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24 March 2023
Ref: 1129_610_012

ATTN: Sophia Armstrong
Department of Environment and Science
Minerals Business Centre
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Cairns QLD 4870
Email: ESCairns@des.qld.gov.au

Dear Sophia,

Response to Information Request Regarding Progressive Rehabilitation and Closure Plan, Environmental Authority EPML00912113 (Application ref. C-EATPRCP-100262503), The Austral Brick Co. Pty Ltd

Groundwork Plus has been engaged on behalf of The Austral Brick Co. Pty Ltd ('Austral Bricks') in relation to the Progressive Rehabilitation and Closure Plan for the mining activities authorised under Environmental Authority EPML00912113 (DES Application ref. C-EATPRCP-100262503). In response to the Information Request ('IR') dated 9 June 2022, we enclose the following:

- Table providing responses and cross-references to Sections of the revised PRCP where the requested information has been provided, refer to **Attachment A**.
- The revised PRCP (Document ref. (1129_610_008_V1), refer to **Attachment B**.
- Revised PRCP Schedule in excel format, refer to **Attachment C**.

Shape files to support the revised PRCP, prepared in response to the information request have been provided to the Department electronically.

Austral Bricks welcome the opportunity for ongoing consultation on these matters prior to the determination on the PRCP Schedule.

Should further information be required, please contact me on 0499 180 877 or via email to ydowling@groundwork.com.au.

Yours faithfully
Groundwork Plus Pty Ltd

Yoland Dowling
Senior Environmental Consultant
Enc.:
Attachment A – Response to Information Request
Attachment B – Revised PRCP
Attachment C – PRCP Schedule

Attachment A

Response to Information Request

Item	Matter	Information Requested	Relevant PRCP Section and/or Response
1	*A spatial information submission was made on 3 May 2022 along with the PRC plan. This submission did not meet validation requirements by the Spatial submissions team and following this another submission was made on 4 May 2022 which passed initial validation. The information included within the spatial files did not display and label all of the PMLU's for the areas under the resource tenures. A number of points were included within the file which appeared to be sensitive receptors however these were not labelled. Additionally, the rehabilitation and improvement areas that correspond to the proposed PRCP schedule are a requirement of the PRCP guideline to be included.*	*Provide an updated Rehabilitation Planning Part that includes a reviewed spatial information document and captures all the relevant spatial information requirements including the updates and changes captured within this information request.*	Please refer to the spatial data submission.
2	*The majority of the land covered by ML1156 and ML1151 (Rochedale site) is proposed to be industrial area. However, aerial imagery and the figure on PDF page 113 shows a wetland on the western side of the leases. It is unclear how the wetland will be suitable for industrial use.* *While it is noted that each site has areas of native ecosystem, and wetland ecosystem, comparable regional ecosystems or reference sites have not been nominated.*	*Provide an updated Rehabilitation Planning Part that includes further information regarding:* • *how the wetland ecosystem PMLUs function in the broader landscape, and* • *reference regional ecosystems types or reference sites that will be used to demonstrate the native ecosystem PMLU.*	Please refer to the following sections: • Section 6.1.3 – Wetland Ecosystem PMLU; and, • Section 6.1.2.2 –Rochedale.
3	*The pre-approved PMLU for the Rochedale site is industrial. However, the PRCP proposes PMLUs of industrial, wetland and native ecosystem. No information is provided demonstrating how the proposed PMLU is the same or substantially similar to the approved PMLU.* *Where the proposed PMLU is not pre-approved, community consultation relating to the proposed land uses must be provided and the PRC plan must state the extent to which the proposed PMLU is consistent with the outcomes of consultation.*	*Provide information that demonstrates the proposed PMLUs are substantially similar to the pre-approved PMLU.* *Provide additional information relating to community consultation and the extent to which the proposed land uses are consistent with the results of community consultation.*	For information regarding community consultation and further justification to demonstrate that the proposed PMLUs are 'substantially similar' in accordance with Section 754 of the *Environmental Protection Act 1994* ('EP Act'), please refer to Section 5.3.3 – Rochedale Justification Relating to Change of PMLU.
4	*This section provides information regarding rehabilitation that has already occurred. The condition of the existing rehabilitation and whether further work is required to achieve a stable condition is unclear. It is unclear where in the schedule these areas are represented.* *Information demonstrating the proposed species mix is suitable for the site and reflects the adjacent regional ecosystems is not provided.*	*Provide an updated Rehabilitation Planning Part and updated Schedule that includes the following:* • *information on the condition of the existing rehabilitation,* • *where existing rehabilitation areas are represented throughout the schedule, and* • *information demonstrating the proposed species mix is suitable for the site.*	Information on the condition of existing rehabilitation is provided in Section 3.4.2 – Progressive Rehabilitation Burbank and Section 3.4.2 – Progressive Rehabilitation Rochedale. Information demonstrating the suitability of the species mix is provided in Section 3.4.2 – Progressive Rehabilitation Burbank and Section 3.4.3 – Progressive Rehabilitation Rochedale. The existing rehabilitation areas for Burbank (RA1, RA2, RA3 and RA5) and Rochedale (RA12 and RA14) are now represented in the PRCP Schedule and reference maps contained in the PRCP as distinct rehabilitation areas.
5	*This section provides some flood information and states that Burbank and Redland Bay are not subject to flooding. Supporting evidence is not provided.* *Some figures are provided for the Rochedale site. However, it is unclear from the information provided how proposed drainage measures and detention basins to be implemented will convey water in a range of flood events.*	*Provide an updated Rehabilitation Planning Part that includes information regarding the location of the floodplain in a range of events for the Burbank and Redland Bay sites. Provide information regarding how these sites will be rehabilitated to a condition that will remain stable in a range of rainfall/flood events up to PMF.* *Provide an updated Rehabilitation Planning Part that includes further flood modelling that shows the depth and*	Information regarding the location of the floodplain under various rainfall events as provided by Council for Burbank and Redland Bay is provided in Section 6.3 – Flooding. Further modelling regarding the depth and velocity of water through drainage system under flood conditions at Rochedale is provided in Section 6.3 – Flooding.

Item	Matter	Information Requested	Relevant PRCP Section and/or Response
		velocity of water through the drainage system proposed for the Rochedale site during a range of flood levels.	
6	*This section does not provide information about topsoil requirements to complete rehabilitation. RM7 indicates that overburden will need to be used to supplement topsoil to provide sufficient growth medium.* *Section 3.1.9.3 provides a description of soil samples gathered from a number of locations on the Burbank site including existing rehabilitation areas and demonstrates that areas with very high ESP (Rehab 2.1 and 2.2) have poor groundcover and vegetation density. This section also suggests the amelioration of soil with lime or gypsum will be required. However, neither section 6.4.1.3 or the PRCP schedule include the incorporation of ameliorant/s into the subsoil or topsoil during or after spreading.* *Section 6.4.1.3 also states that no topsoil is required for the Rochedale site as all land will be used for industrial infrastructure. However, Figure 29 indicates that the southern portion of ML1156 will not be used for industrial area and has been disturbed by mining activities. Hence, it appears that a rehabilitation method for this area to achieve a stable condition has not been provided. Further, section 6.8.2.1 states that should a development approval not be obtained to use the land for an industrial purpose the land will be rehabilitated using rural residential pasture species mix.*	*Provide an updated Rehabilitation Planning Part that includes further information regarding:* • *quantity of topsoil material required to complete rehabilitation at each site,* • *whether overburden will be used to supplement topsoil material,* • *the ameliorants and fertilisers that will be used, application rate and method of incorporation, and* • *the relationships between the proposed topsoil material, vegetation ecosystems for the PMLU and the proposed rehabilitation methodology.*	The quantity of topsoil available and whether overburden will supplement topsoil at the sites is summarised in Section 6.4.1.2 - Available Quantities and Requirements. Details on ameliorants and fertilisers and rates is addressed in Section 6.4.1.1 - Soil Quality. The relationship between the soils and the regional ecosystem is provided in Section 6.4.1.1 - Soil Quality.
7	*This section proposes that fill material meet NEPM soil contamination guidelines for commercial industrial premises. Soils that meet the contamination requirements for commercial industrial premises may not be suitable for a PMLU of native ecosystem or rural residential. There is no distinguishment between fill for the Rochedale site and fill for the Burbank or Redland Bay sites. RM4 of the PRCP schedule indicates that offsite material will not be used for fill at the Burbank or Redland Bay sites. A clarification statement should be provided in this part of the Rehabilitation Planning Part to clearly establish imported fill material will not be used for any land with a PMLU of native ecosystem, wetland ecosystem or rural residential.*	*Provide an updated Rehabilitation Planning Part that includes further information regarding how the importation of fill material will be undertaken and managed to ensure that the land will achieve a stable condition.*	Methods for ensuring importation of fill will be managed are summarised in Section 6.4.2 - Backfill Materials and Section 6.4.3 - Batter Slope Stability.
8	*In the flooding section, reference is made to the establishment of a drainage channel and detention basins at the Rochedale site. However, a description of the intent of design and function of the drainage channel and detention basin is not provided in this section.* *This section lists potential contaminants from fuel and chemical storage areas but does not specify which sites it applies to or how this will be rehabilitated to achieve a stable condition.* *While this section states that the sites will be free draining, it does not describe the receiving environment and how surface water flow from the site will discharge to the receiving environment.*	*Provide an updated Rehabilitation Planning Part that includes further information regarding water management at the Rochedale site after the cessation of mining including:* • *design parameters for drainage channels, and* • *the intended purpose and function of the detention basin in the water management section.* *Provide an updated Rehabilitation Planning Part that includes further information regarding how the land and groundwater will be rehabilitated to ensure it achieves a stable condition.* *Provide an updated Rehabilitation Planning Part that includes further information regarding the discharge*	Further information regarding water management in lien with the Department's request is provided in Section 6.6 – Water Management.

Item	Matter	Information Requested	Relevant PRCP Section and/or Response
		locations at each site and how surface water flow from the site will be non-polluting and not cause erosion in the receiving environment.	
9	*This section provides information about previous and future approvals to support the land use, provides a concept plan in figure 29 and states the final landform will be prepared for a development application.* *Figure 29 includes several detention basins and appears to indicate the current wetland on the western boundary will be filled in. This figure does not indicate the final landform of the southern portion of ML1156. A description of rehabilitation activities needed to achieve the final landform including how the landform will interact with the detention basins, drainage and receiving environment is not provided.*	*Provide an updated Rehabilitation Planning Part that includes a description of rehabilitation activities needed to achieve the final landform including how the landform will interact with detention basins, drainage and the receiving environment.*	Further information to address the Department's request is provided in Section 6.1.1 – Industrial PMLU.
10	*This section proposes to leave land with slopes of 17-35 degrees which will then be spread with topsoil. However, section 3.1.9.3 notes that soils on the Burbank site can be highly sodic. Information demonstrating a stable condition can be achieved with the proposed angles on sodic soils has not been provided.*	*Provide an updated Rehabilitation Planning Part that includes further information to address the requirements of the Landform design part of section 3.6.1 of the PRCP Guideline.*	Further information to address how sodic soils at Burbank will be stabilised is provided in Section 6.1.2.1 - Burbank and Redland Bay. Information to address the proposed construction of wetlands is provided in Section 6.1.3 - Wetland Ecosystem PMLU. Further information to address the matters outlined at item 12 are provided in Section 6.1 Landform Design, Section 6.4.3 – Batter Slope Stability and Section 6.6 – Water Management.
11	*It is noted that wetlands are proposed for each of the three sites. However, information regarding how these wetlands have been/will be constructed and will function within the landform and the surrounding PMLU is not provided.* *Information about the proposed maximum depth of the wetlands, potential overflow points and maximum batter slopes to facilitate riparian vegetation and to achieve a stable and safe condition has not been provided.*		
12	*Information regarding the proposed topography of the land, maximum slope angles and discharge points has not been provided.*		
13	*This section provides a species list for Native Ecosystem PMLU. However, information is not provided to demonstrate how the species mix:* • *reflects the species composition similar to the pre-mining composition (as required by the Environmental Authority), or* • *reflects regional ecosystems found in the surrounding environment* *Seeding and tubestock planting rates are not provided. Information relating to the sourcing of tubestock and relevant seed mixes is absent.* *Information regarding the application and incorporation of ameliorants and fertilisers is not provided.* *Information regarding how revegetation of native ecosystem and wetland ecosystem post mining land uses provide for fauna use and habitat has not been included.* *Information regarding how the wetland ecosystem areas will be rehabilitated is not provided.* *It is noted that this section also proposes that the land be left to naturally regenerate*	*Provide an updated Rehabilitation Planning Part that includes further information regarding proposed revegetation required by the Revegetation part of section 3.6.1 of the PRCP Guideline.* *Provide an updated Rehabilitation Planning Part that includes proposed species mixes for native ecosystem and rural residential PMLUs that do not include identified environmental weeds/invasive species.* *Provide further information regarding revegetation works previously carried out including but not limited to:* • *timing of previous rehabilitation activities,* • *monitoring and maintenance,* • *soil types, and* • *lessons/successes applicable to future revegetation*	Further information to address the Department's request for proposed species mix and supplementary information to address section 3.6.1 of the PRCP Guideline is provided in Section 6.7 – Revegetation. Information regarding previous revegetation including timing, monitoring and maintenance, soil types and less/success is provided in Section 3.4.2 – Progressive Rehabilitation Burbank and Section 3.4.3 – Progressive Rehabilitation Rochedale.

Item	Matter	Information Requested	Relevant PRCP Section and/or Response
	and that seeding and planting will only be carried out as required. It is unclear how this will achieve a stable condition given existing rehabilitation areas are showing signs of insufficient groundcover and vegetation cover. *Throughout table 42 'Proposed Rural Residential Pasture Species Mix' there have been species proposed which are regarded as an environmental weed/invasive species in Queensland.*		
14	*This section does not provide a methodology and commitment to ensure the land is non-polluting and is suitable for the PMLU including rural residential and native ecosystem. This is relevant considering section 6.4.2 states that material from sites listed on the EMR may be used as backfill for land forming activities.*	*Provide an updated Rehabilitation Planning Part that includes further information regarding how each of the sites will be non-polluting and suitable for the PMLU.*	Further information regarding how the land will be non-polluting at completion is provided in Section 6.4.2 – Backfill Materials, Section 6.4.3 – Batter Slope Stability, Section 6.6 – Water Management and Section 6.8 - Contaminated Land Remediation.
15	*The Rehabilitation Planning Part provides some information regarding reactive management of rehabilitation that relies on active monitoring and maintenance/intervention. Further, some aspects of the rehabilitation methodology is reliant on monitoring such as sampling and monitoring of backfill material to be used on the Rochedale site.* *Further information relating to section 3.8 of the PRCP Guideline is required. For example, information regarding proposed monitoring to determine whether intervention is required and demonstrate success of rehabilitation.* *The monitoring and maintenance section should document a monitoring program to gather data that will be used to demonstrate a stable condition has been achieved and the land is suitable for surrender.*	*Provide an updated Rehabilitation Planning Part that includes further information regarding monitoring and maintenance in accordance with section 3.8 of the PRCP Guideline.*	A dedicated monitoring and maintenance plan containing the information referenced in section 3.8 of the PRCP Guideline has been included as Section 9 – Monitoring and Maintenance Program.
16	*RA1 (Rochedale site) includes two different proposed PMLU's of wetland and native ecosystem. In accordance with Step 2 of section 4.1 of the PRCP Guideline, RAs may only contain one PMLU.*	*Provide an updated PRCP Schedule that proposes a single PMLU for each RA at the Rochedale site.*	Please refer to the reference maps contained in the PRCP, shape file submission and the proposed PRCP Schedule where this has been addressed.
17	*It appears that RA 2 is an area that has not been disturbed and is not proposed to be disturbed. If this is the case, then it should not be included in the schedule or reference maps and should only be reflected in the final site design.*	*Provide an updated PRCP schedule including reference maps that only include areas that have been, or will be, disturbed.*	Please refer to the reference maps contained in the PRCP, shape file submission and the proposed PRCP Schedule where this has been addressed.
18	*It is noted that the PRCP Schedule includes multiple RA1s-RA4s. However, the rehabilitation methodology outlined for the RA differs between each site. In accordance with step 2 of section 4.1 of the PRCP Guideline, each RA may only contain one PMLU and rehabilitation methodology.*	*Provide an updated PRCP schedule that nominates unique RA numbers for each site.*	Please refer to the reference maps contained in the PRCP, shape file submission and the proposed PRCP Schedule where this has been addressed.
19	*There appears to be an inconsistency in the PRCP schedule for RA3 – Burbank (sediment basin). The Excel (.xls) template version of the schedule numbers this as RA4 and no area is included in the rehabilitation schedule despite the RA having an area of 0.148877.*	*Provide an updated PRCP schedule and/or planning part that addresses the inconsistency identified.*	Please refer to the proposed PRCP Schedule where this has been addressed.
20	*The areas included in each RA do not appear to be cumulative areas of rehabilitation (for example, see RA1 – Redland Bay). As outlined in Appendix 2 of the PRCP Guideline, progressively rehabilitated areas are to be accumulated as each RM is achieved so that at the end of the rehabilitation table, the total area of*	*Provide an updated PRCP schedule that provides cumulative areas of rehabilitation as each rehabilitation milestone is achieved.*	Please refer to the proposed PRCP Schedule where this has been addressed.

Item	Matter	Information Requested	Relevant PRCP Section and/or Response
	disturbance is reflected in the final milestone indicating that the entire area has achieved a stable condition.		
21	*It is noted that a PSI is only proposed if land is listed on the EMR. The Rehabilitation Planning Part does not provide advice regarding whether any of the sites are listed on the EMR.* *Further, the Rehabilitation Planning Part also proposes to allow the use of fill material from sites on the EMR or wastes to be used as backfill material on all 3 sites.*	*Provide an updated PRCP schedule that includes milestone criteria that reflect the requirement for the land to achieve a stable condition regardless of an EMR listing. For example:* *a. Contaminated material either mediated in-situ or removed/transported to an approved landfill for disposal and waste tracking information recorded and submitted* *b. Contaminated land assessment undertaken by an appropriately qualified person indicates that no contamination unsuitable for the post-mining land use is occurring. If required, a site investigation report including a site suitability statement prepared and submitted in accordance with the provisions of Chapter 7, Part 8 of the EP Act.*	Please refer to Section 8.2 – Selection of Rehabilitation Milestone and the proposed PRCP Schedule where this has been addressed.
22	*Section 6.4.2 states that backfill material will need to be imported for the land to be suitable for the PMLU and achieve a stable condition. There are no criteria in this milestone that reflect the management strategies contained in section 6.4.2.*	*Provide an updated PRCP schedule that includes criteria that:* • *reflect requirements for soil amelioration,* • *specify quality criteria for fill material that is suitable for the PMLU,* • *refer to the nominated AS 3798-2007 Guidelines on earthworks for commercial and residential developments (Standards Australia 2007, or most recent edition), Level 1 or Level 2 geotechnical supervision and testing, and* • *provide maximum slope angles that reflect the PMLU and achieving a stable condition.*	Please refer to Section 8.2 – Selection of Rehabilitation Milestone and the proposed PRCP Schedule where this has been addressed.
23	*Criteria for these milestones are not specific and some are not measurable. The criteria do not appear to reflect the methodology outlined in the Rehabilitation Planning Part.*	*Provide an updated PRCP schedule that includes criteria that reflect a specific rehabilitation methodology including but not limited to:* • *nominated seeding rates of particular species,* • *planting tubestock,* • *minimum strike/survival rates,* • *minimum groundcover rates to be achieved, and* • *presence/management of weed species.*	Please refer to Section 8.2 – Selection of Rehabilitation Milestone and the proposed PRCP Schedule where this has been addressed.
24	*No criteria are provided to demonstrate the land has achieved a stable condition.*	*Include completion criteria that demonstrate a stable condition has been achieved. For example:* • *for all PMLUs – criteria regarding erosion and surface water runoff,* • *for native ecosystem PMLU –criteria regarding species composition, maturity, recruitment,*	Please refer to Section 8.2 – Selection of Rehabilitation Milestone and the proposed PRCP Schedule where this has been addressed.

Item	Matter	Information Requested	Relevant PRCP Section and/or Response
		minimum groundcover rates, soil profile development, habitat features, weed presence, etc. • *for wetland ecosystem PMLU – criteria nominating water quality parameters and values, criteria regarding species composition of fringing vegetation, habitat features, weed/pest presence, etc.* • *for rural residential PMLU – criteria regarding species composition, minimum groundcover percentage, recruitment, weed presence, etc.*	
25	*The proposed duration of Redland Bay is 174 years. However, section 2.2.3 does not include information justifying the proposed timeframe.*	*Provide a detailed explanation for why the proposed duration of operation at Redland Bay is 174 years.*	Additional information regarding the resource remaining within the Redland Bay site to support the 174 year duration is provided in Section 2.2.3 - Proposed Duration of Operation.

Attachment B

Revised PRCP

Brisbane Mining Project

Progressive Rehabilitation and Closure Plan (PRCP)

Prepared for	The Austral Brick Co. Pty Ltd
Date of Submission:	23 March 2023
Document ID:	1129_610_008
Version	1
Project Name	Brisbane Mining Project
Environmental Authority	EPML00912113
Contact Details	Rose Longley 105 Gardner Road, Rochedale QLD 4123 07 3347 2126
Mining Leases (MLs)	ML1151, ML1152, ML1156, ML50035

DOCUMENT CONTROL

PROJECT / DETAILS REPORT

Document Title:	Brisbane Mining Project: Progressive Rehabilitation and Closure Plan
Principal Author:	Y. Dowling
Client:	The Austral Brick Co. Pty Ltd
Reference Number:	1129_620_008

DOCUMENT STATUS

Issue	Description	Date	Author	Reviewer
0	Final	26 April 2022	Y. Dowling	D. Doolan
1	Revision of PRCP to address information request dated 9 June 2022	23 March 2023	Y. Dowling	M. Folker / D. Doolan

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REFERENCE MAPS

Burbank Final Site Design	(Drawing no. 1129.DRG.105r3)
Redland Bay Final Site Design	(Drawing no. 1129.DRG.103r4).
Rochedale Final Site Design	(Drawing no. 1129.DRG.101)
Reference Map 1	(Drawing no. 1129.DRG.106r3).
Reference Map 2	(Drawing no. 1129.DRG.104r4)
Reference Map 3	(Drawing no. 1129.DRG.102r2)

ATTACHMENTS

Attachment 1	External Environmental Communication Record
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Attachment 3	Rochedale Flood Study
Attachment 4	Landowner Statement
Attachment 5	Easement Documents
Attachment 6	PRCP Schedule

1 Introduction

1.1 Background

Groundwork Plus Pty Ltd has been engaged by The Austral Brick Co. Pty Ltd ('Austral Bricks') to prepare a Progressive Rehabilitation and Closure Plan ('PRCP') relating to Environmental Authority ('EA') EPML00912113 relevant to the mining project, comprising the following sites and Mining Leases ('MLs'):

- Burbank – ML1152
- Redland Bay – ML50035
- Rochedale – ML1151 and ML1156

The EA authorises the carrying out of the following Environmentally Relevant Activity ('ERA') under Schedule 3 of the *Environmental Protection Regulation 2019* ('EP Reg'):

> *20 Threshold (b) Clay pit mining, dimension stone mining or mining gemstones (including the material from which gemstones are extracted) more than 100,000 tonnes, but not more than, 1,000,000 tonnes in a year.*

The mining project, primarily at the Rochedale site, has been operational for many decades and supplies minerals for the manufacturing of a range of construction materials not limited to bricks, brick facings, pavers and mortars at the Rochedale Brick Plant situated on ML1151.

1.2 Purpose of the PRCP

In accordance with the stated purpose of the PRCP prescribed under the *Environmental Protection Act 1994* ('EP Act'), the PRCP is intended to:

- plan for how and where the mining activities will be carried out on the land in a way that maximises the progressive rehabilitation of the land to a stable condition.
- provide for the condition to which Austral Bricks must rehabilitate the land before the EA may be surrendered.

This PRCP has been prepared to address the requirements of Sections 126C and 126D of the EP Act, inclusive of the following:

- Provide a description of:
  - each resource tenure, including the area of each tenure, that applies to the PRCP.
  - the relevant activities to which the application relates.
  - the likely duration of the relevant activities.
- A description of how and where the mining activities will be carried out.
- Proposed methods and techniques for rehabilitating the land to a stable condition in a way that supports the rehabilitation milestones under the proposed PRCP Schedule.
- Details of community consultation (i.e., Community Consultation Plan and Register).
- Details of how the proposed Post-Mining Land Uses ('PMLUs') are consistent with community consultation.
- Any risks of a stable condition for land not being achieved, methods for managing and/or or minimising any potential risks.
- Outline of the proposed PRCP Schedule that states the proposed 'PMLUs' for the land.

This PRCP has also been prepared to include the necessary information required in accordance with the Department's guideline titled *Guideline: Progressive rehabilitation and closure plans (PRC plans)* (DES 2021).

1.3 Land Outcome Documents

In accordance with the definition prescribed under Section 750 of the EP Act, the projects EA is the Land Outcome Document for the purpose of this PRCP. Based on review of the EA and historical documents, there are no other Land Outcomes Documents appliable to this PRCP.

2 Project Description

2.1 Resource Tenure Description

Figure 1 – Brisbane Mining Project Location Plan provides an illustration of the location of the site in a regional context. **Table 1 – Mining Tenements Summary** provides a summary of the background tenure relevant to this PRCP.

Table 1 – Mining Tenements Summary

Mine Site	ML No	Expiry	Lease Area / Surface Area (Ha)	Real Property Description	Landowner
Burbank	1152	31/12/2044	34.46	Lots 23 & 24 on RP30624	Austral Bricks (Qld) Pty Ltd
Redland Bay	50035	31/10/2042	23.0059	Lot 1 on RP854704	Austral Bricks (Qld) Pty Ltd
Rochedale	1151	31/01/2045	20.26	Lot 8 on SP283241	Austral Bricks (Qld) Pty Ltd
				Lot 101 on SP266230	The State of Queensland
				Lot 201 on SP213447	Brisbane City Council
	1156	28/02/2046	43.55	Lot 8 on SP283241	Austral Bricks (Qld) Pty Ltd
				Lot 1 on SP213452	Brisbane City Council
				Lot 101 on SP213452	Brisbane City Council
				Lot 101 on SP266230	The State of Queensland

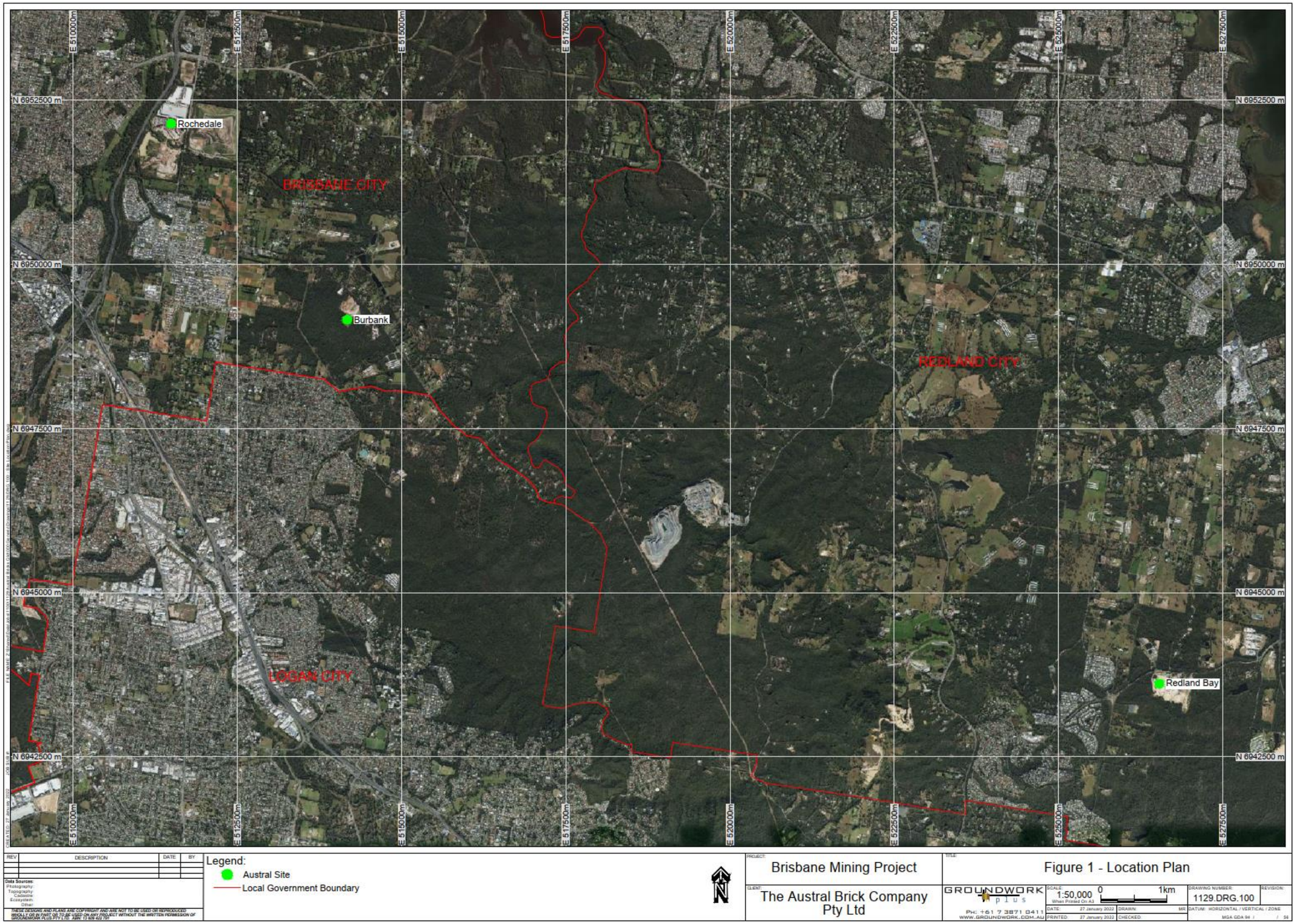


Figure 1 – Brisbane Mining Project Location Plan

2.2 Project Description

2.2.1 Type of Mining Operation

In general, raw materials (clay and shale) are mined from MLs 1152 and 50035 as raw feed for the production of clay bricks and pavers at the Rochedale Brick Plant. Mining activities generally include, but are not limited to:

- Vegetation clearing as necessary.
- Topsoil and overburden stripping as necessary.
- Mechanical extraction of clay / shale via machinery including scrapers, dozers and excavators, front end loaders or similar
- Raw material stockpiling.
- Raw material haulage.

The particular types of clay and shale extracted from the MLs are dependent upon the market fashion trends. The location of extraction the minerals is dependent upon required firing characteristics, colour of the fired materials, and to ensure product quality and minimise product wastage. Materials are selectively extracted from the different MLs based on sampling, testing, and visual inspection of the in-situ materials by experienced Austral Bricks' personnel. The hours of mining operation including delivery truck movements are generally limited to daylight hours.

Raw material extracted from the MLs is generally stockpiled on the extraction area floor prior to being loaded into trucks for haulage to the Rochedale Brick Plant. ML1156 provides invaluable tenure to support the Brick Plant and associated infrastructure on ML1151. ML1156 provides surface area for stockpiling and blending activities, with all minerals sourced from MLs 1152 and 50035 being processed on ML1156. Minerals transported to ML1156 are blended on-site to manage the raw feed quality before the material is transferred to the Brick Plant for processing to create bricks, brick facings, pavers and mortars. Materials are then transported to the crusher by moxy haul truck. Reject material is mainly restricted to overburden / soil which is used directly, stockpiled for later rehabilitation works or used in the construction of amenity banks. While mineral extraction may recommence in future on the Rochedale MLs 1151 and 1156, the site is primarily used as a stockpiling and processing facility.

2.2.2 Primary Mine Features / Infrastructure On-Site

The principal equipment and machinery that may be used on the MLs includes, but is not limited to:

- Brick Plant and all ancillary plant and facilities (e.g., crusher, site office, laboratory, amenities).
- Bulldozer
- Excavator/s
- Off-highway haul truck/s
- Front end loader
- Scraper
- Water truck
- Mobile fuel tanker (as required)
- Delivery trucks
- Fuel storage.

Temporary gravel roads are provided within the workings to enable truck access and load out from the floor of the excavation. Access tracks are relocated when and where required.

2.2.3 Proposed Duration of Operation

Based on current resource utilisation rates, Austral Bricks has determined the estimated life of mine shown in **Table 2 – Estimated Remaining Life of Mine**. The life of mine has been determined by Austral Bricks based on 'Inferred Resource' estimates at each site. The life of each mine may increase or decreased depending upon market demand and other economic factors, and therefore these values are for guidance purposes only.

Table 2 – Estimated Remaining Life of Mine*

Site	Duration
Burbank	21.5 years
Redland Bay	174 years
Rochedale	50 years

*All durations stated are based on Clay and Shale Mineral Resource estimates to the end of December 2021, as well as current usage rates.

In relation to the life of mine of Redland Bay, Austral Bricks has calculated an Inferred Resource estimate of Structural Brick Shale is 7,500,000 tonnes available for present and future exploitation. This value was determined by Austral bricks through review of results from historical drilling campaigns in 1993 (28 holes for a total of 581 metres) and 2000 (19 holes for a total of 297 metres) and subsequent extrapolation of results across the extent of the permit area. At an average yearly consumption rate of 43,000 tonnes, the resource life of the Redland Bay shale extraction operation was determined to be over 174 years. This may rise or fall depending on demand for inert shale, clay, and inert quartzite for bricks tied to consumer demand and various economic factors. The resource estimate was determined by Austral Bricks' National Geologist, Julius Marinelli, who is a Member of the Australasian Institute of Mining and Metallurgy ("AusIMM") and the Australian Institute of Geoscientists ("AIG") and is a Registered Professional Geologist (RPGeo – Mineral Exploration - # 10097).

ML1156 is imperative for the continuation of Austral Bricks' manufacturing activities in Queensland. The tenement provides invaluable surface area for the carrying out of ancillary activities in association with the Rochedale Brick Plant. The ancillary activities carried out on ML 1156 include stockpiling and blending of raw materials extracted from Austral Bricks' South East Queensland mining tenements in readiness for processing through the Brick Plant.

The life of the Rochedale site which is overlain by Austral Bricks' Rochedale Brick Plant and primary mineral stockpiling facility, is likely to exceed the potential resource distribution within the site. Over recent years commencing 2015, Austral Bricks spent $70 million on major upgrades at the Rochedale Brick Plant. The upgrade works included the installation of a new packaging line and the re-commissioning of the west kiln (previously mothballed) to replace the older east kiln (Brickworks Limited 2018, p. 27). The completion of these upgrades has significantly improved product quality and lowered unit production costs (Brickworks 2018). These upgrades affirm Austral Bricks' long-term view of the brick and ceramic product manufacturing activities and the potentially extensive life of the site.

DNRME (2016) stated that yearly production of structural clay represents approximately $7 million and noted the recent trend of rationalisation of the brickworks around the Brisbane region to reduce operating costs (p. 65). This highlights the importance of the Austral Bricks' manufacturing activities on

ML1156, which offer long term security for the supply of construction materials to the Queensland market.

Austral Bricks is Australia's largest clay brick manufacturer with significant market positions in every Australian state (Brickworks Limited 2019), which reinforces the company's importance to the construction industry. The company provides building materials which are long-lasting, cost effective, thermally sound, termite and fire-resistant to help house many Queenslanders and Australians, and the market relies on the consistent supply of materials provided by Austral Bricks. As indicated by **Figure 2 – Building Site Distribution**, the Rochedale Brick Plant is Austral Bricks' sole manufacturing site in the entirety of Queensland, underpinning its importance for the continuity of the company's operations in the State.

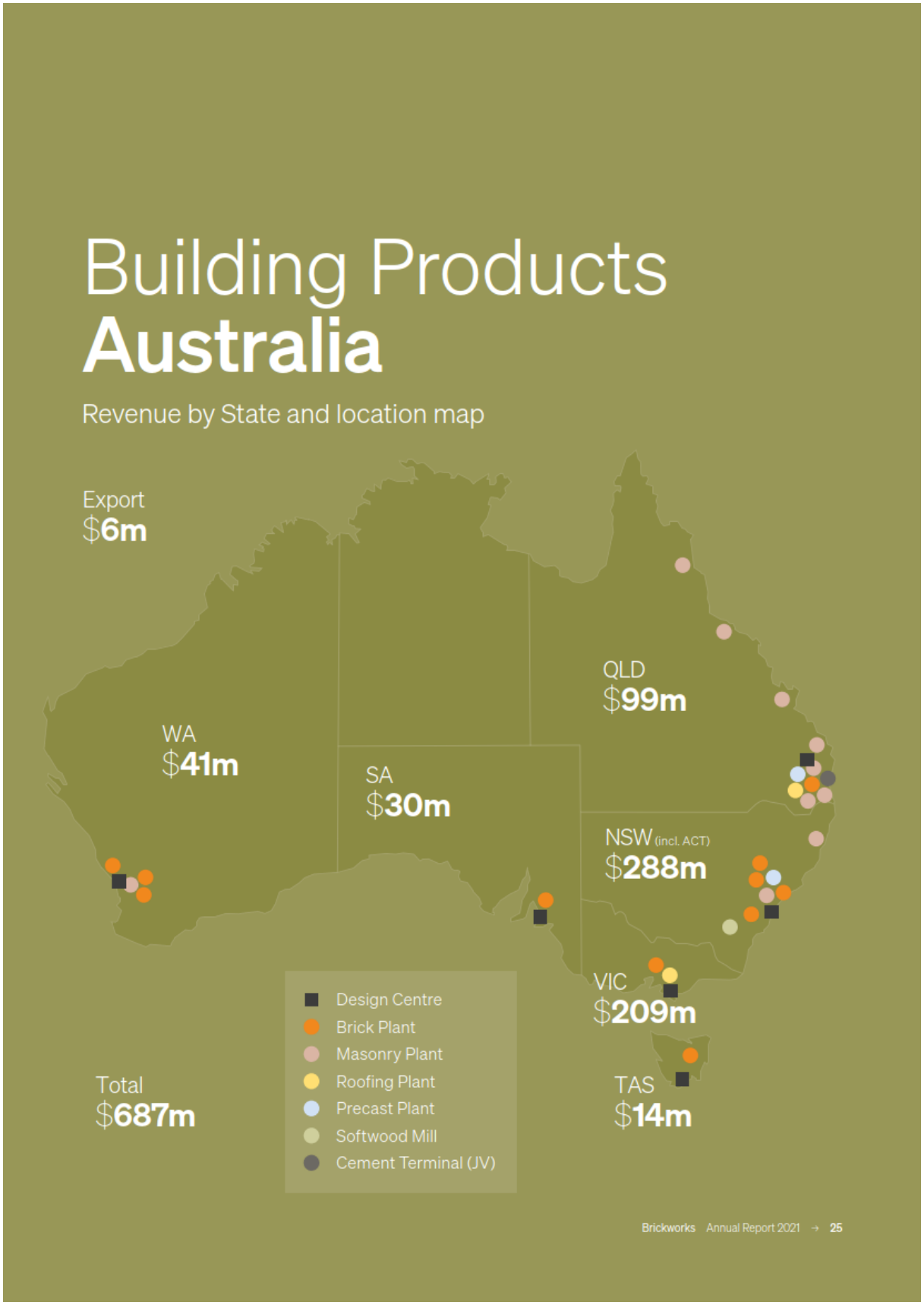


Figure 2 – Building Site Distribution

(Figure reprinted from Brickworks Limited (2021))

In addition to the domestic market, Austral Bricks export approximately ten million bricks per annum, predominantly to the Asian and New Zealand markets. Exports to the New Zealand market have equated to the construction of approximately 1,500 new homes. These export values are expected to increase significantly over the coming years. With the exception of Burbank, the proposed duration of the tenures extends well beyond the current term of the MLs.

Austral Bricks will continue to seek renewals of the MLs as and when required to ensure that the remaining resource can be fully realised, and operational functionality of the Rochedale site is not impeded.

3 Baseline Information

3.1 Burbank ML1152

3.1.1 Land Use

3.1.1.1 Pre-Mining Land Use

Prior to the grant of ML 1152 on 19 December 1974, the land was partially cleared and used for rural purposes, refer to **Plate 1 – Aerial Imagery Dated 1974: Burbank**. An access track serviced the clearing at the rear of the property while the northern portion was densely vegetated.



Plate 1 – Aerial Imagery Dated 1974: Burbank

(Source QImagery. "Brisbane Region 1974" 1:50,000. Film: RAAF2, Frame: 809, Run:3. Brisbane: QImagery, 1 March 1974)

3.1.1.2 Existing Land Use

The site is currently used for mining.

3.1.1.3 Land Use Adjacent to Site

Table 3 – Adjacent Land Uses: Burbank provides a summary of the land uses surrounding the site.

Table 3 – Adjacent Land Uses: Burbank

Direction	Land Use
North	Ford Road and Environmental management zoned land without agriculture.
East	Environmental management zoned land.
South	Priest Gully and Environmental management zoned land without agriculture.
West	Environmental management zoned land including commercial business (Runaway Bay Pontoon Boats).

Table note: land use zoning sourced from the relevant local planning scheme.

3.1.2 Topography

Elevations within ML 1152 are between 37 m AHD (within the drainage feature central to the site), and 60 m AHD at the hill crest in the southern portion of the site. There is one drainage feature (ephemeral gully) which traverses in an southeast-northwest direction through the centre of the site. Priest Gully lies immediately adjacent to the southern ML boundary. **Figure 3 – Topography: Burbank** provides an illustration of the topographical features in the locality.

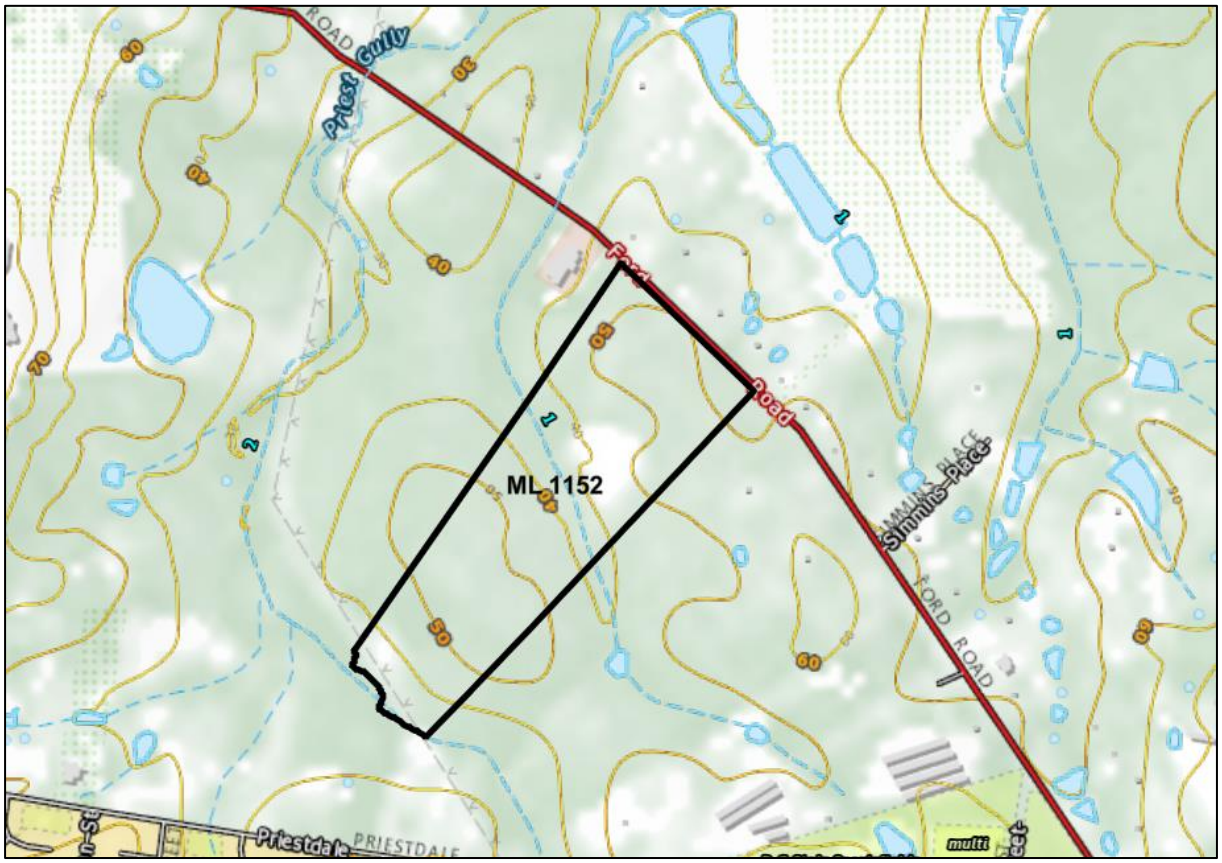


Figure 3 – Topography: Burbank

(Source: The State of Queensland (2022a))

3.1.3 Climate

A summary of the regional climate data sourced from the Bureau of Meteorology ('BoM') is provided in **Table 4 – Burbank Regional Climatic Statistics**.

Table 4 – Burbank Regional Climatic Statistics

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Rainfall (mm)													
Mean	149.2	156.1	140.5	102.1	103.0	68.8	56.9	38.9	32.1	90.6	102.8	126.2	1,193.5
Mean Temperature (°C)													
Min	20.4	20.4	19.7	15.6	13.1	10.8	10.2	11.4	13.0	16.7	18.4	19.2	15.7
Max	28.1	28.4	27.2	25.0	22.9	20.7	20.5	22.2	23.6	26.3	26.1	28.1	24.9
Mean Wind Speed (km/h)													
9am	7.4	6.7	6.7	5.3	5.5	4.9	5.3	5.4	5.6	6.9	7.0	7.0	6.1
3pm	14.3	13.3	13.8	12.3	9.7	8.7	9.3	10.9	12.6	13.3	13.4	13.2	12.1

Source:
Rainfall data from Capalaba Water Treat BoM Station No.: 40458.
Temperature data from Redland (Alexandra Hills) BoM Station No.: 140007 (based on 2021).
Wind speed / direction data from Logan City Water Treatment Plant BoM Station No: 04085.

Based on the above, annual mean rainfall for the permit area is 1,193.5 mm and majority of rain falls between October and May. Review of the annual 9am and 3pm wind direction versus wind speed shows that the morning winds are generally from the west and predominantly calm (between >= 0 and < 10 km/hr). In the afternoon, winds are generally from the east and southeast and predominantly between >= 0 and < 10 km/hr. Refer to **Diagram 1 - Wind Roses of Annual Speed and Direction 9am v. 3pm Station 04085** for graphic representations of the wind observations.

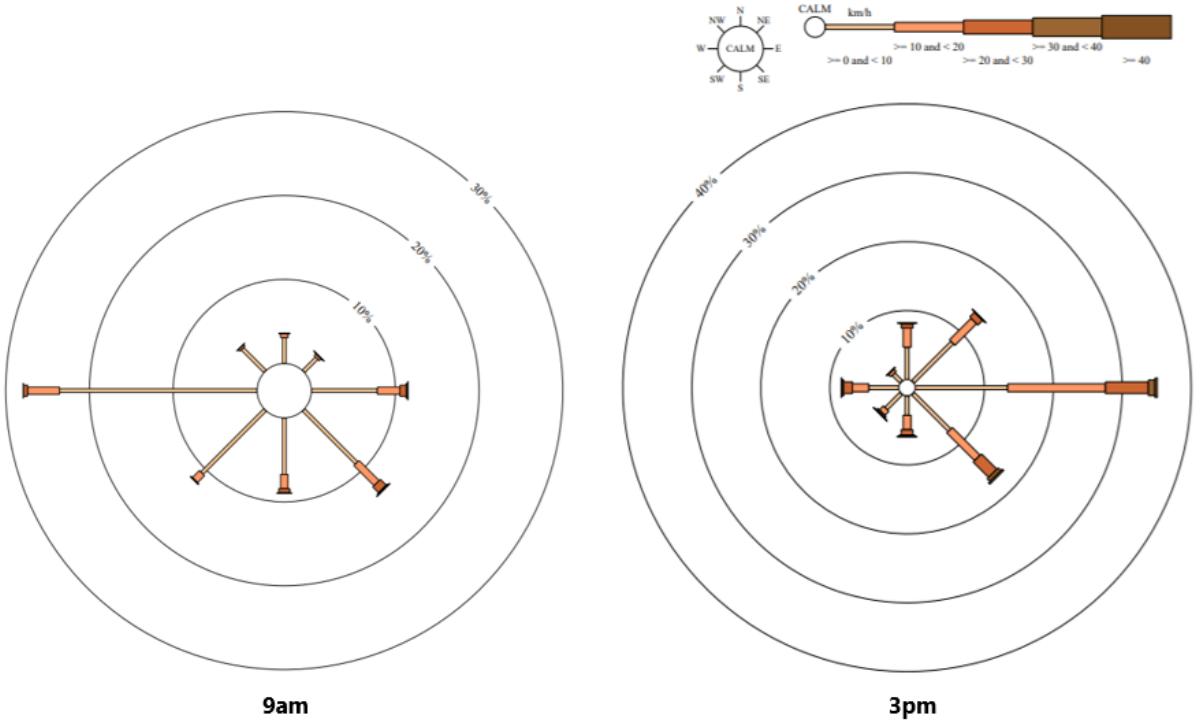


Diagram 1 - Wind Roses of Annual Speed and Direction 9am v. 3pm Station 04085

(Source: Bureau of Meteorology (2022))

3.1.4 Geology

Target clay materials extracted from the site comprise of cream plastic clay, buff semi-plastic clay, brown shale and grey shale for brick and paver manufacturing activities. Refer to **Figure 4 – Geology Mapping: Burbank** for an illustration of the detailed surface geology within ML 1152.



Figure 4 – Geology Mapping: Burbank

(Source: The State of Queensland (2022a))

3.1.5 Hydrology

Figure 5 – Watercourse and Wetland Mapping: Burbank provides an illustration of hydrological features in the locality.

Priest Gully (Stream Order 2) which is situated south of the ML boundary, is fed by several ephemeral gullies flows in a general northerly direction before entering the Tingalpa Reservoir approximately 4.3 km from the site. A drainage feature (Stream Order 1) traverses the centre of site and conjoins with Priest Gully 1.4 km downstream of the site. This drainage feature is fed by several dams upstream of the site, with the uppermost being a water storage at the D.G. Stolz Sportsground 900 m east of the site.

The ephemeral gullies traversing the site, and Priest Gully adjacent to the site, are mapped as being palustrine wetlands and are categorised as vegetation management wetlands for the purpose of Section 20AA of the *Vegetation Management Act 1999* ('VMA').

