Proceed (first providing any relevant procedural rights)

Send to NTCO

Send to Indigenous Services through NTCO


Name, title and signature of officer making this assessment –

Name: Sophie Smith

Title: Native Title Officer

Department/Agency: DILGP– DA Projects

Signature:



Date: 07 December 2016

Don't forget to:

1) Enter your research into QNTIME.

RB / _____

RI / _____

2) Request a conclusion be published where you found a PEPA.



Map Date: 9 December 2016
 Author: Patrina Birt, Ipswich DNRM
 DNRM Ref: 2016/006451
 SARA Ref: SDA-1216-035497

Figure 2 - Aerial overlaid with Veg
 Supporting Map and proposed devel