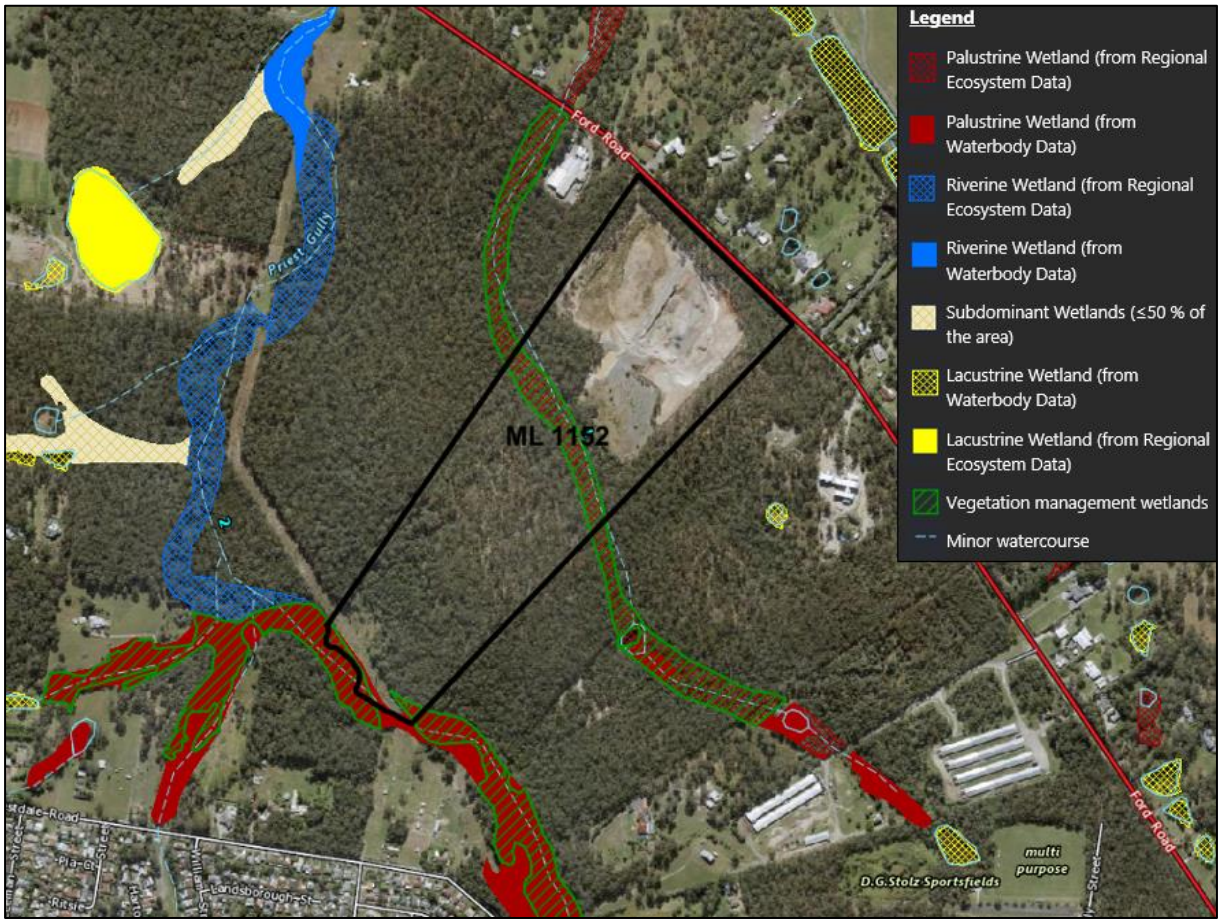


Figure 5 – Watercourse and Wetland Mapping: Burbank

(Source: The State of Queensland (2022a))

3.1.6 Regional Water Quality Objectives

ML 1152 is situated within the coastal streams water type of the Logan Basin, which is subject to the *Environmental Protection (Water) Policy 2009: Redland Creeks environmental values and water quality objectives* (DERM 2010a). The Water Quality Objectives ('WQOs') for these waters are summarised in **Table 5 – Logan Basin Coastal Streams WQOs**.

Table 5 – Logan Basin Coastal Streams WQOs

Parameter	Objective
Turbidity	< 50 NTU
Suspended Solids	< 6 mg/L
Chlorophyll a	<5 µg/L
Total Nitrogen ('N')	< 500 µg/L
Oxidised N	< 60 µg/L
Ammonia N	< 20 µg/L

Parameter	Objective
Organic N	< 420 µg/L
Total Phosphorous ('P')	< 50 µg/L
Filterable Reactive P ('FRP')	< 20 µg/L
Dissolved Oxygen	85-110%
pH	6.5 – 8.0

The WQOs for the site-specific release waters as set by the EA are summarised in **Table 6 – Release Limits: Burbank.**

Table 6 – Release Limits: Burbank

Parameter	Objective
pH	6.5 – 9.0
Turbidity	≤ 92 NTU

3.1.7 Site Specific Water Quality Data

A summary of water quality data held for the Burbank site is provided below, in addition to the receiving environment. Monitoring of pH and Turbidity has been undertaken regularly at the site at the locations shown in **Figure 6 – Burbank Water Monitoring Locations**.

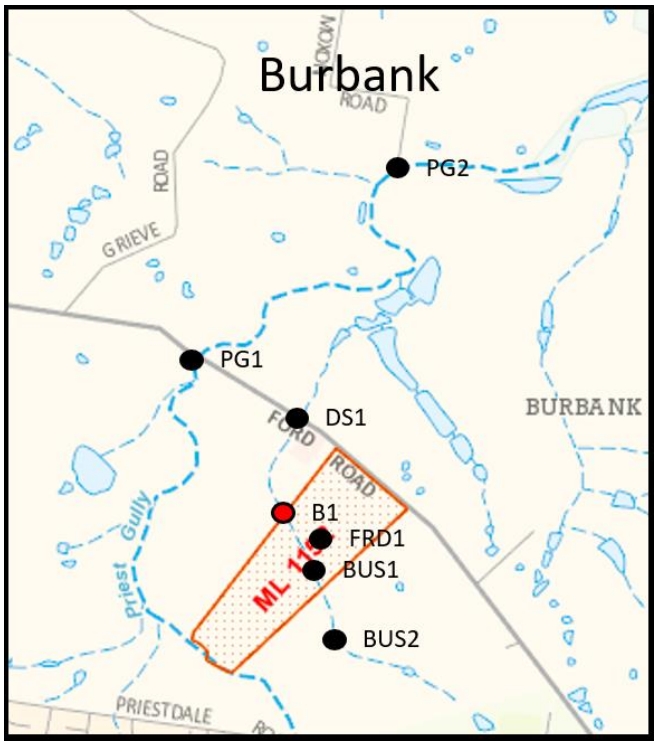
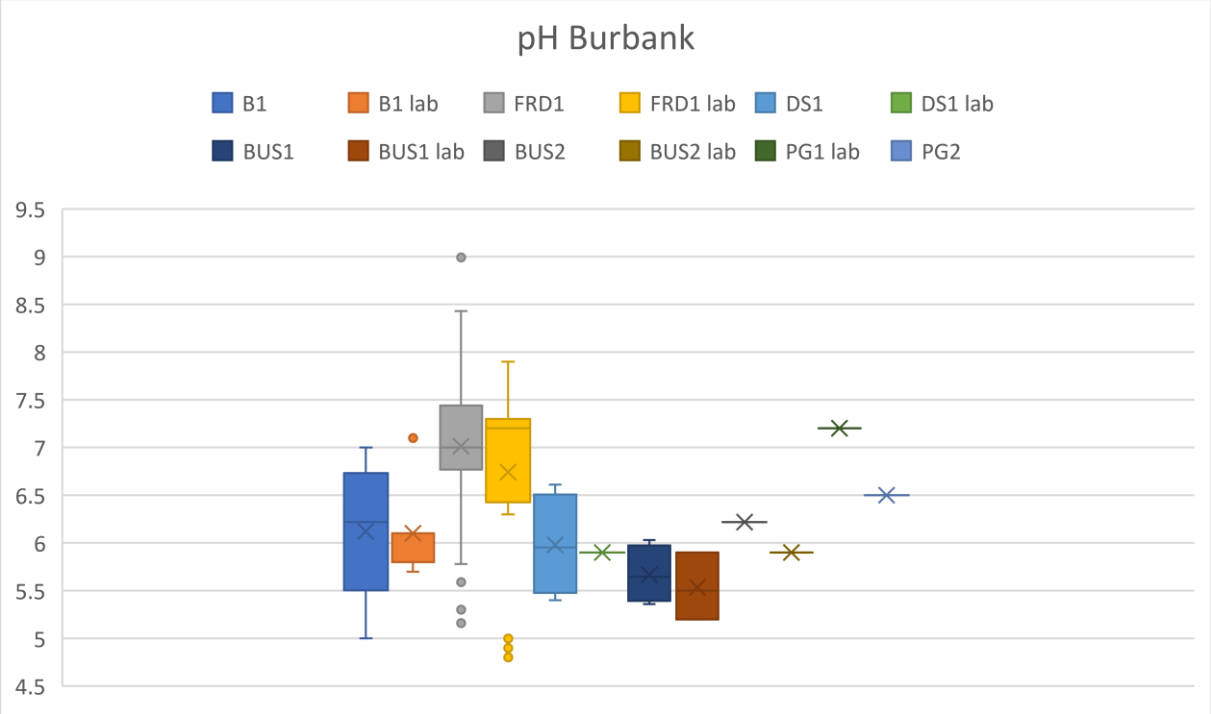


Figure 6 – Burbank Water Monitoring Locations

A graphical representation of pH at the site and surrounding water courses is shown in **Graph 1 – pH Burbank**.



Graph 1 – pH Burbank

A statistical summary of pH data is provided in **Table 7 – pH Statistics: Burbank**.

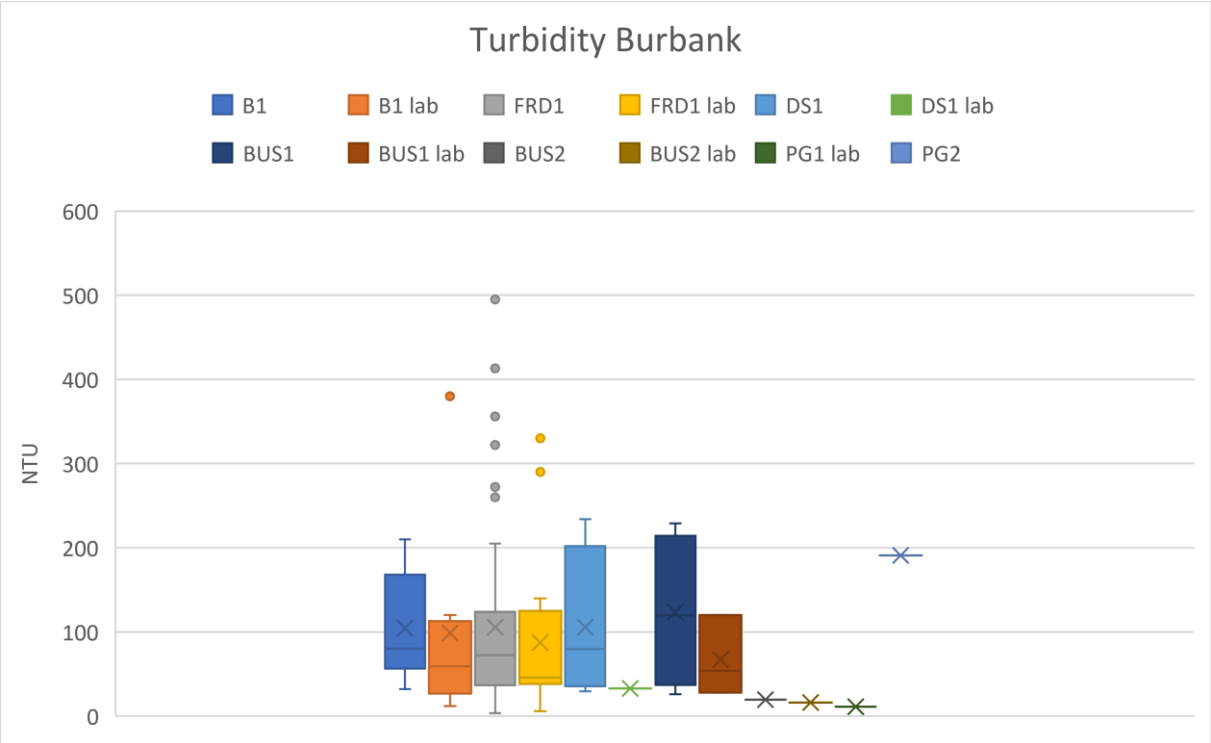
Table 7 – pH Statistics: Burbank

Statistics	B1	B1 lab	FRD1	FRD1 lab	DS1	DS1 lab	BUS1	BUS2	PG1 lab	PG2
Maximum	7	7.1	8.99	7.9	6.61	5.9	6.2	6.22	7.2	6.5
Minimum	5	5.7	5.16	4.8	5.4	5.9	5.36	5.9	7.2	6.5
Std. Dev.	0.70	0.47	0.72	0.93	0.53	-	0.29		-	-
Median	6.22	6.1	7	7.2	5.96	5.9	5.80	6	7.2	6.5
95th %ile	6.93	6.8	8.11	7.5	6.55	5.9	6.16	6.216	7.2	6.5
Average	6.12	6.1	7.01	6.74	5.98	5.9	5.8	6.044	7.2	6.5
Count	8	7	54	24	4	1	9	5	1	1

The results indicate that:

- Limited datasets are available for water quality upstream of the site (BUS2). The result indicated water quality to be slightly acidic;
- Water stored within the site (FRD1), varies from slightly acidic to alkaline, with a range of 5.16 to 8.99. the median pH level is neutral, at pH 7 as a result of active treatment of the site dam:
- Water releasing from site, represented by B1, ranges in pH from slightly acidic to neutral. The median pH level is 6.22:
- Waters immediately downstream of the site (DS1), show similar characteristics to that in the upstream environment.

A graphical representation of turbidity at the site and surrounding water courses is shown in **Graph 2 – Turbidity Burbank**.



Graph 2 – Turbidity Burbank

A statistical summary of turbidity data is provided in **Table 8 – Turbidity Statistics: Burbank**.

Table 8 – Turbidity Statistics: Burbank

Statistics	B1	B1 lab	FRD1	FRD1 lab	DS1	DS1 lab	BUS1	BUS2	PG1 lab	PG2
Maximum	210	380	495	330	234	33	229	33	11	191
Minimum	32.3	12	3.39	5.7	29.4	33	20	9	11	191
Std. Dev.	62.70	119.05	109.86	87.14	91.19		71.47			
Median	80.2	59	72.4	46	79.55	33	54	16	11	191
95th %ile	201.6	289	356.75	292	214.65	33	205	30.32	11	191
Average	104.48	98.625	105.71	87.24	105.63	33	86.91	18.12	11	191
Count	9	8	58	20	4	1	9	5	1	1

The results indicate that:

- Limited datasets are available for water quality upstream of the site (BUS2). The result indicated water vary in turbidity levels, likely subject to rainfall and flow conditions;
- Water stored within the site (FRD1), varies from clear (3.39) to very turbid (330), the median turbidity level is 72.4 as a result of active treatment of the site dam;
- Water releasing from site, represented by B1, ranges in turbidity from clear to turbid. The median turbidity of site releases is 80.2;
- Waters immediately downstream of the site (DS1), show similar characteristics to that in the upstream environment;

- Priest Gully, at PG1 shows water quality to be clear, with downstream Priest Gully, at PG being similar.

Both turbid and acidic waters can be effectively treated using a range of products. Whilst at times waters stored on site are slightly acidic and / or turbid, these can be readily dealt with through on-site treatment.

3.1.8 Groundwater Levels and Properties

There are no groundwater bores established on the site. Local groundwater data has been sourced from registered bores within a 1.5 km radius centred on the site, with the details of bores containing groundwater depth data summarised in **Table 9 – Registered Bore Groundwater Data Summary: Burbank**. Note that a number of bores within the selected radius have been abandoned and destroyed and no groundwater depth or quality records were available. These bores have been excluded from this summary. An illustration of the bore locations is provided in **Figure 7 – Local Groundwater Bores within a 1.5 km Radius: Burbank.** The bore data indicates that groundwater depth varies, with a median value of approximately 28.1 m AHD.

Austral Bricks has reviewed drill data from 16 drillhole logs prepared during the most recent resource investigation in 2020, which determined that five (5) holes encountered water near hole terminus. The average depth to top of aquifer at Burbank is estimated to be 16 m below natural surface level (Brickworks Limited 2022a). Pit depths are not anticipated to extend to depths that would intersect these waters.

Table 9 – Registered Bore Groundwater Data Summary: Burbank

Reg No.	Lat / Long	Geology	SWL / Date	Groundwater Depth (mAHD)*	Conductivity
194249 (abandoned and destroyed)	-27.5786, 153.1478	Sandstone / Shale (Woogaroo Subgroup)	14 m^ / 26/02/2021	~19	996 ppm
152394 (existing)	-27.5809, 153.1479	Sandstone / Shale (Woogaroo Subgroup)	-11.1 / 19/12/2013	~27.9	3,280 ppm
133932 (existing)	-27.5725, 153.1325	Shale (Woogaroo Subgroup)	-6.00 m / 02/05/2006	~60	No data
134872 (abandoned and destroyed)	-27.5718, 153.1323	Shale	-47.00 m / 16/07/2007	~21	No data
134873 (existing)	-27.5711, 153.1340	Shale	-33.00 m / 18/07/2007	~31	No data
120180 (existing)	-27.5707, 153.1430	Shale (Woogaroo Subgroup)	-35 m / 25/02/2004	~2	No data
134847 (existing)	-27.5696, 153.1399	Clay / Shale / Sandstone	- 22.70 m / 10/07/2007	~28.3	No data

Reg No.	Lat / Long	Geology	SWL / Date	Groundwater Depth (mAHD)*	Conductivity
152400 (existing)	-27.5692, 153.1378	Sandstone (Sunnybank Formation)	21.5 m^ / 15/03/2013	~46.5	No data

Notes:
SWL = Standing Water Level
*Based on elevation of bore, subtracting SWL
^Reading from top of aquifer in lieu of SWL data.

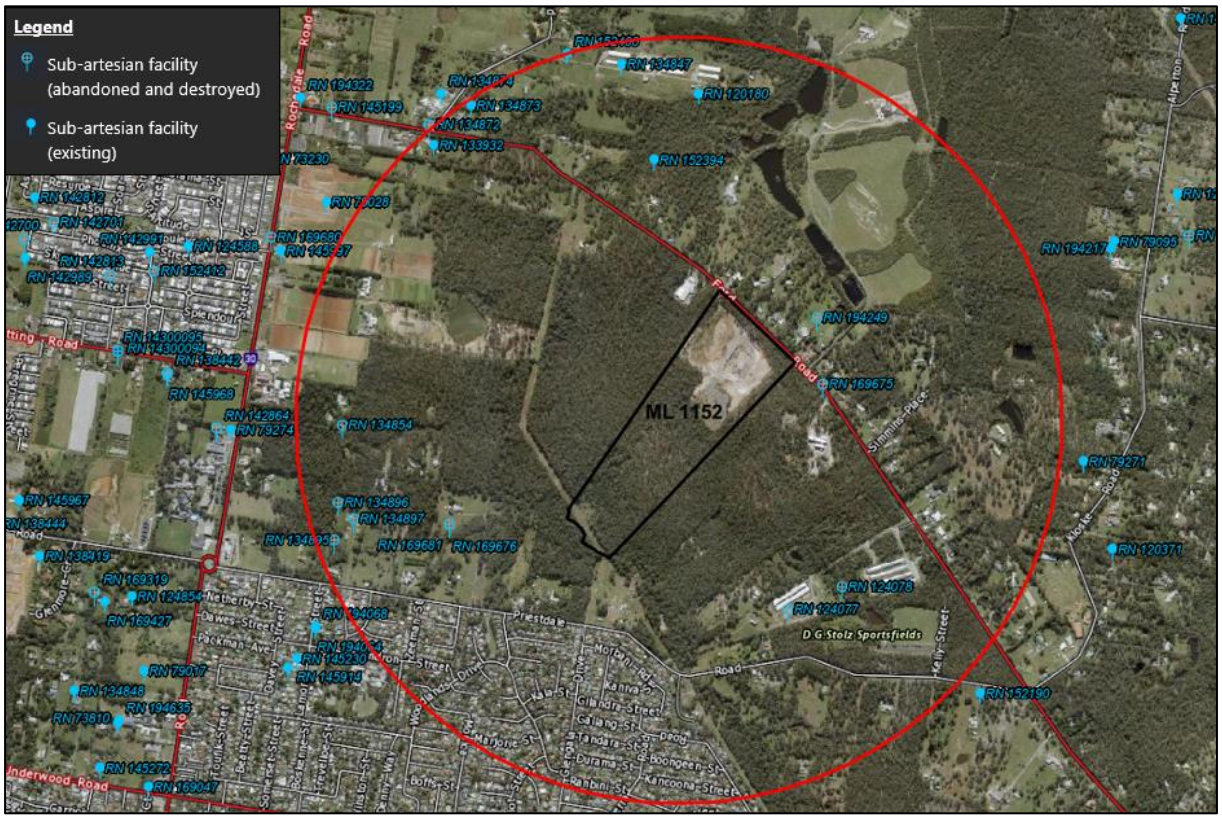


Figure 7 – Local Groundwater Bores within a 1.5 km Radius: Burbank

(Source: The State of Queensland (2022a))

3.1.9 Soils

3.1.9.1 Soil Group

Regional landscape mapping has been undertaken within the region as part of The Soil Landscapes of Brisbane and South-Eastern Environs (CSIRO 1987). The report, and accompanying landscape map, published at a scale of 1:100,000 has identified the area that includes ML1152 as being characteristics of the landscape referred to as "Woodridge".

Woodridge is described as occurring on low convex hills and ridges south of the Brisbane River and on gently undulating surfaces. The soils are described as being clayey sandstones, sandy mudstones, clays, shales and some coarse sandstones.

3.1.9.2 Acid Sulfate Soils

Review of the Acid Sulfate Soils ('ASS') mapping (The State of Queensland (2022a) has confirmed that the site is not located within, or near, an area where ASS have previously been identified, or within a prospective land zone containing ASS. As elevations over the site are generally above 37 m AHD, presence of ASS is considered very unlikely.

3.1.9.3 Productivity

Testing has been undertaken of retained topsoils on site which allow for an assessment of the quality of soil available for rehabilitation at the site.

The soil testing locations are described as follows:

- Rehab 1.1 – Topsoil sample from 0.0-0.5cm, within existing rehabilitation area with decent ground, coverage and vegetation density;
- Rehab 1.2 – Topsoil sample from 0.0-0.5cm, within existing rehabilitation area with decent ground, coverage and vegetation density;
- Rehab 1.3 – Topsoil sample from 0.0-0.5cm, within existing rehabilitation area with decent ground, coverage and vegetation density;
- Rehab 2.1 – Topsoil sample from 0.0-0.5cm, within existing rehabilitation area with poor ground, coverage and vegetation density;
- Rehab 2.2 – Topsoil sample from 0.0-0.5cm, within existing rehabilitation area with poor ground, coverage and vegetation density;
- Rehab 2.3 – Topsoil sample from 0.0-0.5cm, within existing rehabilitation area with poor ground, coverage and vegetation density;
- Topsoil OB1 – Sampled taken from overburden stockpile;
- Topsoil 2 – Topsoil stockpile.

Analysis was undertaken for parameters typical for growth media suitability assessments. Results are provided in **Table 10 – Soil Quality: Burbank**.

Table 10 – Soil Quality: Burbank

Parameter	Rehab 1.1	Rehab 1.2	Rehab 1.3	Rehab 2.1	Rehab 2.2	Rehab 2.3	Topsoil OB1	Topsoil 2
pH	4.1	4.8	5.0	5.2	4.6	4.9	4.8	5.0
EC µS/cm	753	41	35	161	200	29	32	44
CEC (meq/100g)	15.8	14.1	16.5	7.2	4.4	12.7	17.1	12.6
ESP (%)	3.0	9.2	7.5	21.8	27.1	8.5	7.2	10.3
Chloride mg/kg	1,520	20	10	170	290	10	10	30
Iron mg/kg	20.4	27.6	14.0	5.86	100	13.4	8.88	71.9
Manganese mg/kg	<1.00	7.04	12.8	114	5.02	<1.00	<1.00	14.1
Zinc mg/kg	<1.00	1.10	2.25	7.50	<1.00	<1.00	<1.00	1.63
Ammonia as N mg/kg	<20	<20	<20	<20	<20	<20	<20	<20

Parameter	Rehab 1.1	Rehab 1.2	Rehab 1.3	Rehab 2.1	Rehab 2.2	Rehab 2.3	Topsoil OB1	Topsoil 2
Nitrite as N mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrate as N mg/kg	0.6	<0.1	<0.1	0.8	1.5	1.9	5.6	1.4
Nitrite + Nitrate as N mg/kg	0.6	<0.1	<0.1	0.8	1.5	1.9	5.6	1.4
TKN mg/kg	530	620	180	490	610	500	410	710
Total N mg/kg	530	620	180	490	610	500	420	710
Total P mg/kg	233	119	183	113	101	85	156	130
Ext. P (Colwell) mg/kg	<5	<5	<5	<5	<5	<5	<5	<5
Organic Matter %	1.9	2.0	1.6	2.4	2.4	1.4	1.5	2.1
TOC %	1.1	1.1	0.9	1.4	1.4	0.8	0.9	1.2

The above soil results have been used to understand existing soil suitability at the site, with the following comments provided.

The **pH range** for the soils on site is from 4.1 to 5.0 and are described as very strongly acidic. In their current state, they will not be suited to a wide range of revegetation species. However existing rehabilitation within these same soils has had some success, indicating the pH ranges on site are not hostile to some native plants. The natural soils in this area have an inherently low pH and are able to sustain a variety of vegetation. Austral select species which are endemic to the location for rehabilitation to align with the surrounding ecosystem and subsequent rehabilitation efforts have been successful. As a result, ameliorating pH may not be necessary.

The **electrical conductivity** for the soils is low, indicating EC is not a limitation with regard to the available growth media.

The **Exchangeable Sodium Percentage (ESP),** is variable across the site, with a range of 3.0 % to 21 %. Soils are typically described as sodic when ESP is above 6%, with ESP greater than 14% being described as strongly sodic. The results indicate that the soils available are sodic to strongly sodic. Sodic soils can be effectively remedied through the addition of gypsum or lime. As the pH is inherently low it is recommended that lime is preferred over gypsum. It is recommended that areas are rehabilitated as soon as practicable to ensure vegetation coverage as soon as possible to minimise erosion risks.

The **nutrient** levels within the soils, represented by the nitrogen suites of analysis, indicate the fertility of the soils to be poor in regard to nitrogen levels available. This isn't uncommon for soils in Australia, with native plant varieties well-conditioned to low nutrient soils. Nitrogen availability may also be affected by low pH. Nitrogen fixing plants such as acacias have been used by Austral in rehabilitation seed mixes at the site. If necessary, fertility levels can be improved through the addition of fertilisers to ensure an additional nutrient source is made available for plant establishment, particularly in the short

term of any rehabilitation program. However, Austral has not observed nutrient deficiencies in previous progressive rehabilitation.

The **phosphorus** levels, in addition to nitrogen levels, indicate the fertility of soils. Like the nitrogen levels of the soils at the site, phosphorus levels are also low. This isn't uncommon for soils in Australia, with native plant varieties well-conditioned to low nutrient soils. Fertility levels can be improved through the addition of fertilisers to ensure an additional nutrient source is made available for plant establishment, particularly in the short term of any rehabilitation program.

The soil materials at the site, although with some limitations, particularly in regard to pH and ESP levels, have been used with success in rehabilitation areas at the site. Evidence of successful rehabilitation with minimal soil ameliorants is provided in **Section 3.4 - Rehabilitation Planning**. It is also noted that these limitations can be readily overcome through the addition of common ameliorants such as gypsum, lime and fertilisers if necessary.

3.1.10 Land Stability

In the absence of site-specific geotechnical investigations, soil friction angle values have been used to indicate potential geotechnical stability for rehabilitation phase. Typical soil friction angle can be used as a measure of shear strength parameter of soils including clayey soils such as those at the site (Geotechdata 2013). Clays of high plasticity (compacted) typically have a friction angle of 17-35º. Clay shales have a typical friction angle of 20 – 27 º (Wyllie, D. & Norrish, N. 1996).

Shales with a high clay content can be prone to degradation due to weathering processes such as wetting and drying cycles. The impacts of natural weathering on slope stability can range from surficial sloughing and progressive retreat of the face, to slope failures resultant from strength loss over time (Wyllie, D. & Norrish, N. 1996).

3.1.11 Vegetation Communities

3.1.11.1 Mapped Regional Ecosystems

Refer to **Figure 8 – Mapped RE: Burbank** for an illustration of the remnant vegetation mapping over the site. A portion of the former extraction areas is mapped as non-remnant vegetation under the VMA.

The balance of the site is mapped as containing remnant vegetation comprising Category C or R and A or B least concern Regional Ecosystems ('RE') as defined below:

- RE 12.3.6 (100%) – *Melaleuca quinquenervia +/- Eucalyptus tereticornis, Lophostemon suaveolens, Corymbia intermedia* open forest on coastal alluvial plains;
- RE 12.9-10.19a (100%) – E. fibrosa subsp. fibrosa woodland on sedimentary rocks;
- RE 12.9-10.4 (100%) – E. racemosa subsp. racemosa woodland on sedimentary rocks;
- 12.9-10.17a (100%) – E. acmenoides, E. major, E. siderophloia +/- C. citriodora subsp. variegata open forest on sedimentary rocks.

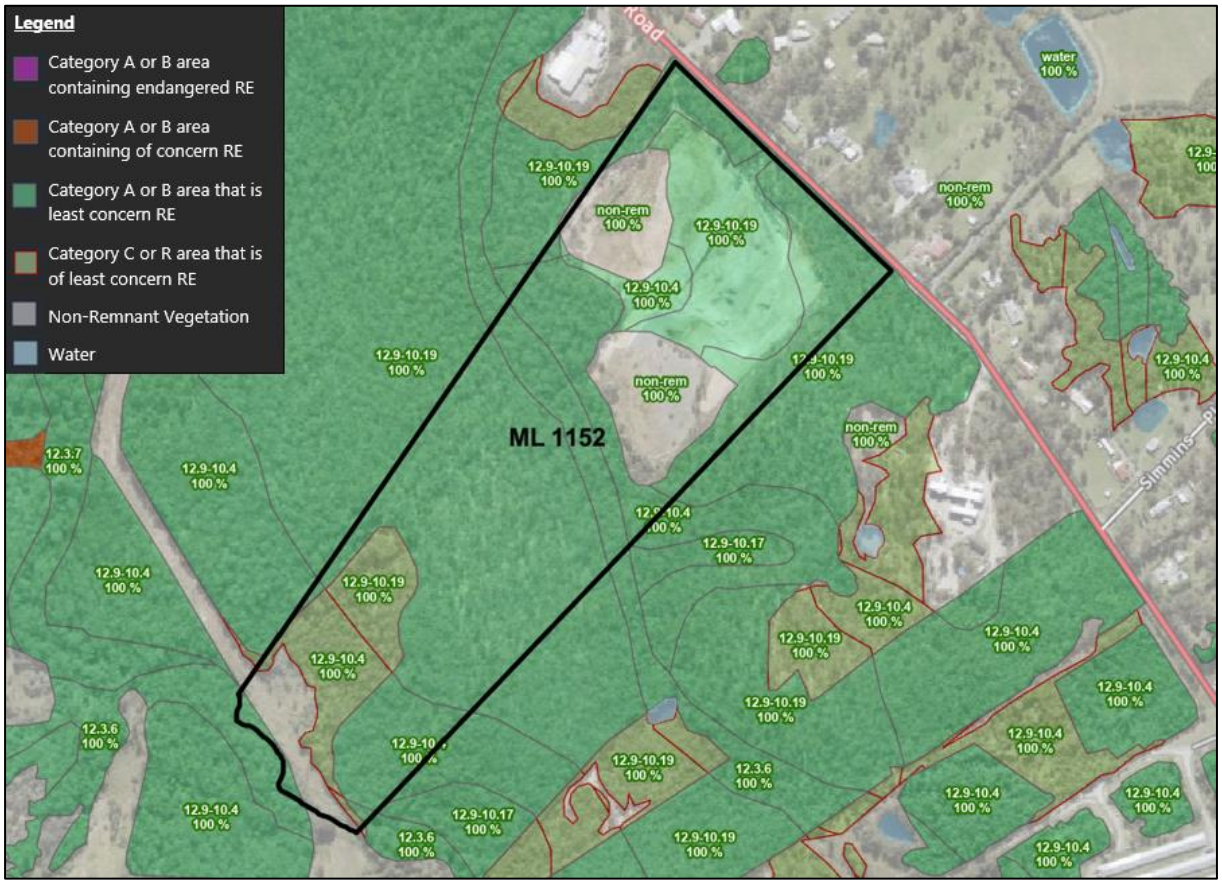


Figure 8 – Mapped RE: Burbank

(Source: The State of Queensland (2022a))

3.1.11.2 Site Survey Data – Flora and Fauna

In 2017, Saunders Havill Group ('SHG') carried out a field survey (flora and fauna) of the site with the findings presented in the report titled *Ecological Assessment Report: Ford Road, Burbank* (SHG 2017a).

At the time of SHG's assessment, the Department of Agriculture, Water and the Environment ('DAWE') 'Protected Matters Search Tool', which identifies the potential presence of matters protected under the *Environment Protection and Biodiversity Conservation Act 1999* ('EPBC Act') listed a single Threatened Ecological Community that may occur within the local area. However, the Critically Endangered Lowland Rainforest of Subtropical Australia was not identified by SHG on or within the vicinity of the site (2017a, p. 19).

16 threatened botanical species were listed as occurring within 5 km of the site at the time of SHG's assessment, most of these species listed in association with rainforest communities and less disturbed environments which are not present on the site (SHG 2017a, p. 19). Vegetation on site was found to be dominated by Eucalyptus species, which is not typical of this threatened community (2017b, p. 19). No threatened plants for the purpose of the *Nature Conservation Act 1992* (NCA) were found by SHG during the site surveys.

In summary, SHG (2017a, p.20-21) determined that:

- The vegetation observed within the assessment area is more consistent with Least Concern RE 12.9-10.17 than that of Least Concern RE 12.9-10.4;

- Species found on site include *Eucalyptus siderophloia* (Northern Grey Ironbark), *Corymbia citriodora* (Spotted Gum), *Eucalyptus fibrosa* (Broad-leaved Red Ironbark), *Eucalyptus propinqua* (Grey Gum;*Eucalyptus microcorys* (Tallowwood), Eucalyptus acmenioides (White Mahogany) and *Corymbia henryii* (Large-leaved Spotted Gum);
- The small isolated patches that contained *Eucalyptus racemosa* (Scribbly Gum) are currently mapped as 12.9-10.17 or non-remnant;
- The southern portion of the assessment area is mapped as non-remnant and contains slash pine;
- The Of Concern vegetation RE 12.3.11 appears to be consistent with the alluvial area associated with the watercourse and contained *Eucalyptus tereticornis* (Forest Red Gum), *Melaleuca quinquenervia* (Broad-leaved Paperbark), *Corymbia intermedia* (Pink Bloodwood) and *Lophostemon sauveolens* (Swamp Box);
- The area of the site north of the waterway is currently mapped as a combination of RE 12.9-10.17 and RE 12.9-10.4 however a large portion of this area shows signs of being historically cleared;
- Species observed within the remnant polygon are, to the most part consistent with the descriptions of each regional ecosystem community.

A complete list of native species identified by SHG (2017a) during the field survey is provided as **Table 11 – Burbank Field Survey Findings – Native Species**. **Figure 9 – Field Survey Assessment Zones: Burbank** provides an illustration of the field survey zones categorising the site into observed native vegetation and slash pine dominated areas.

Table 11 – Burbank Field Survey Findings – Native Species

Site Flora List	
Species Name	**Common Name**
Acacia concurrens	Black Wattle
Acacia disparimma	Hickory Wattle
Acacia fimbriata	Fringed Wattle
Acacia leiocalyx	Early-flowering Black Wattle
Acrotiche aggregata	Ground Berry
Allocasuarina littoralis	Black Sheoak
Alphitonia excelsa	Red Ash
Angophora woodsiana	Smudgy Apple
Babingtonia virgata	Heath Myrtle
Brachychiton acerifolius	Illawarra Flame Tree
Breynia oblongifolia	Coffee Bush
Cassytha pubescens	Dodder Vine
Chalochlaena dubia	False Bracken
Chrysocephalum apiculatum	Yellow Buttons
Corymbia citriodora	Spotted Gum
Corymbia intermedia	Pink Bloodwood
Corymbia trachyphloia	Brown Bloodwood
Coymbia henryi	Large-leaved Spotted Gum
Cyperus polystachyos	Bunchy Sedge

Site Flora List	
Species Name	**Common Name**
Dianella caerulea	Blueberry Lilly
Entolasia stricta	Wiry Panic
Eragrostis sp.	-
Eucalyptus acmenioides	White Mahogany
Eucalyptus fibrosa	Broad-leaved Ironbark
Eucalyptus microcorys	Tallowwood
Eucalyptus propinqua	Grey Gum
Eucalyptus racemosa	Scribbly Gum
Eucalyptus seeana	Narrow-leaved Red Gum
Eucalyptus siderophloia	Northern Grey Ironbark
Eucalyptus tereticornis	Forest Red Gum
Gahnia aspera	Rough Saw-sedge
Geodorum densiflorum	Pink Nodding Orchid
Glochidion fernandii	Cheese Tree
Goodenia rotundifolia	Star Goodenia
Hibbertia vestita	Hairy Guinea Flower
Imperata cylindrica	Bladey Grass
Juncus usitatus	Common sedge
Lepidosperma laterale	Variable Sword Sedge
Leptospermum polygalifolium	Tangoon
Lomandra longifolia	Spiney-head Matrush
Lomandra multiflora	Multi-headed Mat Rush
Lophostemon confertus	Brush Box
Melaleuca quinquenervia	Broad-leaved Paperbark
Melaleuca saligna	Willow Bottlebrush
Melia azederach	White Cedar
Mellicope elleryana	Pink Euodia
Oplismenus imbeccilis	Creeping Beard Grass
Phyllanthus sp.	-
Pimelia linariifolia	Rice Flower
Pteridium esculentum	Bracken Fern
Syzygium leuhmanii	Lillypilly
Thysanotus tuberosus	Fringed Lilly
Tricoryne elatior	Yellow Rush-lilly
Violia hederacea	Native Violet
Xanthorrhoea johnsonii	Grass Tree

3. FIELD SURVEY ASSESSMENT ZONES

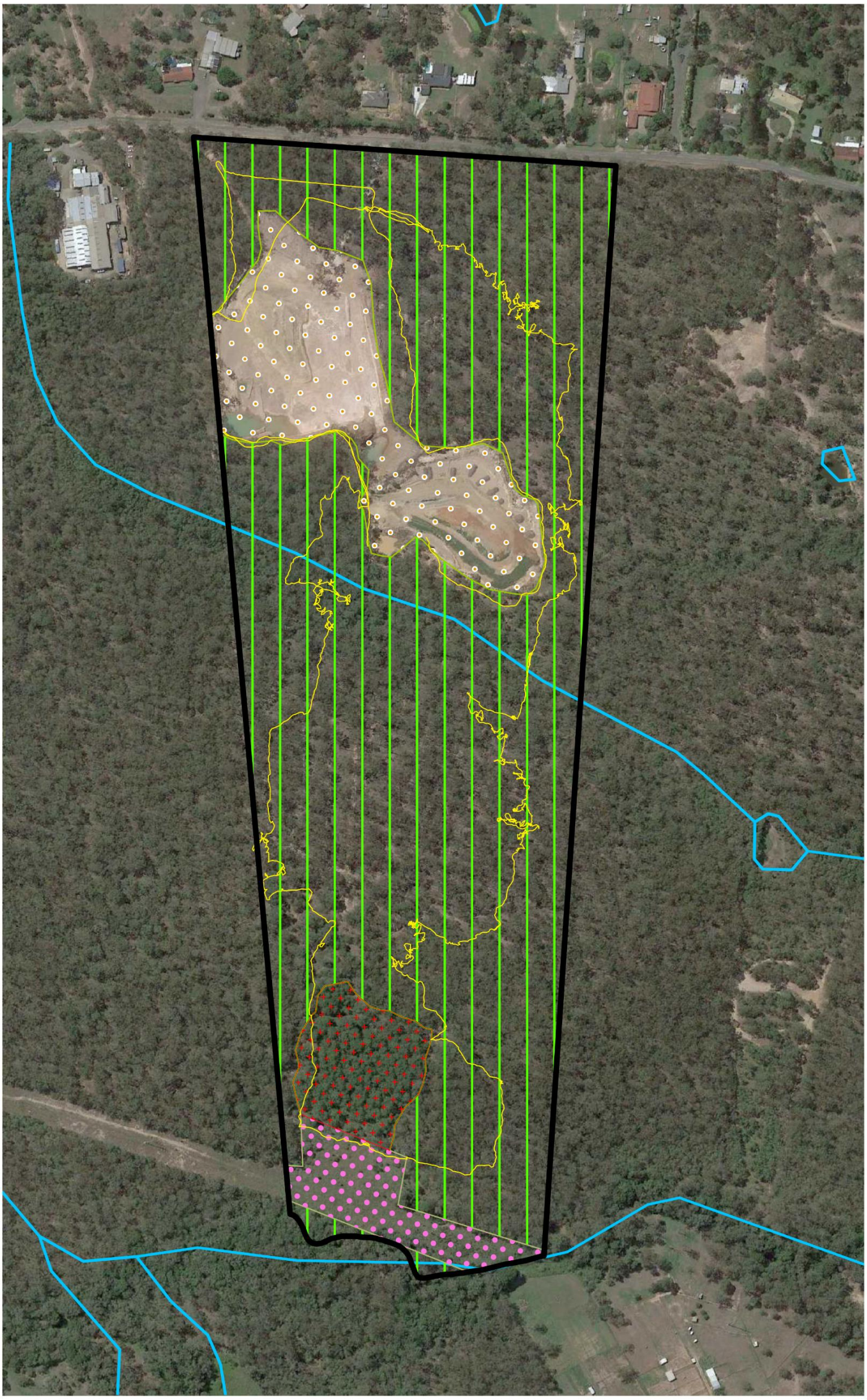


Figure 9 – Field Survey Assessment Zones: Burbank

(Figure reprinted from *Ecological Assessment Report: Ford Road, Burbank* (SHG 2017a)

3.1.12 Fauna Presence and Populations

3.1.12.1 Terrestrial Fauna

At the time of SHG's assessment, the DAWE Protected Matters Search Tool listed 12 Threatened bird species, three (3) Threatened reptile species, six (6) Threatened mammals, zero (0) Threatened amphibians and 10 migratory species within 5 km of the site (2017a, 22). Most of these species are associated with rainforest communities and less disturbed environments however evidence of *Phascolarctos cinereus* (koala) was found on site (SHG 2017a, p. 22).

SHG's assessment determined that the NCA lists an Endangered *Adelotus brevis* (tusked frog), *Crinia tinnula* (wallum froglet), *Numenius madagascariensis* (eastern curlew), *Esacus magnirostris* (beach stone-curlew) and *Phascolarctos cinereus* (koala) as the only threatened fauna species within 5 km of the site. However, due to the fact that unsuitable habitat exists for species such beach stone curlew and the eastern curlew, SHG (2017b) stated that these species are considered unlikely to frequent the site (p. 22).

The on-site waterway area was found by SHG (2017a) to not provide potential habitat for either the tusked frog or the wallum froglet. Although these species are known to occur in the area, SHG stated that they would be restricted to close proximity the mapped waterways and are therefore considered to not be at risk.

In summary, SHG (2017a) reported observing the following fauna species during the site survey:

- *Corvus orru* (Torresian Crow)
- *Cryptoblepharus virgatus* (Wall Skink)
- *Dacelo novaeguineae* (Laughing Kookaburra)
- *Grallina cyanoleuca* (Magpie-lark)
- *Gymnorhina tibicen* (Australian Magpie)
- *Hemidactylus frenatus* (Asian House Gecko)
- *Hirundo neoxena* (Welcome Swallow)
- *Manorina melanocephala* (Noisy Minor)
- *Ocyphaps lophotes* (Crested Pigeon)
- *Platycercus adscitus* (Pale-headed Rosella)
- *Rhinella marina* (Cane Toad)
- *Rhipidura leucophrys* (Willie Wagtail)
- *Trichoglossus haematodus* (Rainbow Lorikeet)
- *Todiramphus macleayii* susp.incinctus (Forest Kingfisher)
- *Macropus giganteus* (Eastern Grey Kangaroo)
- *Coturnix ypsilophora* (Brown Quail)
- *Anas superciliosa* (Pacific Black Duck)
- Bubulcus ibis (Cattle Egret)
- *Corvus orru* (Torresion Crow)
- *Aquila audax* (Wedge-tailed Eagle)
- *Haliastur sphenurus* (Whistling Kite)
- *Porphyrio porphyrio* (Purple Swamphen)
- *Coracina novaehollandiae* (Black-faced Cuckoo Shrike)
- *Centropus phasianinus* (Pheasant Coucal)
- *Glossopsitta pusilla* (Little Lorikeet)
- *Scythrops novaehollandiae* (Channel-billed Cuckoo)

- *Dendrelaphis punctulatus* (Green Tree Snake)
- *Geopelia placida* (Peaceful Dove)
- *Trichoglossus chlorolepidotus* (Scaly-breasted Lorikeet)
- *Ctenotus taenioltus* (Copper Skink)
- *Philemon corniculatus* (Noisy Friarbird)
- *Calptorthynchus funereus* (Yellow-tailed Black Cockatoo).

Koala specific surveys were carried out by SHG (2017a) as the Koala is known to occur in the locality and Koala habitat occurs on-site. The koala survey was completed using the Koala Foundation, specifically the Spot Assessment Technique (SAT) assessment methods. **Figure 10 – SAT Locations: Burbank** provides an illustration of the seven SAT survey sites. The SAT survey identified evidence of historical koala usage at two of the three survey locations (SHG 2017a, p. 23-24):

- SAT 1 was conducted in remnant vegetation dominated by *Eucalyptus fibrosa* with scattered *Eucalyptus siderophloia* and *Corymbia citriodora*. This area showed a usage rate of 16.7%.
- SAT 2 was conducted in remnant vegetation dominated by *Eucalyptus acmenioides* and *Eucalyptus fibrosa* with other associated tree species including *Corymbia intermedia* and *Corymbia trachyphloia*. This area had a 16.7 % usage rate.
- SAT 3 was conducted in remnant vegetation dominated by *Eucalyptus siderophloia* with other associated tree species including *Eucalyptus propinqua*, *Corymbia trachyphloia* and Eucalyptus fibrosa. This area had a 23.3% usage rate
- SAT 4 was conducted in remnant vegetation dominated by *Eucalyptus acmenioides* with other associated species including *Corymbia trachyphloia*. This area had a 23.3% usage rate.
- SAT 5 was conducted in remnant vegetation dominated by *Eucalyptus acmenioides* with other associated tree species including *Eucalyptus microcorys*, *Corymbia trachyphloia* and *Lophostemon confertus*. This area had a 26.6% usage rate.
- SAT 6 was conducted in remnant vegetation dominated by *Eucalyptus acmenioides* with other tree species including *Lophostemon confertus*, *Eucalyptus microcorys* and *Eucalyptus seeana*. This area had a 26.6% usage rate.
- SAT 7 was conducted in remnant vegetation that had undergone some historical disturbance. The dominant tree species in this area was *Allocasuarina littoralis* with scattered large trees containing *Corymbia trachyphloia* and *Eucalyptus acmenioides*. This area had a 10% usage rate.

Table 12 – Summary of SAT Surveys provides a summary of the SAT results. The activity categories used by SHG (2017a) were sourced from the Australian Koala Foundation Koala activity level classifications by Phillips & Callaghan 2011, refer to **Table 13 – AKF Koala Activity Level Classification.**

. SHG (2017a, p. 24) note that East Coast (med-high) Activity Category, which is applicable in habitats dominated by residual, transferral or alluvial type landscapes considered medium-high nutrient soils with good water holding capacity. The soil types that are mapped on-site are considered to have these characteristics.

Table 12 – Summary of SAT Surveys

SAT Assessment No.	Evidence of Koala Use	Koala Use
1	16.7%	Low
2	16.7%	Low
3	23.3%	Low
4	23.3%	Low

SAT Assessment No.	Evidence of Koala Use	Koala Use
5	23.3%	Low
6	26.6%	Low
7	10%	Low

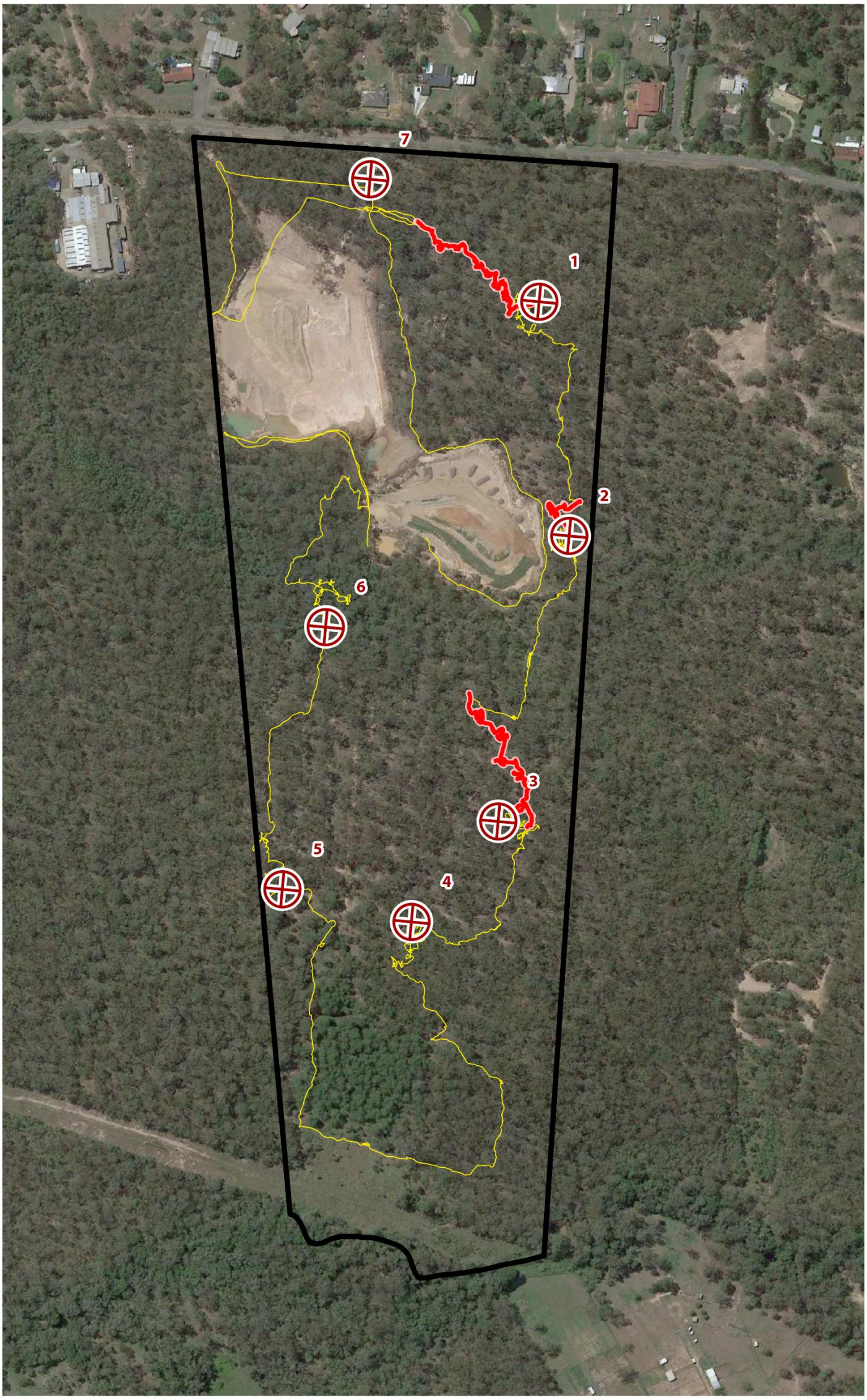
Table reprinted and adapted from SHG (2017a, p. 24).

Table 13 – AKF Koala Activity Level Classification

ACTIVITY CATEGORY	LOW USE	MEDIUM (NORMAL) USE	HIGH USE
Area (density)			
East Coast (low)	< 9.47%	≥ 9.47% but ≤ 12.59%	> 12.59%
East Coast (med – high)	< 22.52%	≥ 22.52% but ≤ 32.84%	> 32.84%
Western areas (med – high)	< 35.84%	≥ 35.84% but ≤ 46.72%	> 46.72%

Table reprinted from SHG (2017a, p. 24).

4. FIELD SURVEY KOALA SAT LOCATIONS



NOTES
This plan was prepared as a desktop assessment tool.
The information on this plan is not suitable for any other purpose.
Property dimensions, areas, numbers of lots and contours and other physical features shown have been compiled from existing information and may not have been verified by field survey. These may need verification if the development application is approved and development proceeds, and may change when a full survey is undertaken or in order to comply with development approval conditions. No reliance should be placed on the information on this plan for detailed design or for any financial dealings involving the land. Saunders Havill Group therefore disclaims any liability for any loss or damage whatsoever or howsoever incurred, arising from any party using or relying upon this plan for any purpose other than as a document prepared for the sole purpose of accompanying a development application and which may be subject to alteration beyond the control of the Saunders Havill Group. Unless a development approval states otherwise, this is not an approved plan.

Layer Sources: QLD GIS Layers (QLD Gov. Information Service 2017), Aerial (Nearmap 2017)

* This note is an integral part of this plan/data. Reproduction of this plan or any part of it without this note being included in full will render the information shown on such reproduction invalid and not suitable for use.

LEGEND

- Project site
- Survey tracklog
- Scat search meander
- SAT location

PLAN ISSUE:

Issue	Date	Description	Drawn	Checked
A	7/03/2017	Prelim Draft	TC	FM

0 50 100 200 m

Universal Transverse Mercator GDA 1994 MGA Zone 56 1:3,750 @ A3

saunders havill group

Ford Road, Burbank The Austral Brick Co Pty Ltd

Address: 105 Gardner Road, Rochedale 7/03/2017 8629 E 03 FR SATs A

Figure 10 – SAT Locations: Burbank

(Figure reprinted from *Ecological Assessment Report: Ford Road, Burbank* (SHG 2017a)

3.1.12.2 Aquatic Macroinvertebrates

FRC Environmental ('FRC') was engaged in 2021 to carry out an assessment which included a survey of aquatic macroinvertebrates at five (5) background locations (upstream and downstream) of the site. Included as **Figure 11 – Aquatic Macroinvertebrates Survey Sites: Burbank** is an illustration of the surveyed locations in relation to the site.

The survey was conducted by FRC on 27 October 2021, with the results indicating the following (2021, p. 9 - 12).

Edge Habitat:

- Taxonomic richness was higher at receiving environment sites (DS01 and DS03) than reference sites (US01 and US02) but lower at site DS02.
- Plecoptera-Ephemeroptera-Trichotpera ('PET') richness was highest at the receiving environment site DS03.
- Stream Invertebrate Grade Number – Average Level version 2 (SIGNAL-2 Score) was higher in all receiving environment sites than reference sites.
- % tolerant taxa was higher in all reference sites than in receiving environment sites.

Bed Habitat:

- Taxonomic richness was highest in the receiving environment site DS03.
- Pet richness was highest in the receiving environment site DS03.
- SIGNAL-2 score was highest in the receiving environment site DS03 and lowest in DS02.
- % tolerant taxa was highest in the receiving environment site DS02 and lowest in the reference site US02.

An aquatic habitat suitability for macroinvertebrates assessment indicated poor to low end of moderate habitat suitability at most sites (FRC 2021).

Fish:

- Only one native species of fish was caught (firetail gudgeon), which was present only at reference site US02 and receiving environment site DS02
- Two species of pest fish were caught (eastern gambusia and swordtail), which were present at reference site US02 and receiving environment sites DS02 and DS03
- Fish were absent from reference site US01 and receiving environment site DS01, because fish habitat was absent at these sites.
- Firetail gudgeon is a common widespread species of native fish that is tolerant of a range of water quality conditions (Pusey et al. 2004 as cited by FRC 2021). Eastern gambusia is a restricted biosecurity matter.
- Overall, the diversity of fish in the waterway is very low (only one native species), with the occurrence of fish determined by habitat suitability factors.

The field results of the surveys are presented in **Table 14 – Macroinvertebrate Results for edge habitat for the October 2021 Survey**, **Table 15 – Macroinvertebrate Results for bed habitat for the October 2021 Survey** and **Table 16 – Fish Results for the October 2021 Survey**.

Table 14 – Macroinvertebrate Results for edge habitat for the October 2021 Survey

Macroinvertebrate Index	Reference Sites		Receiving Environment Sites		
	US01	US02	DS01	DS02	DS03
Taxonomic Richness	5	8	10	3	23
PET Richness	0	1	0	0	5
SIGNAL-2 Score	3.40	3.40	3.74	3.88	4.20
% tolerant taxa	60.00%	62.50%	50.00%	33.33%	27.27%

Table reprinted from FRC (2021, p. 9).

Table 15 – Macroinvertebrate Results for bed habitat for the October 2021 Survey

Macroinvertebrate Index	Reference Sites		Receiving Environment Sites		
	US01	US02	DS01	DS02	DS03
Taxonomic Richness	4	3	4	3	8
PET Richness	0	0	0	0	2
SIGNAL-2 Score	3.43	3.50	3.25	2.25	3.93
% tolerant taxa	50.00%	33.33%	50.00%	100.00%	37.50%

Table reprinted from FRC (2021, p. 10).

Table 16 – Fish Results for the October 2021 Survey

Species	Reference Sites		Receiving Environment Sites		
	US01	US02	DS01	DS02	DS03
Native Species *Hypseleotris gallii* (firetail gudgeon)	-	101	-	12	-
Pest Species *Gambusia holbrooki* (eastern gambusia)	-	99	-	19	1
Xiphophorus helleri (swordtail)	-	2	-	3	1

Table reprinted from FRC (2021, p. 12).

FRC (2021) assessed the aquatic habitat to assist in interpretation of the biological monitoring data. FRC (2021, p. 12-13) concluded that:

- Site US01 comprised a well-defined channel with unstable banks and substrate dominated by silt. Water comprised deep isolated pool with no flow, and habitat features present included small and large woody debris, undercut banks, and trailing bank vegetation. Riparian corridor was semi-continuous with Melaleuca the common species.
- Site US02 comprised an artificially bunded dam with substrate dominated by silt. Water comprised a deep large isolated pool with no flow, and habitat features small woody debris, detritus, tree roots, trailing bank vegetation and in-stream aquatic plants. Riparian corridor was semi-continuous with Melaleuca the common species.
- Site DS01 comprised a poorly defined channel (i.e. wetland swales only) with silt substrate. Water comprised several shallow isolated pools of varying size all with no flow, and aquatic habitat features included small woody debris, and trailing bank vegetation. Riparian corridor was semi-continuous with Melaleuca and Casuarina the common species.
- Site DS02 comprised a poorly defined channel (i.e. wetland swales only) with silt substrate. Water comprised a deep connected pool with no flow and aquatic habitat features included small and large woody debris, and in-stream aquatic plants. Riparian corridor was semi-continuous with Melaleuca the common species.
- Site DS03 comprised a well-defined channel with an irregular meander pattern, and substrate comprised of gravel and sand substrate. Water comprised shallow connected pools with low flow and small riffles, and aquatic habitat included large wordy debris and trailing roots. Riparian corridor was semi-continuous with weeds (predominately Singapore daisy) common in the understorey.
- Riverine bioassessment scores presented in Table 4.5 indicate poor to low end of moderate quality habitat for aquatic biota at sites US01, US02, DS01 and DS02, and low end of good aquatic habitat at site DS03.

The field results of the habitat assessment are summarised in **Table 17 – Habitat Bioassessment Score Results for the October 2021 Survey**.

Table 17 – Habitat Bioassessment Score Results for the October 2021 Survey

Habitat Category	Maximum Score	Reference Sites		Receiving Environment Sites		
		US01	US02	DS01	DS02	DS03
Bottom substrate / available cover	20	2	2	2	2	15
Embeddedness	20	2	3	2	2	11
Velocity / depth category	20	2	5	2	5	8
Channel alteration	15	7	3	7	7	8
Bottom scouring & deposition	15	6	6	6	6	6
Pool / riffle, run / bend ratio	15	3	5	3	3	7
Bank Stability	10	2	5	5	5	7
Bank vegetative stability	10	6	5	6	6	10
Streamside cover	10	7	5	7	7	5

Habitat Category	Maximum Score	Reference Sites		Receiving Environment Sites		
		US01	US02	DS01	DS02	DS03
Total Habitat Bioassessment Score for the Site	135	37	39	40	43	77
Habitat Quality	-	Poor	Moderate	Moderate	Moderate	Good

Table reprinted from FRC (2021, p. 13).

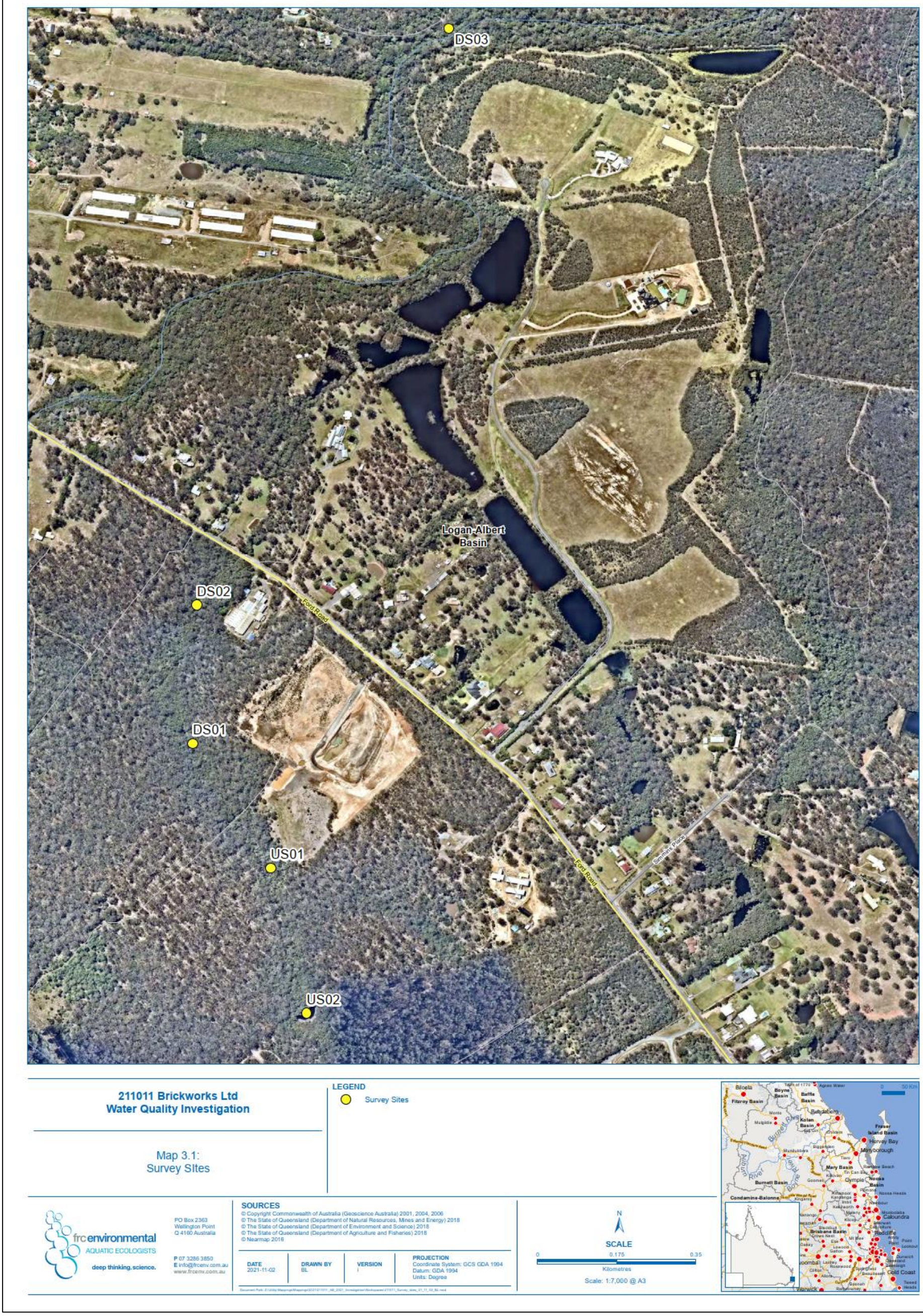


Figure 11 – Aquatic Macroinvertebrates Survey Sites: Burbank

(Figure reprinted from *Receiving Environment Water Quality Investigation 2021* (FRC Environmental 2021)

3.2 Redland Bay

3.2.1 Land Use

3.2.1.1 Pre-Mining Land Use

Prior to the grant of ML 50035 on 15 October 1992, the land was used for extractive industry (quarrying) purposes, refer to **Plate 2 – Aerial Imagery Dated 1990: Redland Bay**. An access track serviced the clearing at the rear of the property while the northern portion was densely vegetated.



Plate 2 – Aerial Imagery Dated 1990: Redland Bay

(Source QImagery. "Beenleigh 1990" 1:4,130. Film: QAP4856, Frame:34, Run: 4. Brisbane: QImagery, 1 June 1990)

3.2.1.2 Existing Land Use

The site is an existing extractive industry and resource activity (combined quarry and mine).

3.2.1.3 Land Use Adjacent to Site

Table 18 – Adjacent Land Uses: Redland Bay provides a summary of the land uses surrounding the site.

Table 18 – Adjacent Land Uses: Redland Bay

Direction	Land Use
North	German Church Road, Rural zoned land including agricultural purposes (horticulture).
East	Rural zoned land including extractive industry and mining activity operated by Redland City Council.
South	Environmental management zoned land, including vacant land and sports facility (southwest).
West	German Church Road, Rural zoned land and Low density zoned land.

Table note: Land zoning sourced from relevant local planning scheme.

3.2.2 Topography

Elevations within ML 50035 are between 45 m AHD to 78 m AHD. There is one drainage feature (ephemeral gully) which traverses in an east-west direction through the centre of the site. Priest Gully lies immediately adjacent to the southern ML boundary. **Figure 12 – Topography: Redland Bay** provides an illustration of the topographical features in the locality.

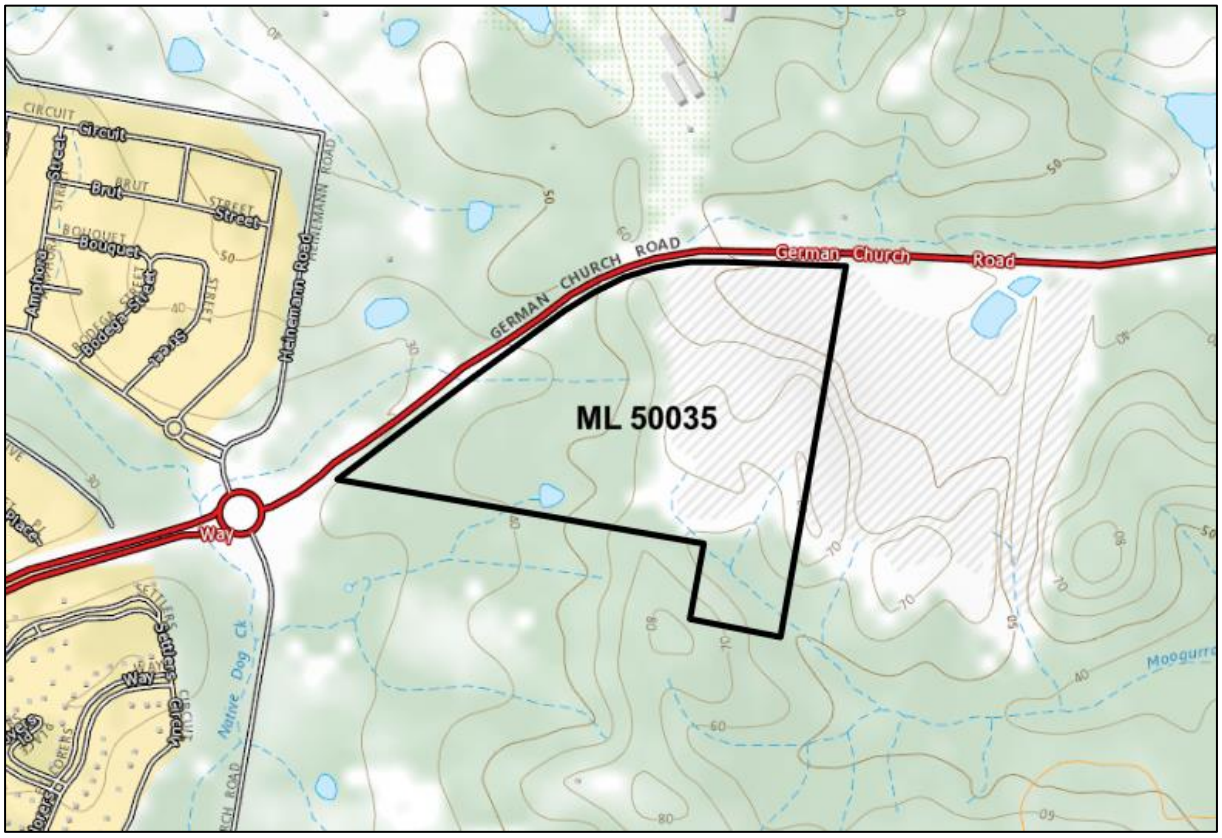


Figure 12 – Topography: Redland Bay

(Source: The State of Queensland (2022a))

3.2.3 Climate

A summary of the regional climate data sourced from BoM is provided in **Table 19 – Redland Bay Regional Climatic Statistics**.

Table 19 – Redland Bay Regional Climatic Statistics

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Rainfall (mm)													
Mean	141.2	168.4	136.8	102.7	114.8	97.0	55.8	46.2	34.2	66.6	94.2	145.7	1,179.2
Mean Temperature (°C)													
Min	20.7	20.6	19.2	16.1	12.6	10.2	8.9	9.5	12.6	15.1	17.5	19.4	15.2
Max	29.9	29.5	28.5	26.5	24.0	21.6	21.6	22.8	25.2	26.6	28.0	29.2	26.1
Mean Wind Speed (km/h)													
9am	7.4	6.7	6.7	5.3	5.5	4.9	5.3	5.4	5.6	6.9	7.0	7.0	6.1
3pm	14.3	13.3	13.8	12.3	9.7	8.7	9.3	10.9	12.6	13.3	13.4	13.2	12.1

Source:
Rainfall data from Redland Bay Golf Club BoM Station No.: 40853.
Temperature and wind speed / direction data from Logan City Water Treatment Plant BoM Station No: 04085.

Annual mean rainfall for the permit area is 1,179.2 mm and majority of rain falls between December and May (in accordance with **Table 19 – Redland Bay Regional Climatic Statistics**). Review of the annual 9am and 3pm wind direction versus wind speed shows that the morning winds are generally from the west and predominantly calm (between >= 0 and < 10 km/hr). In the afternoon, winds are generally from the east and southeast and predominantly between >= 0 and < 10 km/hr. Refer to **Diagram 2 - Wind Roses of Annual Speed and Direction 9am v. 3pm Station 04085** for graphic representations of the wind observations.

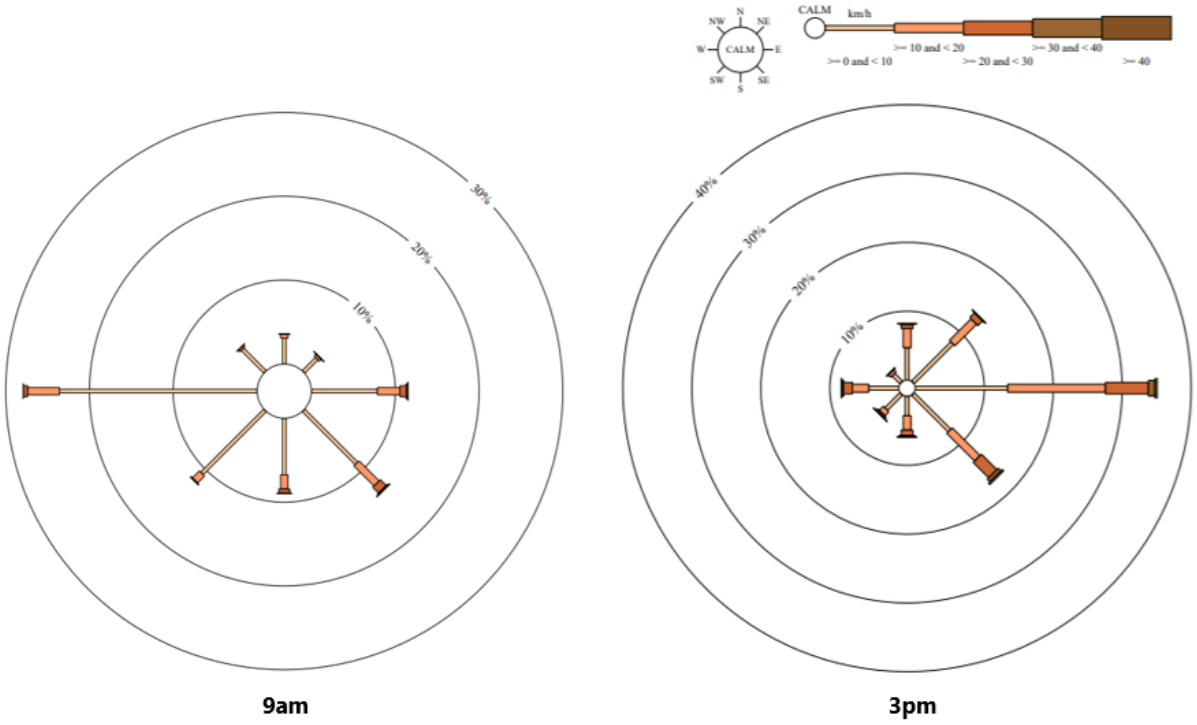


Diagram 2 - Wind Roses of Annual Speed and Direction 9am v. 3pm Station 04085

(Source: Bureau of Meteorology (2022))

3.2.4 Geology

Refer to **Figure 13 – Geology Mapping: Redland Bay** for an illustration of the detailed surface geology within ML 50035. The site is wholly within the Devonian – Carboniferous age Neranleigh-Fernvale Beds, comprised of mudstone, shale, arenite, chert, jasper, basic metavolcanics, pillow lava and conglomerates.

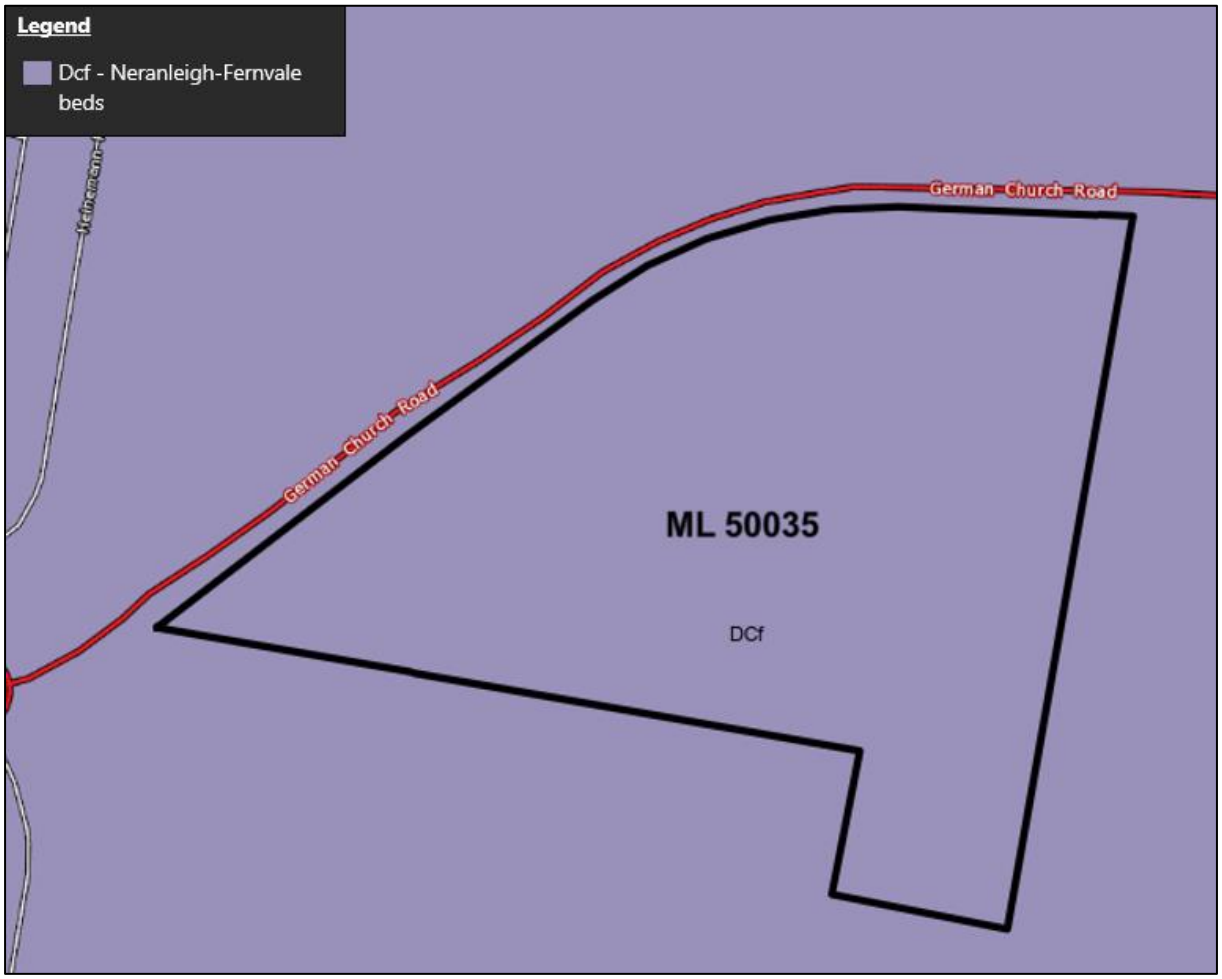


Figure 13 – Geology Mapping: Redland Bay

(Source: The State of Queensland (2022a))

3.2.5 Hydrology

Figure 14 – Watercourse and Wetland Mapping: Redland Bay provides an illustration of hydrological features in the locality.

Several ephemeral gullies along the southern boundary of the site flow in a south-easterly directly and conjoin with Moogurrapum Creek (Stream Order 1), a minor non-perennial watercourse, south of the ML boundary. Ephemeral gullies in the west of the site flow in a general south-westerly direction before entering the Native Dog Creek, (minor non-perennial Stream Order 1 watercourse), southwest of the site. Moogurrapum Creek flows in a north-easterly direction entering Moreton Bay approximately 8 km downstream of the site. Native Dog Creek flows south and conjoins with the Logan River approximately 14 km downstream of the site.

Native Dog Creek and Moogurrapum Creek are mapped as being palustrine wetlands and are categorised as vegetation management wetlands for the purpose of Section 20AA of the VMA.

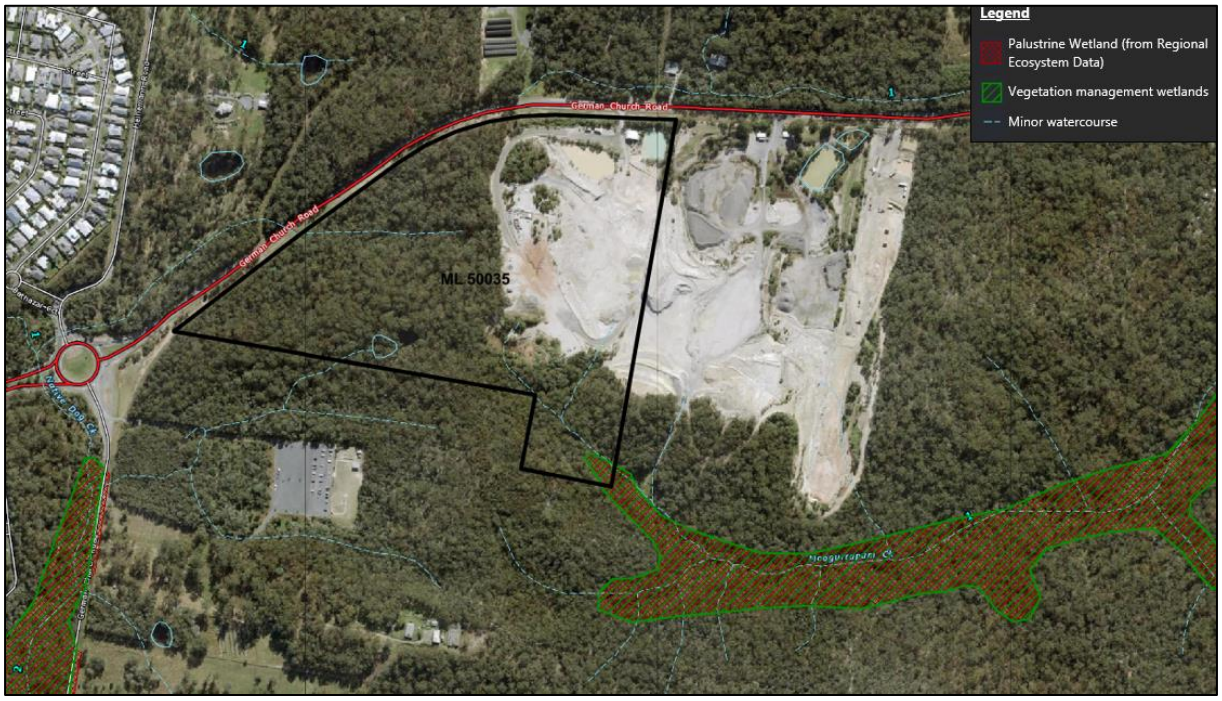


Figure 14 – Watercourse and Wetland Mapping: Redland Bay

(Source: The State of Queensland (2022a))

3.2.6 Regional Water Quality Objectives

ML 50035 is situated within the coastal streams water type of the Logan Basin, which is subject to the *Environmental Protection (Water) Policy 2009: Logan River environmental values and water quality objectives* (DERM 2010b). The Water Quality Objectives ('WQOs') for these waters are summarised in **Table 20 – Logan Albert Basin Coastal Streams WQOs**.

Table 20 – Logan Albert Basin Coastal Streams WQOs

Parameter	Objective
Turbidity	< 10 NTU
Suspended Solids	< 6 mg/L
Chlorophyll a	<5 µg/L
Total Nitrogen ('N')	< 500 µg/L
Oxidised N	< 60 µg/L
Ammonia N	< 20 µg/L
Organic N	< 420 µg/L
Total Phosphorous ('P')	< 50 µg/L
Filterable Reactive P ('FRP')	< 20 µg/L
Dissolved Oxygen	85-110%
pH	6.5 – 8.0

The WQOs for the site-specific release waters as set by the EA are summarised in **Table 21 – Release Limits: Redland Bay**.

Table 21 – Release Limits: Redland Bay

Parameter	Objective
pH	6.5 – 9.0
Turbidity	≤ 85 NTU
Dissolved Oxygen	≥ 6 mg/L

3.2.7 Site Specific Water Quality Data

A summary of water quality data held for the Redland Bay site is provided below, in addition to receiving environment monitoring locations. Monitoring of pH and Turbidity has been undertaken regularly at the locations shown in **Figure 15 – Redland Bay Water Monitoring Locations**. Minimal stormwater from the site currently flows towards RB3, therefore minimal data is available for this location.

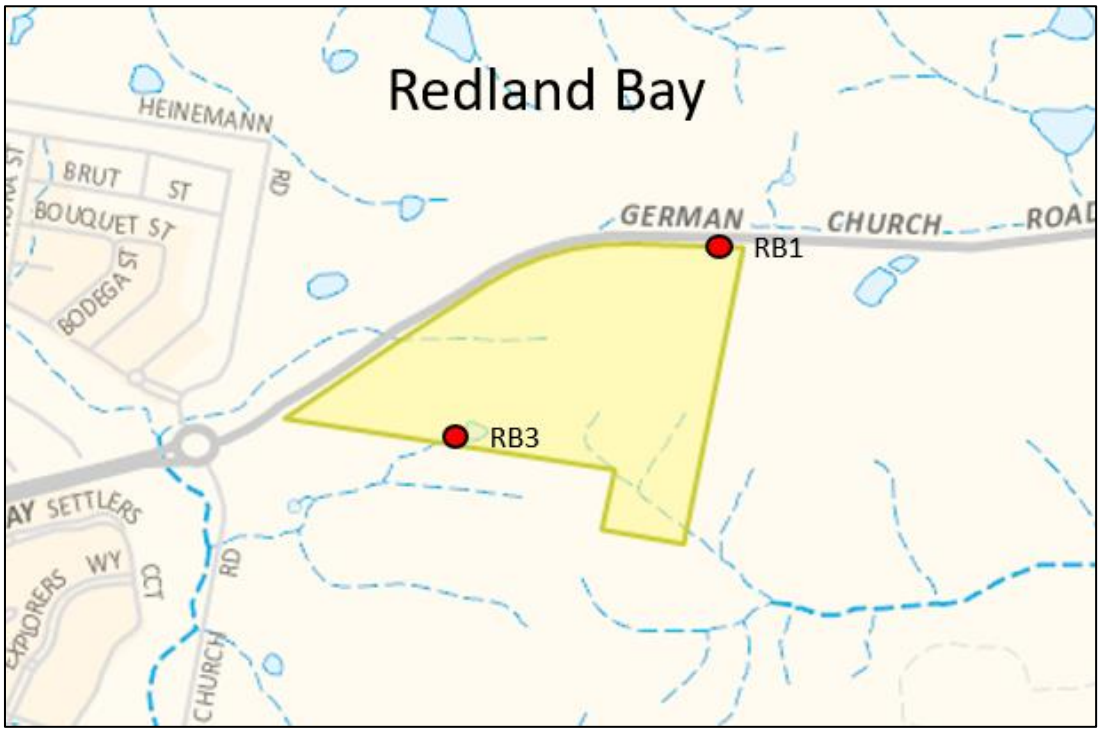
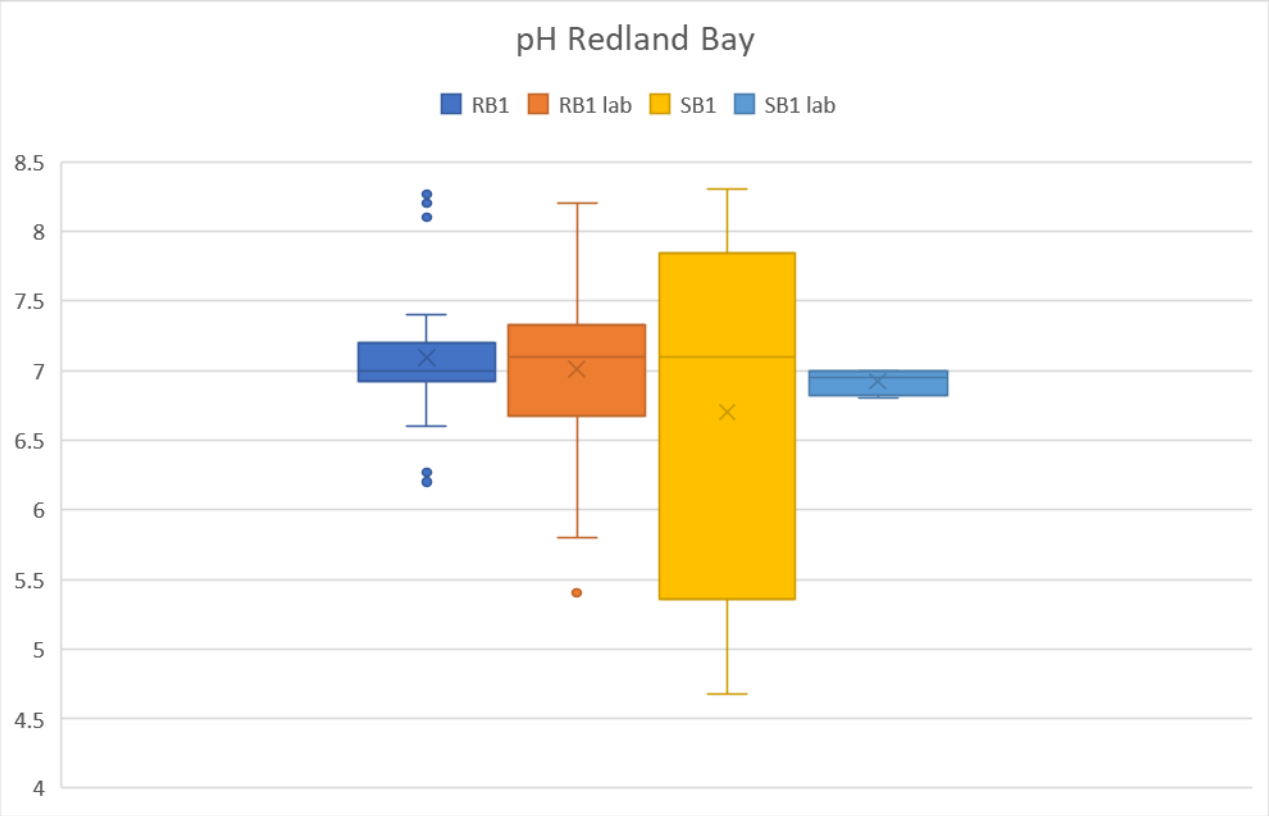


Figure 15 – Redland Bay Water Monitoring Locations

A graphical representation of pH at the site and surrounding water courses is shown below in **Graph 3 – pH Redland Bay**.



Graph 3 – pH Redland Bay

A statistical summary of pH data is provided in **Table 22 – pH Statistics: Redland Bay**.

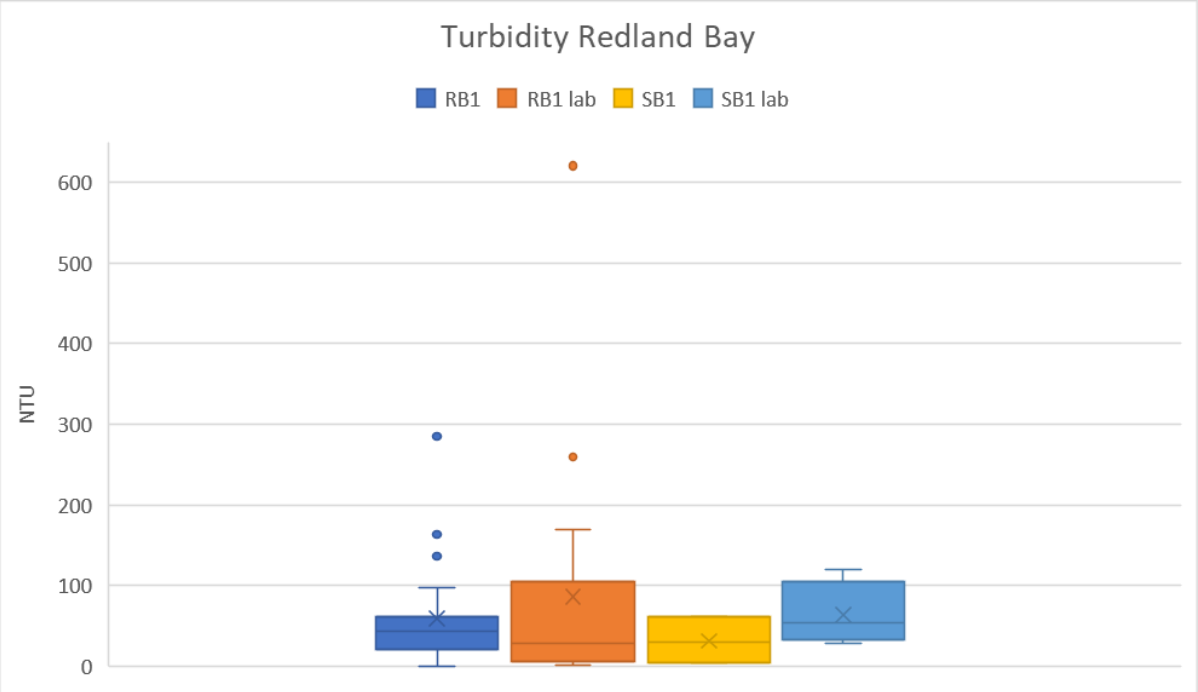
Table 22 – pH Statistics: Redland Bay

Statistics	RB1	RB1 lab	SB1	SB1 lab
Maximum	8.27	8.2	8.3	7
Minimum	6.2	5.4	4.68	6.8
Std. Dev.	0.44	0.66	1.39	0.10
Median	7	7.1	7.1	6.95
95th %ile	8.15	7.775	8.118	7
Average	7.09	7.01	6.7	6.93
Count	32	18	5	4

The results indicate that:

- Water releasing from site, represented by RB1, ranges in pH from slightly acidic to alkaline.
- The median pH level is 7.0.
- Waters stored on site, represented by SB1, show water quality to be acidic to alkaline, however the dataset is limited. Based on anecdotal evidence and field tests run off waters tend to be slightly acidic (5.5-6) and currently require treatment for pH.

A graphical representation of turbidity at the site and surrounding water courses is shown in **Graph 4 – Turbidity Redland Bay**.



Graph 4 – Turbidity Redland Bay

A statistical summary of turbidity data is provided in **Table 23 – Turbidity Statistics: Redland Bay.**

Table 23 – Turbidity Statistics: Redland Bay

Statistics	RB1	RB1 lab	SB1	SB1 lab
Maximum	289	620	61.4	120
Minimum	0	1.6	3.82	28
Std. Dev.	68.77	155.81	28.83	39.60
Median	43.6	29	30	54
95th %ile	211.8	332	58.26	111
Average	59.26	86.30	31.74	64.00
Count	33	17	3	4

The results indicate that:

- Water releasing from site, represented by RB1, ranges from clear to turbid, with a median level of 43.6 NTU;
- Waters stored on site, represented by SB1, and is typically after water treatment occurs, show water quality to be relatively clear, at a median of 30 NTU (field), however the dataset is limited.

Stormwater controls have been significantly improved over the preceding 18-month period with additional storage, and treatment controls in place to improve water retention and quality.

3.2.8 Groundwater Levels and Properties

There are no groundwater bores established on the site. Local groundwater data has been sourced from registered bores within a 2 km radius centred on the site, with the details of bores containing groundwater depth data summarised in **Table 24 – Registered Bore Groundwater Data Summary: Redland Bay.** An illustration of the bore locations is provided **Figure 16 – Local Groundwater Bores**

within a 2 km Radius: Redland Bay. The bore data indicates that groundwater depth varies, with a median value of approximately 27.5 m AHD.

Austral Bricks have reviewed 47 drillhole logs prepared in 1993 and 2000 which determined that only five (5) logs identified moisture in clay commencing near hole terminus, with only one (1) drillhole log encountering water. The average depth to the top of aquifer at Redland Bay is estimated by Austral Bricks at 18 m below surface level (Brickworks Limited 2022b). Pit depths are not anticipated to extend to depths that would intersect these waters.

Table 24 – Registered Bore Groundwater Data Summary: Redland Bay

Reg No.	Lat / Long	Geology	SWL / Date	Groundwater Depth (mAHD)*	Quality
73802 (existing)	-27.6406, 153.2847	Shale (Neranleigh-Fernvale Beds)	15.2^ m / 21/07/1988	~19	No data
120303 (existing)	-27.6245, 153.2725	Shale (Neranleigh-Fernvale Beds)	-12 m / 22/10/2003	~71	No data
134853 (existing)	-27.6280, 153.2664	Shale	- 20 m / 27/07/2007	~34	No data
145292 (existing)	27.6314, 153.2486	Shale (Neranleigh-Fernvale Beds)	-20 m / 22/04/2007	~26	270 ppm
152001 (existing)	-27.6380, 153.2866	Shale (Neranleigh-Fernvale Beds)	-1 m / 14/02/2012	~30	1,200 ppm
152002 (existing)	-27.63805, 153.2853	Shale (Neranleigh-Fernvale Beds)	-2 m / 15/02/2012	~28	No data
152003 (existing)	-27.6314, 153.2487	Shale (Neranleigh-Fernvale Beds)	-2 m / 22/04/2007	~29	1,100 ppm
152004 (existing)	-27.6378, 153.285	Shale (Neranleigh-Fernvale Beds)	-1.8 m / 12/03/2012	~26.2	1,200 ppm
152590 (existing)	-27.6350, 153.2508	Shale (Neranleigh-Fernvale Beds)	-20 m / 10/02/2014	~21	350 ppm
169480 (existing)	-27.6350, 153.2513	Shale (Neranleigh-Fernvale Beds)	-18 m / 21/03/2016	~27	390 µS/cm

Notes:
SWL = Standing Water Level
*Based on elevation of bore, subtracting SWL.
^Reading from top of aquifer in lieu of SWL data.



Figure 16 – Local Groundwater Bores within a 2 km Radius: Redland Bay

(Source: The State of Queensland (2022a))

3.2.9 Soils

3.2.9.1 Soil Group

Regional landscape mapping has been undertaken within the region as part of The Soil Landscapes of Brisbane and South-Eastern Environs (CSIRO 1987). The report, and accompanying landscape map, published at a scale of 1:100,000 has identified the area that includes ML50035 as being characteristics of the landscape referred to as "Pullenvale".

Pullenvale is described Lithosols, with thin red-yellow podzolic soils occurring on crests and slopes on greywackes, shales, phyllites.

3.2.9.2 Acid Sulfate Soils

Review of the Acid Sulfate Soils ('ASS') mapping (The State of Queensland (2022a) has confirmed that the site is not located within, or near, an area where ASS have previously been identified, or within a prospective land zone containing ASS.

3.2.9.3 Productivity

Testing has been undertaken of retained topsoils on site which allow for an assessment of the quality of soil available for rehabilitation at the site.

The soil testing locations are described as follows:

- Redland 1 – Topsoil stockpile
- Redland 2 – Topsoil stockpile

Analysis was undertaken for parameters typical for growth media suitability assessments. Results are provided in **Table 25 – Soil Quality: Redland Bay**.

Table 25 – Soil Quality: Redland Bay

Parameter	Redland 1	Redland 2
pH	5.6	5.7
EC µS/cm	22	17
CEC (meq/100g)	2.9	6.5
ESP (%)	6.3	3.5
Chloride mg/kg	20	10
Iron mg/kg	183	203
Manganese mg/kg	2.08	2.49
Zinc mg/kg	2.29	1.68
Ammonia as N mg/kg	<20	<20
Nitrite as N mg/kg	<0.1	<0.1
Nitrate as N mg/kg	0.9	0.5
Nitrite + Nitrate as N mg/kg	0.9	0.5
TKN mg/kg	540	460
Total N mg/kg	540	460
Total P mg/kg	78	57
Ext. P (Colwell) mg/kg	<5	<5
Organic Matter %	1.8	1.8
TOC %	1.1	1.0

The above soil results have been used to understand existing soil suitability at the site, with the following comments provided.

The **pH range** for the soils on site is 5.6 to 5.7 and is described as moderately acidic. In their current state, they will not be suited to a wide range of revegetation species. However existing rehabilitation within these same soils has had some success, indicating the pH ranges on site are not hostile to some native plants. Through addition of ameliorants (e.g. lime), pH levels will increase to allow additional species to be used in rehabilitation.

The **electrical conductivity** for the soils is low, indicating EC is not a limitation with regard to the available growth media.

The **Exchangeable Sodium Percentage (ESP),** is variable across the site, with a range of 3.5 % to 6.5 %. Soils are typically described as sodic when ESP is above 6%, with ESP greater than 14% being described as strongly sodic. The results indicate that the soils available are non-sodic to slightly sodic. Addition of gypsum or lime will aid in reducing the ESP levels within the soils.

The **nutrient** levels within the soils, represented by the nitrogen suites of analytes, indicate the fertility of the soils to be poor in regard to nitrogen levels available. This isn't uncommon for soils in Australia, with native plant varieties well-conditioned to low nutrient soils. Fertility levels can be improved through the addition of fertilisers to ensure an additional nutrient source is made available for plant establishment, particularly in the short term of any rehabilitation program.

The **phosphorus** levels, in addition to nitrogen levels, indicate the fertility of soils. Like the nitrogen levels of the soils at the site, phosphorus levels are also low. This isn't uncommon for soils in Australia, with native plant varieties well-conditioned to low nutrient soils. Fertility levels can be improved through the addition of fertilisers to ensure an additional nutrient source is made available for plant establishment, particularly in the short term of any rehabilitation program.

The soil materials at the site, although with some limitations, particularly in regard to pH and nutrient levels, have been used with some success in rehabilitation areas at the site. It is also noted, that these limitations can be readily overcome through the addition of common ameliorants such as gypsum, lime and fertilisers if necessary.

3.2.10 Land Stability

Refer to **Section 3.1.10 – Land Stability** which provides discussion on land stability, which is also relevant to the Redland Bay site.

3.2.11 Vegetation Communities

3.2.11.1 Mapped Regional Ecosystems

Refer to **Figure 17 – Mapped RE: Redland Bay** for an illustration of the remnant vegetation mapping over the site. The current extraction area is mapped as non-remnant vegetation under the VMA.

The balance of the site is mapped as containing the following remnant vegetation.

Category A or B and C or R endangered RE:

- RE 12.11.23/12.11.27 (90%/10%) – E. pilularis open forest on coastal metamorphics and interbedded volcanics, and E. racemosa subsp. racemosa and/or E. seeana and C intermedia woodland on metamorphics +/- interbedded volcanics respectively.
- RE 12.11.23/12.11.27 (60%/40%) – E. pilularis open forest on coastal metamorphics and interbedded volcanics, and E. racemosa subsp. racemosa and/or E. seeana and C intermedia woodland on metamorphics +/- interbedded volcanics respectively.

Category A or B least concern RE:

- RE 12.3.6 (100%) - Melaleuca quinquenervia +/- Eucalyptus tereticornis, Lophostemon suaveolens, Corymbia intermedia open forest on coastal alluvial plains.

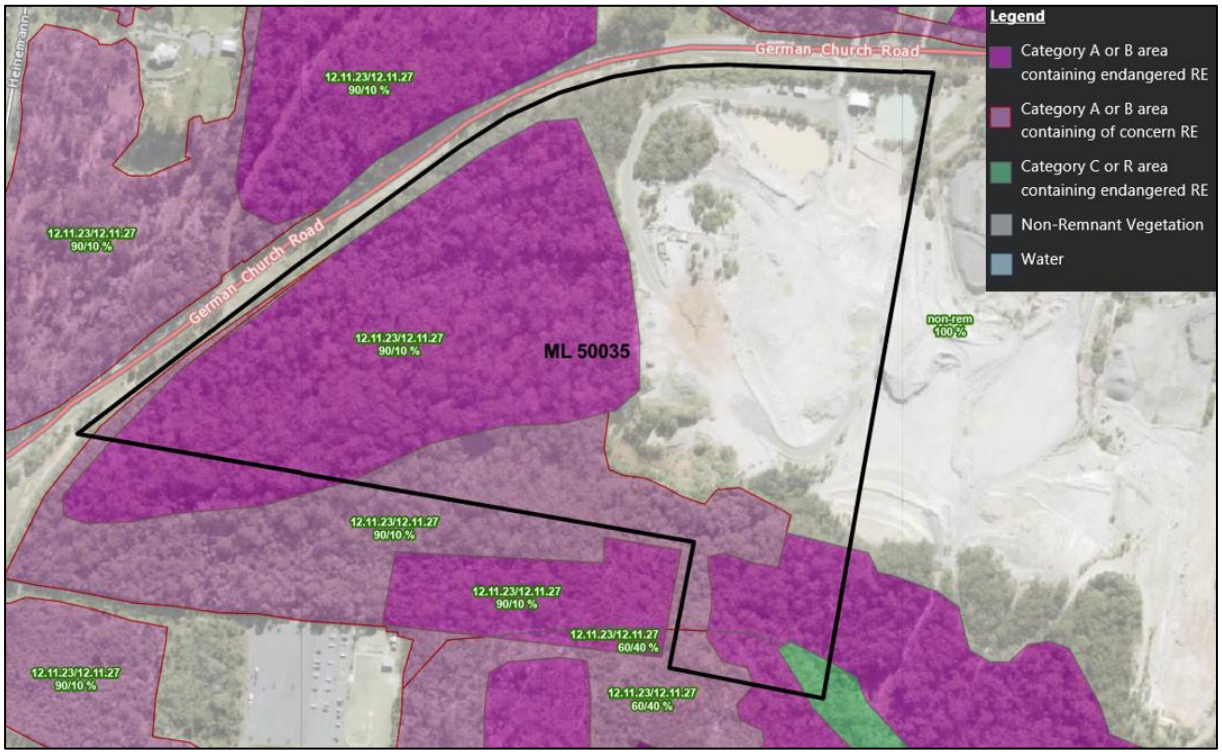


Figure 17 – Mapped RE: Redland Bay

(Source: The State of Queensland (2022a))

3.2.11.2 Site Survey Data – Flora & Fauna

There is no site survey data available for the site.

3.2.11.3 Fauna Presence and Populations

No site fauna surveys have been carried out. In the absence of site-specific data, reference has been made to the DAWE Protected Matters Search Tool to determine the possible presence of species protected under the EPBC Act in the site locality (0 km buffer applied). A summary of the search results is provided in **Table 26 – Protected Matters Search Results: Redland Bay**. It must be noted that this species list has not been ground-truthed, and it's likely that the actual species composition on-site will vary.

Table 26 – Protected Matters Search Results: Redland Bay

Scientific Name	Common Name	Presence*	Threatened Category
Anthochaera phrygia	Regent Honeyeater	Known	Critically Endangered
Numenius madagascariensis	Eastern Curlew, Far Eastern Curlew	May	Critically Endangered
Lathamus discolor	Swift Parrot	Likely	Critically Endangered
Calidris ferruginea	Curlew Sandpiper	May[M]	Critically Endangered
Argynnis hyperbius inconstans	Australian Fritillary	May	Critically Endangered
Rostratula australis	Australian Painted Snipe	Likely	Endangered

Scientific Name	Common Name	Presence*	Threatened Category
Dasyurus maculatus maculatus (SE mainland population)	Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population)	Likely	Endangered
Cyclopsitta diophthalma coxeni	Coxen's Fig-Parrot	May	Endangered
Calidris canutus	Red Knot, Knot	May[M]	Endangered
Botaurus poiciloptilus	Australasian Bittern	Likely	Endangered
Potorous tridactylus tridactylus	Long-nosed Potoroo (SE Mainland)	May	Vulnerable
Arthraxon hispidus	Hairy-joint Grass	Likely	Vulnerable
Turnix melanogaster	Black-breasted Button-quail	May	Vulnerable
Chalinolobus dwyeri	Large-eared Pied Bat, Large Pied Bat	May	Vulnerable
Pteropus poliocephalus	Grey-headed Flying-fox	Known	Vulnerable
Geophaps scripta scripta	Squatter Pigeon (southern)	May	Vulnerable
Delma torquata	Adorned Delma, Collared Delma	May	Vulnerable
Sternula nereis nereis	Australian Fairy Tern	May	Vulnerable
Erythrotriorchis radiatus	Red Goshawk	Likely	Vulnerable
Macroderma gigas	Ghost Bat	May	Vulnerable
Charadrius leschenaultii	Greater Sand Plover, Large Sand Plover	Likely[M]	Vulnerable
Petauroides volans	Greater Glider	Known	Vulnerable
Falco hypoleucos	Grey Falcon	Likely	Vulnerable
Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)	Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory)	Known	Vulnerable
Hirundapus caudacutus	White-throated Needletail	Known[M]	Vulnerable
Grantiella picta	Painted Honeyeater	May	Vulnerable

Table notes:
*Known = Known to occur within area. Likely = Likely to occur within area, May = May occur within area.
M = Migratory species.

3.3 Rochedale ML1151 & ML1156

3.3.1 Land Use

3.3.1.1 Pre-Mining Land Use

Brick manufacturing and clay pit mining is estimated to have commenced between 1951 and 1955 based on review of aerial imagery, refer to **Plate 3 – Aerial Imagery Dated 1951: Rochedale** and **Plate 4 – Aerial Imagery Dated 1955: Rochedale**. In 1951 prior to these activities commencing, the land within ML1151 was used for rural purposes. Land within ML1156 was predominantly vegetated, with a portion cleared for a rural dwelling and surrounding paddocks.

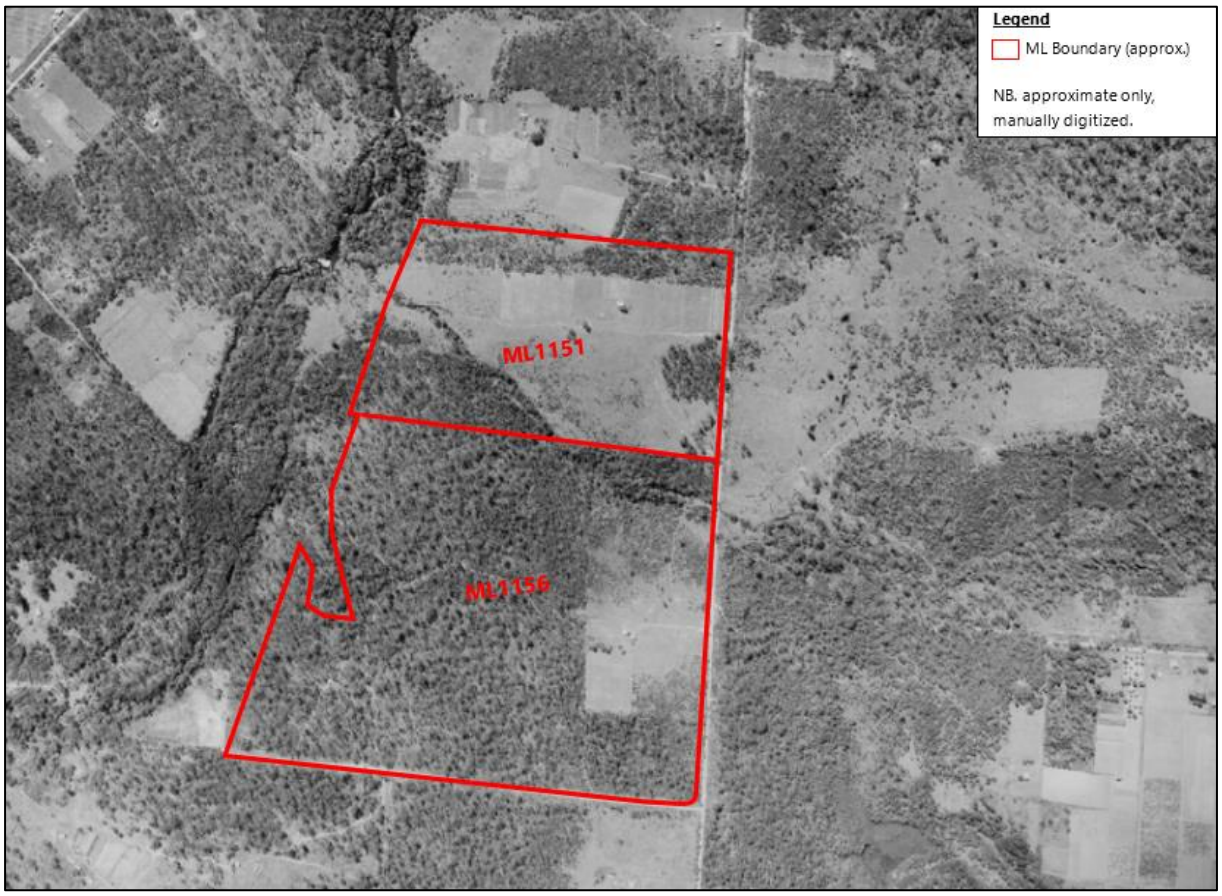


Plate 3 – Aerial Imagery Dated 1951: Rochedale

(Source QImagery. "Greater Brisbane 1951" 1:16,000. Film: BCC6, Frame: 39469, Run: 12. Brisbane: QImagery, 23 August 1951)

In 1955, there is evidence that a small brick plant may have been established on ML 1151, with some small areas of associated clay extraction visible, refer to **Plate 4 – Aerial Imagery Dated 1955: Rochedale**. A haulage route appears to have been established from the land east of site to the sheds on ML1151.

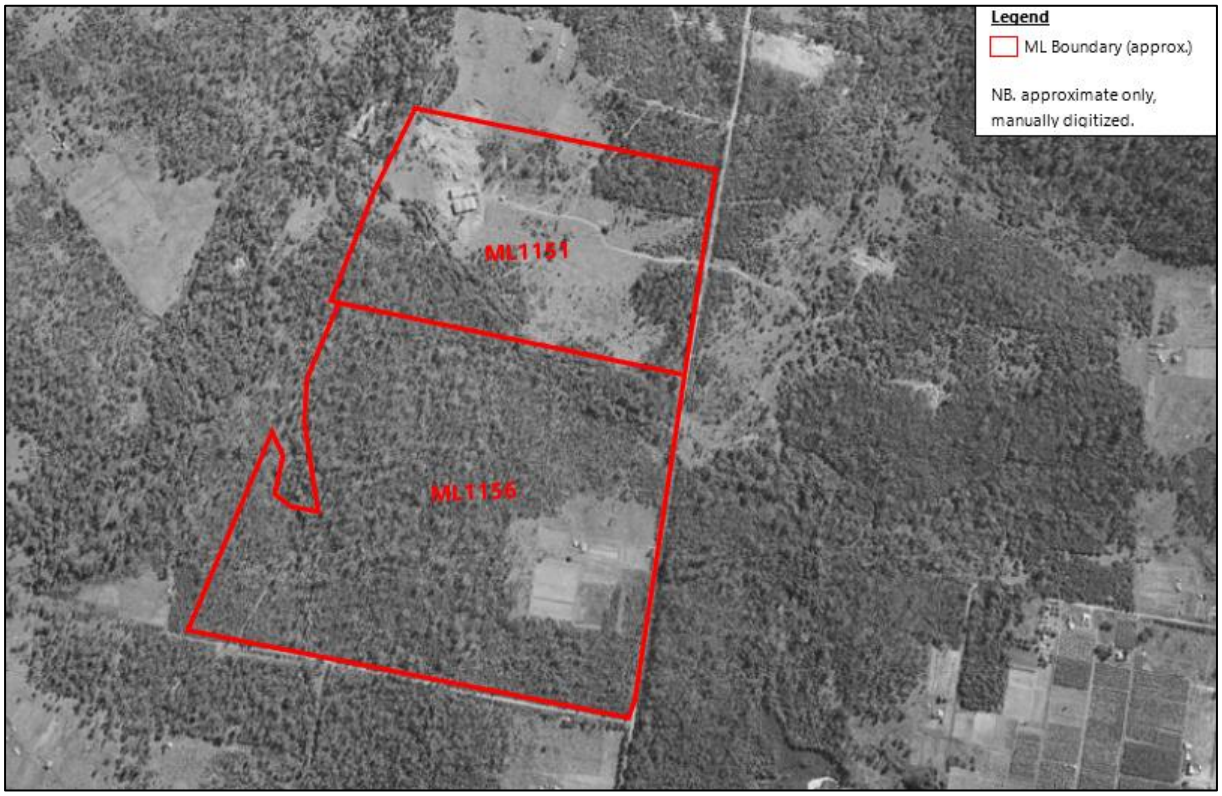


Plate 4 – Aerial Imagery Dated 1955: Rochedale

(Source QImagery. "Beenleigh 1955" 1:3,810. Film: QAP537, Frame: 80, Run: 2. Brisbane: QImagery, 1 July 1955)

Prior to the grant of MLs 1151 and 1156 in 1975, the land was in operation as a brick plant and clay pit mine, presumably under permits granted pursuant to superseded legislation, refer to **Plate 5 – Aerial Imagery Dated 1974: Rochedale**. ML1156 remains largely vegetated, with the exception of a small area of void adjacent to the southern boundary.

Clay extraction from land east of the MLs is evident, with an established haulage route to the brick plant. This land east of the site is now owned by Brisbane City Council and used as a landfill, which commenced in 1993.



Plate 5 – Aerial Imagery Dated 1974: Rochedale

(Source QImagery. "Beenleigh 1974" 1:30,000. Film: QAAP2668, Frame: 93, Run:2. Brisbane: QImagery, 1 April 1974)

3.3.1.2 Existing Land Use

The existing land use for MLs 1151 and 1156 is mining.

3.3.1.3 Land Use Adjacent to Site

Table 27 – Adjacent Land Uses: Rochedale provides a summary of the land uses surrounding the site.

Table 27 – Adjacent Land Uses: Rochedale

Direction	Land Use
North	Industrial use.
East	Waste treatment and disposal (landfill operated by Brisbane City Council).
South	Vacant land and medium density residential.
West	Gateway Motorway.

3.3.2 Topography

Elevations across the site range from 22 m AHD within the watercourse intersecting the site, to 78 m AHD along the western boundary of MLs 1156. **Figure 18 – Topography: Rochedale** provides an illustration of the topographical features in the locality.

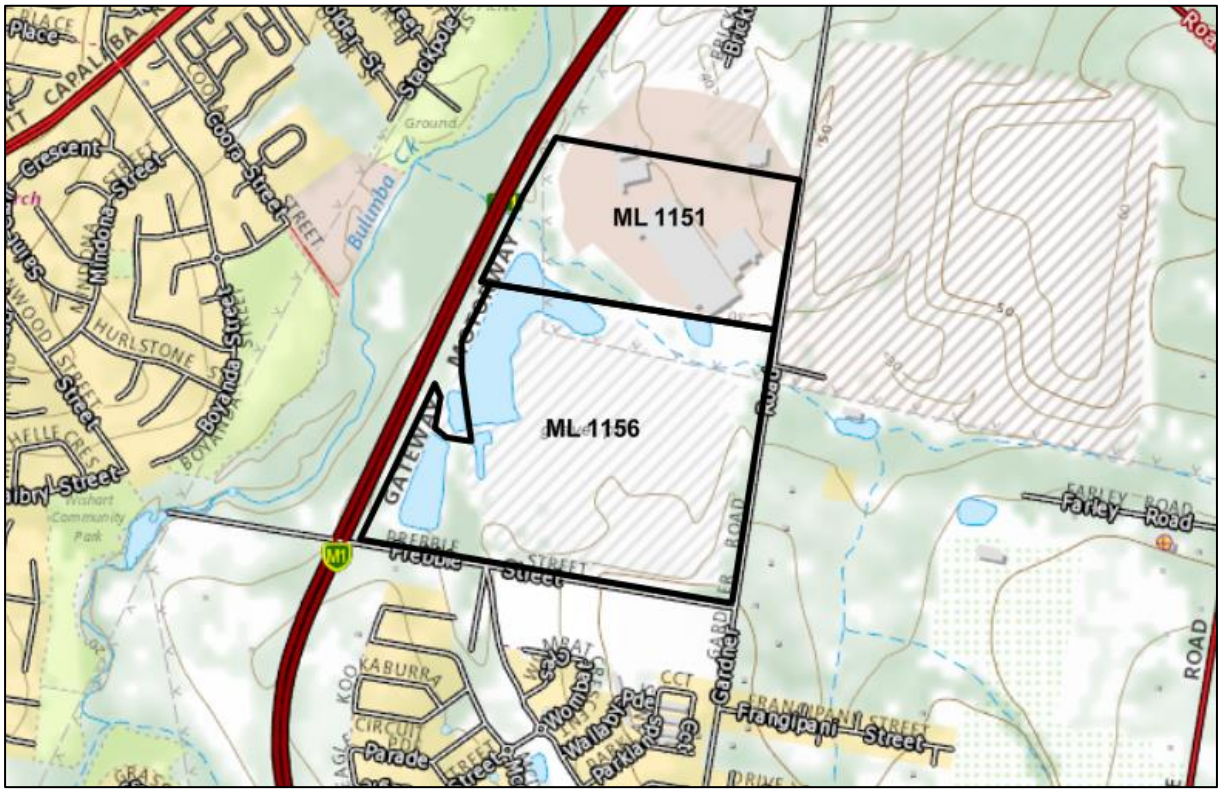


Figure 18 – Topography: Rochedale

(Source: The State of Queensland (2022a))

3.3.3 Climate

Refer to **Section 3.1.3 - Climate** for a summary of regional climate data for the locality. The Rochedale site is situated in the same geographic region as the Burbank site, and therefore the sites share the same climate statistics.

3.3.4 Geology

Refer to **Figure 19 – Geology Mapping: Rochedale** for an illustration of the detailed surface geology within the site. The site predominantly overlays the Tingalpa and Sunnybank Formations. The Tingalpa Formation is primarily comprised of Triassic age shales, siltstone and thin coal seams. The Sunnybank Formation is comprised of Eocene – Oligocene age sedimentary rocks, predominantly sandstone, conglomerate, silty clay, siltstone and clayey mudstone.

The primary clay winning tenement at Rochedale is ML 1156. Target minerals within ML 1156 comprise Rochedale Buff clay, Rochedale Red clay and Rochedale Grey clay/mudstone. Imagery derived from a 2003 resource investigation which shows the distribution of these resources is provide **in Figure 20 – ML 1156 Clay Distribution**.



Figure 19 – Geology Mapping: Rochedale

(Source: The State of Queensland (2022a))

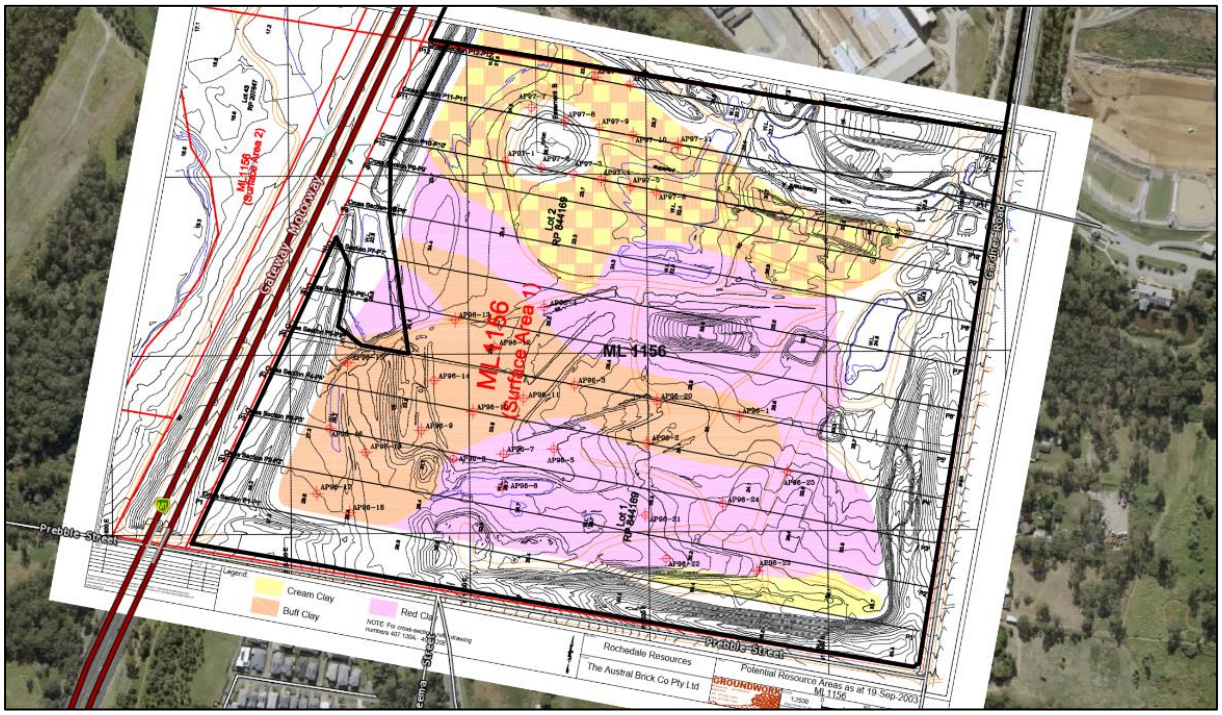


Figure 20 – ML 1156 Clay Distribution

(Source: The State of Queensland (2022a) and *Potential Resource Areas as at 19-Sep-2003 (Drg no. 407.122A)* prepared by Groundwork Environmental Management Services Pty Ltd (2003))

3.3.5 Hydrology

Figure 21 – Watercourse and Wetland Mapping: Rochedale provides an illustration of hydrological features in the locality.

The site is intersected by a minor non-perennial watercourse (Stream Order 2), which flows in a westerly direction conjoining with Bulimba Creek 250 m west of the site. This watercourse originates from several rural dams upstream and traverses the Brisbane City Council landfill before entering the site.

Bulimba Creek flows in a northerly direction for over 30 km before conjoining with the Brisbane River.

The waterbodies created through the course of extraction which are mapped as lacustrine wetlands. The watercourse traversing the site is identified as a lacustrine wetland system in the east of the site, and a palustrine wetland in the west of the site. The palustrine wetland along the southern ML 1156 boundary is mapped as a vegetation management wetland for the purpose of Section 20AA of the VMA.

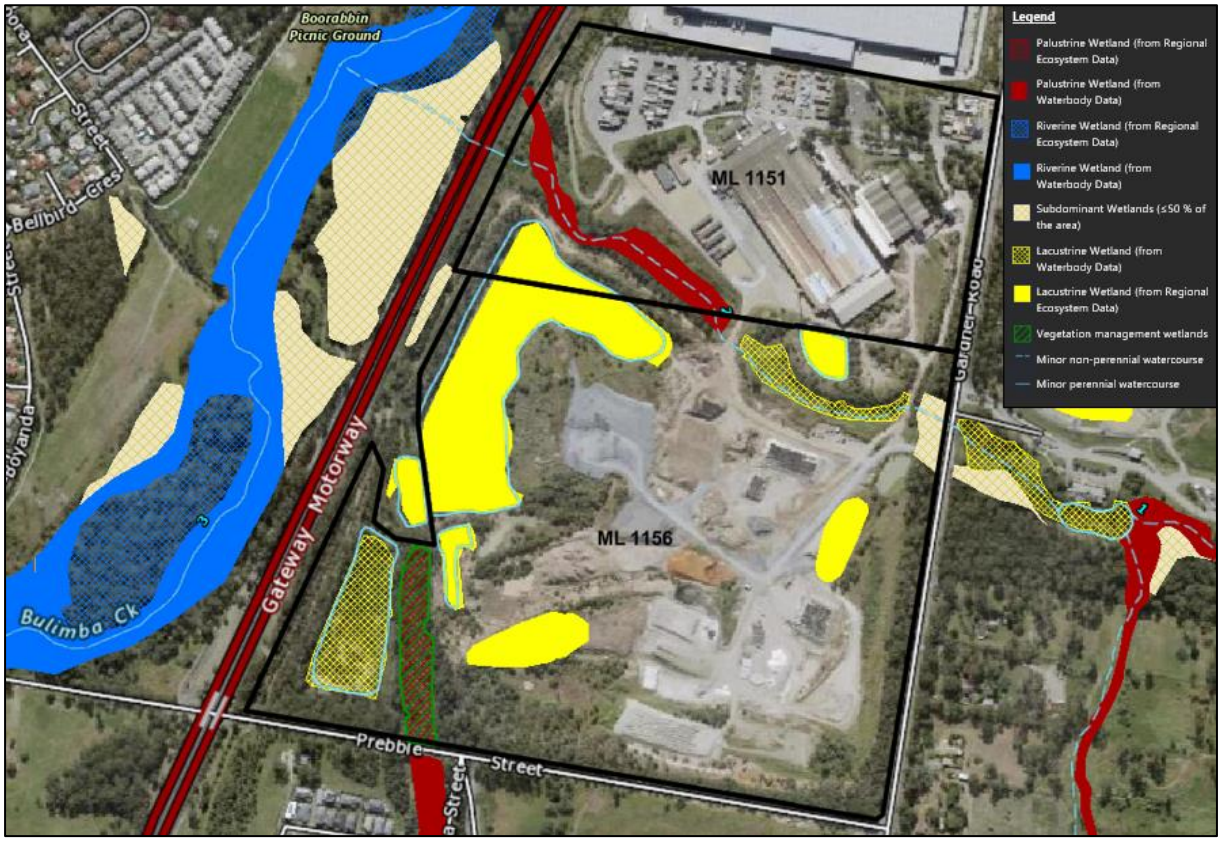


Figure 21 – Watercourse and Wetland Mapping: Rochedale

(Source: The State of Queensland (2022a))

3.3.6 Regional Water Quality Objectives

The site is situated within the lowland / coastal streams water type of the Brisbane River Basin, which is subject to the *Environmental Protection (Water) Policy 2009: Brisbane River Estuary environmental values and water quality objectives* (DERM 2010c).

The WQOs for these waters are summarised in **Table 28 – Brisbane River Estuary Coastal and Lowland Streams WQOs**.

Table 28 – Brisbane River Estuary Coastal and Lowland Streams WQOs

Parameter	Objective
Turbidity	< 50 NTU
Suspended Solids	< 6 mg/L
Chlorophyll a	<5 µg/L
Total Nitrogen ('N')	< 500 µg/L
Oxidised N	< 60 µg/L
Ammonia N	< 20 µg/L
Organic N	< 420 µg/L
Total Phosphorous ('P')	< 50 µg/L
Filterable Reactive P ('FRP')	< 20 µg/L
Dissolved Oxygen	85-110%
pH	6.5 – 8.0
Conductivity	600 µS/cm

The WQOs for the site-specific release waters as set by the EA are summarised in **Table 29 – Release Limits: Rochedale**.

Table 29 – Release Limits: Rochedale

Parameter	Objective
pH	6.5 – 9.0
Turbidity	≤ 95 NTU

3.3.7 Site Specific Water Quality Data

A summary of water quality data held for the Rochedale site is provided below, in addition to the receiving environment. Monitoring of pH and Turbidity has been undertaken regularly at the site at the locations shown in **Figure 22 – Rochedale Water Monitoring Locations**.

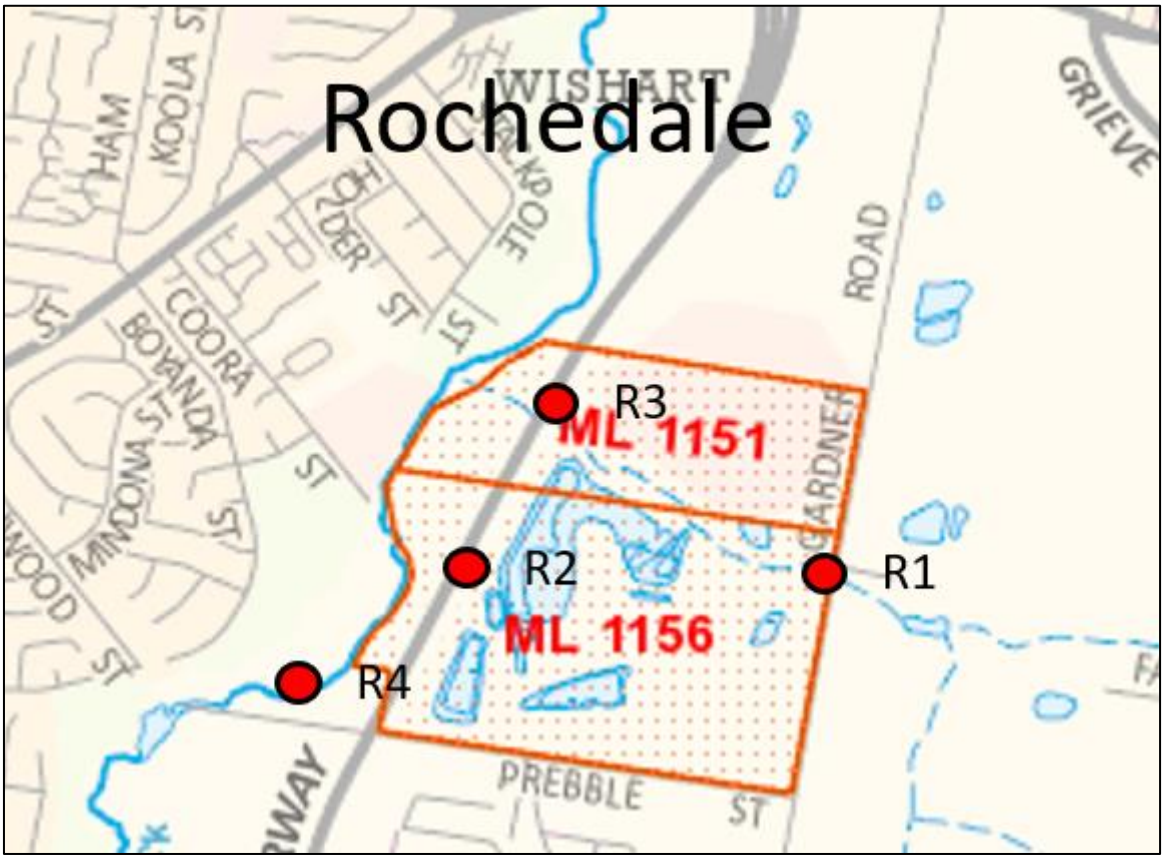
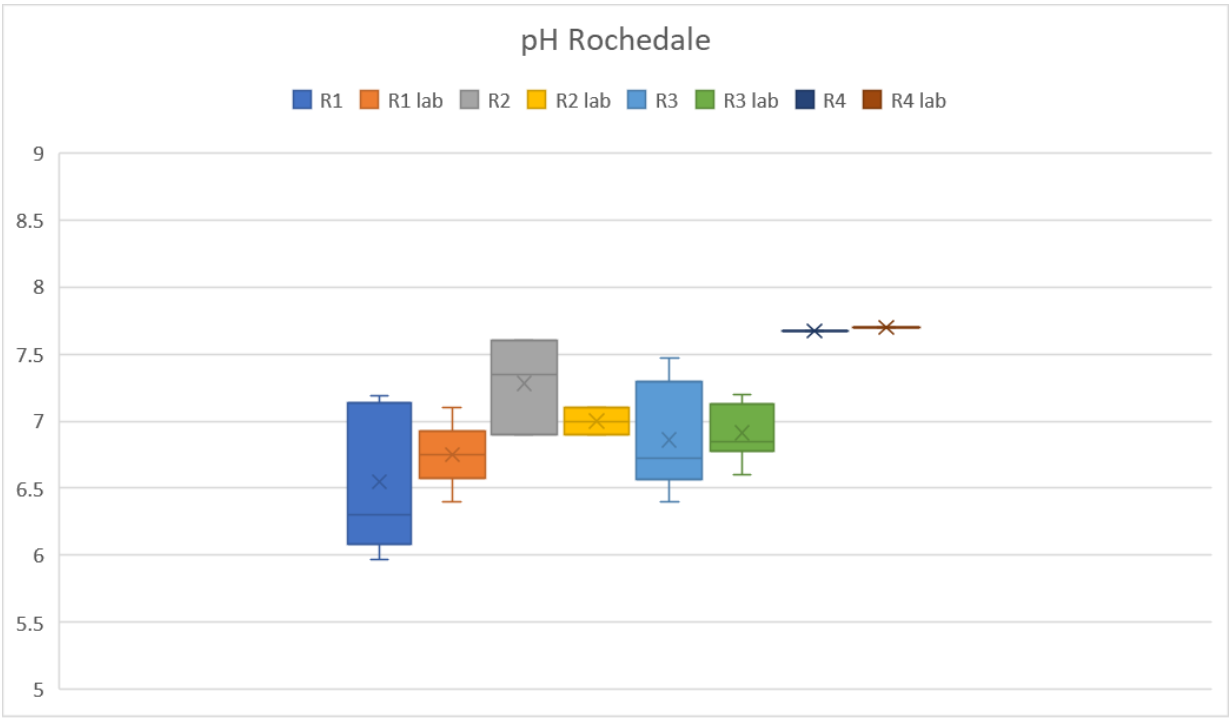


Figure 22 – Rochedale Water Monitoring Locations

A graphical representation of pH at the site and surrounding water courses is shown in **Graph 5 – pH Rochedale**.



Graph 5 – pH Rochedale

A statistical summary of pH data is provided in **Table 30 – pH Statistics: Rochedale**.

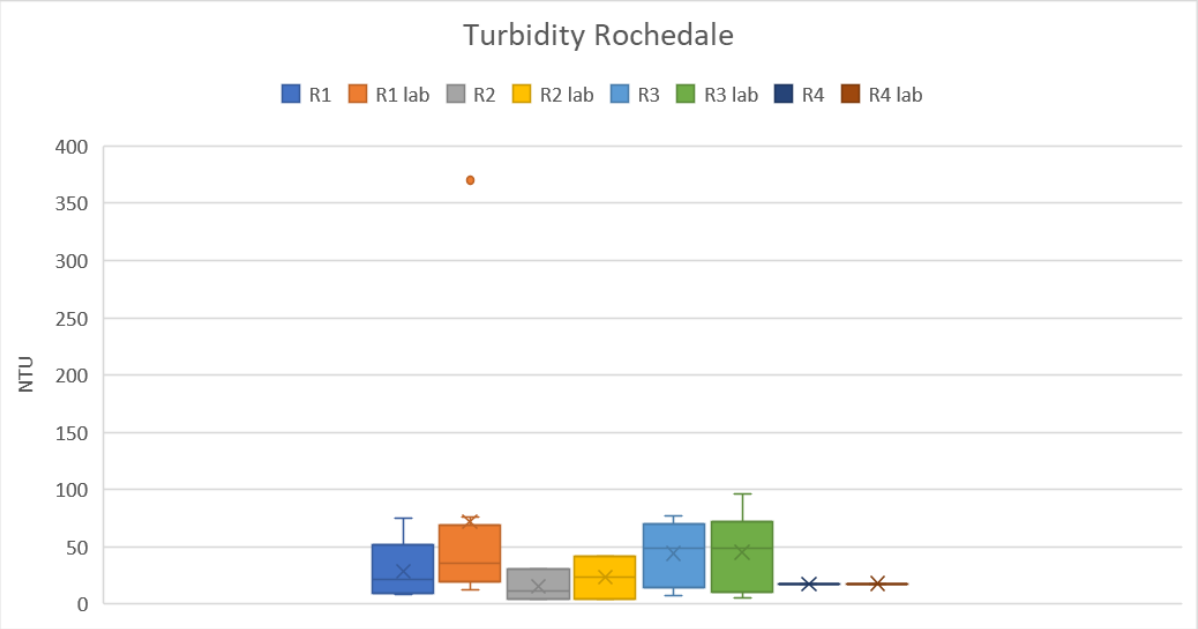
Table 30 – pH Statistics: Rochedale

Statistics	R1	R1 lab	R2	R2 lab	R3	R3 lab	R4	R4 lab
Maximum	7.19	7.1	7.6	7.1	7.47	7.2	7.67	7.7
Minimum	5.97	6.4	6.9	6.9	6.4	6.6	7.67	7.7
Std. Dev.	0.55	0.23	0.35	0.14	0.41	0.20		
Median	6.3	6.75	7.35	7	6.72	6.85	7.67	7.7
95th %ile	7.17	7.06	7.58	7.09	7.41	7.2	7.67	7.7
Average	6.55	6.75	7.28	7	6.86	6.91	7.67	7.7
Count	5	10	3	2	6	14	1	1

A graphical representation of Turbidity at the site and surrounding water courses is shown in **Graph 6 – Turbidity Rochedale**.

The results indicate that:

- Water releasing from site ranges in pH from slightly acidic to neutral. Release events are infrequent from the site.



Graph 6 – Turbidity Rochedale

A statistical summary of pH data is provided in **Table 31 – Turbidity Statistics: Rochedale**.

Table 31 – Turbidity Statistics: Rochedale

Statistics	R1	R1 lab	R2	R2 lab	R3	R3 lab	R4	R4 lab
Maximum	74.9	370	30.6	42	77.5	96	17.7	18
Minimum	8.04	13	4.58	4.9	7.8	5.5	17.7	18
Std. Dev.	27.00	107.19	13.54	26.23	29.70	31.87	--	--

Median	21.3	35.5	11.1	23.45	49.1	48.5	17.7	18
95th %ile	65.66	237.7	28.65	40.15	74.9	86.9	17.7	18
Average	28.87	72.1	15.43	23.45	44.47	45.33	17.7	18
Count	5	10	3	2	6	14	1	1

The results indicate that:

- Water releasing from site ranges in low to high turbidity levels. The high turbidity release events likely correspond to periods intense rainfall. Austral upgraded the stormwater controls at the site in 2019 and monitoring data since this time has been compliant with the relevant release criteria, with the exception of February 2022 flood event.

3.3.8 Groundwater Levels and Properties

Local groundwater data has been sourced from registered bores within a 1.5 km radius centred on the site, with the details of bores containing groundwater depth data summarised in **Table 32 – Registered Bore Groundwater Data Summary: Rochedale**. An illustration of the bore locations is provided **Figure 23 – Local Groundwater Bores within 1.5 km Radius: Rochedale**. There is one registered bore situated on-site; however, this bore is not in use and there no records are available for this bore. Note that a number of bores within the selected radius have been abandoned and destroyed and no groundwater depth or quality records were available. These bores have been excluded from this summary. The bore data indicates that groundwater depth varies, with a median value of approximately 29.3 m AHD.

Based on drillhole logs prepared in the most recent resource investigation dated 2019, a range of water table levels were encountered below collar ranging from 5.5m to 12.5m, with the average depth being 9 m below the current disturbed land surface (Brickworks Limited 2022c). As no further mineral extraction is proposed at Rochedale, it is not anticipated that groundwater will be intersected.

Table 32 – Registered Bore Groundwater Data Summary: Rochedale

Reg No.	Lat / Long	Geology	SWL / Date	Groundwater Depth (mAHD)*	Quality
79282 (existing)	-27.5700, 153.1149	No data	- 29 m / 11/12/1989	27	Conductivity: 880 µS/cm pH: 7.6
142814 (existing)	-27.5658, 153.1194	Sand (Sunnybank Formation)	-9.70 m / 05/05/2011	44.3	No data
142816 (existing)	-27.5649, 153.1214	Sand (Sunnybank Formation)	-10.50 m / 12/03/2011	31.5	No data
142860	-27.5489, 153.1211	Sandstone (Tingalpa Formation)	-12.00 m / 08/02/2012	21	No data
152600	-27.5456, 153.1218	Sedimentary (Tingalpa Formation)	-9.00 m / 05/03/2014	36	No data
169574	-27.5498, 153.1272	Shale (Tingalpa Formation)	23 m^ / 16/06/2016	19	1,280 µS/cm

Notes:
SWL = Standing Water Level
*Based on elevation of bore, subtracting SWL.
^Reading from top of aquifer in lieu of SWL data.



Figure 23 – Local Groundwater Bores within 1.5 km Radius: Rochedale

(Source: The State of Queensland (2022a))

3.3.9 Soils

3.3.9.1 Soil Group

Regional landscape mapping has been undertaken within the region as part of The Soil Landscapes of Brisbane and South-Eastern Environs (CSIRO 1987). The report, and accompanying landscape map, published at a scale of 1:100,000 has identified the area that includes ML1156 as being characteristics of the landscapes referred to as "Woodridge" and "Coopers Plains".

Woodridge is described as occurring on low convex hills and ridges south of the Brisbane River and on gently undulating surfaces. The soils are described as being clayey sandstones, sandy mudstones, clays, shales and some coarse sandstones.

Coopers Plains is described as occurring on slopes below plateau surfaces on sandy clays and sandstones, with Red-yellow podzolic soils and later podzolic soils.

3.3.9.2 Acid Sulfate Soils

Review of the Acid Sulfate Soils ('ASS') mapping (The State of Queensland (2022a) has confirmed that the site is not located within, or near, an area where ASS have previously been identified, or within a prospective land zone containing ASS.

3.3.9.3 Productivity

There is no topsoil or growth media that has been retained at the Rochedale site. Importation of material will be required to facilitate any future rehabilitation and will be managed as part of the development of the industrial estate.

3.3.10 Land Stability

3.3.11 Vegetation Communities

3.3.11.1 Mapped Regional Ecosystems

Refer to **Figure 24 – Mapped RE: Rochedale** for an illustration of the remnant vegetation mapping over the site. The current extraction area is mapped as non-remnant vegetation under the VMA.

The balance of the site is mapped as containing the following remnant vegetation.

Category A or B least concern RE:

- RE 12.3.6 (100%) – M. quinquenervia +/- E. tereticornis, L. suaveolens, C. intermedia open forest on coastal alluvial plains.
- RE 12.9-10.17d (100%) - E. acmenoides, E. major, E. siderophloia +/- Corymbia citriodora subsp. variegata open forest on sedimentary rocks. Open forest generally containing E. siderophloia, E. propinqua or E major, Corymbia intermedia. Other characteristic species include Lophostemon confertus, Eucalyptus microcorys and E. acmenoides or E. portuensis. Other species that may be present locally include Corymbia trachyphloia subsp. trachyphloia, C. citriodora subsp. variegata, E. longirostrata, E. carnea, E. moluccana and occasional vine forest species. Hills and ranges on Cainozoic and Mesozoic sediments. Not a Wetland.

Category A or B and C or R endangered RE:

- RE 12.5.3a (100%) – E. racemosa subsp. racemosa woodland on remnant Tertiary surfaces. Occurs mainly to the south of Brisbane. Extensively cleared for urban development. E. seeana is often only a minor component of this RE.

Category C or R of concern RE:

- RE 12.3.11 (100%) – E. tereticornis +/- EucE.alyptus siderophloia, C. intermedia open forest on alluvial plains usually near coast.

Category C or R least concern RE:

- RE 12.9-10.17d (100%) – As per Category A or B above.

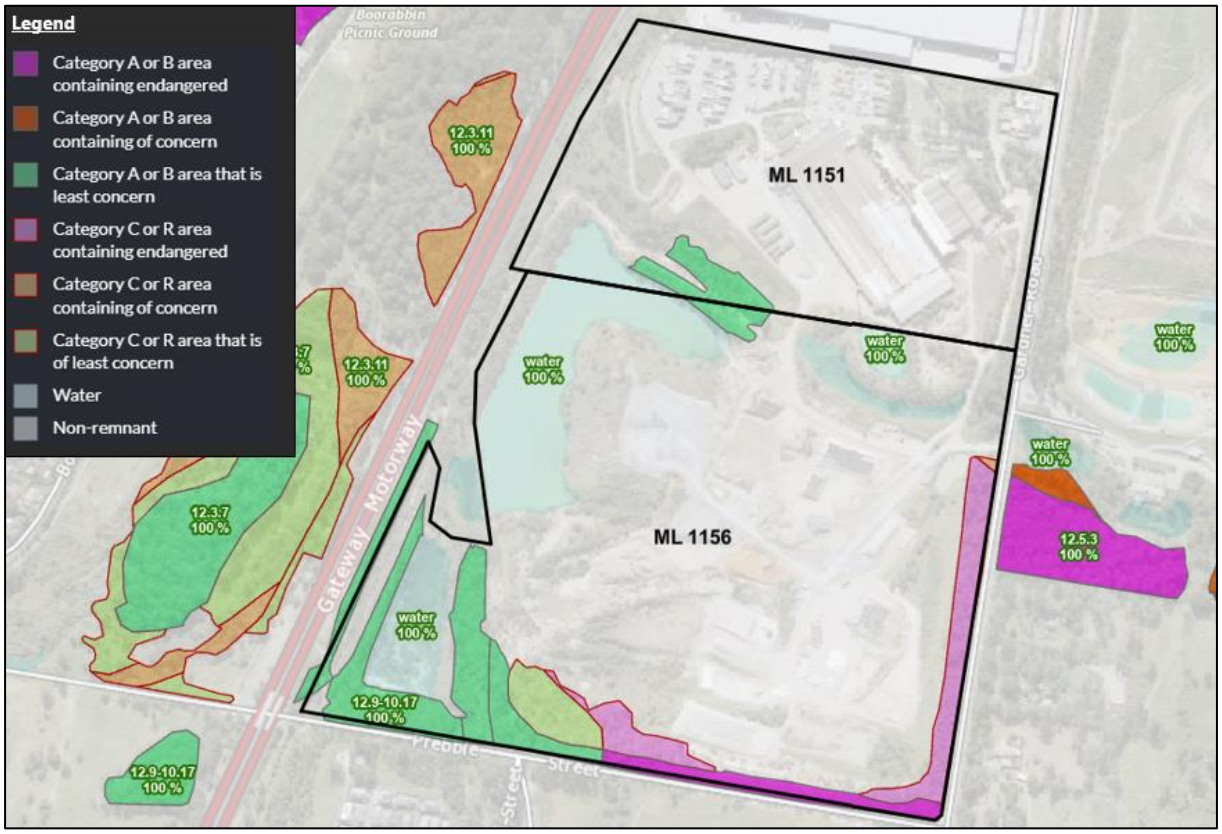


Figure 24 – Mapped RE: Rochedale

(Source: The State of Queensland (2022a))

3.3.11.2 Site Survey Data – Flora and Fauna

In 2017, SHG carried out a field survey of the site with the findings presented in the report titled *Ecological Assessment Report: 105 Gardner Road, Rochedale* (SHG 2017b). **Figure 25 – Field Survey Assessment Zones: Rochedale** provides an illustration of the field survey zones assessed by SHG.

76 fauna species were identified by SHG throughout the investigation area at the time of the assessment. Of these, 44 were native species (some having been planted around an existing building) with the remaining 32 were introduced species (2017b, p. 21).

SHG (2017b, p. 16-17) stated the following in relation to the western waterway shown in **Figure 25 – Field Survey Assessment Zones: Rochedale**:

- The southwestern watercourse flows from the higher ridgeline to the south in a northwesterly direction;
- The southern portion of the watercourse is contained within mapped remnant vegetation (RE 12.3.6). The vegetation within the southern portion of the site was consistent with the vegetation associated with RE 12.3.6. *Melaleuca quinquenervia* (Broad-leaved Paperbark), *Allocasuarina littoralis* (Black Sheoak),
- *Lophostemon sauveolens* (Swamp Box) and *Eucalyptus tereticornis* (Forest Red Gum). Weed infestation in the upper portion of the watercourse is sparse in comparison with the heavily weed infested northern portion of the site;
- The northwestern portion of the waterway has been made partially discontinuous due to the works associated with the clay extraction. The downstream portion of this watercourse is heavily

weed infested and is highly disturbed. Weeds observed included *Baccharis halimifolia* (Groundsel Bush), *Setaria sphacelata* (Setaria), *Lantana camara* (Lantana) and *Solanum torvum* (Giant Devils Fig). Numerous other introduced weeds were also observed within the surrounding area; and
- This watercourse runs under the Pacific Motorway through a series of box culverts.

SHG (2017b, p. 16-17) state the following in relation to the central waterway shown in **Figure 25 – Field Survey Assessment Zones: Rochedale**:

- The central watercourse runs from east to west through the central portion of the site;
- This watercourse is highly disturbed and contains dense infestation of numerous introduced/exotic weed species. Weed species include *Baccharis halimifolia* (Groundsel), *Lantana camara* (Lantana), *Schinus terebinthifolius* (Broad-leaved Pepper), Sphagneticola trilobata (Singapore Daisy), *Setaria sphacelata* (Setaria), *Typha orientalis* (Bulrush) and *Brachiaria mutica* (Para Grass);
- Some areas contained deeper pool areas, which appear to have been artificially modified. The majority of the area was dry at the time of assessment; and
- A turtle was observed within the deeper pool area, species specific identification was not possible.
- The central waterway is connected to the areas east of Gardner Road via a culvert adjacent to the Landfill entrance.
- While there is a hydrological connection the vegetation on either side of the road is highly fragmented with a fence located over the culvert on the eastern side. The patch of endangered vegetation on the eastern side of Gardner
- Road has no hydraulic connection to the site and is also separated from the site by a fence.

A complete list of species (native and introduced) identified by SHG (2017b) during the field survey is provided as **Table 33 – Rochedale Field Survey Findings – Flora Species**.

Table 33 – Rochedale Field Survey Findings – Flora Species

Site Flora List	
Species Name	**Common Name**
Cymbopogon refractus	Barbwire Grass
Ageratum houstonianum	Blue Billygoat Weed
Pinus elliotti	Exotic Pine
Lantana camara	Lantana
Setaria sphacelata	Setaria
Jacaranda mimosifolia	Jacaranda
Bougainvillia sp.	Bougainvillia
Cirsium vulgare	Scotch Thistle
Andropogon virginicus	Whiskey Grass
Lobelia purpurascens	White Root
Passiflora suberosa	Corky Passionflower
Lantana montevidensis	Creeping Lantana
Asclepisa	Red-headed Cotton Bush
Syagrus romanozoffiana	Cocos Palm

Site Flora List	
Species Name	**Common Name**
Chloris gayana	Rhodes Grass
Bothrichloa decipiens	Pitted Bluegrass
Sporobolus pyramidalis	Giant Rat's Tail Grass
Solanum mauritianum	Wild Tobacco
Ambrosia artemisiifolia	Annual Ragweed
Senna pendula	Easter Cassia
Cynodon dactylon	Couch
Nephrolepis cordifolia	Fishbone Fern
Gahnia aspera	Rough Saw-sedge
Goodenia rotundifolia	Star Goodenia
Entolasia stricta	Wiry Panic
Allocasuarina littoralis	Black Sheoak
Acrotiche aggregata	Ground Berry
Hibbertia vestita	Hairy Guinea Flower
Lomandra multiflora	Multi-headed Mat Rush
Lepidosperma laterale	Variable Sword Sedge
Alphitonia excelsa	Red Ash
Xanthorrhoea johnsonii	Grass Tree
Eucalyptus racemosa	Scribbly Gum
Tricoryne elatior	Yellow Rush-lilly
Oplismenus imbeccilis	Creeping Beard Grass
Acacia disparimma	Hickory Wattle
Acacia leiocalyx	Early-flowering Black Wattle
Melaleuca saligna	Willow Bottlebrush
Lophostemon confertus	Brush Box
Imperata cylindrica	Bladey Grass
Eucalyptus tereticornis	Forest Red Gum
Acacia concurrens	Blacl Wattle
Acacia fimbriata	Fringed Wattle
Melia azederach	White Cedar
Lomandra longifolia	Spiney-head Matrush
Thysanotus tuberosus	Fringed Lilly
Eucalyptus seeana	Narrow-leaved Red Gum
Eucalyptus siderophloia	Northern Grey Ironbark
Eucalyptus fibrosa	Braod-leaved Ironbark
Angophora woodsiana	Smudgy Apple
Corymbia intermedia	Pink Bloodwood
Corymbia citriodora	Spootted Gum

Site Flora List	
Species Name	**Common Name**
Coymbia henryi	Large-leaved Spotted Gum
Eucalyptus acmenioides	White Mahogany
Eucalyptus microcorys	Tallowwood
Pimelia linariifolia	Rice Flower
Dianella caerulea	Blueberry Lilly
Corymbia trachyphloia	Brown Bloodwood
Leptospermum polygalifolium	Tangoon
Melaleuca quinquenervia	Broad-leaved Paperbark
Eucalyptus propinqua	Grey Gum
Brachychiton acerifolius	Illawarra Flame Tree
Geodorum densiflorum	Pink Nodding Orchid
Breynia oblongifolia	Coffee Bush
Chrysocephalum apiculatum	Yellow Buttons
Juncus usitatus	Common sedge
Cyperus polystachyos	Bunchy Sedge
Eragrostis sp.	-
Mellicope elleryana	Pink Euodia
Chalochlaena dubia	False Bracken
Pteridium esculentum	Bracken Fern
Phyllanthus sp.	-
Syzygium leuhmanii	Lillypilly
Babingtonia virgata	Heath Myrtle
Glochidion fernandii	Cheese Tree
Cassytha pubescens	Dodder Vine
Violia hederacea	Native Violet
Ageratum houstonianum	Blue Billygoat Weed
Pinus elliotti	Exotic Pine
Lantana camara	Lantana
Setaria sphacelata	Setaria
Jacaranda mimosifolia	Jacaranda
Bougainvillia sp.	Bougainvillia
Cirsium vulgare	Scotch Thistle
Andropogon virginicus	Whiskey Grass
Lobelia purpurascens	White Root
Ambrosia artemisiifolia	Annual Ragweed
Bidens pillosa	Cobblers Pegs
Syagrus romanozoffiana	Cocos Palm
Passiflora suberosa	Corky Passionflower

Site Flora List	
Species Name	**Common Name**
Cynodon dactylon	Couch
Lantana montevidensis	Creeping Lantana
Senna pendula	Easter Cassia
Nephrolepis cordifolia	Fishbone Fern
Sporobolus pyramidalis	Giant Rat's Tail Grass
Bothrichloa decipiens	Pitted Bluegrass
Asclepisa	Red-headed Cotton Bush
Chloris gayana	Rhodes Grass
Solanum mauritianum	Wild Tobacco

Table reptinred from *Ecological Assessment Report, 105 Gardner Road, Rochedale* prepared by SHG (2017b).

In relation to remnant vegetation, SHG (2017b, p. 20) determined the following:

The species and vegetation structure were consistent with the regional ecosystem description. Remnant Least Concern RE 12.9-10.17 was described in the areas adjoining the alluvial floodplain associated with the watercourse. Based on the vegetation structure and species observed the remnant vegetation would be more correctly defined as RE 12.9-10.17b. The canopy was dominated by *Corymbia citriodora* (Spotted Gum) with various other Corymbia and Eucalyptus species including *Corymbia trachyphloia* (Brown Bloodwood), *Corymbia intermedia* (Pink Bloodwood), Eucalyptus siderophloia (Northern Grey Ironbark) and *Eucalyptus propinqua* (Grey Gum). A narrow strip of remnant RE 12.9-10.17 was also observed running externally along the western boundary. An area of rehabilitation exists to the east of the thin strip of remnant vegetation and was associated with previous high pressure non potable water pipeline infrastructure. Species observed within the remnant polygon are consistent with the descriptions of the regional ecosystem community.

SHG identified that the vegetation remaining within the buffer areas is generally consistent with remnant vegetation of Least Concern RE 12.9-10.17 however also contain a number of weed species in the understorey (2017b, p. 21).

Based on the field survey, vegetation on site was found to be dominated by Eucalyptus species, which is not typical of this threatened community (SHG 2017b, p. 16). The DAWE Protected Matters Search Tool identified a single Threatened Ecological Community that may occur within the local area, being the Critically Endangered Lowland Rainforest of Subtropical Australia; however, this was not identified on or within the vicinity of the site (SHG 2017b, p. 16). Fourteen (14) threatened botanical species were identified in the DAWE Protected Matters Search Tool. however, SHG (2017b) noted that most of these listed are in association with rainforest communities and less disturbed environments. The NCA lists an Endangered Leucopogon sp. (Coolmunda D. Halford Q1635), as the only threatened plant species within 5 km of the site, which is only known from a small area south-east of Inglewood, within the McIntyre River catchment, and was not observed on site (SHG 2017b. p. 16). SHG (2017b) did not identify any threatened species at the time of the assessment.

3. FIELD SURVEY ASSESSMENT ZONES

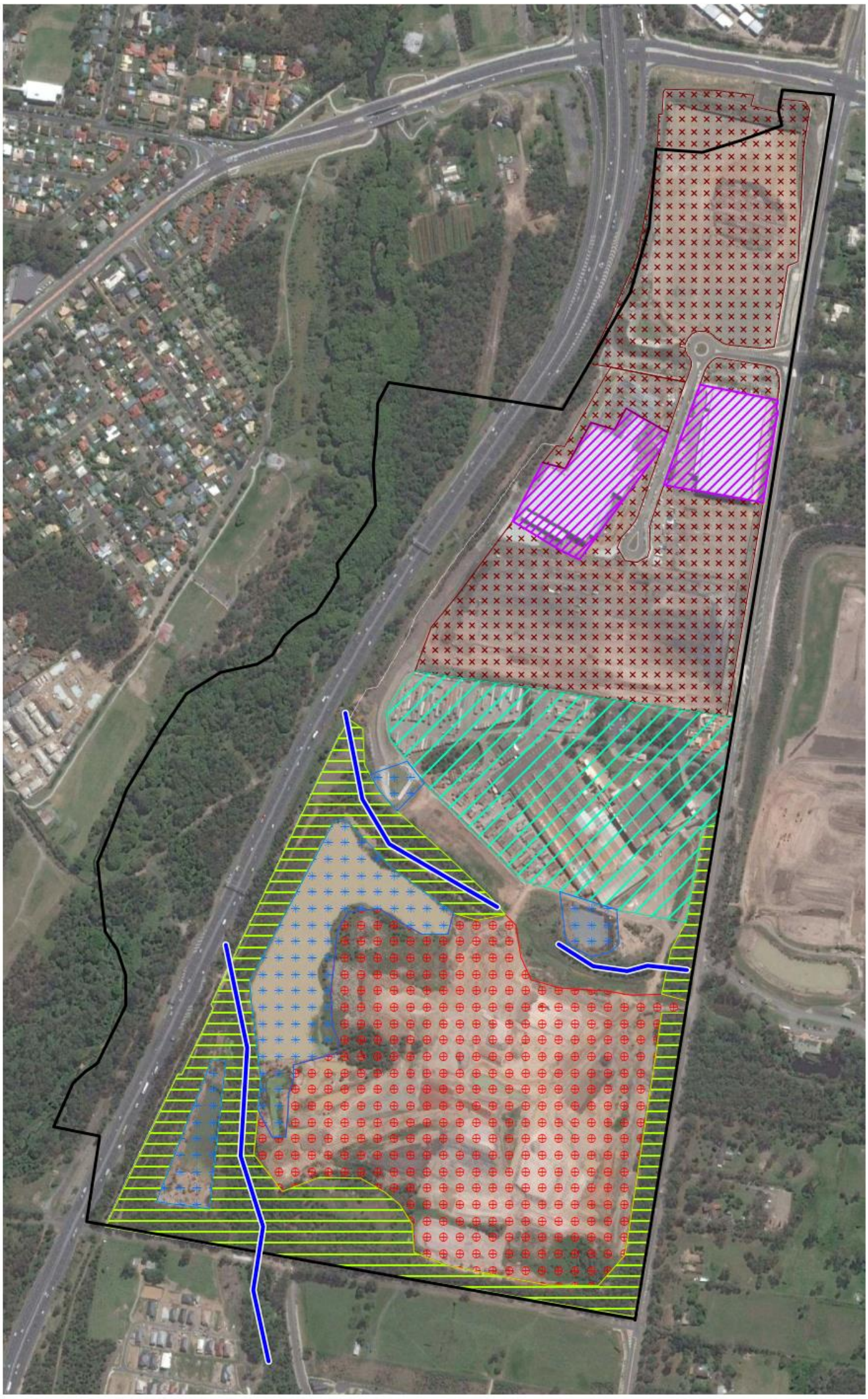


Figure 25 – Field Survey Assessment Zones: Rochedale

(Figure reprinted from *Ecological Assessment Report: 105 Gardner Road, Rochedale* (SHG 2017b)

3.3.11.3 Fauna Presence and Populations

At the time of SHG's assessment in 2017, the DAWE Protected Matters Search Tool listed 11 threatened bird species, three (3) threatened reptile species, six (6) threatened mammals, no threatened amphibians and 12 migratory species within 5 km of the site. SHG (2017b) noted that most of these are associated with rainforest communities and less disturbed environments therefore are highly unlikely to utilize the site.

The NCA lists an Endangered *Adelotus brevis* (tusked frog), *Crinia tinnula* (wallum froglet), *Numenius madagascariensis* (eastern curlew) and *Phascolarctos cinereus* (koala) as the only threatened fauna species within 5 km of the site; however, SHG (2017b) stated that due to the extremely disturbed nature of the site the above species are not expected to use the site even in an intermittent nature. SHG did not observe any of the four (4) threatened species during fauna and other opportunistic surveys (2017b).

SHG (2017b) reported observing the following fauna species during the site survey:

- *Canis lupus familiaris* (Domestic Dog)
- *Corvus orru* (Torresian Crow)
- *Cryptoblepharus virgatus* (Wall Skink)
- *Dacelo novaeguineae* (Laughing Kookaburra)
- *Grallina cyanoleuca* (Magpie-lark)
- *Gymnorhina tibicen* (Australian Magpie)
- *Hemidactylus frenatus* (Asian House Gecko)
- *Manorina melanocephala* (Noisy Minor)
- *Ocyphaps lophotes* (Crested Pigeon)
- *Platycercus adscitus* (Pale-headed Rosella)
- *Rhinella marina* (Cane Toad)
- *Taeniopygia bichenovii* (Double Barred Finch)
- *Rhipidura leucophrys* (Willie Wagtail)
- *Trichoglossus haematodus* (Rainbow Lorikeet)
- *Coturnix ypsilophora* (Brown Quail)
- *Anas superciliosa* (Pacific Black Duck)
- *Bubulcus ibis* (Cattle Egret)
- *Corvus orru* (Torresion Crow)
- *Porphyrio porphyrio* (Purple Swamphen).
- *Geopelia placida* (Peaceful Dove)
- *Trichoglossus chlorolepidotus* (Scaly-breasted Lorikeet)

SHG (2017b, p. 26-27) concluded the following in relation to koalas and koala habitat.

The field survey did not identify any signs of koala usage with the only fauna observed or expected to be present being species commonly found in urban environments. The Rochedale area is rapidly urbanising with a large amount of traffic including trucks and construction equipment utilising Gardner Road and adjacent properties to the north and south. The noise, vibration and dust generated from these activities would discourage fauna utilisation of the site in the short term, however allowance has been made for fauna movement along the western, southern and central waterway of the site.

The site is mapped in the Koala Priority Area, with the buffer areas also identified as being Core Koala Habitat area.

SHG noted that no essential habitat is mapped over the site and no evidence of koala usage was observed during the surveys and no individuals would be expected to utilise the site given the high level of disturbance.

3.4 Rehabilitation Planning

3.4.1 Rehabilitation Completed to Date

The following summary of rehabilitation completed at the sites has been prepared to satisfy the requirements of Section 126C(1)(j) of the EP Act.

Mineral extraction at Burbank and Redland Bay is typically carried out on a campaign basis in response to market demands and trends, which therefore requires broader operational areas to remain accessible for extraction. Consequently, areas available for rehabilitation are relatively limited. To date there has been limited opportunity for rehabilitation of Redland Bay as the operational areas and extraction void are required to remain at the current surface area for functionality of the site. There has been progressive rehabilitation at Burbank and Rochedale, which is discussed herein.

It must be noted that resource demands may require previously rehabilitated to be further extracted at a future date. Recent plant upgrades at the Rochedale Brick Plant have allowed Austral Bricks to process additional mineral which previously wasn't possible, and therefore the need to re-enter previously rehabilitated areas will be dependent upon market demands and clay / shale distribution across the site.

There have been no applications made, or approvals obtained, in relation to progressive certification of the rehabilitation under the EP Act. All progressive rehabilitation of the sites is ongoing as at the date of this PRCP.

3.4.2 Progressive Rehabilitation Burbank

Progressive rehabilitation to a Native Ecosystem and Wetland Ecosystem PMLUs has been progressed in four areas of the site in 2017 (Area 0), November 2018 (Area 1) and November 2019 (Area 2) as well as a wetland area (RA5). These RAs are shown in the attached reference maps **Burbank Final Site Design (Drawing no. 1129.DRG.105r3)** and **Reference Map 1 (Drawing no. 1129.DRG.106r2)**.

Rehabilitation treatments applied in RA1 (Area 0), RA2 (Area 1) and RA3 (Area 2) included:

- Reprofiling of disturbance areas.
- Spreading available topsoils and mulch
- Revegetation via:
    - Hand-planting of tubestock (Area 0 only).
    - Hydroseeding using the species mix identified in **Table 34 – Burbank Revegetation Species Mix**.
- Fertiliser application and monitoring as required.
- Weed management.

Rehabilitation of the wetland ecosystem PMLU undertaken in 2018 represented as RA5 in **Reference Map 1 (Drawing no. 1129.DRG.106r2)** comprised of allowing the water body to naturally regenerate.

As identified in the field survey data summarised in **Section 3.1.11.2 - Site Survey Data**, the species mix used by Austral Bricks below comprises of native species which have been ground-truthed as

occurring on-site in undisturbed areas in 2017. This confirms the suitability of these species for the site's rehabilitation.

Table 34 – Burbank Revegetation Species Mix

Scientific Name	Common Name
Leptospermum polygalifolium	Tangoon
Lomandra longifolia	Spiney-Head Matrush
Lophostemon confertus	Brush Box
Melia azederach	White Cedar
Mellicope elleryana	Pink Euodia
Acacia concurrens	Black Wattle
A. disparimma	Hickory Wattle
A. fimbriata	Fringed Wattle
A. leiocalyx	Early-flowering Black Wattle
Allocasuarina littoralis	Black Sheoak
Alphitonia excelsa	Red Ash
Corymbia citriodora	Spotted Gum
Cyperus polystachyos	Bunchy Sedge
Dianella caerulea	Blueberry Lilly
Eucalyptus fibrosa	Broad-leaved Ironbark
E. microcorys	Tallowwood
E. propinqua	Grey Gum
E. racemosa	Scribbly Gum
E. tereticornis	Forest Red Gum
Imperata cylindrica	Blady Grass

Soil types within the site are characteristic of the Woodridge Red-Yellow Podzolic soils which are generally sandy/clay/loam. Hardwood mulch was applied (thickness estimated to be approximately 100 mm) for tube stock planting on Area 0 (RA1).

On 2 December 2022, Austral Bricks completed a site inspection of the progressive rehabilitation area to determine the current status and condition. **Table 35 – Burbank Condition of Rehabilitation: 2 December 2022** provides a summary of the observations made by Austral Bricks during this inspection. **Plate 6** and **Plate 7** provide an illustration of areas of progressive rehabilitation.

Table 35 – Burbank Condition of Rehabilitation: 2 December 2022

RA No.	Condition / Status	Proposed Action
RA1 (Area 0)	• Southern / central portions more successful. • Remainder of areas are primarily grass cover with sparse native vegetation. • Mulched embankments are very sparsely vegetated.	• Support assisted natural recruitment in areas where revegetation has not succeeded. • Carry out additional hydro-seeding in areas. Suitably qualified person assistance is to be obtained where required in relation to hydro-seeding.

RA No.	Condition / Status	Proposed Action
	• Areas of environmental weeds (Cotton Bush) identified.	• Weed control is required to remove environmental weeds. Austral Bricks intend to engage the services of a contractor to carry out weed control. • Monitoring on an ongoing basis (refer **Section 9 - Monitoring and Maintenance Program**).
RA2 (Area 1)	• Satisfactory groundcover of native vegetation.	• Monitoring on an ongoing basis (refer **Section 9 - Monitoring and Maintenance Program**).
RA3 (Area 2)	• Estimated 50% of this rehabilitation area in North Eastern section has been washed out in 2 distinct areas. • Remaining areas show well established groundcover.	• Support assisted natural recruitment in areas where revegetation has not succeeded. • Carry out additional hydro-seeding if areas. Suitably qualified person assistance where required in relation to hydro-seeding. • Weed control to remove environmental weeds. • Monitoring on an ongoing basis (refer **Section 9 - Monitoring and Maintenance Program**).
RA5 (Wetland)	• Satisfactory groundcover of native vegetation.	• Monitoring on an ongoing basis (refer **Section 9 - Monitoring and Maintenance Program**).



Plate 6 – Burbank Progressive Rehabilitation (RA1) 2 December 2022



Plate 7 – Burbank Progressive Rehabilitation (RA1) 2 December 2022



Plate 8 – Burbank Progressive Rehabilitation (RA2) 2 December 2022



Plate 9 – Burbank Progressive Rehabilitation (RA2) 2 December 2022



Plate 10 – Burbank Progressive Rehabilitation (RA3) 2 December 2022



Plate 11 – Burbank Progressive Rehabilitation (RA3) 2 December 2022



Plate 12 – Burbank Progressive Rehabilitation (RA5) 2 December 2022

3.4.3 Progressive Rehabilitation Rochedale

Broad natural regeneration of former operational areas has occurred at Rochedale. In December 2021, supplementary hydroseeding was carried out on land adjacent to Prebble Street. These areas are shown as RA12 and RA14 in the attached reference maps **Rochedale Final Site Design (Drawing no. 1129.DRG.101)** and **Reference Map 1 (Drawing no. 1129.DRG.102r2)**. This land is the subject of a future surrender application which must be submitted by 1 March 2024 in accordance with Austral Bricks' ML 1156 conditions prescribed by the Department of Resources. Species used for hydro-seeding are summarised in **Table 36 – Rochedale Revegetation Species Mix**.

As identified in the field survey data summarised in **Section 3.3.11.2 - Site Survey Data**, the species mix used by Austral Bricks below comprises of native species which have been ground-truthed as occurring on-site in 2017.

Table 36 – Rochedale Revegetation Species Mix

Scientific Name	Common Name
Leptospermum polygalifolium	Tangoon
Lomandra longifolia	Spiney-Head Matrush
Lophostemon confertus	Brush Box
Melia azederach	White Cedar

Scientific Name	Common Name
Mellicope elleryana	Pink Euodia
A. concurrens	Black Wattle
A. disparimma	Hickory Wattle
A. fimbriata	Fringed Wattle
A. leiocalyx	Early-flowering Black Wattle
Allocasuarina littoralis	Black Sheoak
Corymbia citriodora	Spotted Gum
E. fibrosa	Broad-leaved Ironbark
E. microcorys	Tallowwood
E. propinqua	Grey Gum
E. racemosa	Scribbly Gum
E. tereticornis	Forest Red Gum

On 2 December 2022, Austral Bricks completed a site inspection of the progressive rehabilitation area to determine the current status and condition. **Table 35 – Burbank Condition of Rehabilitation: 2 December 2022** provides a summary of the observations made by Austral Bricks during this inspection. **Plate 6** and **Plate 7** provide an illustration of areas of progressive rehabilitation.

Table 37 – Rochedale Condition of Rehabilitation: 2 December 2022

RA No.	Condition / Status	Proposed Action
RA9	Austral Bricks obtained a water sample of waters within the wetland on 9 December 2022 to provide an indication of water quality. Results are presented in **Table 38 – Rochedale Rehabilitation Area Water Quality 9 December 2022**. The results comply with the target water quality adopted from the EA release criteria for Rochedale which is pH of 6.5-9 and Turbidity of 95 NTU.	• Monitoring on an ongoing basis (refer **Section 9 - Monitoring and Maintenance Program**).
RA10	Growth from seeds is apparent across all areas. Plants identified included *Acacia* and *Eucalyptus* species. Density of growth has been estimated at approximately 1 plant for every 4-6m^2. Height of plants was approximately 2-3 cm.	• Monitoring on an ongoing basis (refer **Section 9 - Monitoring and Maintenance Program**).

Table 38 – Rochedale Rehabilitation Area Water Quality 9 December 2022

Date	Sample Location	pH	Turbidity
9/12/22	Southern end	7.8	15.5
9/12/22	Northern end (wetland exit)	8.0	9.07



Plate 13 – Wetland Rehabilitation (RA14) (Southern End) as at 7 December 2022



Plate 14 – Wetland Rehabilitation (RA14) (Northern End) as at 7 December 2022

On 6 March 2023, Biodiversity Assessment and Management (BAAM) carried out a site inspection of the progressive rehabilitation areas. The following provides extracts of BAAM's findings from this site visit. The area assessed is shown over page as **Figure 26 - Revegetation Assessment 105 Gardner Road Rochedale**.



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Figure 26 - Revegetation Assessment 105 Gardner Road Rochedale

(Figure reprinted from the *Revegetation Assessment and Advice, Austral Bricks Quarry, Rochedale* (BAAM 2023))

BAAM (2023, p.1) found that the rehabilitation area comprises steep banks of cainozoic/proterozoic consolidated shale type sediment with no topsoil present, and a flat area comprising the same ground rock material. Rill and mass movement erosion was evident on the embanked areas (BAAM 2023, p.1).

The areas that have undergone hydro-mulching display evidence of seed germination, notably that of Allocasuarina/Casuarina, Leptospermum, Acacia and Eucalypts (BAAM 2023, p.1). These seedlings have a height range of between 2-8 cm (BAAM 2023, p.1). The list of species in the hydro-mix is described in **Table 39 - Hydro-mulch revegetation species list**.

Whilst the species that have been hydro-mulched are that of a native mix, only a percentage of them are species recorded in the regional ecosystem (RE 12.9/10.17d: Open forest generally containing Eucalyptus siderophloia, E. propinqua or E major, Corymbia intermedia) (BAAM 2023, p.1).

BAAM (2023, p. 3) identified that the current, minimum seedling density is 1 per 6 m^2 minimum which is in line with the required stem density for the pre clear RE 12.9-10.17d (BAAM 2023, p.1).

Table 39 - Hydro-mulch revegetation species list

Species	**Evidence of Germination**	**Species Endemic RE 12.9/10.17d**
Allocasuarina littoralis – Black Sheoak	Yes	Yes
Leptospermum polygalifolium - Tangoon	Yes	
Lomandra longifolia – Spiney -head Matrush		Yes
Lophostemon confertus – Brush Box		Yes
Melia azedarach – White Cedar		
Melicope elleryana – Pink Euodia		
Acacias (below)	Yes*	
Acacia concurrens – Black Wattle		
Acacia disparrima – Hickory Wattle		Yes
Acacia fimbriata – Fringed Wattle		
Acacia leiocalyx – Early Flowering Black Wattle		Yes
Eucalypts (below)	Yes*	
Corymbia citriodora – Spotted Gum		
Eucalyptus fibrosa – Broad-leaved Ironbark		
Eucalyptus microcorys – Tallowwood		
Eucalyptus propinqua – Grey Gum		Yes
Eucalyptus racemosa – Scribbly Gum		Yes

Species	Evidence of Germination	Species Endemic RE 12.9/10.17d
Eucalyptus tereticornis – Forest Red Gum		

Table notes:

Table reprinted from the *Revegetation Assessment and Advice, Austral Bricks Quarry, Rochedale* (BAAM 2023).

*Germinated seedlings not identified to species level

Photographs of the progressive rehabilitation area taken by BAAM (2023) are presented in **Plate 15** to **Plate 20** below.



Plate 15 – Existing vegetation at the top of the western bank



Plate 16 – Hydro-mulched western slope with existing vegetation



Plate 17 – Existing grass on sloped area (little or no existing topsoil)

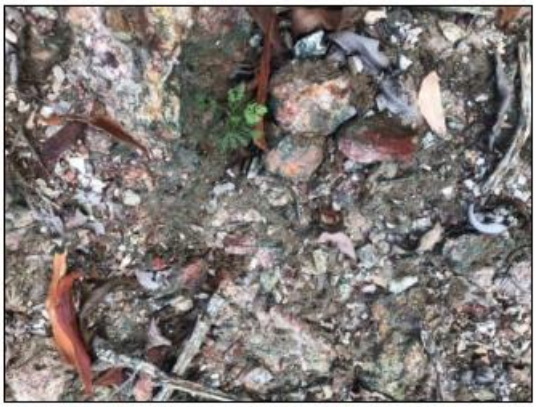


Plate 18 – Acacia seedling in hydro-mulched area



Plate 19 – Hydro- mulched area on flat, towards slope



Plate 20 – Abrupt ecotone between hydro-mulched bank and aquatic/riparian zone

Recommendations provided by BAAM (2023, p. 5) for works to be completed at Rochedale for areas subject to rehabilitation to the Native Ecosystem PMLU include:

- Increase planting density via assisted revegetation in the form of hydro-mulch seeding at maximum densities with a composition mixture that is representative of the pre clear RE 12.9/10.17d (see **Section 6.7 - Revegetation** for details).
- Consider addition of topsoil, mulch and tubestock across the flatter revegetation areas
- Monitor macropod grazing and install tree guards, if required.
- For any slope over 30%, erosion control should be considered. Options available range from sediment control socks, hydro-mulching, and open weave jute matting.

Recommendations provided by BAAM (2023, p. 5-6) for works to be completed at Rochedale for areas subject to rehabilitation to the Wetland Ecosystem PMLU include:

- Assisted revegetation in the form of hydro-mulch seeding at maximum densities with a composition mixture that is representative of the pre clear RE 12.9/10.17d (see **Section 6.7 - Revegetation** for details).
- For any slope over 30%, erosion control should be considered. Options available range from sediment control socks, hydro-mulching, and open weave jute matting.
- Monitor macropod grazing and install tree guards, if required.
- Sediment control suggested at bank base.
- Full identification and BioCondition composition of wetland to be undertaken.
- Species composition as per wetland indicator plants of Southeast Queensland (SEQ) bioregion to be implemented through assisted revegetation process, if deemed required (determined by BioCondition assessment), at a rate of 6-10 plants per m^2 along water edge (see **Section 6.7 - Revegetation** for details).

Soil types within the site are characteristic of the Coopers Plains / Woodridge Red-Yellow Podzolic soils which are generally sandy/clay/loam. Austral Bricks has advised that fertiliser was applied at a rate of approximately 300 kg in areas which were hydromulched at Rochedale.

4 Community Consultation

4.1 Purpose

In accordance with Section 126C(1)(c)(iii) and (iv) of the EP Act, this section has been developed to provide:

- details of the consultation undertaken by the applicant in developing the proposed PRCP (refer **Section 4.2**).
- details of how the applicant will undertake ongoing consultation in relation to the rehabilitation to be carried out under the plan (refer **Section 4.3**).

4.2 Community Consultation Register

Due to the historical nature of the project, and as a result pre-existing PMLUs nominated in land outcome document for the project, there has been limited recording of community consultation undertaken in relation to rehabilitation.

Included as **Attachment 1 – External Environmental Communication Record** is a community consultation register prepared to address the requirements of this PRCP. This register is intended to be a live document and it is to be updated throughout the life cycle of the project to reflect ongoing consultation with the community regarding rehabilitation outcomes for the sites. Community consultation is recorded in Brickworks' Donesafe management system based on the form provided in **Attachment 1 – External Environmental Communication Record**. External Environmental Communication records are now able to be logged into the cloud based program which will ensure records are easily accessible in future.

Going forward, community consultation is to be carried out in accordance with the Community Consultation Plan (refer **Section 4.3**).

4.3 Community Consultation Plan

4.3.1 Objectives

The primary purpose of the Community Consultation Plan is to provide a program for the engagement and consultation relevant stakeholders in relation to rehabilitation. The Community Consultation Plan is to be implemented prior to any PRCP Schedule amendments that may affect the community. The community consultation register (refer **Attachment 1 – External Environmental Communication Record**) is to be updated whenever consultation is undertaken.

The objectives of the Community Consultation Plan are to:

- identify key stakeholders relevant to the site
- establish mechanisms and frequencies for formal engagement with stakeholders about the PRCP Schedule.
- provide relevant stakeholders with the information necessary to enable an understanding of the rehabilitation that will take place.
- enable a collaborative approach to work with stakeholders in relation to the rehabilitation proposed.

- establish relationships between Austral Bricks and stakeholders and enable stakeholder feedback where appropriate.
- address stakeholder interests and concerns.
- document how records of community consultation are to be kept.

4.3.2 Responsible Personnel

The personnel who are responsible for implementing this Community Engagement Plan in relation to the PRCP are identified in **Table 40 – Responsibilities and Authorities**.

Table 40 – Responsibilities and Authorities

Position	Responsibilities	Authorities
State Environmental Managers	Provide advice and support in preparing the Community Engagement Plan	Recommend the development of Community Engagement Plans for relevant sites
General Managers	Maintain awareness of community issues for sites under their control	Manage highly contentious community issues
Site Managers	Approve Community Engagement Plan	Manage community issues
Environmental Officers	Prepare & maintain Community Engagement Plan	-

4.3.3 Key Stakeholder Identification

Key stakeholders are to be identified in the Community Consultation Register (refer **Attachment 1 – External Environmental Communication Record**).

As the key stakeholders and contact information will change over time, the register is to be a live document that must be updated where necessary to reflect any changes to the relevant stakeholders.

In summary, stakeholders general fall into the following broad stakeholder groups:

- Administering authorities relevant to the MLs and EA (limited to the Department of Environment and Science, and the Department of Resources, or subsequent Departments as renamed).
- Local government agencies.
- Local and State members of Parliament.
- Landowners for the background tenure relevant to the MLs (for both surface area and access).
- Adjacent landowners.
- Local community groups.

It should be noted that the land comprising the MLs is freehold land, and therefore Exclusive Land (100%) meaning that Native Title has been extinguished on the land.

4.3.4 Community Engagement Strategy

A summary of the proposed consultation and frequency is provided in **Table 41 - Stakeholder Consultation Requirements**.

Table 41 - Stakeholder Consultation Requirements

Stakeholder	Consultation Requirements	Proposed Consultation Frequency
Department of Environment and Science	Reporting in accordance with the EA and relevant legislative requirements of the EP Act as required.	In accordance with the frequencies prescribed under the EA and EP Act.
Department of Resources	Reporting in accordance with relevant legislative requirements of the *Mineral Resources Act 1989* ('MRA') as required.	In accordance with the frequencies prescribed under the MRA.
State / Local Members	Communicate as required in relation to the proposed rehabilitation for the sites with reference to local planning instruments applicable to the land.	As required.
Local Government	Communicate as required in relation to the proposed rehabilitation for the sites with reference to local planning instruments applicable to the land.	As required.
Landowners	Communicate as required in relation to the proposed rehabilitation for the sites.	As required.
Local Community Groups	Communicate as required in relation to the proposed rehabilitation for the sites.	As required.
Traditional Owners	Communicate as required in relation to the proposed rehabilitation for the sites.	As required.

4.3.5 Communication Methods and Information to be Released

The methods and content of information to be released will vary according to each stakeholder group's information needs. Examples of communication medium that may be used are provided in **Table 42 - Communication Medium**.

Table 42 - Communication Medium

Medium	Description
Face to face meetings	Meetings with individual stakeholders such as Landowners may be carried out by on-on-on meetings where required to communicate regarding the proposed rehabilitation of the sites and to obtain feedback.
Focus groups / Workshops	This enables stakeholders with the same interest to attend a single meeting to discuss common matters / issues.
Emails	Distribution of relevant content via electronic mail to enable rapid delivery of messaging in relation to rehabilitation. Emails may be used for distribution of print materials in lieu of hard copy mail outs for efficiency and to reach a wider audience.
Print materials	This could include, but is not limited to: • letters • background information documents • flyers.

Medium	Description
	Print materials are relevant for delivering specific and/or targeting messages.
Online media	This can include Facebook and company website hosting relevant project information. This enables positive messaging to stakeholders and proactive solutions via monitoring of engagement.
Phone calls	Discussion over the phone with stakeholders to reach a mutual understanding. This offers an efficient resolution process due to the ability to obtain immediate feedback and responses.

The type of information that will be released via the above methods will be limited to matters relevant to the PRCP, such as:

- Summaries of PRCP content relevant to any change of a PMLU.
- Details of any amendments to PRCP Schedule that may be required over the life of the project.
- Proactive advice and messaging to the community during progressive rehabilitation.

4.3.6 Consideration of Feedback and Comments

The communication medium identified at **Section 4.3.5 - Communication Methods and Information to be Released** will provide stakeholders with an opportunity to provide feedback regarding the rehabilitation of the project. Contact details of the nominated Austral Bricks representative are to be provided in any communication medium to enable the community to provide feedback on the project. A conceptual flow chart of the feedback and comment handling process is provided in **Diagram 3 - Feedback and Comment Handling Process**.

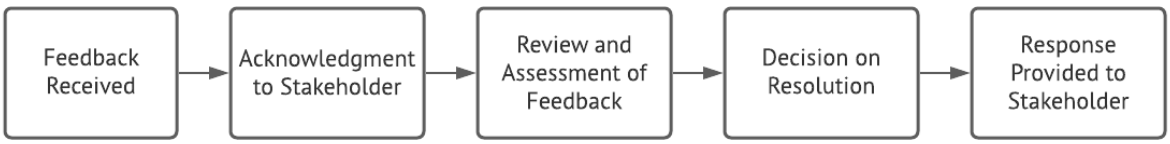


Diagram 3 - Feedback and Comment Handling Process

Austral Bricks are to carry out systematic analysis of the feedback and comments provided by the stakeholders in response to each separate consultation and/or feedback event to determine if, and how, the matters raised should be used to inform site rehabilitation activities.

The analysis is to include:

- a summary of items raised by the stakeholders.
- consideration of any relevant legislation and/or regulations relevant to the feedback.
- if applicable. potential solutions and resources required to address / resolve the feedback.

An electronic record of community feedback and comments is to be maintained (refer **Attachment 1 – External Environmental Communication Record** for a template).

Analysis of community feedback is to be provided to the relevant senior management team for review. Where relevant, the feedback the analysis findings are to be used by Austral Bricks to develop and implement rehabilitation activities for the sites.

Austral Bricks are to provide a response to all feedback received in line with the methods of communication outlined at **Section 4.3.5 - Communication Methods and Information to be Released**.

5 Post-Mining Land Uses

5.1 Purpose

This section has been prepared to satisfy the requirements of Section 126C(1)(d) of the EP Act to state the extent to which each PMLU in the PRCP schedule is consistent with:

- the outcome of consultation with the community in developing the plan; and,
- any strategies or plans for the land of a local government, the State, or the Commonwealth.

The PMLUs for the site have been previously addressed in the EA (the primary Land Outcome Document), and these are able to be transitioned into the PRCP schedule. As a result, Austral Bricks is not required to complete the information requirements under section 126C(1)(j) of the EP Act in this section.

5.2 Approved PMLUs

Table 43 – Pre-Approved PMLUs summarises the PMLUs which are approved in the Land Outcome Documents relevant to the site. No Non-Use Management Areas are proposed for the site or the PRCP Schedule. It is proposed to amend the PMLUs for the Rochedale site to reflect those shown under Proposed PMLU, which is further discussed in the following sections.

Table 43 – Pre-Approved PMLUs

Site	Mine Feature	Currently Approved PMLU	Proposed PMLU
Burbank (ML 1152)	Mine Voids	Native Ecosystem	No change
	Buffer	Native Ecosystem	
	Sediment Traps / Basins	Wetland Ecosystem	
	Roads	No rehabilitation required	
Redland Bay (ML 50035)	Mine Voids (> 20º slope)	Native Ecosystem	No change
	Mine Voids (< 20º slope)	Rural Residential	
	Mine Voids (below free draining level)	Wetland Ecosystem	
	Buffer	Native Ecosystem	
	Sediment Traps / Basins	Wetland Ecosystem	
	Roads	No rehabilitation required	
Rochedale (MLs 1151 & 1156)	Infrastructure (brick manufacturing and ancillary facilities including roads)	Industrial	Industrial Native Ecosystem Wetland Ecosystem
	Mine Voids		
	Sediment Traps / Water Basins		
	Amenity Bank / Buffers		

5.3 PMLU Criteria Consideration

5.3.1 Outcomes of Consultation

Due to the historical nature of the mining project, there has been limited consultation with the community regarding rehabilitation of the site to date with the exception of Rochedale.

Going forward, Austral Bricks are to engage with relevant stakeholders regarding the implementation of the PRCP via the Community Consultation Plan (refer to **Section 3**).

5.3.2 Government Strategies / Plans for the Land

5.3.2.1 Summary

Table 44 – Summary of Planning Considerations provides a summary of the relevant local authorities, planning scheme and zoning.

Table 44 – Summary of Planning Considerations

	Burbank (ML 1152)	**Redland Bay (ML 50035)**	**Rochedale (MLs 1151 & 1156)**
Local Authority	Brisbane City	Redlands City	Brisbane City
Planning Scheme	City Plan 2014	Redland City Planning Scheme	City Plan 2014
Current zone	Environmental Management Zone	Rural Zone	Industry Investigation Zone Emerging Community Zone Open Space Zone
SEQ Regional Plan	Regional Landscape and Rural Production Area	Urban Footprint	Regional Landscape and Rural Production Area

5.3.2.2 Planning Scheme considerations

Development of land within Queensland follows the planning framework established by the *Planning Act 2016*. Each local government within Queensland has prepared a Planning Scheme, which sets up the assessment benchmarks applicable when development the site, including establishing the definition of land uses. Where applicable, development may also require concurrent, or additional approvals at State government level.

All of the sites are subject to South East Queensland Regional Plan, which is administered by the *Planning Regulation 2017* ('Planning Reg'). The Planning Reg contains provisions to ensure particular forms of development within South East Queensland are consistent with the intent of the *ShapingSEQ* policy.

5.3.2.2.1 Burbank

The Burbank site is located in the Brisbane City Council local government area and is administered by the City Plan 2014 (City Plan). The site is located in the Environmental Management Zone, the purpose

of which is to identify environmentally sensitive areas and provide for the protection of the environmentally sensitive areas from urban and industrial activities other than dwelling house, other low-impact activities and quarries.

City Plan also identifies overlay which reflect state and local level interests. Overlays present within the ML area include; Airports environs overlay, Biodiversity areas, Bushfire, Community purposes network, Critical infrastructure and movement, Flood (overland flow), Regional infrastructure corridors and substations and Waterway corridors. Of particular relevance to the PMLU for the Burbank site are the environmental overlays, which seek to ensure development avoids, or manages, the risks and consequences associated with natural hazards and protects the environmental values of the site.

The City Plan prescribes land use definitions. The proposed PMLU would be identified as vacant/rural land.

The site also contains matters of State interest being; Remnant vegetation, SEQ Regional Plan (Regional landscape and rural production area), Waterway barrier works, Koala habitat and Powerlink easement.

The following is relevant to the PMLU:

a) Unless filling to design levels exceeds the pre-mining landform, the rehabilitation work will not constitute development under the Planning Act. Therefore, an Operational Works is not required.
b) The Environmental Management Zone contemplates use of the site for natural environment-centred land uses, such as nature-based living. In this regard, the zone predominantly comprises dwelling houses. Other land uses, are unlikely to be supported given the sites identification in the Biodiversity areas overlay. Returning the site to vacant land does not constitute development under the Planning Act. Therefore, a Material Change of Use is not required.
c) Urban and rural residential activities are prevented from occurring in the SEQ Regional Landscape and Rural Production Area.

5.3.2.2.2 Redland Bay

The Redland Bay site is located in the Redlands City local government area and is administered by the *Redlands City Plan* (Planning Scheme). The site is located in the Rural Zone, the purpose of which is to *provide for a wide range of primary production activities while protecting natural resources and significant natural resources and significant environmental and landscape values*.

Overlays present within the ML area include: Bushfire hazard, Environmental significance, Extractive resources, Flood and storm tide hazard, Landslide hazard and Transport noise corridor. Of relevance to the PMLU for the Redland Bay site are the biodiversity overlay which managed development to avoid or minimise and mitigate significant impacts on matters of national, state and local environmental significance. The proposed PMLU is rural residential, which would be defined under the Planning Scheme as a dwelling house.

The site also contains matters of State interest being; SEQ Regional Plan (Regional landscape and rural production area), Waterway barrier works, Remnant vegetation and Koala habitat.

The following is relevant to the PMLU:

a) Unless filling to design levels exceeds the pre-mining landform, the rehabilitation work will not constitute development under the Planning Act. Therefore, an Operational Works is not required.
b) Construction of a dwelling house does not require an application for a Material Change of Use under the Planning Scheme.

5.3.2.2.3 Rochedale

The Rochdale site is located in the Brisbane City Council local government area and is administered by the *City Plan 2014* (City Plan). The site is identified within the Industry Investigation Zone, Emerging Community Zone and Open Space Zone, refer to **Figure 27 – Rochedale Zoning Map**.

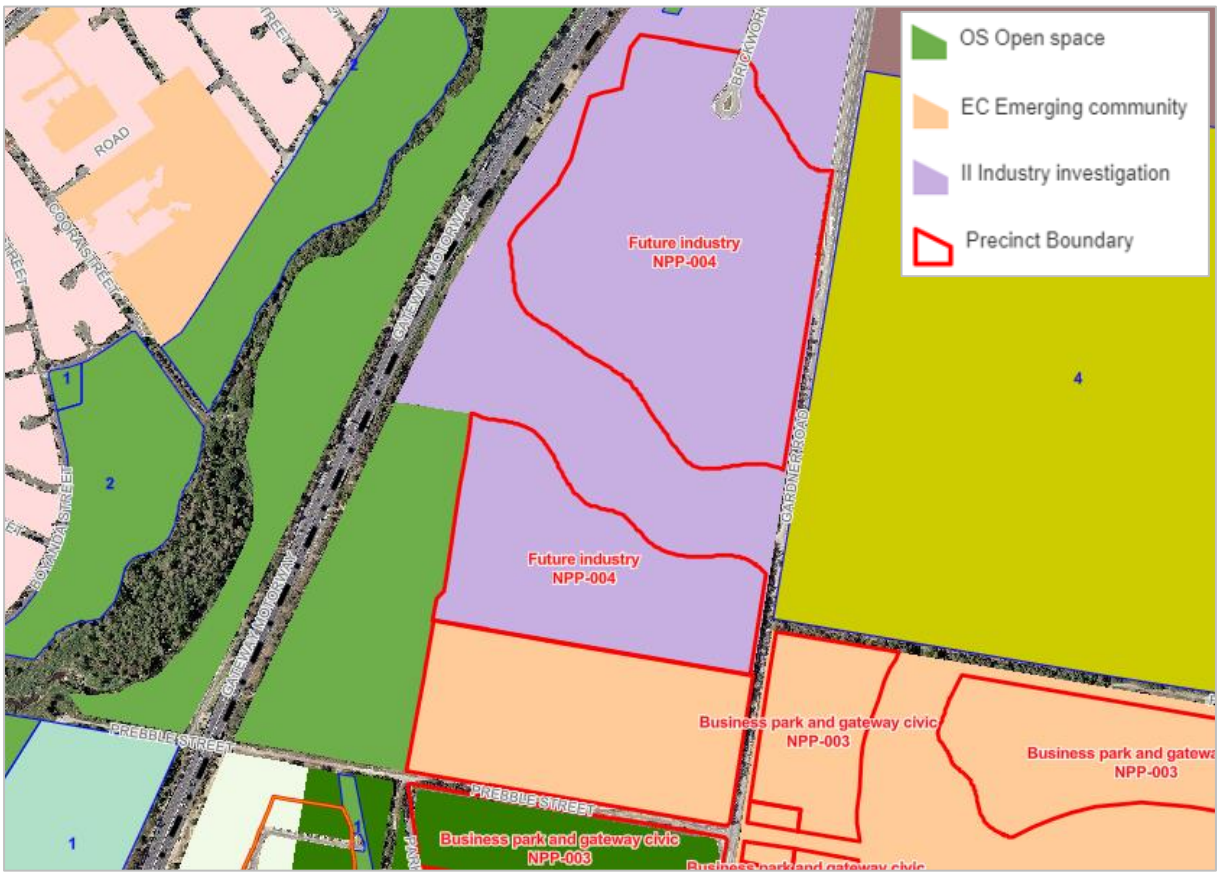


Figure 27 – Rochedale Zoning Map

(Source: Brisbane City Council City Plan 2014)

The Rochedale Urban Community Neighbourhood Plan also applies (Neighbourhood Plan Precinct boundaries illustrated in red above), identifying portions of the site as Future Industry and Business Park and Gateway Civic Precinct. The northern portion of the site is subject to a Preliminary Approval which allows for a range of industrial activities to occur on the land once the site is connected to trunk infrastructure.

The split-zoning across the site reflects that further detailed planning needs to occur prior to converting the site for industrial or business activities. However, the zoning does preference future development for industrial activities on the site.

Overlays present within the ML area include; Airport environs, Bicycle network, Biodiversity areas, Bushfire, Community purposes, Critical infrastructure and movement network, Flood, Industrial amenity, Landslide, Potential and actual acid sulfate soils, Regional infrastructure corridors and substations, Road hierarchy, Streetscape hierarchy, Transport noise corridor and Waterway corridors.

The proposed PMLU is for industrial activities. These uses have various definitions under the City Plan.

The site also contains matters of State interest being; Waterway barrier works, Remnant vegetation, Koala habitat, Protected plants and Powerlink Easement.

The following is relevant to the PMLU:

a) Unless filling to design levels exceeds the pre-mining landform, the rehabilitation work will not constitute development under the Planning Act. Therefore, an Operational Works is not required.
b) A Preliminary Approval allows for a range of industrial activities to be established on the northern portion (Lot 8 SP283241) of the site once the site is connected to necessary infrastructure (i.e., sewer, stormwater, water and road upgrades). The balance of the site (Lot 1 SP213452) is also identified for future industrial activities, subject to detailed planning and connection to necessary infrastructure.
c) A Development Application for a Preliminary Approval to vary the effect of the *Brisbane City Plan 2014* and Development Permit for Reconfiguring a Lot was lodged to BCC pursuant to Section 50 of the *Planning Act 2016* on 31 October 2018. This application was submitted by BCC's Asset Optimisation Branch as the primary applicant.

The purpose of Council's development application in relation to Lot 1 on SP213452 and Lot 101 on SP213452 is to allow future development of 227 Gardner Road, Rochedale for various commercial and industrial purposes, and retention of the western portion of the Lot as open space. On 4 September 2019, the State Assessment and Referral Agency (SARA) issued the applicant a Referral Agency Response – with Conditions. On 23 July 2020, BBC issued a Further Advice letter requesting additional information regarding tree retention and access matters. At the time of preparing this PRCP, the development application remains under assessment.

5.3.3 Rochedale Justification Relating to Change of PMLU

As indicated in **Table 43 – Pre-Approved PMLUs**, Austral Bricks wish to add the PMLUs of Native Ecosystem and Wetland Ecosystem to the western portion of land overlain by ML 1156 (currently Lot 1 on SP213452 and Lot 101 on SP213452) which is owned by BCC. To justify this change, this section has been prepared to satisfy the requirements of Section 754 pf the EP Act.

Consultation with the Department during the preparation of similar PRCPs has confirmed that the following information would be necessary to justify that the PMLU of Industrial is substantially similar to the PMLU nominated in the existing land outcome document:

- Will the impacts and aspects to Environmental Values change?
- How does the local Planning Scheme consider the old and new outcome. Are both outcomes on the same overlay in the planning scheme for that particular lot?
- Does the community have any objections?
- Will the new PMLU require substantially different rehabilitation methodology to achieve?

Previous consultation with the Department also indicted that, where a historical EA document provided for rehabilitation outcomes, consideration may be given to such documents. The following sections provide responses to each of the above-mentioned items.

5.3.3.1 Impacts to EVs

Under the Department's previous guideline titled *Rehabilitation requirements for mining projects* (DES 2014, p. 5):

> *The rehabilitation hierarchy, in order of decreasing capacity to prevent or minimise environmental harm, is:*
>
> 1. *avoid disturbance that will require rehabilitation*

2. *reinstate a "natural" ecosystem as similar as possible to the original ecosystem*
3. *develop an alternative outcome with a higher economic value than the previous land use*

As recognised by the Department, achieving natural ecosystems (e.g., Native Ecosystem and Wetland Ecosystem such as those at Rochedale) provide for an outcome that has an increased capacity to minimise environmental harm on environmental values. The addition of Native Ecosystem and Wetland Ecosystem PMLUs over a portion of ML 1156 directly aligns with this goal of reduced environmental harm.

An Industrial PMLU inherently requires disturbance of the landform and establishment of industrial premises and infrastructure. This would require removal of the current established vegetated landform, and aligns with BCC's intentions for the site as the landowner which are to use this portion of the site for future community open space. Therefore, the risks of impacts to EVs are reduced from those which would otherwise apply if an Industrial PMLU was subsequently established in this area of the site.

5.3.3.2 Local and State Planning Considerations

The proposed PMLUs are considered consistent with the outcomes of the relevant local planning framework for the following reasons:

- As identified in **Section 5.3.2.2.3 - Rochedale**, the site has mixed zoning, with the land the subject of the proposed Native Ecosystem and Wetland Ecosystem PMLUs identified as 'Open Space' zone under the *Brisbane City Plan 2014*.
- The proposed PMLUs are consistent with the outcomes sought for the open space under the Rochedale Urban Community Neighbourhood Plan which applies over the site. Under the Rochedale Urban Community Neighbourhood Plan, the western portion the subject of the PMLU change is identified as 'Habitat areas and ecological corridors private', refer to **Figure 28 – Rochedale Urban Community Local Plan Extract** which illustrates this intent.
- BCC has lodged a development application over Lot 1 on SP213452 (BCC ref. A005056710) recognising this portion of the site as community open space (discussed in **Section 5.3.2.2.3 - Rochedale** and illustrated in **Section 6.1.1.2 - 227 Gardner Road, Rochedale**).

The site is located within the Urban Footprint of the South East Queensland Regional Plan developed under the State planning framework, which is administered by the *Planning Regulation 2017* ('Planning Reg'). The Planning Reg contains provisions to ensure particular forms of development within South East Queensland are consistent with the intent of the *ShapingSEQ* policy.

A key strategy for the Urban Footprint as defined under Element 10: Safety of the *Shaping SEQ* policy is:

Element 10: Safety

1. *The area incorporates the full range of urban uses including housing, industry, business, infrastructure, community facilities and other integral components of well-planned urban environments, such as local areas for sport and recreation and urban open space* (p. 101).

The EA defining a PMLU of Industrial over this portion of the site would not facilitate the development of the site into such an end use, nor provide jurisdiction for this use to be accepted by the appropriate State and Local government authorities. Rather the *Brisbane City Plan 2014*, in particular the Rochedale Urban Community Neighbourhood Plan, define the land as being suitable for uses other than industrial, and therefore industrial on this portion of land is not currently acceptable under the local planning instruments. Any development application which was to propose a residential use would be required to justify departure from the current planning intent for the site This would not guarantee the residential use would be approved by the relevant local and State authorities.

An Industrial PMLU over this portion of the Rochedale site is likely to be prohibitive for any future surrender of the EA as it is not reflective of the overarching planning instruments in place, or community expectations for the end use. BCC as the landowner is currently in the process of obtaining land use approvals for a community open space over this portion of the site, to preserve ecological values of the land in line with the intent of the Rochedale Urban Community Neighbourhood Plan. Once the development permit is granted, this will preclude an industrial end use in this portion of the site. As such, an Industrial PMLU is not currently appropriate, having regard to the planning intent for the site.

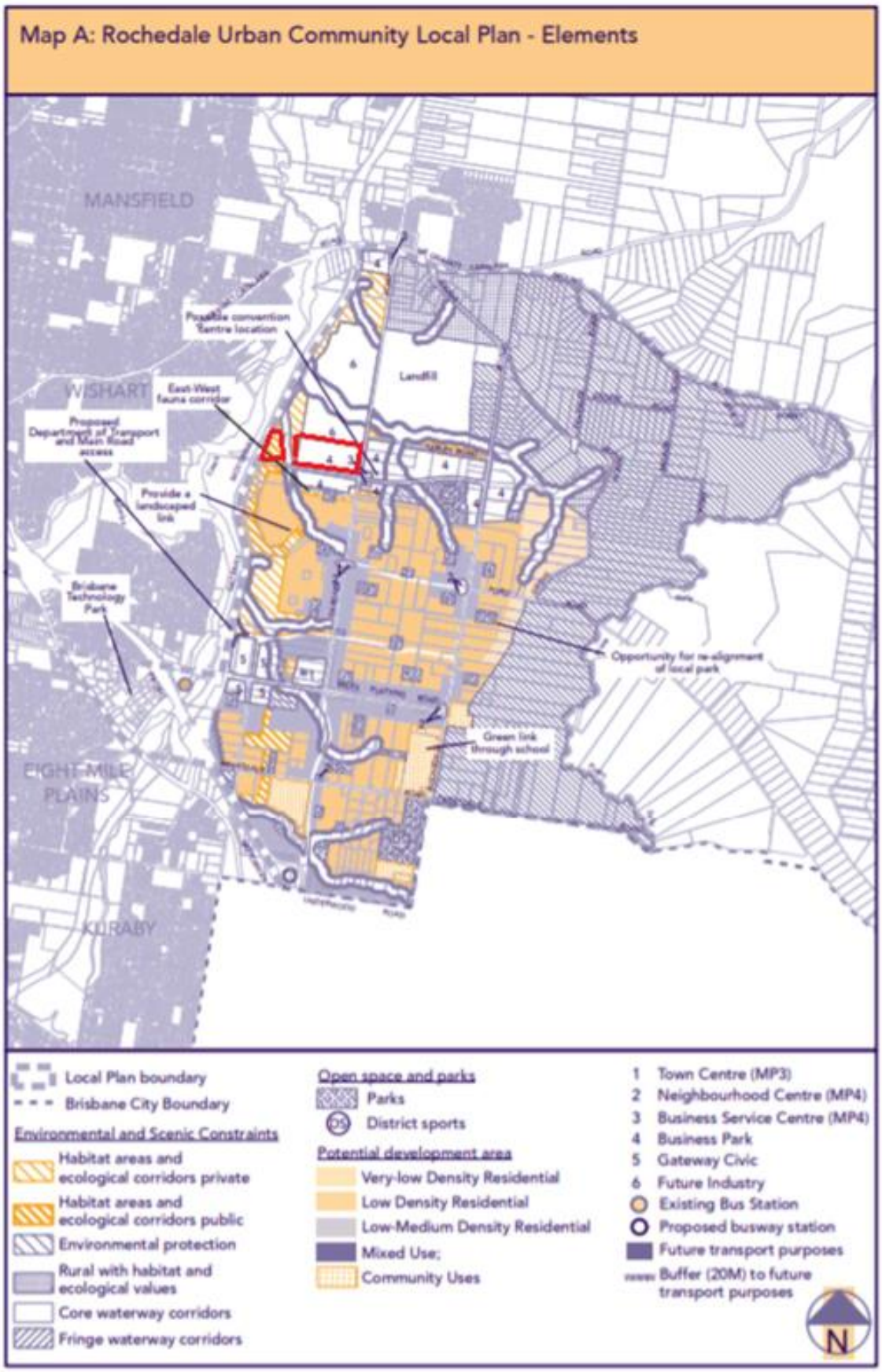


Figure 28 – Rochedale Urban Community Local Plan Extract
(Source: Brisbane City Council)

5.3.3.3 Community Consultation and Objections

The portion of the land subject to the Native Ecosystem and Wetland Ecosystem PMLU was agreed to be surrendered as part of the recent application to renew ML 1156 which was lodged in August 2020 and subsequently approved in July 2021. The requirement to condition a partial surrender was decided following extensive consultation between Austal Bricks, BCC as the landowner and the Department of Resources ('DoR'). Under the conditions imposed on the renewal at the request of BCC and DoR, Austral Bricks is required to surrender this land by March 2024. The condition states:

> *The holder shall lodge a partial surrender application of a portion of the mining lease as shown on the drawing 407.DRG.156 revision 1 within three years of the date of the last renewal.*

Drawing 407.DRG.156 revision 1 as referenced in this condition is included as **Figure 31 – Partial Surrender Area**.

As discussed at **Section 5.3.2.2.3 - Rochedale,** BCC has lodged a development application over Lot 1 on SP213452 (BCC ref. A005056710) recognising the western portion of the site the subject of the proposed PMLU change as community open space. The planning framework required a period of public notification for BCC's DA, which occurred between 14 June 2019 to 29 July 2019.

Submissions made in relation to the DA were as follows; however, it is noted that no member of the community objected to the proposed use of the land as future community open space:

- A submission was made by Urban Strategies in support of the development of the property on the basis of a forthcoming approval being conditioned such that the variation approval allows for consistent land use outcomes and assessment benchmarks to that of the pending development application over 231 Gardner Road, Rochedale. This includes the upgrade of Prebble Street, upgrade of Gardner Road and upgrade of the Prebble Street / Gardner Road intersection, occur prior to the variation approval having any force or effect.
- The Goodman Property Services submission provided the argument that, whilst the land dedication is provided as part of the development application, the application is not proposing to undertake the road works and required infrastructure upgrades that has significant cost impact for future owners of land and operations along Gardner Road. Goodman also have engaged a firm known as Bitzios to peer review their Traffic Impact Assessment.

While Austral Bricks was also an objector during this notification period, this was on the basis of potential encroachment on its mining activities, which were considered to be afforded protection from incompatible or sensitive land uses under town planning principles identified in the *City Plan 2014* strategic plan.

In addition to the above, Neighbourhood Plans such as the Rochedale Urban Community Neighbourhood Plan are subject to extensive community consultation during the preliminary and draft document phases. Therefore, through this process, the local community, and Local and State governments have an expectation that the site will be a mixture of open space (in the western portion) and industrial uses.

Through consultation with BCC and DoR, the agreed condition in which the area the subject of the PMLU change will be left was discussed and agreed.

5.3.3.4 Rehabilitation Methodology to Achieve Proposed PMLU

It must be noted that, following consultation commencing on 25 October 2016 with DES, Austral Bricks was requested to retrospectively amend the rehabilitation outcomes of the EA to facilitate the partial

surrender of the northern position of the Rochedale site, which was formerly overlain by MLs 1165, 50189, 50165 and part of ML 1151. The amendment was completed in order to remove inconsistencies between the industrial landform that had been established on MLs 1165, 50189, 50165 and part of ML 1151, and the rehabilitation outcomes contemplated by the EA. The amendment resulted in the change to the 'Rehabilitation Outcomes' nominated in the former EA condition (F1-1), with all 'Rehabilitation Outcomes' for the Rochedale MLs changed to an 'industrial' end use. This was done to reflect the end use present on MLs 1165, 50189, 50165 and part of ML 1151, but was also pre-emptive to address what, at that time, was the assumed PMLU for the balance of the Rochedale site. **Table 45 – Former EA Schedule F – Table 1: Final Land Use and Rehabilitation Outcomes1** provides an extract of the former rehabilitation outcomes contained in the EA relevant to Rochedale.

Table 45 – Former EA Schedule F – Table 1: Final Land Use and Rehabilitation Outcomes[1]

Tenure ID [1]	Disturbance Type	Former Projective Surface Area (ha)	Former EA Approved Rehabilitation Outcomes
ML 1151	Infrastructure (brick manufacturing and ancillary facilities)	22.5	Industrial
	Mine void	7.0	Industrial
	Sediment traps / water basins	0.2	Wetland Type 1
	Amenity banks / buffers	4.0	Native Ecosystem
ML 1156	Mine void	31.5	Industrial
	Sediment traps / water basins	2.0	Wetland Type 2
	Amenity banks / buffers	-	Native Ecosystem

Notes:

1. This table has been extracted and modified from Schedule F – Table 1: Final land use and rehabilitation outcomes contained in the EA.

The amendment also sought to remove the former condition (F9-1) which related to a Planning Use Study and the associated condition of the EA that set the date by which the Planning Use Study was to be submitted to the Department as being 30 June 2005. This date being historical at the point of the amendment was no longer considered applicable, and was therefore requested to be removed. An example of the wording of this condition, sourced from a copy of the EA dated 18-SEP-2014 is provided below:

> *Complete an investigation into rehabilitation of disturbed areas and submit a report to the administering authority proposing acceptance criteria to meet the outcomes in (F3-1). A report on the investigation, which will propose acceptance criteria, must be submitted to the administering authority by June 2005.*

The Planning Use Study submitted in 2005 to address the requirements of this condition was the report titled *Integrated Authority No. SR2484: Report on Rehabilitation Acceptance Criteria, Native Ecosystem and Water Filled Voids and Planning Use Study* (Groundwork EMS Pty Ltd 2005). An extract of the recommendations of the Planning Use Study are provided below:

TABLE 1
FINAL LAND USE AND REHABILITATION OUTCOME SCHEDULE

Tenure ID	Disturbance Type	Projected life of mine disturbance Area (ha)	Rehabilitation Outcome	27 June 2005 Disturbance Area (ha)
ROCHEDALE LEASES				
ML1151	Amenity banks/buffers	4.0	Native Ecosystem	0.8
ML1156	Amenity banks/buffers	3.1	Native Ecosystem	3.1
ML1165	Amenity bank/buffers	0.8	Native Ecosystem	0.3
ML50165	Mine void	3.7	Wetland Type 2	1.8
	Amenity banks/buffers	3.2	Native Ecosystem	1.0
ML50189	Mine void	5.2	Wetland Type 2	1.5
	Amenity banks/buffers	1.6	Native Ecosystem	0.6
BURBANK LEASE				
ML1152	Mine void	24	Native Ecosystem	3.0
REDLAND BAY LEASE				
ML50035	Buffer	4	Native Ecosystem	0.45

As shown by the above, a Native Ecosystem PMLU was contemplated by the former EA and the Planning Use Study prepared to satisfy the former EA conditions. In addition, a Wetland PMLU was formerly applicable to the site.

A detailed summary of the rehabilitation to the Native Ecosystem PMLU and Wetland Ecosystem PMLU is provided in **Section 6.1.2 - Native Ecosystem PMLU** and **Section 6.1.3 - Wetland Ecosystem PMLU**. While the rehabilitation methodology will differ, it will result in a landform which aligns with the Department's guideline, decreases 'the capacity to prevent or minimise environmental harm' be reinstating a natural ecosystem. As previously discussed, the PMLUs align with the intent of the local and State planning instruments, and the landowner's expectations for the property.

6 Rehabilitation and Management Methodology

6.1 Landform Design

6.1.1 Industrial PMLU

6.1.1.1 105 Gardner Road, Rochedale

Lot 8 SP283241 situated at 105 Gardner Road, Rochedale is land owned by Austral Bricks, which is intended to comprise a future industrial development.

Section 85 of the *Planning Act 2016* directs that a development approval for material change of use will lapse if not commenced within six years of the date of the decision notice being granted. Based on the timeframes previously experienced by Austral Bricks, the development application process to obtain a material change of use to convert land comprising a ML into urban uses (e.g., industrial) can take in excess of four (4) years before a development approval is obtained. Because of the time taken to obtain a development approval, and the limited time that the approval is valid before lapsing, a proponent would typically not commence works to obtain the planning approvals for a PMLU until the mine is nearing the end of life. For example, the planning application for the industrial PMLU over land subject to the former MLs 1165, 50189, 50165 and part of 1151 was lodged in 2009, and a decision on the application was made in March 2013. Although Austral Bricks acted upon the approval as it related to land over the former surrender areas, the component of the planning approval relevant to the balance of MLs 1151 and 1156 has since lapsed.

Landform design plans for the Rochedale Industrial PMLU that illustrate the layout of the proposed estates, infrastructure locations, land parcel information (e.g., reconfiguration of lots), RLs of the final landform, will be prepared for the purpose of any future development application to reflect the requirements of the relevant planning instruments in place at the time that the application is compiled. Landform design plans will be negotiated with the relevant assessment manager for the development application. As a consequence of these planning limitations, landform design plans that illustrate the final layout of the industrial PMLU are not able to be prepared at the time of this PRCP.

A Preliminary Approval varying the effects of the (now superseded) City Plan 2000 was approved via a Court Order on 8 November 2012. The extent to which the Preliminary Approval varies the effect of the City Plan 2000 is limited to a Material Change of Use and associated Building Work and Reconfiguration of a Lot for the purpose of listed uses (including industry, warehouse, service station, car wash, container depot, display and sales activities, indoor sport and recreation, utility installation, telecommunication tower and outdoor lighting). It is understood the Preliminary Approval had a relevant period of 120 months, from the date of the Court Order. A copy of the approved plan is provided as **Figure 29 – Concept Plan: Rochedale Industrial Estate**. The Preliminary Approval allowed for industrial development to occur once trunk infrastructure was provided to the site through future development applications for Reconfiguring of a Lot and/or Material Change of Use on the site. Austral Bricks are anticipated to commission specialists to design and engineer landform design plans at the point of lodging any future development application. However, the concept plan provided in this PRCP illustrates the final landform design which was approved via the previous DA as an example. A similar concept plan is likely to be replicated in any future development application.

Rehabilitation activities needed to achieve the final landform will primarily involve bulk earthworks to stabilise the landform and create levels which align with any future industrial development of the land. All earthworks for the industrial estate are to be carried out under either Level 1 or Level 2 supervision in accordance with *AS 3798-2007 Guidelines on earthworks for commercial and residential developments* (Standards Australia 2007), depending upon the location of the earthworks (for example, land underlying easements typically requires a lower level of geotechnical supervision due to the encumbrances / development restrictions over the land).

The subsequent rehabilitation activities will be guided by any subsequent development permit granted over the site and are likely to include:

- Establishment of stormwater infrastructure and services (e.g., power, water, telecommunications) for the development.
- Landscaping.
- Paving of roadways.

However, the extent to which the development of the industrial use will be progressed will be dictated by the stage at which the MLs are surrendered. As the Department is aware, in the event that a development permit for operational works is in place and has been acted upon, the ML holder can choose to surrender the EA in favour of the development permit and associated conditions. Former mine disturbance may remain on land at the point of surrender; however, under this scenario, civil works are expected to have commenced under the prevailing development permits for the industrial end use, and all residual disturbed land would be retained at the point of surrender, with obligations for rehabilitation transferred to the jurisdiction of Council to regulate under conditions of Operational Works approval. This method of rehabilitation has been progressed on numerous occasions, both in urban resource activity settings and extractive industry activities, wherein surrenders have been approved immediately after civil works for the development commence. This is therefore not a novel or unproven method of carrying out rehabilitation of urban mine sites and is anticipated to be applicable in this scenario.

In the event that the development permits are not at a progressed stage at the point of surrender, such as those relevant to Lot 1 (discussed at **Section 6.1.1.2 - 227 Gardner Road, Rochedale**), *Schedule F - Table 1: Rehabilitation requirements* of the EA allows for nomination of an 'alternative rehabilitation outcome'. Under previous examples, ML holders often nominate to return the landform to a safe, stable and non-polluting state such as pasture or native ecosystem.

Industrial development of land often requires establishment of stormwater controls such as sediment basin and drainage systems. As shown in **Figure 29 – Concept Plan: Rochedale Industrial Estate**, detention basins were incorporated into the concept plan. The *Rochedale Industrial Estate, Gardner Road, Rochedale: Stormwater Management Plan* (Cardno 2012a) lodged with the former development application identified these basins as the main stormwater capture and treatment measure for the development, intended to reduce the developed peak discharges from the site to the pre-development flow rates (Cardno 2012a, p. 92). Cardno (2012a, p. 10) noted that these basin designs were for functional purposes only, and that the landscaping design to be undertaken for the site will modify the location and form of each basin to some extent.

It is anticipated that in the post-development landscape, the basins will be able to drain freely with invert levels of the basin outlets mirroring the channel invert levels immediately downstream of the outlets (Cardno 2012a). The design of the basins will be regulated under conditions of the development permit to ensure that the basins are able to meet the stormwater quality objectives set for the development.

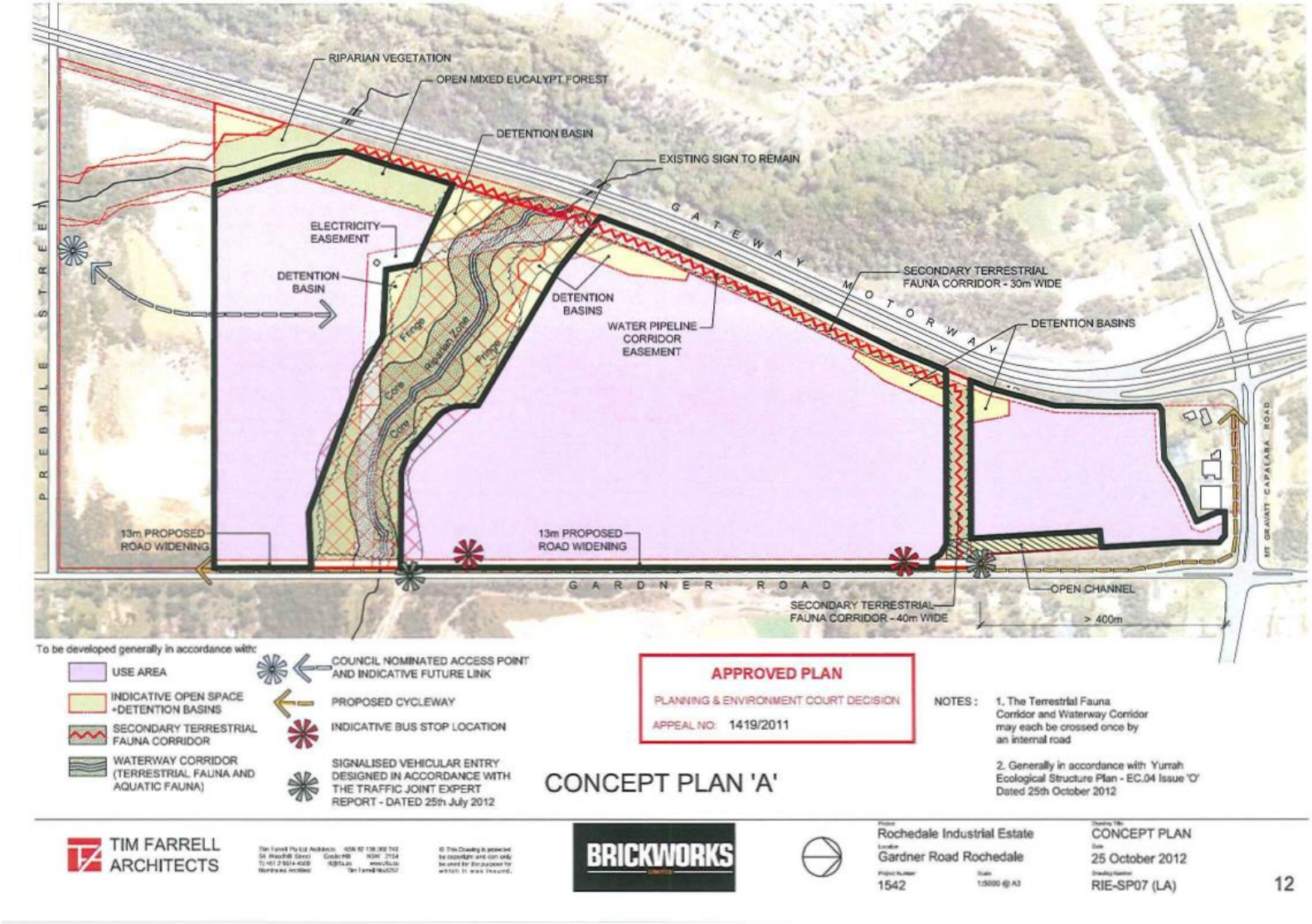


Figure 29 – Concept Plan: Rochedale Industrial Estate

(Reprinted from Concept Plan 'A' prepared by Tim Farrell Pty Ltd Architects (2012))

6.1.1.2 227 Gardner Road, Rochedale

A copy of the structure plan lodged by BCC with the application is provided as **Figure 30 – 227 Gardner Road Rochedale: Structure Plan** which illustrates the industrial reconfiguration of the lot and the area proposed to be reserved for community open space.

It should also be noted that, as BCC own this property and will be the holder of the development permit for the final land uses once granted, Austral Bricks' ability to rehabilitate the land to an Industrial PMLU within this portion of the site is limited other than as directed by BCC at cessation of the mining activities.

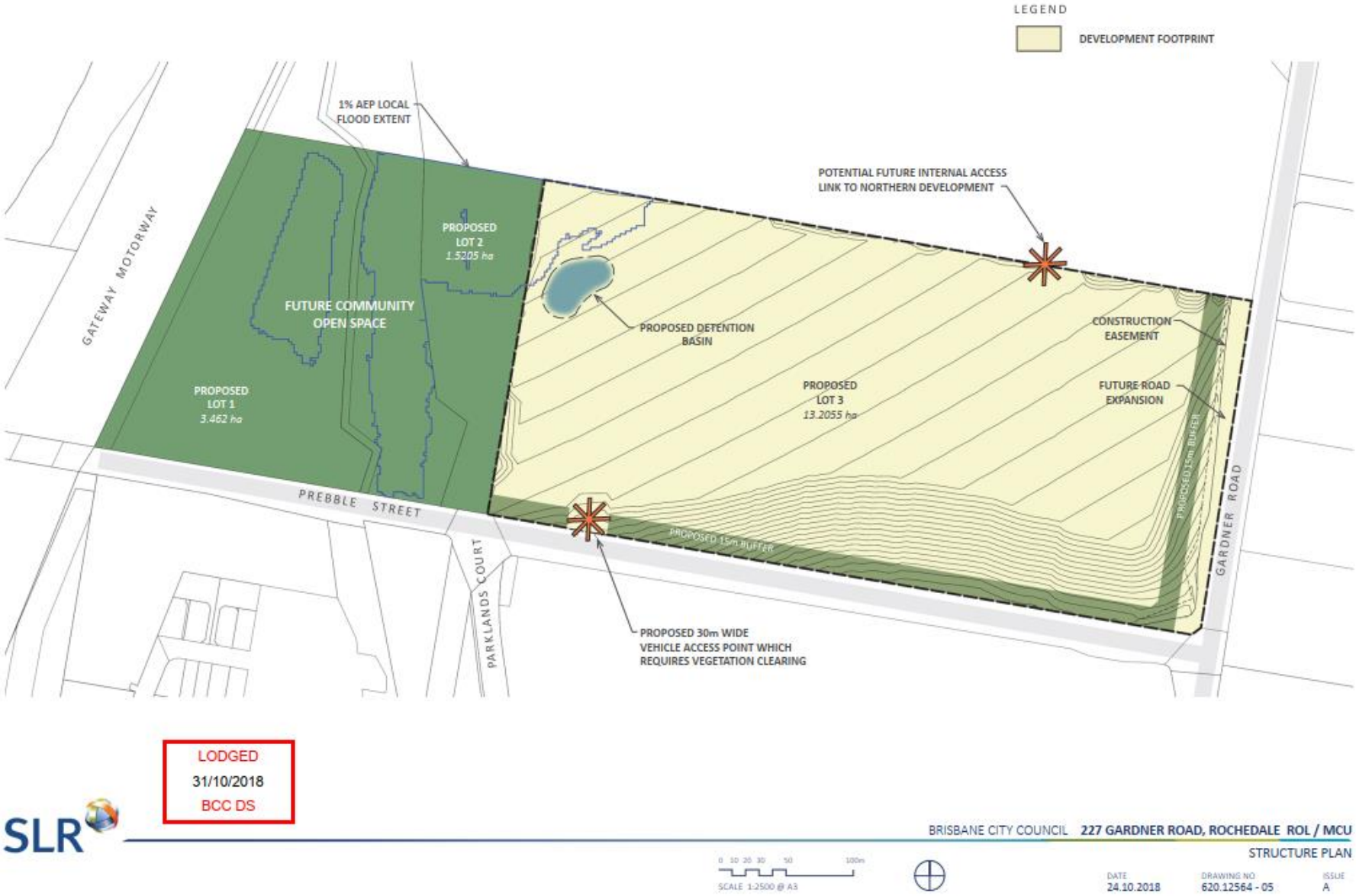


Figure 30 – 227 Gardner Road Rochedale: Structure Plan

(Reprinted from Structure Plan prepared by SLR Consulting (2018))



Figure 31 – Partial Surrender Area

6.1.2 Native Ecosystem PMLU

6.1.2.1 Burbank and Redland Bay

The Native Ecosystem final landforms are anticipated to be water-shedding (i.e., free draining) following reprofiling. The final landform will be reprofiled to achieve slopes which reflect the friction angle of the clay and substrate (as outlined in **Section 3.1.10- Land Stability** and **Section 3.2.10 - Land Stability**). Clays of high plasticity (compacted) typically have a friction angle of 17-35°. Clay shales have a typical friction angle of 20 - 27 ° (Wyllie, D. & Norrish, N. 1996).

Available topsoil and overburden will then be respread over the land surface. As determined through soils analysis, the soils at the sites are inherently sodic. To create a stable condition in sodic soils and improve rehabilitation success, the Commonwealth guideline *Leading Practice Sustainable Development Program for the Mining Industry* (Commonwealth of Australia 2016) recommends application of gypsum for such materials based on site-specific soil tests to determine application rates (refer to **Section 6.4.1.1 - Soil Quality** for details of amelioration to create a stable condition). Gypsum application will assist in preventing or reducing potential dispersion of soils on slopes (Commonwealth of Australia 2016).,

The landform will then be revegetated (refer **Section 6.7 - Revegetation** for methods). Hydroseeding is to be used on steeper slopes by spraying a mixture containing seed, fertiliser and binding agents to encourage vegetation growth (Commonwealth of Australia 2016). IECA (Australasia) (2010, p.5) state that 'at least 70% ground cover (combined plant and mulch) is considered necessary to provide a satisfactory level of erosion control'.

Rehabilitation of the buffer land which remains intact and undisturbed will not require rehabilitation. In addition, the amenity banks established at the Redland Bay site north of the maximum mining footprint have been excluded from rehabilitation, as these are assumed to be stable for the purpose of this PRCP. An access track into site traverses the buffer at the site entry/exit point. This access road is anticipated to be retained to allow for site access and, in accordance with the EA, no rehabilitation is required for roads. These areas are to be demarcated and excluded from the final rehabilitation. Selective weed management is to be carried out to reduce weed infestation associated with edge effects in areas bordered by rehabilitated operational areas.

6.1.2.2 Rochedale

The Native Ecosystem PMLUs within the partial surrender area at Rochedale as identified in are currently subject to progressive rehabilitation in readiness for handover to BCC. Ethos Urban (2018) provide the following description of the area in the Planning Report, which was submitted with the development application over Lot 1 on SP213452 and Lot 101 on SP213452:

> *Council's Brisbane City Plan mapping identifies the western part of the site, including the creek between the two parts of the site, within the Biodiversity areas overlay and High ecological significance sub-category. To protect conservation values on the site, the proposed development will subdivide the site to designate the western section of the site for Open Space and concentrate the future development footprint in the eastern part of the site. Additionally, the two vegetation corridors along Prebble Street and Gardner Road will be retained to the greatest extent possible to preserve the inherent ecological values in these locations* (p. 30).

> *A waterway corridor* [Lot 101 SP213452] *intersects the Open Space Zone. The proposed development footprint is located outside the Open Space Zone and allows for a 60m wide waterway corridor to be maintained to uphold drainage functions and for riparian vegetation to be protected* (p. 49)
>
> *The proposed development is proposed to subdivide the Open Space Zone from the future development footprint within the Emerging Community Zone to protect the waterway corridor* (p.69).
>
> *No infrastructure is proposed within the waterway corridor therefore, no vegetation is proposed to be removed thus, removing the requirement to rehabilitate the waterway corridor* (p.69).
>
> *The function and quality of the waterway will be retained and will not be altered from its current state* (p.69).
>
> *Future subsequent development applications may provide landscaping which assists in rehabilitating ecological health and habitat values in areas surrounding the waterway corridor* (p.69).

On this basis, it is understood that the native ecosystem within the landform will be retained and enhanced to provide for community benefit in line with the intent of BCC's City Plan and development application. Ethos Urban (2018) identify that this vegetated area will support a for future parkland (p. 38).

Austral Bricks and is currently in the process of progressively rehabilitating this land to a safe, stable and non-polluting landform, equivalent to a Native Ecosystem and Wetland Ecosystem PMLU in readiness for the surrender of this land in March 2024 and handover to Council. This has included all of the treatments outlined in **Section 3.4.3 - Progressive Rehabilitation Rochedale**.

As part of the DA process, BCC commissioned a *Conceptual Rehabilitation Plan* (E2M Consulting 2019) to guide the rehabilitation of the western portion of Lot 1 SP213452 and Lot 101 SP213452. The Conceptual Rehabilitation Plan was prepared in response to the Request for Further Information for the DA, and addresses the following items:

- *Description of proposed rehabilitation, including earthworks, methods, objectives; and,*
- *Details of maintenance access and fire maintenance tracks.*

Details of the rehabilitation treatments proposed by Council are outlined in the *Conceptual Rehabilitation Plan* (E2M Consulting 2019) which is provided as **Attachment 2 – 227 Gardner Rd, Rochedale: Conceptual Rehabilitation Plan**. Upon surrender, Council will take over any future works within this portion of the site in accordance with the *Conceptual Rehabilitation Plan* (E2M Consulting 2019) once the DA is approved.

For reference, the regional ecosystem types being established in the landform align with the findings of the field survey carried out by SHG (2017b) of pre-existing regional ecosystems. During this field survey, SHG identified that the vegetation within the site more accurately aligned with remnant Least Concern RE 12.9-10.17b. Species used by Austral Bricks for the revegetation of the landform have comprised of a mixture of species which have been identified in intact stands of vegetation within the site by SHG, and RE 12.9-10.17b (refer to **Table 36 – Rochedale Revegetation Species Mix** for a summary of species used, which align with the field survey and RE 12.9-10.17b).

6.1.3 Wetland Ecosystem PMLU

6.1.3.1 Burbank and Redland Bay

Wetland Ecosystem PMLUs will function as filtration systems in the broader landscape, assisting in natural water quality treatment and improvement. The wetlands will filter and capture sediment which will settle it to the bed of the wetlands. Wetland plant species established in the wetland ecosystem will then be able to access nutrients in the settled materials to support growth, in turn increasing habitat for fauna species.

Wetlands within the final landform are anticipated to act as a sink for dead plant matter, which will break down in the waters to create organic matter particulates referred to as detritus[1]. This enriched organic matter is expected to provide a food source for a variety of species including insects, reptiles, amphibians, birds and mammals such as the Firetail Gudgeon, Purple Swamphen and Cattle Egret recorded as occurring at the Burbank site (also note that the wetlands will provide a water source for all species recorded during ecological field surveys as outlined at **Section 3.1.12 - Fauna Presence and Populations**).

Wetlands also act as a carbon store by capturing carbon in the plants and soils within the system, preventing release to the atmosphere as carbon dioxide[1].

The layout of the Wetland Ecosystem PMLU will be dictated by the stormwater management devices that are in place at cessation of extraction; however, it is anticipated that the following rehabilitation treatments will apply:

- Sediment is to be removed from the basins and placed in a location where it can dewater prior to use in rehabilitation activities (DES 2022). Final wetland depths should be between 0.5 m below the normal water level to 0.2 m above the normal water level (Water by Design 2010, p. 157).
- Basins are to be battered to a bathymetry which results in a macrophyte zone that creates a sequence of ephemeral, shallow marsh, marsh and deep marsh zones in addition to small open water zones. Batter slopes are to be no greater than 1 (H): 4 (V) where possible.
- Overflow points are to be established at an elevation above the predicted standing water level.
- Batters are to be excluded from access to enable colonisation (natural regeneration) by wetland species. Where regeneration does not occur within 12 months of battering slopes, supplementary planting is to be carried out. Refer **Section 6.7 - Revegetation** for methods.
- Water quality is to be assessed to ensure that it achieves compliance with criteria specified in the EA.

6.1.3.2 Rochedale

The wetland ecosystem PMLU at Rochedale is situated within land owned by BCC. The wetland is currently in-situ and will remain in the landscape post-surrender to support BCC's plans for the site as open space. Ethos Urban (2018) state in the Planning Report submitted with the development application over Lot 1 SP213542:

[1] EPA (United States Environmental Protection Agency), (2022). *Why are Wetlands Important?* Accessed 29 November 2022 via https://www.epa.gov/wetlands/why-are-wetlands-important

> *The western portion of the site is characterised by water ponds and patches of remnant and regrowth vegetation and is intersected by a waterway corridor identified within Lot 101 on SP213452 which is not proposed to be developed as part of the proposal* (p. 1).
>
> *Three water ponds are located on the western portion of the lot (in an area where a tributary of Bulimba Creek was located) surrounded by sparse but healthy vegetation;*
>
> *Dense vegetation is located on either side of the waterway corridor with a higher number of Eucalyptus located west of the waterway.*

On this basis, it is understood that no further rehabilitation of the wetland ecosystem PMLU within the Rochedale site is required, as these have been designated by BCC as an area which will not be disturbed by the future proposed development. The waterbodies within the landform will be retained to provide a water feature to support the intended use as community recreational area and provide water storage to support the surrounding native ecosystem and increase stormwater runoff and flood storage. Water quality testing prior to the partial surrender of the ML to ensure that the water quality complies with the release criteria designated in the EA.

As outlined in **Section 6.1.3.1**, the function of the wetland in the broader landscape will be to provide natural water quality treatment and improvement, which would also be suitable for integrated water quality treatment compatible with the future land use

6.1.4 Rural Residential PMLU (Redland Bay)

Where land will be below 20^{o} and able suitable for a rural residential end use in accordance with the prevailing planning instrument, the landform will be graded to a free-draining landform and revegetated with pasture species suitable for a rural use. As outlined in **Section 3.1.10- Land Stability** and **Section 3.2.10 – Land Stability**, slope angles of less than 20^{o} achieve a friction angle which is appropriate for long-term stability.

Rehabilitation is to include the following:

- Flattening the slopes of batters, to a stable angle of repose suitable for the substrate.
- Using earthmoving equipment to progressively shape and trim the workings to the design profiles.
- Marrying all banks and batters with the surrounding ground surface and slope where practicable.
- Respreading topsoil in a way which assists in retaining precipitation and controlling sediment movement.
- Providing access to the terminal workings (e.g., batters) to allow maintenance of rehabilitation works.

It is anticipated that the plant growing media will be sourced from on-site stockpiles to the extent possible. At completion of reprofiling at Burbank and Redland Bay, the landform is to be revegetated with a species mix in line with **Section 6.7 – Revegetation**. Landscaping at Rochedale will be informed by the prevailing planning approval for the industrial PMLU.

Discharge points will be retained at the locations prescribed in the EA, refer to **Section 6.6 - Water Management**.

6.2 Hydrogeology

Section 3.1.5, 3.2.5 and **3.3.5** provide a summary of groundwater depths and quality at the sites based on registered groundwater bores in the vicinity of the sites. The adopted management approach to mining in relation to groundwater resources at the sites is avoidance, and the final landforms are not anticipated to retain voids which would intercept groundwater. As such, the level of assessment recommended to be undertaken as part of the PRCP Guideline has not been completed nor is it seen as being necessary to be undertaken. The mining activities the subject of this PRCP are relatively low risk when compared to other mining activities (coal, gold, copper etc.). The approach of avoiding groundwater is seen as an effective means to manage impacts on groundwater resources.

The nature of the mining activity, and the target resource being Clay and Shale, means that the contaminants that may arise from the mining activity are limited. There are very limited wastes produced from the mining activity, comprised of primarily overburden, with all saleable material extracted used as either material for brick manufacturing, general fill or for allocation in rehabilitation.

In relation to potential contaminants that may pose a risk to groundwater resources, as a result of the nature of the activity and simplistic nature of the adopted mining processes, there are few contaminants produced from the activity that pose a risk to groundwater resources. This is supported by the conditions of the EA which identify pH, Turbidity and Dissolved Oxygen (Redland Bay only) as the parameters to be monitored for surface water releases from site. There is an acceptance that stormwater interaction with these particular mining activities is low risk in being affected by hazardous contaminants. This in turn results in impacts to groundwater resources, particularly when avoidance of groundwater is preferred, to be low potential.

6.3 Flooding

To determine flood risks, reference has been made to the Brisbane City Council and Redland City Council mapping for flood prone areas. Review of this mapping has confirmed that Burbank and Redland Bay are not subject to flooding in accordance with the current City Plan overlays. **Figure 32 – Flood Information Mapping: Burbank** provides an illustration of the Burbank site in relation to flood events, sourced from Council's Flood Information mapping. A shown in the mapping, the site is not subject to flood events.



Figure 32 – Flood Information Mapping: Burbank

(Reprinted from https://fam.brisbane.qld.gov.au/)

Figure 33 – RCC Flood Prone Mapping: Redland Bay provides an illustration of flood mapping over the site. As evidenced by this mapping, the site is not in a floodplain location and is not mapped as being in a flood prone area. Consideration



Figure 33 – RCC Flood Prone Mapping: Redland Bay

(Reprinted from https://fam.brisbane.qld.gov.au/)

Figure 34 – Flood Information Mapping: Rochedale provides the most relevant mapping from Brisbane City Council in relation to flood events for the Rochedale site sourced from Council's Flood Information mapping.

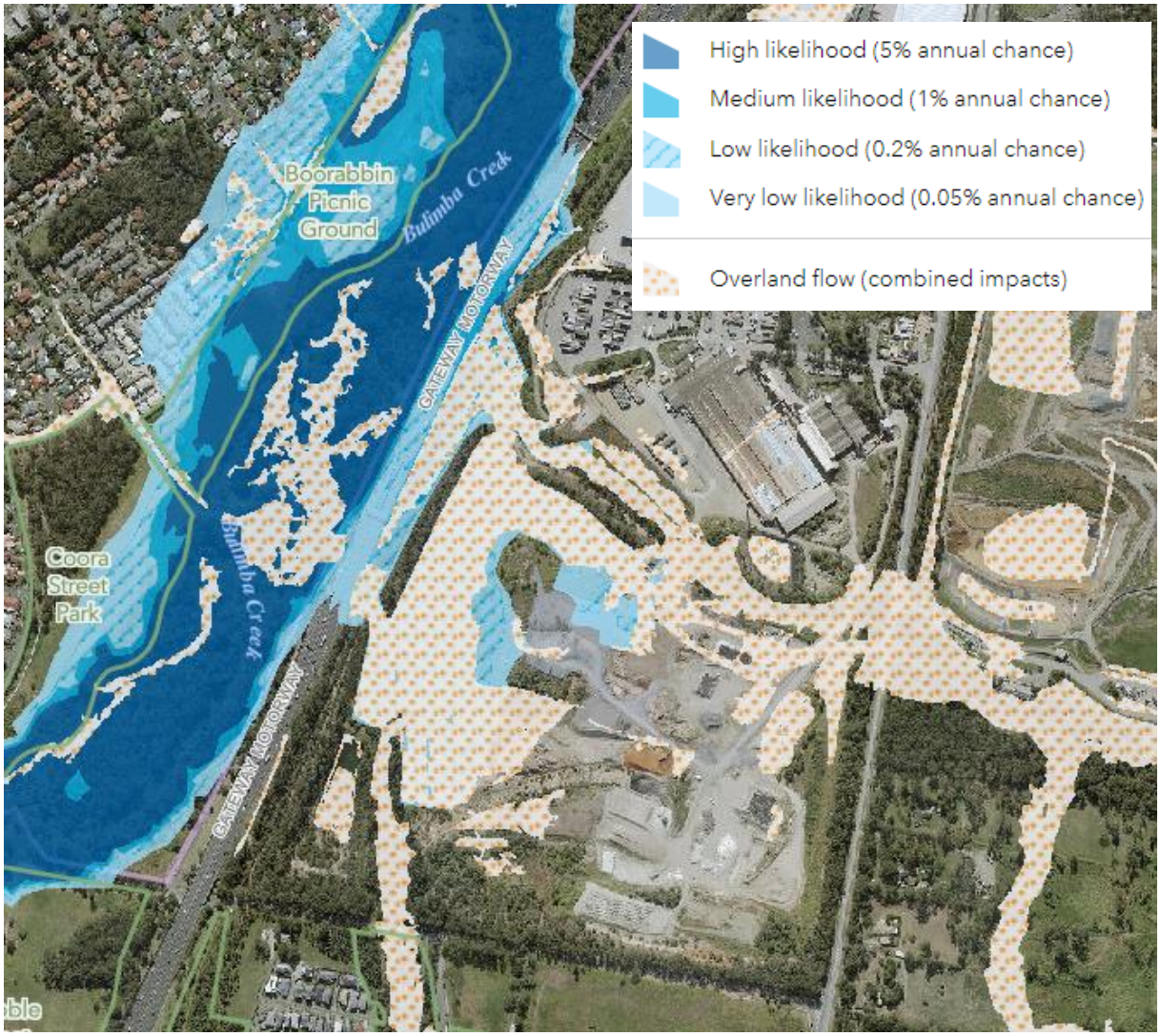


Figure 34 – Flood Information Mapping: Rochedale

(Reprinted from https://fam.brisbane.qld.gov.au/)

The site is primarily mapped as being subject to overland flows, with a small portion of the western boundary and central area being mapped as potentially subject to 'Very Low Likelihood' events, and 'Low likelihood' events. These are defined by Council as follows:

> ***Very Low likelihood (0.05% Annual Chance)***
>
> *This type of flood is considered very rare or an extreme event. There is a 1 in 2000 chance (0.05% likelihood) of flooding occurring in any year. Although this is rare, it may still occur.*
>
> ***Low likelihood (0.2% Annual Chance)***
>
> *This type of flood is considered rare. Although this is rare, it may still occur. There is a 1 in 500 chance (0.2% likelihood) of flood occurring in any year.*

City Plan overlay mapping shows that the western boundary of Rochedale is mapped by Brisbane City Council as being subject to waterway flooding (refer to **Figure 35 – BCC Creek/Waterway Flood Mapping**) and the central and southern drainage features are mapped as subject to overland flow flooding (refer to **Figure 36 – BCC Overland Flow Flood Mapping**).

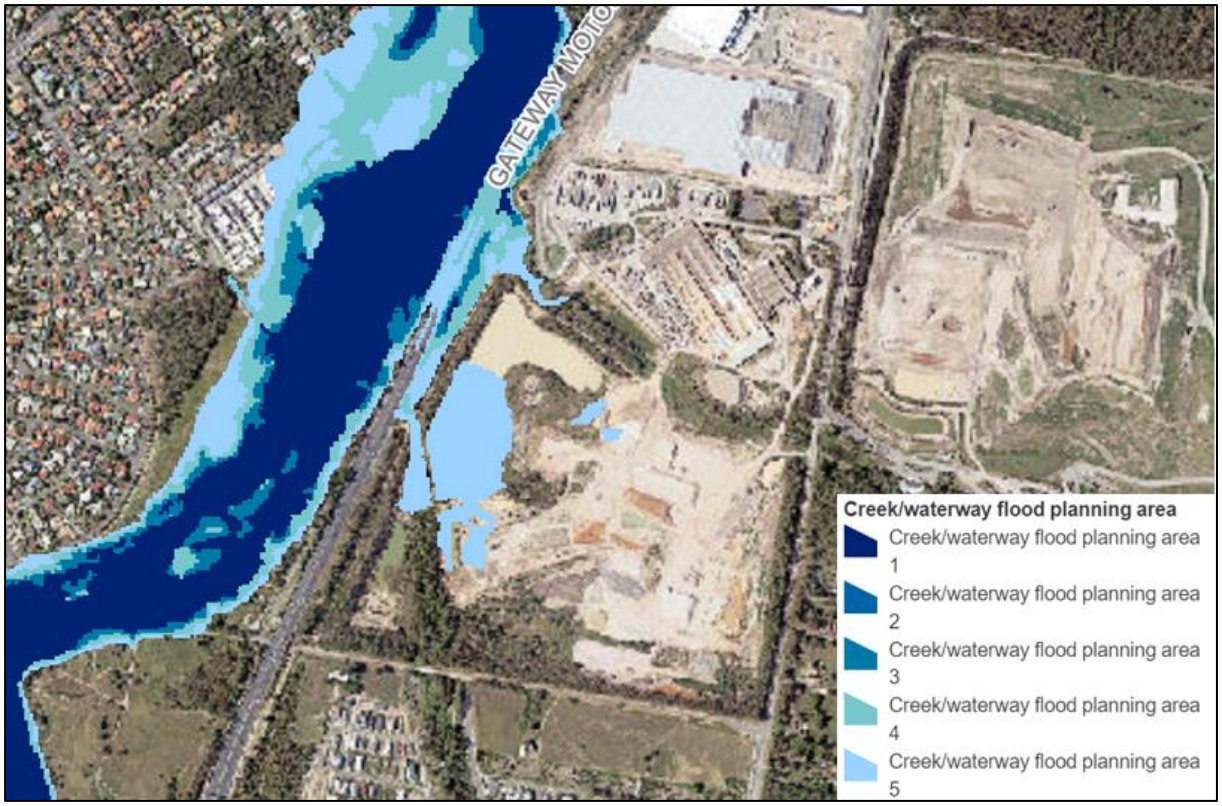


Figure 35 – BCC Creek/Waterway Flood Mapping

(Reprinted from https://cityplan.brisbane.qld.gov.au/eplan)



Figure 36 – BCC Overland Flow Flood Mapping

(Reprinted from https://cityplan.brisbane.qld.gov.au/eplan)

Austral Bricks commissioned Cardno to prepare a Flood Study of the site, which formed a component of the development application process for the industrial redevelopment of the site. The Flood Study subsequently became an approved document, forming part of the Court Appeal Decision dated 8 November 2012 authorising the redevelopment of the land to an industrial PMLU. The Flood Study modelled a range of flood events at the site, ranging from 2-year Average Recurrence Interval (ARI) to 100 Year ARI. The Flood Study provides an indication of the depth and velocity of water through the central drainage system during a range of flood levels. A copy of the Flood Study is provided as **Attachment 3 – Rochedale Flood Study**.

In summary, Cardno (2012b, p. 45) determined that the maximum flood depth based on the modelling outcomes will be less than 1m, except at downstream end of the channel, demonstrating that the channel has sufficient capacity to contain major flow within its banks. An illustration of the estimated flood depths is provided as **Figure 37 – Post-Development 100-Year ARI Flood Depth**.

Cardno (2012b, p. 45) determined that the maximum velocity based on the modelling outcomes will be less than 2m/s, demonstrating that no further scour protection measures are necessary. An illustration of the estimated flood depths is provided as **Figure 38 – Post-Development 100-Year ARI Flood Velocity**.

A key mitigation measure proposed via the flood modelling is the filling of developable areas to above the 100-year ARI peak flood elevation as predicted by Cardno's TUFLOW model. In summary, Cardno (2012b, p. 46) proposed the following additional measures:

Peak Discharge Attenuation

It is proposed to construct end-of-line detention basins within the site to attenuate the developed peak discharges from the site back to the pre-development flow rates.

Northern External Catchment Drainage

It is proposed to convey peak discharges from the northern external catchments through the site by the use of a constructed open channel. As part of the drainage strategy, it is also proposed to upgrade the existing culverts at two locations under Gardner Road, and provide culverts under the proposed internal roads.

Southern External Catchment Drainage

As part of this stormwater drainage strategy, it is proposed to construct an open channel within the site to convey the runoff from the southern external catchments. A detailed two—dimensional flood study was undertaken using the TUFLOW software to assess impacts of the proposed drainage measures. The results of the flood modelling demonstrated that developed site will not have any significant adverse impacts external to the development site.

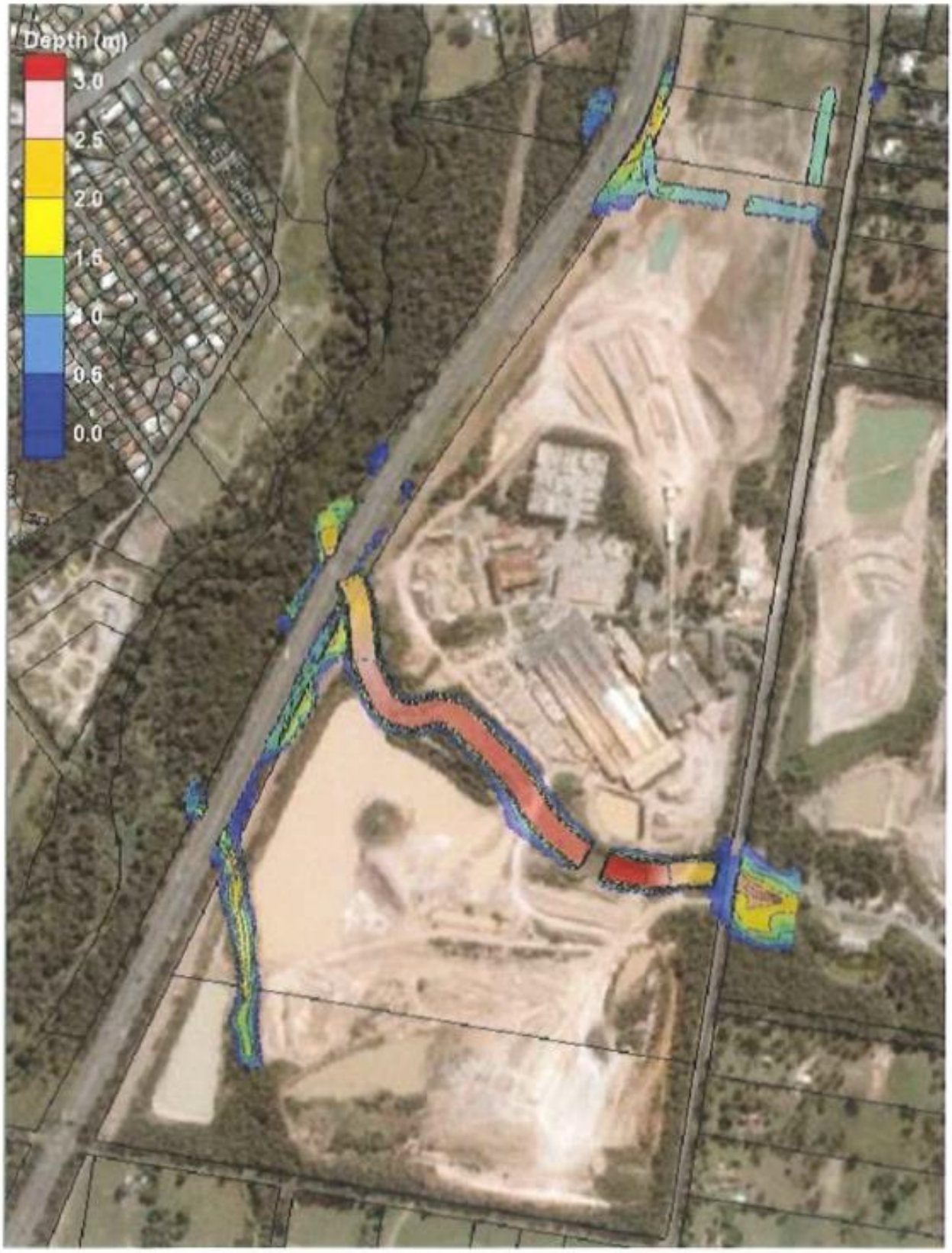


Figure 37 – Post-Development 100-Year ARI Flood Depth

(Reprinted from the *Rochedale Industrial Estate: Flood Study* prepared by Cardno (2012b))

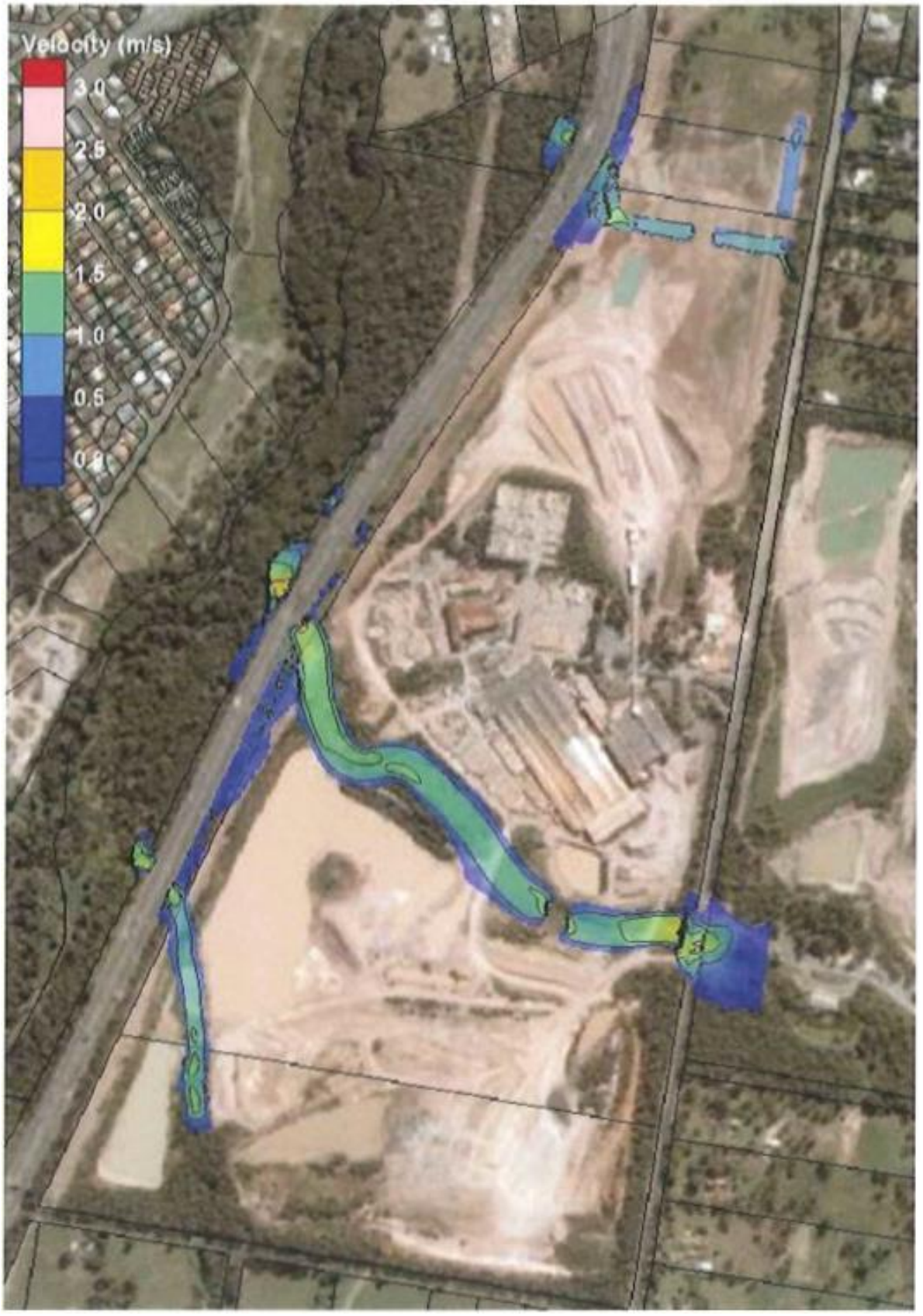


Figure 38 – Post-Development 100-Year ARI Flood Velocity

(Reprinted from the *Rochedale Industrial Estate: Flood Study* prepared by Cardno (2012b))

6.4 Soil, Capping Material and Cover Design

6.4.1 Quality and Quantity of Topsoil

6.4.1.1 Soil Quality

The quality of available topsoil and overburden at the sites is summarised in **Sections 3.1.9, 3.2.9** and **3.3.9.**

Fertilisers and ameliorants applied to the topsoil are to be commensurate with the nutrient requirements of the species used (pasture species used for Rural Residential PMLU will have different nutrient requirements to a Native Ecosystem PMLU).

While soil ESP is variable across the Burbank and Redland Bay sites which were analysed (noting that no topsoil or overburden is available at Rochedale), ranging from 3% to 21% indicating that the soils available are sodic to strongly sodic, these soils are native to the locality and have proven viable in supporting progressive rehabilitation for Native Ecosystem PMLUs as outlined at **Section 3.4.2 – Progressive Rehabilitation Burbank**. If required, the soils can be remedied through the addition of gypsum or lime; however, where soils have a pH of 5 or less, any plants present may be harmed through the gypsum application (OSU 2022). Therefore, lime should be applied to increase the soil pH before considering required gypsum applications where soil pH is inherently low.

Liming rates are to be between 2.5 – 5 tonnes per hectare, depending upon the outcomes of soil sampling carried out prior to revegetation commencing. Lime should be applied prior to, or during, earthworks to incorporate the lime into the soil. Where possible, lime should be applied prior to the wet season to maximise potential for movement into the soil profile.

The following table provides indicative gypsum application rates based on ESP. If a soil test reveals high EC, sodium and chloride, gypsum is not recommended. Under these conditions, the most appropriate method of amelioration is through improving drainage.

Table 46 – Gypsum Rates (t/ha) at Various ESP in the Topsoil

ESP %	<5	5-10	>10
Tonnes/ha of Gypsum	Nil	2-5	5

Table note: Table reprinted and adapted from NSW Agriculture (2000).

Where possible, gypsum should be applied to topsoils before initial stripping to enable mixing into the soils. If applied after reprofiling takes place, the gypsum should be broadcast over the reprofiled soils surface in advance of seeding / planting.

Analysis of available soils within Burbank and Redland Bay site (refer **Section 3.1.9.3 – Productivity** and **Section 3.2.9.3 – Productivity**) indicated that the soils are generally low in nitrogen and phosphorus,

which is relatively common for highly weathered soils in Australia[2], with many native plant varieties well-conditioned to low nutrient environments. Nutrient enrichment on various native and semi-native plant communities which have adapted to inherently low nutrient soils has been determined to have long-term negative impacts[3]. Daw et. Al. (2019) stated that, "despite this knowledge, fertiliser application is generally viewed as a necessary step in re-establishing native plant communities in post-mining restoration". In studies completed by Daws et. Al. (2019), results indicated that application of fertiliser lead to slow-growing re-sprouter species being outcompeted by more vigorous understorey species. In research completed by Williams et. Al (2019) it was found that the addition of fertilisers containing phosphorus in post-mining landforms has unpredictable impacts[2], which can reduce growth of some species.

As the soils within the region of the sites are inherently low in nitrogen and phosphorous, it is not proposed that amelioration for these nutrients is carried out as it is unlikely to be advantageous for the locally endemic species which have evolved to thrive in low nutrient conditions. Any attempt to increase available nutrients may not be advantageous and may cause toxicity for species which aren't adapted to higher nutrient conditions.

The CSIRO (1987, p. 39), through the soils mapping and analysis completed for Brisbane and surrounds concluded the following in relation to the podzolic soils that occur in the Burbank, Redland Bay and Rochedale localities:

> *Some krasnozems of the Redlands area, which have been heavily fertilised with ammonium sulfate in intensive vegetable production, have become more acid, with values down to pH 5, and have developed 'acid soil problems' which are not yet fully understood Similar problems have been encountered on some naturally strongly acid podzolic soils.*

To this end, intensive fertiliser application in areas subject to Native Ecosystem PMLUs is not anticipated to be beneficial for the site. CSIRO (1987, p.40) has confirmed gross deficiencies of P, N and Ca can be predicted for most of the virgin, strongly acid soils, particularly the various podzolic soils such as those at the Redland Bay site. Species for the site localities have adapted to these low nutrient levels and acidic soil conditions. The species which have been identified by SHG (2017a and 2017b) at the Burbank and Rochedale sites are typically associated with wet / coastal swamp sclerophyll forests which form on poor to moderately fertile soils, and therefore it is not anticipated that there will be implications for success of revegetation using native soils with inherent poor fertility. DAWE (2021) identified that the intensive application of fertilisers in areas characterised by Sclerophyll Forest of South East Queensland has contributed to invasion of exotic plant species due to an increased availability of nutrients which are not endemic to the locality. Increases in total nitrogen and available phosphorus trough fertiliser application were found by Prober & Wiehl (2012) to directly correlate to increases in exotic plant abundance.

To reiterate, Austral has not carried out any soil amelioration in the existing progressive rehabilitation areas at the Burbank site, and therefore amelioration should be considered on a case-by-case basis subsequent to soil sampling and analysis to ensure that the soil conditions align with those preferred by the species to be planted.

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[2] Williams, A., George, S., Birt, H.W., Daws, M.I. & Tibbett, M., (2019). *Sensitivity of seedling growth to phosphorus supply in six tree species of the Australian Great Western Woodlands*. Australian Journal of Botany 67(5) 390-396. Accessed 23 November 2022 via https://www.publish.csiro.au/bt/bt18247

[3] Daws, MI, Grigg, AH, Standish, RJ & Tibbett, M., (2019). 'Applied phosphorus has long-term impacts on vegetation responses in restored jarrah forest', in AB Fourie & M Tibbett (eds), *Mine Closure 2019: Proceedings of the 13th International Conference on Mine Closure*, Australian Centre for Geomechanics, Perth, pp. 693-704, https://doi.org/10.36487/ACG_rep/1915_55_Daws

Areas subject to revegetation with grass species may benefit from fertiliser application of a combined phosphorous, nitrogen and potassium mix, which can be mixed with the seed and broadcast over the revegetation area. Rates should not exceed 300 kg/ha (or 3 kg/100m^2) three times per year. DAF (2013) identify that productivity is optimum for the first three to five years, after which time there is usually a tie-up of nitrogen in the soil and fertility decreases. To address this, application of additional fertilisers is to be reassessed on an ongoing basis to determine if additional fertilisers are required.

6.4.1.2 Available Quantities and Requirements

Due to the inherent nature of the soils and geology at the sites, there is limited to negligible topsoil available at commencement (ranging anywhere from 0 mm to 500 mm). Historical drilling activities confirm that the A horizon is comprised of predominantly argillite / sandstone at Redland Bay and clays at Burbank and Rochedale. As a result, topsoil is generally comprised of a thin layer of organic matter overlying clays. The industrial PMLU at Rochedale will not require topsoil within areas destined to be industrial premises as the ground surfaces will be overlain by infrastructure such as warehouses, roads, ancillary facilities, utilities and services, etc. Topsoil at these locations would serve no benefit as the soils are not required to support vegetation growth as they are overlain by industrial / commercial infrastructure.

Native Ecosystem and Rural Residential PMLUs are expected to require respreading of topsoil (to levels not exceeding pre-mining levels) to encourage groundcover regrowth. Inherently, endemic species at the locations thrived on the relatively skeletal topsoils, and as such, these conditions are to be replicated at cessation of mining. Overburden will be used to supplement topsoil at the sites.

A comparison of the available quantities of topsoil / overburden in comparison to the required topsoil / overburden based on a spread depth of 150 mm is provided in **Table 47 – Available Topsoil and Overburden**. Burbank and Redland Bay are expected to have in excess of the volumes required, which can be used in landforming at the sites.

Table 47 – Available Topsoil and Overburden

Site	Topsoil / Overburden Stockpile (tonnes)	Undisturbed Topsoil / Overburden Remaining (tonnes)	Required Topsoil (tonnes[1])	Import Volume (tonnes)
Burbank	1,679	64,500	57,888	Surplus of 8,291
Redland Bay	4,324	140,000	41,286	Surplus of 113,037
Rochedale	0	0	0	0

Table notes:

1. Based on a conversion rate of 1.6 tonnes (clay soils) per m^3.
2. Redland Bay = 17.2027 hectares x 150 mm of topsoil/overburden = 25,804 m^3.
3. Values of available material advised by Austral Bricks.

6.4.1.3 Topsoil / Subsoil Management

When available, topsoil is to be stockpiled separately for use in rehabilitation activities. The following measures are to be implemented for topsoil stripping:

- Stripping of topsoil is to be limited to the minimum area necessary.
- Materials should not be stripped when too wet or too dry.
- When stripped, materials should be used directly for rehabilitation to the maximum practicable extent or stockpiled and preserved for future use.
- Stockpiling of materials are to be shaped and revegetated to protect the soil from erosion and weed infestation.
- Stockpiles are to be maintained in a free draining condition and long-term soil saturation should be avoided.

The following measures are to be implemented for topsoil respreading:

- Areas to be re-spread with topsoil are to be reprofiled prior to placing materials over the contoured surface.
- Equipment used to spread materials should be scheduled to avoid compaction.
- Before respreading the materials, loosen the underlying substrate to break up any compacted or surface sealing and to enable keying of the two (2) materials.
- On slopes less than 3(H):1(V), loosen lightly compacted substrate, ensuring all ripping operations occur along the contour.
- Materials are to be removed from stockpiles in a manner that avoids vehicles travelling over the stockpiles.
- Materials are to be respread in the reverse sequence to its removal so that the original upper soil layer is returned to the surface to re-establish the entrapped seed content of the soil.

Topsoil in wetland conditions (e.g., where the PMLU is a Wetland System such as basins at Burbank and Redland Bay) typically do not require fertiliser application because of natural processes. Periodic saturation of the soils in the final landform is anticipated to create anaerobic environments encouraging decomposition of organic matter within the soil provided naturally elevated levels of available nitrogen. Anaerobic processes are also associated with release of iron oxides from soil particle surfaces which leads to increased available phosphorus to support plant growth.

6.4.2 Backfill Materials

The PMLU for Rochedale is industrial which will require filling of the landscape to create the final designed layout. Where necessary, filling may also occur at Burbank and Redland Bay to create the desired grades within Rural Residential and Native Ecosystem PMLUs. Filling is not anticipated to be required for Wetland Ecosystems.

Due to the nature of the mining activities resulting in removal of overburden and clay for brick and paver manufacturing, it is likely that Austral Bricks will be required to import clean earth for backfilling of the final voids. Where filling is to occur to the pre-mining levels, no additional approvals are required. Where filling to design levels exceeding the pre-mining landform is required, Austral Bricks will be required to obtain Operational Works for filling and bulk earthworks pursuant to the local planning instruments.

The volume of fill materials required to instate the Industrial PMLU at Rochedale is not known at this stage as it will be dependent upon the engineered designs. Any fill materials used at the sites are to be certified by a suitably qualified person as appropriate for the PMLU, or verified as clean earth, prior to importation onto the sites. Clean earth for the purpose of the current legislation means:

any natural substance found in the earth that is not contaminated with waste or a hazardous contaminant e.g., clay, gravel, loam, rock, sand, soil.

The following standards for fill quality and compaction are applicable to the various PMLUs where filling may occur. It must be noted however that the level of compaction required will vary depending upon the location of the earthworks (for example, land underlying easements typically requires a lower level of geotechnical supervision due to the encumbrances / development restrictions over the land). The below is therefore indicative only, and will be informed by an SQP with relevant geotechnical engineering qualifications.

Table 48 – Compaction Standards and Contaminated Land Default Guidelines

PMLU	Compaction Standards	Contaminated Land Default Guidelines
Industrial	*AS 3798-2007 Guidelines on earthworks for commercial and residential developments* (Standards Australia 2007, or most recent edition), Level 1 or Level 2 geotechnical supervision and testing.	• HIL D – commercial industrial premises under *National Environment Protection (Assessment of Site Contamination) Measure 1999* (amended 2013)
Rural Residential	*AS 3798-2007 Guidelines on earthworks for commercial and residential developments* (Standards Australia 2007, or most recent edition), Level 1 or Level 2 geotechnical supervision and testing (within the building envelope only).	• HIL A – low density residential, including a sizeable garden under *National Environment Protection (Assessment of Site Contamination) Measure 1999* (amended 2013).
Native Ecosystem	Not applicable – geotechnical performance standards apply to commercial and residential uses only. General stability assessment to be completed to ensure the landform will remain stable.	• EILs under *National Environment Protection (Assessment of Site Contamination) Measure 1999* (amended 2013). • ESLs under *National Environment Protection (Assessment of Site Contamination) Measure 1999* (amended 2013).

Fill materials should be analysed prior to importation onto site, or subject to random grab samples as a minimum. Where large volumes of fill materials are to be imported, grab samples at the densities required by the guidelines may be difficult to achieve, in which case a Suitably Qualified Person in accordance with the definitions provided by the EP Act must be engaged to determine an appropriate sampling regime. Any such contaminated land assessments must be completed in accordance with the following relevant guidelines:

- *AS 4482.1-2005 – Guide to the sampling and investigation of potentially contaminated soil. Part 1 – Non-volatile and Semi-volatile compounds*.
- *AS 4482.2-2005 – Guide to the sampling and investigation of potentially contaminated soil. Part 2 – Volatile Compounds*.

Fill sources should be limited to:

- Licenced quarry.
- Land that has not been disturbed.
- Land which has been disturbed but is not listed on the Environmental Management Register ('EMR').
- Fill materials may be sourced from a site that is on the EMR provided adequate sampling and analysis has been undertaken by a SQP to determine that the materials are clean (refer to **Table 48 – Compaction Standards and Contaminated Land Default Guidelines** for relevant standards).

Fill containing inert wastes (non-putrescible wastes including bricks, pavers, ceramics, concrete, glass or steel) or general waste must not be accepted onto site unless compliant to an applicable End of Waste code pursuant to the *Waste Reduction and Recycling Act 2011*.

The methods of fill importation are expected to follow the below general procedures:

- Prior to importation of the materials onto site, a suitably qualified person is to carry out an assessment to confirm that the materials are suitable for the PMLU (refer to **Table 48 – Compaction Standards and Contaminated Land Default Guidelines**).
- Importation and use f material directly for filling or stockpiling the fill material in a designated area until it is able to be used in the required location.
- For industrial and residential areas, geotechnical supervision is to be carried out for filling where required (a suitably qualified person is to be consulted prior to filling works commencing to determine the level of supervision needed based on the intended landform).

6.4.3 Batter Slope Stability

Typical soil friction angle can be used as a measure of shear strength parameter of soils including clayey soils such as those at the site (Geotechdata 2013). Clays of high plasticity (compacted) typically have a friction angle of 17-35°. Clay shales have a typical friction angle of 20 - 27 ° (Wyllie, D. & Norrish, N. 1996).

"Factor of Safety" (FoS) is another common measure used in global stability assessments to express the safety margin of slopes on embankments[4]. A factor of safety of 1.5 is considered generally suitable for permanent works.

Accordingly, it is proposed that slope angles will be in the order of 20 - 27 ° with a factor of safety of not less than 1.5 to ensure long term stability.

6.4.4 Cover Design

Cover design is not required for the sites as there is no waste rock, low-grade ore, heap leach material or tailings resultant from the clay pit mining activities.

[4] Herza, J. Ashley, M. & Thorp, J., (2012). *Factor of Safety? - Do we use it correctly?*. Accessed 20 July 2022 via https://www.ghd.com/en/expertise/resources/PDF/ANCOLD_2017_Ashley_Factor-of-Safety-Do-we-use-it-correctly.pdf

6.5 Waste Characterisation

Waste materials present on the sites are generally limited to overburden stockpiles. Where overburden comprises clays suitable for the brick and paver manufacturing, this material is extracted as used as raw feed.

Overburden that is unsuitable for production is generally removed and pushed to the edge of the extraction voids at commencement of the extraction activities to form perimeter bunds of varying heights. The thickness of the overburden layer varies at each site; however, typically there is a residual soil layer of 0 mm to 500 mm thick. As a result, waste characterisation has not been considered further for this PRCP.

6.6 Water Management

Table 49 – Potential Water Contaminants and Sources provides a summary of the potential contaminants and the possible source and pathway of these contaminants at the site. Mineral processing does not involve any chemical processes, rather, mineral processing is limited to stockpiling and physical blending of clays at the Rochedale site. This material is then transferred to the adjacent Brick Plant where it is used as raw feed for the kilns. Processing of the materials at the Brick Plant is dealt with under the approvals for the Prescribed ERA of ceramic product manufacturing, and therefore not relevant to this PRCP. Therefore, the range of potential contaminants that may pose a risk to local environmental values are limited.

Table 49 – Potential Water Contaminants and Sources

Source and Pathway	Potential Contaminants
Mineral Extraction Extraction of clay and shale.	• pH • Turbidity • Dissolved Oxygen (Redland Bay only).
Fuel and Chemical Storage Areas Minor spillage of materials causing migration of liquid phase hydrocarbons into surface water and groundwater.	• Total Recoverable Hydrocarbons (TRH) • BTEX (Benzene, Toluene, Ethylbenzene and Xylene) • Polycyclic Aromatic Hydrocarbons (PAH) • Organochlorine Pesticides • Organophosphorus Pesticides

There are no permanent fuel or chemical storage areas at the Burbank site, therefore it is not anticipated that remediation of water contamination will be applicable to this site. Limited volumes of fuels and chemicals necessary to service plant and equipment are stored in temporary demountable facility at the Redland Bay site, and in the contractors facilities at the Rochedale site. At demobilisation from the sites, an SQP is to be engaged to carry out a PSI of the land underlying the former storage areas to inform whether contaminated remediation is required. All remediation must be carried out in accordance with the recommendations of the SQP and under the guidance of the SQP to ensure effective remediation. For details on how the land will be rehabilitated in relation to potential contaminants, refer to **Section 6.8 – Contaminated Land Remediation**. This is anticipated to ensure that potentials contaminants associated with the temporary fuel and chemical storage areas (as identified in **Table 49 – Potential Water Contaminants and Sources**) do not mobilise to waters. If deemed necessary by the SQP

following the PSI, groundwater contamination assessment and subsequent remediation (where required) is to be undertaken.

The permanent fuel and chemical storage facilities at Rochedale which are located adjacent to the brick plant have been constructed for the purpose of the Prescribed ERAs authorised under the EA (the brick manufacturing activities). These activities are separate and distinct to the mineral extraction activities relevant to this PRCP and as such, remediation of any contamination associated with the brick plant is not applicable to this PRCP.

The sites are to be free draining and/or engineered landforms (relevant to Rochedale which will have an industrial PMLU). Stormwater released from site is anticipated to be limited to the runoff interacting with rehabilitated surfaces, which will be revegetated for stabilisation, or in the case of Rochedale, subject to a combination of landscaping and engineered stormwater infrastructure (e.g., drains, guttering, etc) both of which would be regulated via conditions of the overarching planning approval for the industrial end use. The discharge locations are anticipated to be those prescribed in the EA, which represent locations along drainage lines at the boundaries of the sites (summarised in **Table 50 – Discharge Locations**).

Table 50 – Discharge Locations

Discharge Location	Latitude	Longitude
Rochedale		
R1	27.558045834° S	153.118404648° E
R2	27.557780916° S	153.111242774° E
R3	27.554403033° S	153.113052504° E
R4	27.560917969° S	153.105623877° E
Burbank		
B1	27.580431130°	153.141711147° E
Redland Bay		
RB1	27.629793447° S	153.270452977° E
RB2	27.629762097° S	153.267999961° E
RB3	27.632952226° S	153.266264269° E

Any retained sediment basins at Redland Bay and/or Burbank will function as wetland ecosystems, which will hold relatively small volumes of water that is likely to fluctuate seasonally. At completion of rehabilitation, the catchment surrounding the wetlands will not be disturbed, and therefore the retained basins will not be required to function as stormwater management devices and will provide habitat only.

During progressive rehabilitation when the catchment remains disturbed, surface water flow will be directed to the sediment basins where it will be captured and treated prior to release to achieve the contaminant limits prescribed under the EA for pH, to ensure that it is non-polluting. At completion of the site rehabilitation, the catchments will be converted to clean catchments and surface water flow will no longer require capture and treatment prior to release. To mitigate erosion in the receiving environment, erosion and sediment controls are to be incorporated into the landform which may include:

- Installing control measures such as rock checks to control flow velocities, mulch berms to provide drainage and sediment control, catch drains and diversion bunds to divert flows (e.g., diverting runoff waters from the neighbouring properties around the site). Austral Bricks are to consult an SQP prior to installation of these systems to ensure that the appropriate controls are selected and sited based on site-specific conditions.

- Establishing revegetated landforms (grass cover or native species according to the relevant PMLU) to act as a sediment trap wherein any potential sediment resultant from sheet flow over the land surface is captured within the vegetated areas, filtering the stormwater runoff enabling release of clean waters[5]. Turf filter stripes in particular are a recognised Type 1 and Type 3 erosion and sediment control system in accordance with the IECA classification system. IECA (Australasia) (2010, p. 5) state that 'at least 70% ground cover (combined plant and mulch) is considered necessary to provide a satisfactory level of erosion control'.
- Retention of a vegetated remnant vegetation buffer around the perimeter of the site (Burbank and Redland Bay), providing further sediment filtering.

In accordance with the *Leading Practice Sustainable Development Program for the Mining Industry* (Commonwealth of Australia 2016), there is currently no broad agreement on what constitutes an 'acceptable' rate of erosion on a rehabilitated mine site' (p. 22). However, a target erosion rate such that rill erosion and eventual gully development are unlikely is commonly adopted (Commonwealth of Australia 2016). This approach is adopted for the purpose of this PRCP and development of milestone criteria.

In relation to basins at Rochedale, as previously discussed, industrial development of land often requires establishment of stormwater controls such as sediment basin and drainage systems to mitigate erosion and contaminant releases. As shown in , detention basins were incorporated into the concept plan. The *Rochedale Industrial Estate, Gardner Road, Rochedale: Stormwater Management Plan* (Cardno 2012a) lodged with the former development application identified basins as the main stormwater capture and treatment measure for the development, intended to reduce the developed peak discharges from the site to the pre-development flow rates (Cardno 2012a, p. 92). Cardno (2012a, p. 10) noted that the basin designs are for functional purposes only, and that the landscaping design to be undertaken for the site will modify the location and form of each basin to some extent. The *Rochedale Industrial Estate, Gardner Road, Rochedale: Stormwater Management Plan* (Cardno 2012a) presented the basin design parameters shown in **Table 51 – Indicative Industrial Detention Basin Design Characteristics**. Cardno (2012a) anticipated that in the post-development landscape, any basins would be able to drain freely with invert levels of the basin outlets mirroring the channel invert levels immediately downstream of the outlets. For the purpose of the previous channel design, Cardno (2012a) adopted the parameters shown in **Table 52 – Indicative Industrial Characteristics of Channel**.

It must be noted that these parameters were developed based on the previous industrial layout concept and would therefore be subject to redesign and assessment under any future development application for the Industrial PMLU. The design characteristics for the basins and channels will be regulated under conditions of any future development permit to ensure that the structures are able to meet the stormwater quality objectives set for the development.

Table 51 – Indicative Industrial Detention Basin Design Characteristics

Bioretention Characteristics	**Value**
Extended detention (m)	0.3
Seepage loss (mm/hr)	0
Filter depth (m)	0.6
Filter media particle diameter (m)	0.45

[5]Catchment & Creeks Pty Ltd, (2010). *Grass Filter Strips: Sediment Control Techniques.* Accessed via https://www.austieca.com.au/documents/item/261

Bioretention Characteristics	Value
Saturated hydraulic conductivity (mm/hr)	180
Side Slopes (V:H)	1:4

Table note: reprinted and adapted from *Rochedale Industrial Estate, Gardner Road, Rochedale: Stormwater Management Plan* (Cardno 2012a).

Table 52 – Indicative Industrial Characteristics of Channel

Channel Parameter	Value
Base Width (m)	32.0
Depth (m)	2.0
Bank Slope (V:H)	1:4
Top Width (m)	48
Manning's Roughness 'n'	0.15
Longitudinal Slope (%)	0.5
Calculated Channel Capacity (m_3/s)	52.7

Table note: reprinted from *Rochedale Industrial Estate, Gardner Road, Rochedale: Flood Study* (Cardno 2012b).

6.7 Revegetation

6.7.1 Revegetation Objectives

The primary objectives of revegetation of the sites are to:

- Ensure landforms are safe, stable and non-polluting.
- Encourage species composition and density similar to the pre-mining landscape.

The species outlined in this section are not intended to be prescriptive, and any final species mix selected is to be guided by an SQP and will be subject to local availability.

It is anticipated that establishment of Native Ecosystem and Wetland PMLUs will create habitat features as follows (SHG 2017a, p. 26):

- Crown cover associated with mature canopy vegetation, offering habitat for fly-through birds;
- Fallen timber, leaf litter, associated with the bushland remnant, offering habitat for reptiles, amphibians
- and small ground-dwelling mammals.

6.7.2 Revegetation Methods

Establishment of adequate plant cover / groundcover is anticipated to reduce wind erosion, as well as increase organic matter in surface soils gradually through accumulation of leaf litter. Groundcover will also assist in soil moisture retention and soil stability. These factors are anticipated to provide improved conditions for natural recruitment and further regeneration. Groundcover densities at completion of the rehabilitation are to be 70% or more. IECA (Australasia) (2010, p.5) state that 'at least 70% ground cover (combined plant and mulch) is considered necessary to provide a satisfactory level of erosion control'.

Revegetation will be allowed to naturally regeneration by access exclusion, followed by supplementary seeding and/or planting. Hydroseeding is to be used on steeper slopes by spraying a mixture containing seed, fertiliser and binding agents to create a stable condition. Short term stabilisation of the reprofiled surfaces may be required, which can be achieved through seed spreading with pasture grasses, examples may include Maize (*Zea mays*) and Pearl millet and Bullrush millet (*Pennisetum glaucum*).

BAAM (2023) was engaged to provide a recommended recommend revegetation species, density and composition. A summary of the recommendations is provided in **Table 53 – Recommended revegetation species list (benchmark density and composition**.

Table 53 – Recommended revegetation species list (benchmark density and composition

Stratum	Species	Precent Composition	Stem Density per ha	Number per ha
T1 Upper Canopy			220	
	Eucalyptus siderophloia	35		77
	Eucalyptus propinqua	30		66
	Corymbia intermedia	20		44
	Eucalyptus microcorys	10		22
	Lophostemon confertus	5		11
T2 Mid Level Canopy			160	
	Allocasuarina torulosa	30		48
	Allocasuarina littoralis	30		48
	Acacia leiocalyx	15		24
	Corymbia intermedia	15		24
	Eucalyptus propinqua	10		16
T3 Lower Canopy			100	
	Syncarpia glomulifera	40		40
	Polyscias elegans	30		30
	Backhousia myrtifolia	15		15
	Alphitonia excelsa	15		15
S1 Shrub Layer			90	
	Acacia disparrima subsp. disparrima	40		
	Dodonaea triquetra	24		
	Lophostemon confertus	24		
	Allocasuarina torulosa	9		
	Acacia maidenii	1		
	Alphitonia excelsa	1		
	Breynia oblongifolia	1		
G			9430	
	Themeda triandra	30		2829

Stratum	Species	Precent Composition	Stem Density per ha	Number per ha
Ground Cover Layer	*Imperata cylindrica*	20		1886
	Lomandra confertifolia subsp. pallida	18		1697
	Lomandra multiflora subsp. multiflora	18		1698
	Billardiera scandens	7		660
	Entolasia stricta	1		94
	Panicum effusum	2		188
	Cymbopogon refractus	1		95
	Eragrostis brownii	1		94
	Fimbristylis dichotoma	1		94
	Lomandra longifolia	1		95

Table note: Table reprinted from the *Revegetation Assessment and Advice, Austral Bricks Quarry, Rochedale* (BAAM 2023, p. 3).

At Burbank, in the absence of site-specific recommendations, the species composition to be used for any supplementary seeding or planting of Native Ecosystem PMLUs is to align with these species used previously, extracted below as **Table 54 – Proposed Native Ecosystem Revegetation Species Mix** for reference. Where tubestock is to be used, it must be sourced from an external supplier and is to be transported to the site in a weed free state with species names clearly labelled on each tube.

Table 54 – Proposed Native Ecosystem Revegetation Species Mix

Scientific Name	Common Name
Acacia concurrens	Black Wattle
A. disparimma	Hickory Wattle
A. fimbriata	Fringed Wattle
A. leiocalyx	Early-flowering Black Wattle
Allocasuarina littoralis	Black Sheoak
Alphitonia excelsa	Red Ash
Corymbia citriodora	Spotted Gum
Cyperus polystachyos	Bunchy Sedge
Dianella caerulea	Blueberry Lilly
Eucalyptus fibrosa	Broad-leaved Ironbark
E. microcorys	Tallowwood
E. propinqua	Grey Gum
E. racemosa	Scribbly Gum
E. tereticornis	Forest Red Gum
Imperata cylindrica	Bladey Grass
Leptospermum polygalifolium	Tangoon
Lomandra longifolia	Spiney-Head Matrush

Scientific Name	Common Name
Lophostemon confertus	Brush Box
Melia azederach	White Cedar
Mellicope elleryana	Pink Euodia

As previously identified, these species align with those present in undisturbed areas and reference regional ecosystems (refer **Section 3.4 - Rehabilitation Planning**) and are therefore anticipated to provide habitat for the broad range of native fauna species (particular those identified through the site ecological survey, refer to **Section 3.1.12 - Fauna Presence and Populations**).

To achieve closure of vegetation and weed reduction, a planting density of 2-5 plants/m^2 (approximately 700 mm to 0.4 m centres) is recommended (Chenoweth EPLA and Bushland Restoration Services 2012). Where seeding or hydroseeding is used, 2-4 kg/ha of seed is to be applied (Commonwealth of Australia 2016).

Based on previous revegetation of native ecosystem PMLUs carried out by Austral Bricks (refer **to Section 3.4 - Rehabilitation Planning**) lessons/successes applicable to future revegetation include:

- Regular monitoring and maintenance is key to ensuring progression towards achieving the rehabilitation milestone criteria. Austral Bricks has nominated an inspection frequency of six month to ensure that any issues / requirements relating to the rehabilitation can be actioned.
- Ongoing weed control is required to ensure that total ground coverage of weed species is reduced.
- Additional hydroseeding may be necessary subsequent to the initial seeding campaign to increase native species density.

Austral bricks are to ensure that the above monitoring and maintenance continues throughout the progression of rehabilitation.

The species composition that may be used for any supplementary seeding of Rural Residential PMLUs is summarised in **Table 55 – Proposed Rural Residential Pasture Species Mix**. In the event that land nominated for Industrial PMLU at Rochedale is not subject to an active DA at completion, the below species may be used to stabilise the landform to ensure it is safe, stable and non-polluting in readiness for future redevelopment. Seeds are to be sourced from a local supplier and must be applied at a rate of <1 kg to 4 kg / ha.

Table 55 – Proposed Rural Residential Pasture Species Mix

Scientific Name	Common Name
Brachiaria spp. Hybrids	Brachi hybrid; Brachiaria hybrid
Paspalum nicorae	Brunswick grass
Digitaria eriantha	Digit grass
Pennisetum clandestinum	Kikuyu
Panicum maximum	Panics
Bromus wildenowii	Prairie grass
Festuca arundinacea Schreb.	Tall fescue

Wetland Ecosystems are to be excluded from access to enable colonisation of wetland species on the banks and batters of the wetland. Where species have not established within 12 months of completion

of the activities, supplementary planting is to be carried out on areas which are not subject to inundation with waters at a planting density of 6-10 plants/m^2 (Water by Design 2010) on the waters edge.

BAAM (2023) provided recommendations for a wetland species pallet in line with RE 12.3.6, Southeast Queensland (SEQ) bioregion published by the State Government[6] and Bioretention plant species (Healthy waterways) which is summarised in **Table 56 – Wetland species pallet (if required)**.

Table 56 – Wetland species pallet (if required)

Scientific Name	Wetland Indicator Plants (SEQ)	RE 12.3.6 (preclear riparian RE)	Bioretention plant species (Healthy waterways)
Juncus kraussii	Yes	Yes	Yes
Fimbristylis polytrichoides	Yes		
Juncus kraussii	Yes		Yes
Eleocharis dulcis	Yes		
Phragmites australis	Yes		
Persicaria decipiens	Yes		
Philydrum lanuginosum	Yes		
Cyperus gunnii	Yes		Yes
Carex pumila	Yes		Yes
Carex fascicularis	Yes		Yes
Cyperus difformis		Yes	
Cyperus haspan		Yes	
Cyperus pilosus		Yes	
Eleocharis acuta		Yes	
Carex polyantha			Yes
Carex appressa			Yes
Carex pumila			Yes
Fincia nodosa			Yes
Juncus usitatus	Yes		Yes
Cyperus polystachyos	Yes		Yes
Sacciolepis indica	Yes		

Table note: Table reprinted from *Revegetation Assessment and Advice, Austral Bricks Quarry, Rochedale* (BAAM 2023, p. 3).

6.7.3 Watering

Watering frequency will be dependent upon local rainfall volumes and stage of vegetation growth.

[6] Accessible at https://wetlandinfo.des.qld.gov.au/wetlands/facts-maps/wildlife/?ArealD=bioregion-southeast-queensland-seq&Kingdom=plants&SpeciesFilter=WetlandIndicator

It is recommended that revegetation projects are completed at times of the year when natural weather patterns will support growth (for example, hydroseeding should be completed in approximately November or December to benefit from wet season rains). If watering is required, watering at the frequencies shown in **Table 57 – Watering Frequency** is recommended for an initial period of three months, which may be increase or extended depending upon climatic conditions and groundcover establishment.

Table 57 – Watering Frequency

Timeframe	Watering frequency
Weeks 1 and 2	Three times per week
Weeks 3 to 6	Twice per week
Weeks 7 to 12	Once per week
12 weeks onwards	During extended dry periods only and as required to encourage native vegetation densities.

6.7.4 Access Exclusion

Areas subject to revegetation should be demarcated to exclude unauthorised entry and vehicle access to prevent impacts to plant growth.

6.7.5 Invasive Plant (Weed) Control

Ongoing removal of weeds during the initial establishment and maintenance period will be required to minimise potential for spread. Measures to minimise weed spread are as follows:

- Use short term cover crops where necessary until such time as natural recruitment has achieved a sufficient groundcover.
- Engage the services of a weed management contractor as required.
- Apply biodegradable weed matting if necessary.

6.8 Contaminated Land Remediation

No hazardous contaminant use is associated with the site activities as no mineral processing occurs on-sites. Potential land contaminant sources are anticipated to be limited to minor volumes of hydrocarbon and chemical handling and storage. There are no permanent fuel or chemical storage areas at the Burbank site, therefore it is not anticipated that remediation of water contamination will be applicable to this site. Limited volumes of fuels and chemicals necessary to service plant and equipment are stored in temporary demountable facility at the Redland Bay site, and in the contractors facilities at the Rochedale site.

The following notifiable activity in accordance with Schedule 3 of EP Act is currently conducted at the Rochedale site and the land parcel / mining lease these activities are undertaken on are as follows:

29. Petroleum product or oil storage—storing petroleum products or oil—

(a) in underground tanks with more than 200L capacity; or

(b) in above ground tanks with—

(i) for petroleum products or oil in class 3 in packaging groups 1 and 2 of the dangerous goods code — more than 2500L capacity; or

(ii) for petroleum products or oil in class 3 in packaging groups 3 of the dangerous goods code — more than 5000L capacity; or

(iii) for petroleum products that are combustible liquids in class C1 or C2 in Australian Standard AS 1940, 'The storage and handling of flammable and combustible liquids' published by Standards Australia—more than 25,000L capacity.

However, it must be noted that the above notifiable activities are carried out in associated with the brick plant (Prescribed ERAs). The brick plant activities are separate and distinct to the mineral extraction activities relevant to this PRCP and as such, remediation of any contamination associated with the brick plant is not applicable to this PRCP.

Prior to site closure, if visible signs of hydrocarbon spillage are noted such as surface staining, a contaminated land assessment by an SQP may be required. Assessment of site contamination, if required, is to be undertaken and managed in accordance with the following:

- *National Environment Protection (Assessment of Site Contamination) Measure 1999* (amended 2013)
- *AS 4482.1-2005 – Guide to the sampling and investigation of potentially contaminated soil. Part 1 – Non-volatile and Semi-volatile compounds* (Standards Australia 2005a).
- *AS 4482.2-2005 – Guide to the sampling and investigation of potentially contaminated soil. Part 2 – Volatile Compounds* (Standards Australia 2005b).

Should it be identified that areas of the sites have been contaminated through the site activities, these areas are to be remediated and validated to ensure the soils are suitable for the future use in accordance with the relevant Health Investigation Levels (HILs) or Ecological Investigation Levels (EILs). The land is to be confirmed as non-polluting for the relevant PMLUs with reference to the guideline values prescribed in NEPM as shown in **Table 58 –Contaminated Land Default Guidelines**.

Table 58 –Contaminated Land Default Guidelines

PMLU	Contaminated Land Default Guidelines
Industrial	• HIL D – commercial industrial premises under *National Environment Protection (Assessment of Site Contamination) Measure 1999* (amended 2013)
Rural Residential	• HIL A – low density residential, including a sizeable garden under *National Environment Protection (Assessment of Site Contamination) Measure 1999* (amended 2013).
Native Ecosystem	• EILs under *National Environment Protection (Assessment of Site Contamination) Measure 1999* (amended 2013). • ESLs under *National Environment Protection (Assessment of Site Contamination) Measure 1999* (amended 2013).

Austral Bricks is to commission SQPs for the purpose of legislation governing contaminated land matters to advise on the remediation actions required. Contaminated land remediation methodology if required is to include:

- Removal, or on-site treatment, of contaminated materials identified through the PSI or subsequent DSI.
- Once contaminated materials are removed or remediated, validation testing is to take place to ensure the site is non-polluting.

6.9 Tailings Storage Facility

Due to the inherent nature of the clay and shale mining activities, tailings storage is not applicable to the sites.

6.10 Voids

In accordance with the Department's guideline, for mine sites retaining voids, the rehabilitation planning part must include a void closure plan. As Austral Bricks do not intend to retain any mine voids in the final landform, this PRCP does not include a void closure plan.

Voids at Rochedale will be backfilled to enable redevelopment of the site to an industrial PMLU. This is likely to occur via bulk earthworks authorised under the prevailing planning instrument at the time of surrender. All filling of mine voids at Rochedale will be subject to *AS 3798-2007 Guidelines on earthworks for commercial and residential developments* (Standards Australia 2007, or most recent edition), Level 1 or Level 2 geotechnical supervision and testing.

At completion of the rehabilitation, a suitably qualified geotechnical engineer is to assess the stability of the final landform. Any actions recommended by the engineer to address slope instabilities are to be actioned, and retreatment of the void batter is to occur.

6.11 Underground Mining

Austral Bricks' activities do not include underground mining.

6.12 Built Infrastructure

No permanent built infrastructure has been, or will be, established at the mineral extraction sites. Temporary infrastructure comprises of:

- demountable buildings including employee amenities.
- portable storage container/s.
- gravel roads (bitumen sealed roads at the site entry/exit at Burbank) within the workings and operational areas to enable delivery trucks access and load out from the floor of the excavation.

These items will be demobilised from the site at cessation of the site activities. The sites are not connected to any telecommunications, electricity, or potable water supply services.

All infrastructure associated with the Brick Plant and ancillary facilities situated on ML 1151 are for the purpose of the Prescribed ERA, and therefore excluded from consideration in this PRCP.

In accordance with the provisions of the EA, roads and access tracks are proposed to be left intact to provide a beneficial use and can be transition into the PMLU landscape. A landowner statement prepared by Austral Bricks is included as **Attachment 4 – Landowner Statement**.

A summary of easements established over the tenure areas which are used for the purpose of public infrastructure (stormwater, electricity, sewerage, drainage) is provided in **Table 59 – Easements Overlapping MLs**. Access tracks that service the easements located within the Burbank and Rochedale MLs were not constructed for the mining activities and are required to remain to allow easement holders' access to the various assets within their easements. The tracks provide a means of access to the infrastructure maintained by the easement holders. In accordance with the conditions of the easements, the landowner must not change any existing road within the easement area or prevent access to the easement infrastructure. The access tracks therefore need to remain in-situ. Copies of easement documents containing conditions requiring retention of access are included as **Attachment 5 – Easement Documents**.

Table 59 – Easements Overlapping MLs

ML	Easement	Registered interest
1151	AH SP179796	Central SEQ Distributor-Retailer Authority
1151	B RP207905	Queensland Electricity Commission
1151	B RP207905	Queensland Electricity Commission
1151	C SP229877	The Coordinator General
1151	D SP229878	The Coordinator General
1151	E SP288130	Central SEQ Distributor-Retailer Authority
1151	N SP283241	BGMG 9 Pty Ltd
1151	N SP283241	BGMG 9 Pty Ltd
1151	O SP283241	Brisbane City Council
1151	O SP283241	Central SEQ Distributor-Retailer Authority
1151	T SP283241	Central SEQ Distributor-Retailer Authority
1152	A RP104790	Queensland Electricity Commission
1152	A RP104791	Queensland Electricity Commission
1156	A RP97654	Queensland Electricity Commission
1156	A RP97655	Queensland Electricity Commission (same as A RP97654 above)
1156	A SP229876	Coordinator General
1156	A SP266231	Grantee listed as Austral Bricks (Qld) Pty Ltd
1156	AG SP179796	Central SEQ Distributor-Retailer Authority (same as AH SP179796 above)
1156	B RP165986	Brisbane City Council
1156	E SP288130	Central SEQ Distributor-Retailer Authority
1156	H SP229878	The Coordinator General (same as D SP229878 above)
1156	B RP207905	Queensland Electricity Commission
1156	C SP229877	The Coordinator General
1156	O SP283241	Central SEQ Distributor-Retailer Authority
1156	AH SP179796	Central SEQ Distributor-Retailer Authority

7 Rehabilitation Trials

Rehabilitation trials are limited to the progressive rehabilitation of the existing sites as outlined in **Section 3.4 – Rehabilitation Planning** and final rehabilitation of surrendered land as outlined in the case studies below.

Rehabilitation activities at the site are not novel or unproven, and therefore trials in addition to progressive rehabilitation is not relevant to the sites. The success of progressive rehabilitation will inform future rehabilitation activities as areas become available. The criteria for assessing success of progressive rehabilitation are outlined in the rehabilitation milestones include in this PRCP.

7.1 Case Study Rochedale Resumption Area

In 2008, Brisbane City Council commenced the acquisition of Lot 201 on SP213447 along the Bulimba Creek tributary. The resumption of the land was for drainage purposes to establish a legal point of discharge for upstream development. Lot 201 was acquired as part of a broader resumption of land parcels along the Bulimba Creek tributary. Infrastructure to facilitate the purpose of the easement has since been installed by Council.

The land resumption was gazetted on the 7 November 2008 and the land title was registered to Council on 18 November 2008. Effective 2008 at the point of resumption, Austral Bricks use of the land ceased, and the lease area was allowed by Council to rehabilitate via natural regeneration to a wetland ecosystem. The surrender of the land was approved by DoR on 13 May 2021. A selection of photos illustrating the rehabilitation are provided as **Plate 21 – Resumption Rehabilitation Photo 1** and **Plate 22 – Resumption Rehabilitation Photo 2**.

As part of this surrender process, Austral Bricks relinquished land which was held as buffer to the west of the Gateway Motorway. A selection of photos illustrating the condition of the buffer land at the point of surrender are provided as **Plate 23 – Rochedale Surrendered Buffer Land Photo 1** and **Plate 24 – Rochedale Surrendered Buffer Land Photo 1**.



Plate 21 – Resumption Rehabilitation Photo 1



Plate 22 – Resumption Rehabilitation Photo 2



Plate 23 – Rochedale Surrendered Buffer Land Photo 1



Plate 24 – Rochedale Surrendered Buffer Land Photo 1

7.2 Case Study Rochedale Motorway Estate

Austral, in joint venture partnership with development group, Goodman Australia (Goodman), redeveloped land formerly overlain by MLs 1165, 50189, 50165 and part of 1151 into the new industrial land referred to as the Rochedale Motorway Estate. Realising the development potential of the land, and the advantageous position in the expanding urban locality, Austral commenced rehabilitation of the MLs to achieve an Industrial PMLUs in line with the requirements of the site's EA.

Commencing in mid-2014, numerous development approvals were progressively granted by Brisbane City Council, and Austral in partnership with Goodman, rehabilitated the former disturbed mine areas into an industrial end use in accordance with the rehabilitation objectives of the EA and requirements of the development approvals. Rehabilitation comprised of bulk earthworks including filling the former mine disturbance areas including historical extraction voids with clean earth, drainage works, installation of services and roads, landscaping, and ultimately construction of industrial premises and ancillary infrastructure. The resultant industrial estate is known as the 'Rochedale Motorway Estate', **Figure 39 – Rochedale Motorway Estate Concept** provides an illustration of the estate.



Figure 39 – Rochedale Motorway Estate Concept

(Figure reprinted from *Rochedale Motorway Estate* prepared by Goodman Property Services (Aust) Pty Ltd (2022))

In 2017, an application for surrender of the MLs and partial surrender of the EA was approved. Photos of the industrial estate taken at the point of surrender in 2017 are provided as **Plate 25** to **Plate 28**.

Figure 40 – Former Surrender Area: Rochedale provides current aerial imagery dated 24 January 2022 overlain with the approximate boundaries of the surrender area. Copies of the approvals can be found on the BCC online portal PDOnline.



Plate 25 – View from Brickworks Place facing west.



Plate 26 – View from Brickworks Place facing east towards Gardner Road.



Plate 27 – View from Brickworks Place facing south over former part ML 1151.



Plate 28 – View from intersection facing south along Brickworks Place.



Figure 40 – Former Surrender Area: Rochedale

(Source: Nearmap (2022))

8 Final Site Design and Milestones

8.1 Final Site Design and Reference Maps

The following final site design plans for the sites to illustrate the maximum disturbance footprint, MLs boundaries and PMLU(s):

- **Burbank Final Site Design (Drawing no. 1129.DRG.105r3).**
- **Redland Bay Final Site Design (Drawing no. 1129.DRG.103r5).**
- **Rochedale Final Site Design (Drawing no. 1129.DRG.101).**

The following reference maps have been prepared for the Burbank, Redland Bay and Rochedale respectively illustrating the location of the proposed Rehabilitation Areas (Ras):

- **Reference Map 1 (Drawing no. 1129.DRG.106r3)**.
- **Reference Map 2 (Drawing no. 1129.DRG.104r4).**
- **Reference Map 3 (Drawing no. 1129.DRG.102r2).**

8.2 Selection of Rehabilitation Milestones

Table 60 – Rehabilitation Milestones provides a summary of the selected milestones, the milestone criteria and other factor relevant to achieving these milestones with references to the principles of SMART. **Table 60 – Rehabilitation Milestones** summarises the proposed schedule of monitoring and maintenance for the rehabilitation activities.

The schedule outlines the following:

- monitoring, reporting and review for each milestone.
- description of methodologies and standards.
- contingency strategies if monitoring data indicates milestone criteria are not being met.
- post-closure monitoring to ensure milestone criteria has been demonstrated.
- intent of monitoring reports, such as provision of results and key findings.

All records and reports prepared under this monitoring and maintenance program are to be held by Austral Bricks for a period of five years following surrender of the site.

8.3 PRCP Schedule

Included as **Attachment 6 – PRCP Schedule** is the PRCP Schedule which has been prepared following the outcomes of this PRCP.

Table 60 – Rehabilitation Milestones

		S	M	A	R	T
ID	**Rehabilitation Milestone**	**Specific** (Milestone Criteria)	**Measurable** [1] (Standard / Reference / Measure / Records Required)	**Achievable** (How the Milestone will be Achieved)	**Relevant** (Relevance of the Criteria)	**Time-Bound** (Monitoring Frequency and/or Timing)
RM1	**Infrastructure decommissioning and removal** Note – infrastructure to be retained in accordance with the landowner statement will be transitioned to the PMLU. All Brick Plant infrastructure is associated with the Prescribed ERA, not the mineral extraction activities, and has therefore been excluded from consideration.	• Remove mobile and temporary infrastructure including buildings. • Remove aggregate hardstand areas.	• Inspection record and photographs confirming removal of infrastructure.	Equipment and buildings at the mineral extraction sites are mobile and temporary only and can be removed by Austral Bricks and its site contractors.	The mineral extraction sites are typically operated on a campaign basis and therefore there is no permanent mine-related infrastructure at the sites. Demountable buildings and storages transported to the sites for the operational phase are to be removed at completion of the site activities.	During the site decommissioning phase.
RM2	**Roads and Access Tracks**	• Retain for ongoing beneficial use.	• Inspection record and photographs confirming removal of infrastructure.	In accordance with the EA, landowner statement and easement documents, roads and access tracks are to be retained.	In accordance with the EA, landowner statement and easement documents, roads and access tracks are to be retained.	During the site decommissioning phase.
RM3	**Remediation of contaminated land**	• Contaminated land assessment undertaken by an appropriately qualified person indicates that no contamination unsuitable for the post-mining land use is occurring. If required, a site investigation report including a site suitability statement prepared and submitted in accordance with the provisions of Chapter 7, Part 8 of the EP Act. • Contaminated material either remediated in-situ or removed/transported to an approved landfill for disposal and waste tracking information recorded and submitted.	• SQP (contaminated land expert) report and analytical results for assessment in accordance with: o *AS 4482.1-2005 – Guide to the sampling and investigation of potentially contaminated soil. Part 1 – Non-volatile and Semi-volatile compounds* (Standards Australia 2005a). o *AS 4482.2-2005 – Guide to the sampling and investigation of potentially contaminated soil. Part 2 – Volatile Compounds* (Standards Australia 2005b). Analytical results reporting levels of contaminants below NEPM.	Austral Bricks use the services of SQP (i.e., contaminated land experts) who are to be engaged to complete and testing or remediation.	**Section 6.6 – Water Management** identifies that there is a low risk of potential contamination, with the primary sources associated with handling and storage of minor volumes of fuels and substances within chemical storage areas. A PSI will determine if there are any residual contaminants associated with these activities that need to be treated.	During the site decommissioning phase.
RM4	**Landform development and**	• General reshaping and pushing/trimming to achieve final landform with maximum	• Inspection record and photographs.	Austral Bricks has access to earthmoving equipment used for the extraction of minerals	Batter slopes of approx. 20° – 27° or less are considered the	At completion of progressive and final rehabilitation.

		S	M	A	R	T
ID	**Rehabilitation Milestone**	**Specific** (Milestone Criteria)	**Measurable** [1] (Standard / Reference / Measure / Records Required)	**Achievable** (How the Milestone will be Achieved)	**Relevant** (Relevance of the Criteria)	**Time-Bound** (Monitoring Frequency and/or Timing)
	reshaping/reprofiling (Native Ecosystem)	slopes of 20 º - 27º with a factor of safety of not less than 1.5 which is expected to ensure long term stability. • Backfill as required with onsite materials, or imported clean earth verified in accordance with EIL / ESL guideline values under NEPM. • Erosion and sediment control systems installed such as sediment control socks, hydro-mulching, and open weave jute matting (BAAM 2023).	• SQP (contaminated land expert) report and analytical results for assessment in accordance with: o *AS 4482.1-2005 - Guide to the sampling and investigation of potentially contaminated soil. Part 1 – Non-volatile and Semi-volatile compounds* (Standards Australia 2005a). o *AS 4482.2-2005 - Guide to the sampling and investigation of potentially contaminated soil. Part 2 – Volatile Compounds* (Standards Australia 2005b). • Analytical results reporting levels of contaminants below EIL / ESL of NEPM.	which will be used to remedy erosion and reprofile void batters.	appropriate friction angle to ensure long-term stability.	
RM5	**Landform development and reshaping/reprofiling (Rural Residential)**	• General reshaping and pushing/trimming to achieve final landform with maximum slopes of 20 º - 27º with a factor of safety of not less than 1.5 which is expected to ensure long term stability. • Backfill as required with onsite materials, or imported clean earth verified in accordance with HIL guideline values under NEPM. • Erosion and sediment control systems installed.	• Inspection record and photographs. • SQP (contaminated land expert) report and analytical results for assessment in accordance with: o *AS 4482.1-2005 - Guide to the sampling and investigation of potentially contaminated soil. Part 1 – Non-volatile and Semi-volatile compounds* (Standards Australia 2005a). o *AS 4482.2-2005 - Guide to the sampling and investigation of potentially contaminated soil. Part 2 – Volatile Compounds* (Standards Australia 2005b). • Analytical results reporting levels of contaminants below HIL of NEPM.	Austral Bricks has access to earthmoving equipment used for the extraction of minerals which will be used to remedy erosion and reprofile void batters.	Batter slopes of approx. 20º – 27º or less are considered the appropriate friction angle to ensure long-term stability.	At completion of progressive and final rehabilitation.
RM6	**Landform development and reshaping/reprofiling (Industrial)**	• Finalise engineering and design plans. • Batter slopes as per engineered designs or a maximum of 20 - 27 o with a factor of safety of not less than 1.5 which is expected to ensure long term stability. • Backfilling carried out under Level 1 or Level 2 geotechnical supervision and testing in accordance with AS 3798-2007 Guidelines on earthworks for commercial and residential developments (Standards	• SQP (contaminated land expert) report and analytical results for assessment in accordance with: o *AS 4482.1-2005 - Guide to the sampling and investigation of potentially contaminated soil. Part 1 – Non-volatile and Semi-volatile compounds* (Standards Australia 2005a). o *AS 4482.2-2005 - Guide to the sampling and investigation of potentially contaminated soil. Part 2 – Volatile Compounds* (Standards Australia 2005b). • Analytical results reporting levels of contaminants below HIL D – commercial industrial premises of NEPM.	Austral Bricks has access to earthmoving equipment used for the extraction of minerals which will be used to remedy erosion and reprofile void batters. Austral Bricks will engage contractors and SQPs as required to carry out bulk earthworks and geotechnical supervision of backfilling. Austral Bricks use the services of SQPs (i.e., geotechnical engineers) who are to be engaged to complete the	Backfilling will be required to ensure the landform is suitable for industrial development.	At completion of progressive and final rehabilitation.

		S	M	A	R	T
ID	**Rehabilitation Milestone**	**Specific** (Milestone Criteria)	**Measurable** [1] (Standard / Reference / Measure / Records Required)	**Achievable** (How the Milestone will be Achieved)	**Relevant** (Relevance of the Criteria)	**Time-Bound** (Monitoring Frequency and/or Timing)
		Australia 2007, or most recent edition). • Materials imported for backfilling must be clean earth capable of satisfying HIL D – commercial industrial premises of NEPM.	Geotechnical records prepared by an SQP.	geotechnical assessments of final landform.		
RM7	**Landform development and reshaping/reprofiling (Wetland Ecosystem)**	• General reshaping and pushing/trimming to achieve final landform. • Batter slopes are to be no greater than 1 (H): 4 (V) where possible. • Erosion and sediment control systems installed on slopes of more than 30% such as sediment control socks, hydro-mulching, and open weave jute matting (BAAM 2023).	• Batter slopes are to be no greater than 1 (H): 4 (V) where possible. • Aerial and/or bathymetric survey (if water-filled).	Austral Bricks has access to earthmoving equipment used for the extraction of minerals which will be used to reprofile batters.	Basins are to be battered to a bathymetry which results in a macrophyte zone that creates a sequence of ephemeral, shallow marsh, marsh and deep marsh zones in addition to small open water zones.	At completion of progressive and final rehabilitation.
RM8	**Surface preparation**	• Remediate any erosion. • Trim, rock rake and deep rip. • Source, cart and spread growth media (topsoil and overburden) spread to a depth of 150 mm. • Soil analysis complete and soil ameliorants applied based on the outcomes of the assessment. • Apply mulch.	• Erosion equivalent to adjacent undisturbed land. • Ameliorants applied in line with methods of assessment and application in **Section 6.4.1.1 - Soil Quality**.	Austral Bricks (and its contractors) have access to earthmoving equipment to carry out surface preparation.	To ensure the site is stable and suitable for revegetating or development (Industrial PMLU).	At completion of progressive and final rehabilitation.
RM9	**Revegetation (Native Ecosystem)**	• Assisted natural regeneration supported by hydroseeding at maximum densities with a composition mixture that is representative of the pre clear RE (refer **Section 6.7 - Revegetation**) • Minimum 60% strike/survival rate. • Weeds controlled to reduce competition. • Install fencing to exclude access if required.	• BioCondition Assessment and inspection records confirming species composition consistent with **Section 6.7 – Revegetation**.	Species for any supplementary seeding or planting can be sourced from local suppliers and have proven viable in previously completed rehabilitation.	**Section 3.4 – Rehabilitation Planning** illustrates the success of natural regeneration in progressive rehabilitation completed at the site.	At completion of progressive and final rehabilitation.

		S	M	A	R	T
ID	**Rehabilitation Milestone**	**Specific** (Milestone Criteria)	**Measurable** [1] (Standard / Reference / Measure / Records Required)	**Achievable** (How the Milestone will be Achieved)	**Relevant** (Relevance of the Criteria)	**Time-Bound** (Monitoring Frequency and/or Timing)
RM10	**Revegetation (Rural Residential)**	• Seeding at a rate of rate of <1 kg to 4 kg / ha. • Minimum 60% strike/survival rate. • Weeds controlled to reduce competition. • Install fencing to exclude access if required.	Inspection records confirming species composition consistent with **Section 6.7 – Revegetation**	Species for any supplementary seeding or planting can be sourced from local suppliers.	Revegetation with grass species will be suitable for rural residential pursuits (e.g., hobby farm, livestock grazing) and will ensure landform is non-polluting.	At completion of progressive and final rehabilitation.
RM11	**Revegetation (Wetland Ecosystem)**	• Assisted revegetation in the form of hydro-mulch seeding, if deemed required (determined by BioCondition assessment), planting at a rate of 6-10 plants per m^2 along water edge (BAAM 2023). • Minimum 60% strike/survival rate. • Weeds controlled to reduce competition. • Install fencing to exclude access if required.	Inspection records confirming species composition consistent with **Section 6.7 – Revegetation**.	Species for any supplementary seeding or planting can be sourced from local suppliers.	Revegetation with wetland species will be suitable wetland outcomes and will ensure landform is non-polluting.	At completion of progressive and final rehabilitation.
RM12	**Achievement of surface requirements (Native Ecosystem)**	• Monitoring to determine whether vegetation is self-sustaining. • Monitoring to determine that species composition is adequate**.** • Assemble/disassemble fencing if required. • Monitor macropod grazing and install tree guards, if required (BAAM 2023).	• Groundcover biomass achieves ≥ 70%. • Species composition consistent with **Section 6.7 - Revegetation**. • Photographs and inspection records.	Austral Bricks has a proven track record in rehabilitation of land to a safe, stable and non-polluting landform. Refer to **Section 3.4 - Rehabilitation Planning** and **Section 7 - Rehabilitation Trials**.	Monitoring will ensure that adequate groundcover and species are established to ensure long-term suitability of the rehabilitated landform. IECA (Australasia) (2010, p.5) state that 'at least 70% ground cover (combined plant and mulch) is considered necessary to provide a satisfactory level of erosion control'.	Within three years of completion of each stage of the rehabilitation (including at final stage).
RM13	**Achievement of surface requirements (Rural Residential)**	• Monitoring to determine whether vegetation is self-sustaining. • Monitoring to determine that species composition is adequate**.** • Assemble fencing if required.	• Groundcover biomass achieves ≥ 70%. • Species composition consistent with **Section 6.7 - Revegetation**. • Photographs and inspection records.	Austral Bricks has a proven track record in rehabilitation of land to a safe, stable and non-polluting landform. Refer to **Section 3.4 - Rehabilitation Planning** and **Section 7 –- Rehabilitation Trials**.	Monitoring will ensure that adequate groundcover and species are established to ensure long-term suitability of the rehabilitated landform. IECA (Australasia) (2010, p.5) state that 'at least 70% ground cover (combined plant and mulch) is considered necessary to provide a satisfactory level of erosion control'.	Within three years of completion of each stage of the rehabilitation (including at final stage).

		S	M	A	R	T
ID	**Rehabilitation Milestone**	**Specific** (Milestone Criteria)	**Measurable** [1] (Standard / Reference / Measure / Records Required)	**Achievable** (How the Milestone will be Achieved)	**Relevant** (Relevance of the Criteria)	**Time-Bound** (Monitoring Frequency and/or Timing)
RM14	**Achievement of surface requirements (Industrial)**	• Monitoring to determine whether landform is geotechnically stable.	• Photographs and inspection records. • Geotechnical advice prepared by an SQP.	Austral Bricks has a proven track record in developing Industrial PMLUs at the Rochedale site, refer **to Section 7.2. – Case Study Rochedale Motorway Estate**.	Austral Bricks use the services of SQPs (i.e., engineers) who are to be engaged to complete any geotechnical assessments.	Prior to lodgement of any EA surrender / partial surrender application.
RM15	**Achievement of post-mining land use to stable condition (Native Ecosystem)**	• No rill or gully erosion evident. • Species composition consistent with benchmark regional ecosystems as determined through BioCondition Assessment. • Minimum 70% groundcover to be achieved. • Mortality rate of mature trees equal to, or less than, the recruitment rate of new trees. • No more than 10% groundcover comprised of weed species.	• Advice prepared by an SQP confirming groundcover success and landform stability.	Austral Bricks has carried out progressive rehabilitation of the Burbank and Rochedale site to achieve a Native Ecosystem PMLU. Proven methods will be replicated for future rehabilitation.	Austral Bricks use the services of SQPs (e.g., ecologists, engineers, environmental consultants) who are to be engaged to complete assessments. In accordance with the *Leading Practice Sustainable Development Program for the Mining Industry* (Commonwealth of Australia 2016), there is currently no broad agreement on what constitutes an 'acceptable' rate of erosion on a rehabilitated mine site' (p. 22). However, a target erosion rate such that rill erosion and eventual gully development are unlikely is commonly adopted (Commonwealth of Australia 2016).	Prior to lodgement of any EA surrender / partial surrender application.
RM16	**Achievement of post-mining land use to stable condition (Rural Residential)**	• No rill or gully erosion evident. • Grass species are comparable in composition to the species mix detailed in **Table 55 – Proposed Rural Residential Pasture Species Mix**. • Minimum 70% groundcover to be achieved. • No more than 10% groundcover comprised of weed species.	• Advice prepared by an SQP confirming groundcover success and landform stability.	Austral Bricks has a proven track record in rehabilitation of land to a safe, stable and non-polluting landform. Refer to **Section 3.4 – Rehabilitation Planning** and **Section 7 – Rehabilitation Trials**.	Austral Bricks use the services of SQPs (e.g., ecologists, engineers, environmental consultants) who are to be engaged to complete assessments. IECA (Australasia) (2010, p.5) state that 'at least 70% ground cover (combined plant and mulch) is considered necessary to provide a satisfactory level of erosion control'.	Prior to lodgement of any EA surrender / partial surrender application.

RM17	**Achievement of post-mining land use to stable condition (Wetland Ecosystem)**	• No rill or gully erosion evident.
		• Water quality achieves criteria specified in the EA of:
		  ○ Burbank:
		  ▪ pH 6.5-9.0
		  ▪ Turbidity ≤ 92 NTU.
			• Water quality achieves compliance with criteria specified in the EA.	Austral Bricks has a track record in management of site waters and has access to SQPs who can assist in treatment of site waters if required.	Water quality at the site has been assessed on an ongoing basis in line with the EA requirements. The parameters applicable to the operational phase to assess potential environmental impacts are	Prior to lodgement of any EA surrender / partial surrender application.

		S	M	A	R	T
ID	**Rehabilitation Milestone**	**Specific** (Milestone Criteria)	**Measurable** [1] (Standard / Reference / Measure / Records Required)	**Achievable** (How the Milestone will be Achieved)	**Relevant** (Relevance of the Criteria)	**Time-Bound** (Monitoring Frequency and/or Timing)
		○ Redland Bay: ▪ pH 6.5-9 ▪ Turbidity 85 NTU ▪ Dissolved Oxygen 6.0 mg/L ○ Rochedale ▪ pH 6.5 – 9.0 ▪ Turbidity 95 NTU. • Species composition of fringing vegetation aligns with *wetland indicator plants of Southeast Queensland (SEQ) bioregion* published by the State Government. • Wetland provides for habitat features to support aquatic and terrestrial fauna species recorded in historical site-specific survey. • No more than 10% groundcover comprised of weed species.		Any monitoring results are to be assessed by an SQP prior to lodgement of a surrender application for the EA to confirm suitability.	expected to be relevant for the assessment of post-closure suitability of waters for the PMLUs.	
RM18	**Achievement of post-mining land use to stable condition (Industrial)**	• Where disturbed land will remain post-surrender subject to ongoing civil works for an industrial end use: ○ Development Permits - Operational Works (or equivalent) in effect and acted upon. ○ Stormwater, erosion and sediment controls implemented in accordance with conditions of the development permits. ○ Earthworks undertaken with supervision of SQP. • Where no mine disturbed land remains: – landform is geotechnically safe and stable as confirmed by SQP with a factor of safety of not less than	• Evidence of development permits. • Geotechnical advice prepared by an SQP.	Austral Bricks has a proven track record in developing Industrial PMLUs at the Rochedale site, refer **to Section 7.2. – Case Study Rochedale Motorway Estate**.	It is accepted by the Department that, where land is to remain disturbed at the cessation of mining and is required to facilitate civil works, the regulation of rehabilitation of this land can be transitioned to the jurisdiction of Council under Operational Works – Development Permits which are in effect. It is likely that this may occur at some of the sites. Predicting which sites, or if this will apply, is impossible to determine at the time of preparing this PRCP as it is subject to a range of factors, including the prevailing planning instruments. Austral Bricks use SQPs who are to be engaged to complete assessments.	Prior to lodgement of any EA surrender / partial surrender application.

		S	M	A	R	T
ID	**Rehabilitation Milestone**	**Specific** (Milestone Criteria)	**Measurable** [1] (Standard / Reference / Measure / Records Required)	**Achievable** (How the Milestone will be Achieved)	**Relevant** (Relevance of the Criteria)	**Time-Bound** (Monitoring Frequency and/or Timing)
		1.5 to ensure long term stability. – Minimum 70% groundcover to be achieved (through revegetation with grass species, other agreed engineered solution, or combination of both).			Engineering certification will provide certainty that the landform achieves a safe and stable condition. IECA (Australasia) (2010, p.5) state that 'at least 70% ground cover (combined plant and mulch) is considered necessary to provide a satisfactory level of erosion control'.	

Table notes:

1. May be a combination of any of the records listed and does not indicate all items are required.

9 Monitoring and Maintenance Program

9.1 Purpose

This section has been prepared to address Section 3.8 of the PRCP Guideline. Through the information request received, the Department advised that the program should aim to:

- describe the proposed monitoring to determine whether intervention is required and demonstrate success of rehabilitation.
- document a monitoring program to gather data which can be used to demonstrate a stable condition has been achieved and the land is suitable for surrender.

9.2 Monitoring Schedule

Table 61 – Monitoring Schedule over page provides a summary of monitoring that is to be carried out.

The aim of the monitoring program is to enable collection of data to demonstrate that the milestone criteria have been achieved. Austal Bricks are to engage SQPs where necessary to complete actions outlined in the monitoring schedule.

Table 61 – Monitoring Schedule

Rehabilitation Milestone	Data to be Collected	Monitoring Frequency
RM1 Infrastructure decommissioning and removal	• Inspection record to confirm absence/presence of infrastructure. • Photographs.	Once at decommissioning.
RM2 Roads and Tracks	• Inspection record to document retained roads and condition. • Photographs.	Once at decommissioning.
RM3 Remediation of contaminated land	SQP to carry out contaminated land survey in accordance with relevant Australian Standards and NEPM.	During rehabilitation.
RM4 Landform development and reshaping/reprofiling (Native Ecosystem)	SQP to collect analytical data in accordance with relevant NEPM criteria for soils to be imported from external sources for backfilling (unless otherwise verified by an SQP as clean earth).	• Prior to acceptance of backfill materials onto site. • Ongoing sampling and validation throughout filling campaign.
	Aerial survey of batter profiles.	At completion of shaping / profiling of each rehabilitated area.
RM5 Landform development and reshaping/reprofiling (Rural Residential)	SQP to collect analytical data in accordance with relevant NEPM criteria for soils to be imported from external sources for backfilling (unless otherwise verified by an SQP as clean earth).	• Prior to acceptance of backfill materials onto site. • Ongoing sampling and validation throughout filling campaign. •
	Aerial survey of batter profiles.	• At completion of shaping / profiling of each rehabilitated area.
RM6 Landform development and reshaping/reprofiling (Industrial)	SQP to collect analytical data in accordance with relevant NEPM criteria for soils to be imported from external sources for backfilling (unless otherwise verified by an SQP as clean earth).	• Prior to acceptance of backfill materials onto site. • Ongoing sampling and validation throughout filling campaign.
	• Aerial survey of landform profiles. • Geotechnical assessment of by a suitable qualified person to confirm stability.	At completion of shaping / profiling.

Rehabilitation Milestone	Data to be Collected	Monitoring Frequency
RM7 Landform development and reshaping/reprofiling (Wetland Ecosystem)	Aerial and/or bathymetric survey (if water-filled).	At completion of shaping / profiling of each rehabilitated area.
RM8 Surface preparation	Inspection record to document earthworks completed and assess erosion risks.	At completion of earthworks.
	Obtain samples of soil and complete analysis to determine any requirement for soil amelioration based on species to be planted.	Six weeks prior to commencement of revegetation.
RM9 Revegetation (Native Ecosystem)	Inspection record to assess ongoing maintenance needs and success/failure of seeding or planting.	Six monthly intervals.
	BioCondition Assessment	End of summer rainfall growing season (typically late May, subject to regional rainfall events).
RM10 Revegetation (Rural Residential)	Inspection record to assess success/failure of seeding.	• Six monthly intervals; and, • Prior to surrender.
RM11 Revegetation (Wetland Ecosystem)	Inspection record to assess success/failure of vegetation.	• Six monthly intervals; and, • Prior to surrender.
RM12 Achievement of surface requirements (Native Ecosystem)	• SQP engaged to carry out final inspection and assessment of vegetation (including species composition, biomass, weed presence). • Aerial survey if required.	Within three years of completion of stage (including at final stage).
RM13 Achievement of surface requirements (Rural Residential)	• Inspection record to document species composition, groundcover biomass. • Soil sampling to determine if any additional fertilisers are required. • Aerial survey if required.	Within three years of completion of stage (including at final stage).

Rehabilitation Milestone	Data to be Collected	Monitoring Frequency
RM14 Achievement of surface requirements (Industrial)	SQP to carry out final geotechnical assessment to very landform achieves relevant Australian Standard or development permit requirements.	Prior to lodgement of any EA surrender / partial surrender application.
RM15 Achievement of post-mining land use to stable condition (Native Ecosystem)	Advice prepared by an SQP confirming groundcover success and landform stability.	Prior to lodgement of any EA surrender / partial surrender application.
RM16 Achievement of post-mining land use to stable condition (Rural Residential)	Advice prepared by an SQP confirming groundcover success and landform stability.	Prior to lodgement of any EA surrender / partial surrender application.
RM17 Achievement of post-mining land use to stable condition (Wetland Ecosystem)	Water quality monitoring completed to assess whether waters achieve compliance with criteria specified in the EA.	Prior to lodgement of any EA surrender / partial surrender application.
RM18 Achievement of post-mining land use to stable condition (Industrial)	Geotechnical advice prepared by an SQP.	Prior to lodgement of any EA surrender / partial surrender application.

9.3 Monitoring Methodologies

9.3.1 Inspection Records

Inspection records are to record the following information as a minimum:

- Inspection date.
- Status of rehabilitation including:
    - Extent of rehabilitation area.
    - Vegetation condition (where revegetation has occurred).
    - Weed coverage.
    - Soil stability (e.g., presence of rill or gully erosion).
- Future actions for upcoming period.
- Any actions to rectify observed failures/areas for improvement.

The inspection record must include photographs of the rehabilitation areas taken at locations which are readily repeatable in subsequent inspections to enable ongoing condition assessment of rehabilitation to ensure milestone criteria are being achieved.

9.3.2 Soil sampling

Soil samples are to be collected at representative locations where proposed seeding / planting is to occur at between 100 to 300 mm.

For all laboratory analysis, soil samples of approximately 250–500 grams in weight are to be placed into a sample bag immediately following collection (one bag per sample). All sample bags are to be marked with the following information:

- unique sample ID
- site name
- date of sampling
- sample location
- sample depth.

Soils samples are to packaged in an esky or small box along with a completed Chain of Custody / Sample Submission Form and be submitted to a NATA approved laboratory for the following analytical suite:

- Emerson class test.
- pH and EC (1:5 Water).
- Available Calcium, Magnesium. Potassium, Ammonium, Nitrate, Phosphate. Sulfur;
- Exchangeable Sodium, Potassium, Calcium, Magnesium, Hydrogen. Aluminium. Cation Exchange Capacity;
- Bray I and II Phosphorus;
- Colwell Phosphorus;
- Available Micronutrients Zinc, Manganese, Iron, Copper. Boron. Silicon;
- Total Carbon (TC), Total Nitrogen (TN), Organic Matter, TC/TN Ratio;
- Basic Colour; and,
- Basic Texture.

Results are to be interpreted to identify what, if any, ameliorants are to be applied to support growth of the reference regional ecosystems (native ecosystem PMLU) or pasture (rural residential PMLU).

9.3.3 BioCondition Assessment

An annual BioCondition Assessment of areas subject to native ecosystem rehabilitation will assist in determining the success of achieving rehabilitation milestone criteria with reference to the published 'benchmarks' for regional ecosystems relevant to the sites. The aim of adopting the State Government's BioCondition Assessment Framework is to provide a repeatable and quantifiable measure of revegetation success to enable year on year assessment of vegetation condition. The outcomes of the BioCondition Assessment are to be used to inform targeted maintenance or repair of revegetation areas.

The assessment is to be carried out in accordance with the assessment manual titled *BioCondition: A condition assessment framework for terrestrial biodiversity in Queensland* (Department of Science, Information Technology, Innovation and the Art 2015) or most recent edition.

BioCondition Assessment field sheets are to be completed including photographs of the rehabilitation areas and retained for comparison in subsequent assessments. Austral Bricks are to engage the services of an SQP to carry out the assessment if required.

9.3.4 Contaminated Land Assessments

Where a contaminated land assessment is required, Austral Bricks are to engage the services of an SQP (contaminated land expert) to carry out sampling and reporting in accordance with:

- *AS 4482.1-2005 – Guide to the sampling and investigation of potentially contaminated soil. Part 1 – Non-volatile and Semi-volatile compounds* (Standards Australia 2005a).
- *AS 4482.2-2005 – Guide to the sampling and investigation of potentially contaminated soil. Part 2 – Volatile Compounds* (Standards Australia 2005b).

Analytical results are to be assessed by an SQP in accordance with the relevant investigation levels as prescribed under NEPM. The intent of the assessments is to ensure that the sites can be rehabilitated to a non-polluting state in accordance with the corresponding NEPM guideline values for the proposed PMLU, refer to **Section 6.8 - Contaminated Land Remediation**.

9.3.5 Aerial and Bathymetric Survey

Aerial survey via Unmanned Aerial Vehicle (AUV) will enable capture of imagery to identify matters such as erosion hotspots (active erosion gullies), site slope stability, projective foliage cover, tree and shrub density and weed presence (Commonwealth of Australia 2016, p. 51). Raw data collected during the survey event is to be used to create digital surface models and high resolution imagery to assist in determining how the sites are progressing towards the milestone criteria.

Bathymetric survey is carried out using remotely piloted bathymetric vessel to determine the floor RL of water bodies and will be undertaken at regularly spaced cross sections. Following data capture and processing, a contour map will be prepared showing AHD levels of the bottom of the water body.

9.3.6 Geotechnical Assessments

Austral Bricks are to engage an SQP (geotechnical engineer or equivalent) as required to provide advice in relation to geotechnical stability. The method of assessment is to be determined by the SQP.

9.4 Maintenance Schedule

Table 62 – Maintenance Schedule outlines the maintenance schedule for rehabilitation areas.

Table 62 – Maintenance Schedule

Activity	Frequency
Weed and Pest Control	
Site Preparation (where necessary)	One (1) treatment at least two (2) weeks prior to seeding / planting.
Ongoing weed management	Biannually or as required.
Monitor macropod grazing and install tree guards, if required.	Ongoing.
Revegetation	
Monitor performance and conduct any necessary maintenance.	• One (1) month after seeding / seedling planting. • Three (3) months after seeding / seeding planting. • Six (6) months after seeding / seedling planting. • 12 months after seeding / seedling planting. • Annually thereafter. **OR** • Following significant rainfall events (e.g., >25 mm).
Replace diseased or dead plants. Rectify zero net loss	Annually over a maintenance period of 3 years (BAAM 2023).
Fertilise (if applicable)	Two (2) months after topsoil spreading or seeding.
Apply mulch (if available)	One-off around tube stock plantings
Pasture Management	
Slashing and fertilising	As required.
Water Storages and Erosion and Sediment Controls	
Inspect and address repair/maintenance needs.	• Quarterly as a minimum. • After each rain event, particularly focusing on the entry and exit points, if damage has occurred then make necessary repairs. • Prior to, and immediately after, periods of sustained site shut down (i.e., greater than 30 days.
Structures / landforms subject to engineered design (Industrial PMLU)	
Inspect and address repair/maintenance needs in line with SQP recommendations.	As recommended by SQP appointed to oversee development.

9.5 Contingency Measures

The necessary contingency measures will be dictated by the results of all ongoing monitoring. The following provides a summary of contingency measures which may be required. These will be adapted as necessary based on the findings of the ongoing monitoring:

- Any residual infrastructure identified through the final inspection which is not the subject of a landowner agreement is to be removed.

- Where validation testing indicates that contaminated soils required additional treatment to achieve the relevant NEPM standards, an SQP is to be engaged to determine further treatments and to carry out additional validation testing following any further treatment.
- Reprofiling of final batters as required.
- Reprofiling of final landform if recommended by an SQP (engineer).
- Reprofiling / resurfacing of erosion areas and further stabilisation with vegetation.
- Further revegetation as required where species composition or density does not achieve the applicable Regional Ecosystem.
- Additional works if recommended by an SQP (engineer).
- Remedial action in accordance with SQP recommendations.
- Where analytical results indicate that the water quality of any retained water storage does not meet the relevant objectives for the PMLU, water quality treatments are to be considered and applied. A suitably qualified person may be engaged to determine the most appropriate treatment option.
- Further analysis of waters is to be undertaken following any treatment to verify that the treatment has been successful.

9.6 Reporting

9.6.1 Record Keeping

All maintenance and monitoring records are to be kept for a period of up to five years post-surrender of the relevant tenure. The reports generated will provide a useful means for assessing the ongoing success or failure of rehabilitation activities throughout the life of the operations and will enable a year-on-year assessment of all rehabilitation activities carried out.

9.6.2 Annual Returns

Each annual return for the EA must include an evaluation of the effectiveness of the PRCP Schedule. IN accordance with Section 316J of the EP Act, the annual return must include an evaluation of the effectiveness of:

- actions taken in relation to each rehabilitation milestone or management milestone under the schedule.
- the environmental management carried out under the schedule.
- whether any rehabilitation milestones or management milestones to be completed under the PRCP schedule during the year have been met.
- whether Austral Bricks has complied with the conditions of the PRCP schedule.

9.6.3 PRCP Schedule Audits

An audit must be carried out within three years of the PRCP Schedule, and each subsequent audit must be completed three years after the previous audit period ended. In accordance with the PRCP Guideline, the audit must assess all of the following for the audit period:

- what steps the holder has taken towards achieving milestones
- whether the holder has complied with all the conditions imposed on the PRCP schedule
- whether any information that has been given to the administering authority about rehabilitation is accurate

- whether the PMLUs are likely to be achieved, having regard to the rehabilitation that has and will be carried out.
- recommendations, if any, on what actions the holder should take to ensure milestones are achieved and conditions are complied with.

The findings of the audit are to be documented in an 'audit report' which must be submitted to the Department within four (4) months of the end of each audit period and must include a declaration from the EA.

10 Risk Assessment

10.1 Risk Assessment Purpose

The purpose of this risk assessment is to satisfy the requirements of Section 126C(1)(f) of the EP Act by identifying the potential risks of a stable condition for the land not being achieved, and how these risks will be managed or minimised.

10.2 Risk Assessment Methodology

This risk assessment methodology has been adopted from the process for risk management as set out in Clause 6 of the *AS ISO 31000:2018 Risk management – Guidelines* (Standards Australia 2018). The risk assessment follows the following process:

- Risk Identification (source activity and potential impact).
- Risk Analysis (risk level = likelihood x consequence).
- Risk Evaluation (commentary on risk / management measures proposed).

The risk treatment outlines the controls / management measures that can be implemented to reduce the level of risk to as low as reasonably possible.

The risk analysis qualitatively estimates the level of risk based on the likelihood of an environmental impact or event occurring (**Table 63 – Definitions of Likelihood**), and the consequences of the occurrence (**Table 64 – Definitions of Consequence**).

Table 63 – Definitions of Likelihood

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

Table 64 – Definitions of Consequence

Rating	Descriptor	Score
Negligible	Impacts not requiring any treatment or management action	1
Minor	Nuisance or insignificant environmental harm requiring minor management action	2
Moderate	Serious environmental impacts, readily manageable at low cost	3

Rating	Descriptor	Score
Major	Substantial environmental impacts, manageable but at considerable cost and some disruption	4
Severe	Severe environmental impacts with major consequent disruption and heavy cost	5

The consequence and likelihood scores are plotted on the risk vs consequence matrix (**Table 65 – Risk Assessment Matrix**) and the final risk level assigned is a product of the likelihood and consequence scores, which equals the magnitude of the impacts. The higher the risk score, the higher the priority is for management.

Table 65 – Risk Assessment Matrix

Likelihood		Consequence				
		Negligible	**Minor**	**Moderate**	**Major**	**Severe**
		1	**2**	**3**	**4**	**5**
Almost Certain	**5**	5 Medium	10 High	15 High	20 Very High	25 Very High
Likely	**4**	4 Low	8 Medium	12 High	16 High	20 Very High
Possible	**3**	3 Low	6 Medium	9 Medium	12 High	15 High
Unlikely	**2**	2 Low	4 Low	6 Medium	8 Medium	10 High
Rare	**1**	1 Low	2 Low	3 Low	4 Low	5 Medium

Table 66 – Indicative Management Option for Each Risk Assessment Rating describes the possible actions required for each risk assessment rating.

Table 66 – Indicative Management Option for Each Risk Assessment Rating

Risk Rating	Risk Rating Scores	Indicative Management Option
Very High	**17 – 25**	Manage by implementing site management and emergency procedures, plant design controls and regular monitoring.

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

10.3 Credible Risk Events and Assessment

Under the EP Act residual risks are either or both of the following:

- The risk that, although the land has been rehabilitated and appropriately managed, remedial action will need to be carried out in relation to the land in the foreseeable future.
- The risk that ongoing management activities will need to be carried out in relation to the land, including:
- monitoring the condition of the land or site features of the land; and,
- taking action to prevent or minimise environmental harm caused by the land or site features of the land.

For the purpose this PRCP, credible risk events have been selected based on the reasonable likelihood that that they may occur in future with a known consequence. The likelihood and consequence of each credible risk event has then been qualified to determine the level of residual risk. The outcomes of this assessment are presented in **Table 67 – Assessment of Residual Risk**. Reporting and monitoring requirements for risk treatments are summarised in **Section 8 – Final Site Design and Milestones.**

Table 67 – Assessment of Residual Risk

Source Activity	Credible Risk Event	Control / Treatment	Responsibility	Resource Requirements	Timing of Treatment	Residual Risk Rating
Remediation of contaminated land	Failure to adequately treat and / or manage land contaminated by site activities.	• Engage a SQP to provide management responses for contaminated land as required. • Where contamination is identified, achieve relevant HIL guideline values for commercial / industrial purposes (Rochedale) and EIL guideline values (Burbank and Redland Bay). • If necessary, treatment of the contaminated soils through methods such as land-farming and offsite disposal of affected soils.	Austral Bricks.	Application of financial resources by Austral Bricks and technical resources by their selected contractors.	At completion of mining.	2 x 2 = 4 (**Low**)
Final Landform	Exposed soils resulting in potential impacts to water quality as a result of erosion and sediment loss.	• Reduce disturbed catchment areas through installation of erosion and sediment controls and stabilisation with a groundcover (≥80 % cover) • Burbank and Redland Bay – revegetate via seeding with suitable native species (Native Ecosystem PMLU) and / or grass seeding (Rural Residential PMLU). • Rochedale – stabilise the landform in readiness for redevelopment to an industrial PMLU (can be achieved through temporary cover crop or erosion and sediment controls suitable for construction sites).	Austral Bricks.	Application of financial resources by Austral Bricks and technical resources by Austral Bricks and/or their selected contractors.	Progressively as areas become available and/or at final rehabilitation.	2 x 2 = 4 (**Low**)
	Final landform geotechnical instability.	<u>Rochedale</u> • Rehabilitation via bulk earthworks to complete filling and reprofiling of the landform. • All bulk earthworks are to be quality controlled in accordance the requirements of *AS 3798-2007 Guidelines on earthworks for commercial and residential developments* (Standards Australia 2007). • Geotechnical reports to be prepared to verify the stability. • Where planning approvals are not in place, rehabilitation to a safe, stable and non-polluting landform. <u>Burbank and Redland Bay</u> • Slopes to be battered to achieve an appropriate angle of friction (approx. 20° - 27°). • Groundcover achieves ≥80 % cover. • Quality control in accordance with *AS 3798-2007 Guidelines on earthworks for commercial and residential developments* (Standards Australia 2007) (only if directed to do so by a suitably qualified person to implement Rural Residential PMLU at Redland Bay). • Geotechnical reports to be prepared to verify the stability.	Austral Bricks and selected contractors.	Application of financial resources by Austral Bricks and technical resources by Austral Bricks and/or their selected contractors.	Progressively as areas become available and/or at final rehabilitation.	2 x 2 = 4 (**Low**)

Source Activity	Credible Risk Event	Control / Treatment	Responsibility	Resource Requirements	Timing of Treatment	Residual Risk Rating
Revegetation	Prolonged drought impacting upon groundcover success.	• Where required, increase watering regime to increase success. • Carry out follow-up monitoring and maintenance until plants are self-sustaining.	Austral Bricks.	Application of financial resources and technical resources by Austral Bricks.	As required in response to weather events.	2 x 2 (**Low**)
	Infestation / spread of environmental weeds or declared weeds in the rehabilitated areas.	• Weed control to be undertaken on an as needs basis (note -future long term weed control will be responsibility of the landowner).	Austral Bricks.	Application of financial resources by Austral Bricks and technical resources by Austral Bricks and/or their selected contractors.	Continuous until handover of land.	2 x 2 (**Low**)
	Soil erosion resulting in the failure of plant establishment over eroded surfaces.	• Establish adequate plant cover / groundcover to reduce wind erosion, increase organic matter in surface soils through leaf litter fall, increase soil moisture retention and soil stability.	Austral Bricks.	Application of financial resources by Austral Bricks and technical resources by Austral Bricks and/or their selected contractors.	Progressively as areas become available and/or at final rehabilitation.	2 x 2 (**Low**)
Sediment basins retained post-closure	Failure of water holding structure or drainage control structure.	• Ensure banks/batters of water storages are adequately graded and revegetated. • Analyse surface water samples of the final wetland to ensure that they achieve the water quality objectives suitable for the end use.	Austral Bricks.	Application of financial resources by Austral Bricks and technical resources by Austral Bricks and/or their selected contractors.	At final rehabilitation.	2 x 2 (**Low**)
Flood risks associated with Rochedale rehabilitation	Impacts to final landform.	• Landform implemented in accordance with recommendations of flood modelling (refer **Section 6.3 – Flooding**). • All bulk earthworks are to be quality controlled in accordance the requirements of *AS 3798-2007 Guidelines on earthworks for commercial and residential developments* (Standards Australia 2007). • Geotechnical reports to be prepared to verify the stability.	Austral Bricks and selected contractors.	Application of financial resources by Austral Bricks and technical resources by Austral Bricks and/or their selected contractors.	At final rehabilitation.	2 x 2 = 4 (**Low**)
Infrastructure	Failure to decommission infrastructure.	• Where the landowner has not agreed to retention of infrastructure, the infrastructure must be removed, and the underlying area rehabilitated by ripping and direct seeding.	Austral Bricks.	Application of financial and technical resources by Austral Bricks.	At cessation of operations.	2 x 2 = 4 (**Low**)

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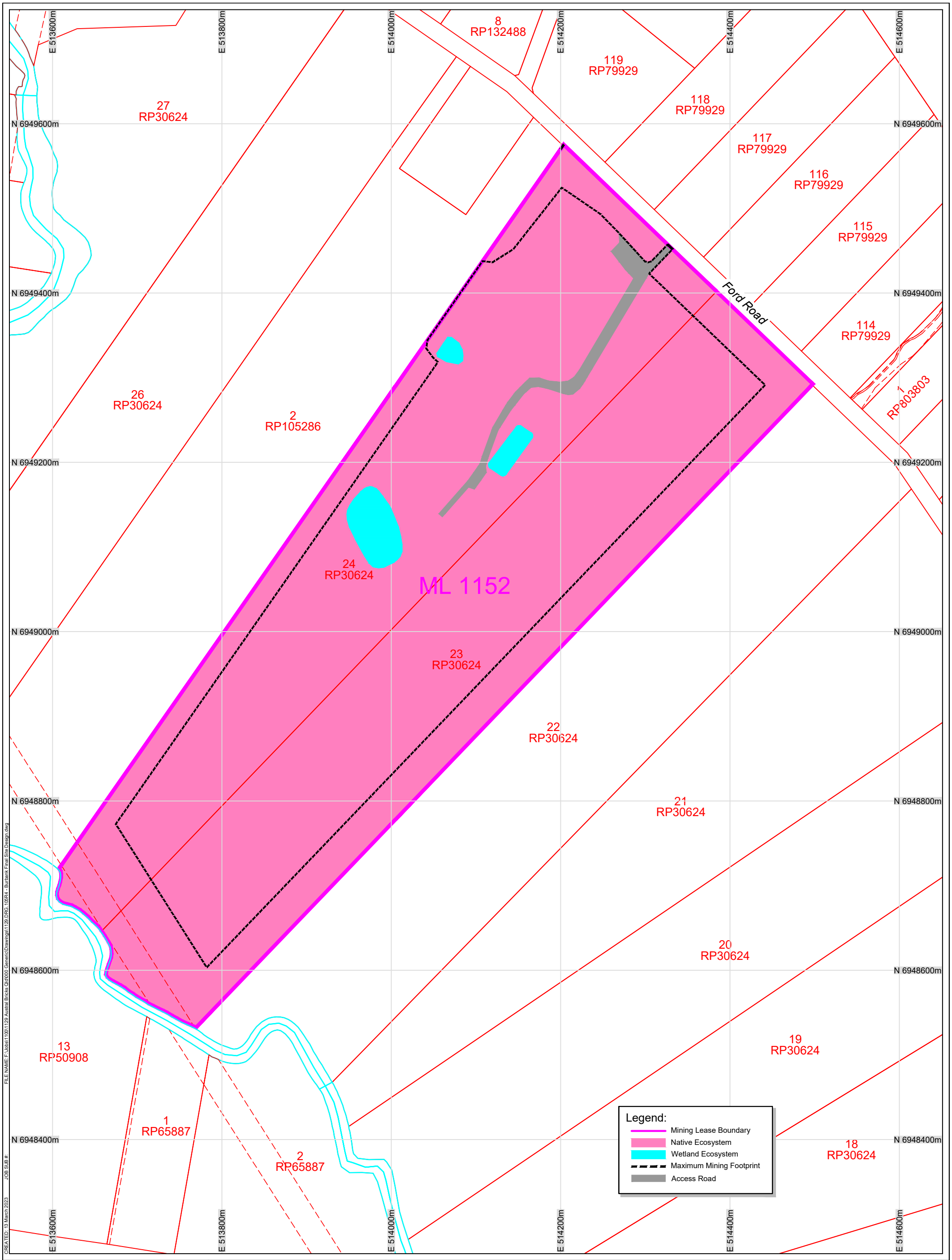
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REFERENCE MAPS

March 2023 | 1129_610_008_V1



REV	DESCRIPTION	DATE	BY
2	Wetland Ecosystem added	22/04/2022	MR
3	Rehabilitation Domains revised	07/03/2023	MR
4	Modification to Native Ecosystem Area	13/03/2023	JHV

Data Sources:
Photography:
Topography:
Cadastre:
Ecosystem:
Other:

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PROJECT: Burbank

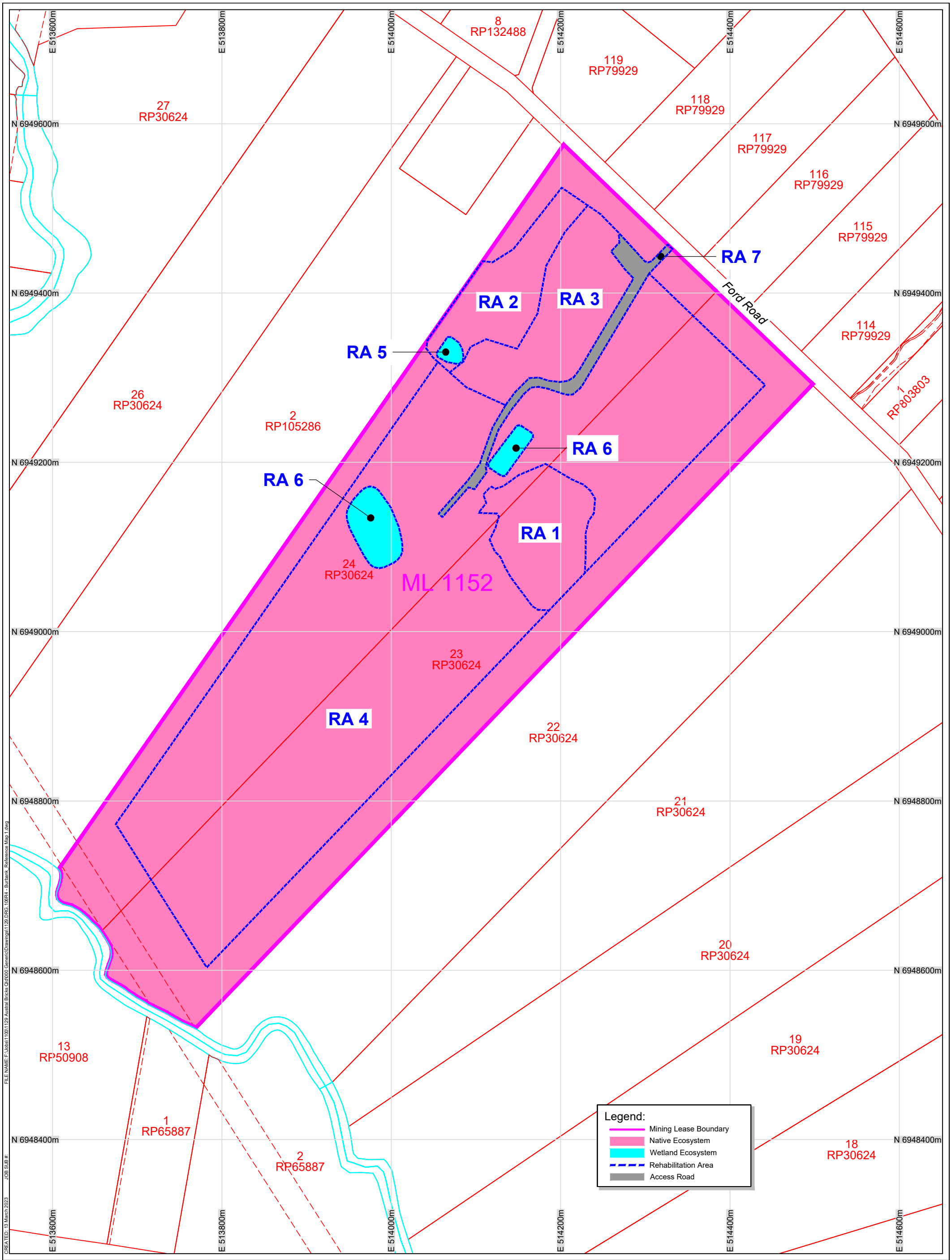
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TITLE: Final Site Design

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SCALE: 1:4,000 When Printed On A3 (0 — 80m)
DATE: 13 March 2023 DRAWN: MR
PRINTED: 13 March 2023 CHECKED: YD
DRAWING NUMBER: 1129.DRG.105 REVISION: 4
DATUM: HORIZONTAL / VERTICAL / ZONE GDA94 / MGA / AHD / 56

FILE NAME: F:\Jobs\1100\1129 Austral Bricks Qld\000 General\Dwgs\1129.DRG.105R4 - Burbank Final Site Design.dwg
JOB SUB #:
CREATED: 13 March 2023



REV	DESCRIPTION	DATE	BY
2	Wetland Ecosystem added	26/04/2022	MR
3	Rehabilitation Domains revised	07/03/2023	MR
4	Modification to Native Ecosystem Area	13/03/2023	JHV

Data Sources:
Photography:
Topography:
Cadastre:
Ecosystem:
Other:

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CLIENT: The Austral Brick Co. Pty Ltd

TITLE: Reference Map 1

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DRAWING NUMBER: 1129.DRG.106

REVISION: 4

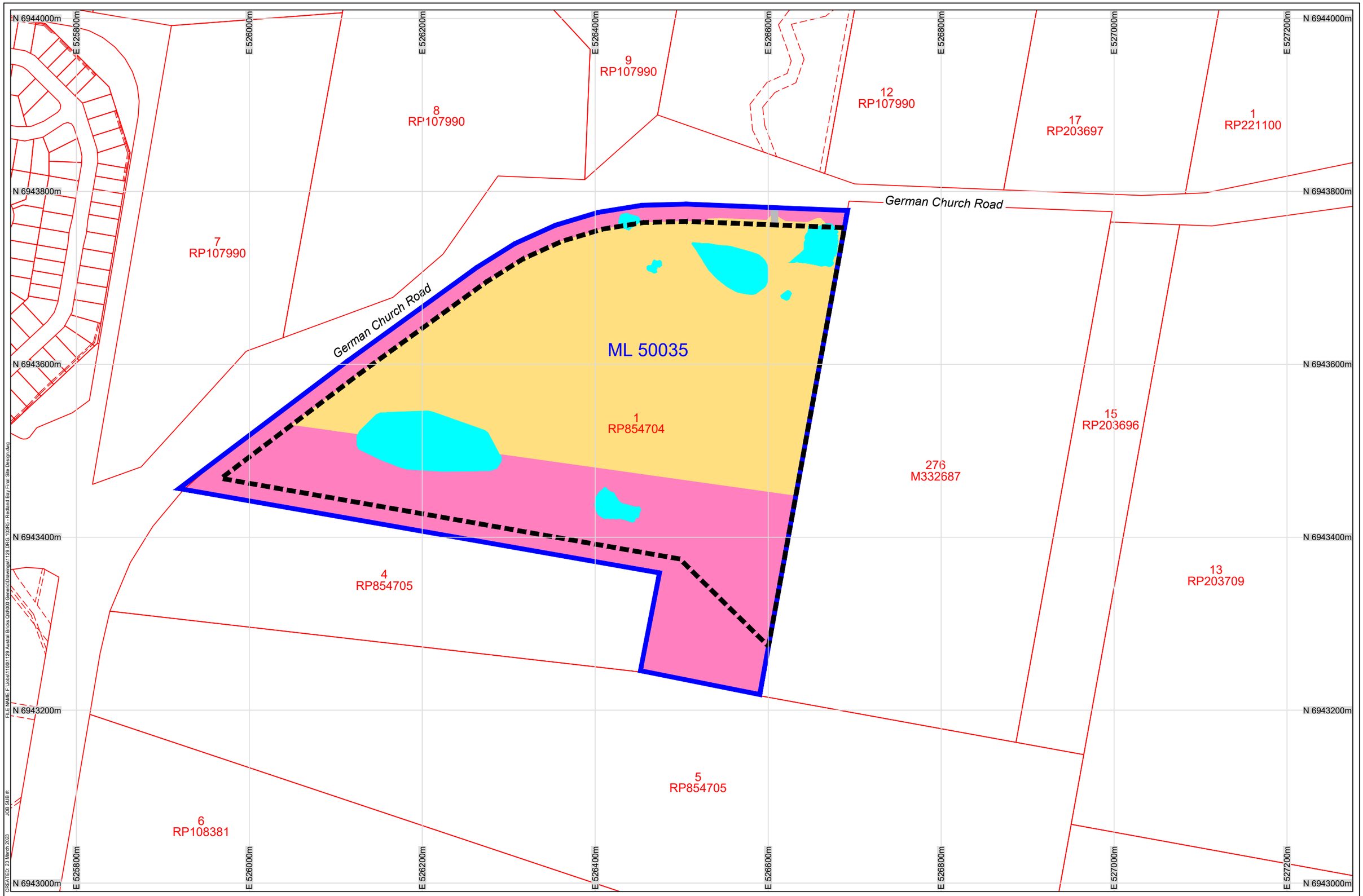
DATE: 13 March 2023 | DRAWN: MR | DATUM: HORIZONTAL / VERTICAL / ZONE

PRINTED: 13 March 2023 | CHECKED: YD | GDA94 / MGA / AHD / 56

FILE NAME: F:\Jobs\1100\1129 Austral Bricks Qld\000 General\Drawings\1129.DRG.106R4 - Burbank Reference Map 1.dwg

JOB SUB #:

CREATED: 13 March 2023



FILE NAME:F:\Jobs\1000\1129 Austral Bricks Qld\000 Generic\Drawings\1129.DRG.103R5 - Redland Bay Final Site Design.dwg
JOB SUB #
CREATED: 23 March 2023

REV	DESCRIPTION	DATE	BY
3	Remove Pink Boundary	25/01/2023	KB
4	Maximum Mining Footprint revised	21/02/2023	MR
5	Modify Native Ecosystem Area	13/03/2023	JHV

Data Sources:
Photography:
Topography:
Cadastre:
Ecosystem:
Other:

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Legend:
- Mining Lease Boundary
- Maximum Mining Footprint
- Native Ecosystem
- Wetland Ecosystem
- Rural Residential

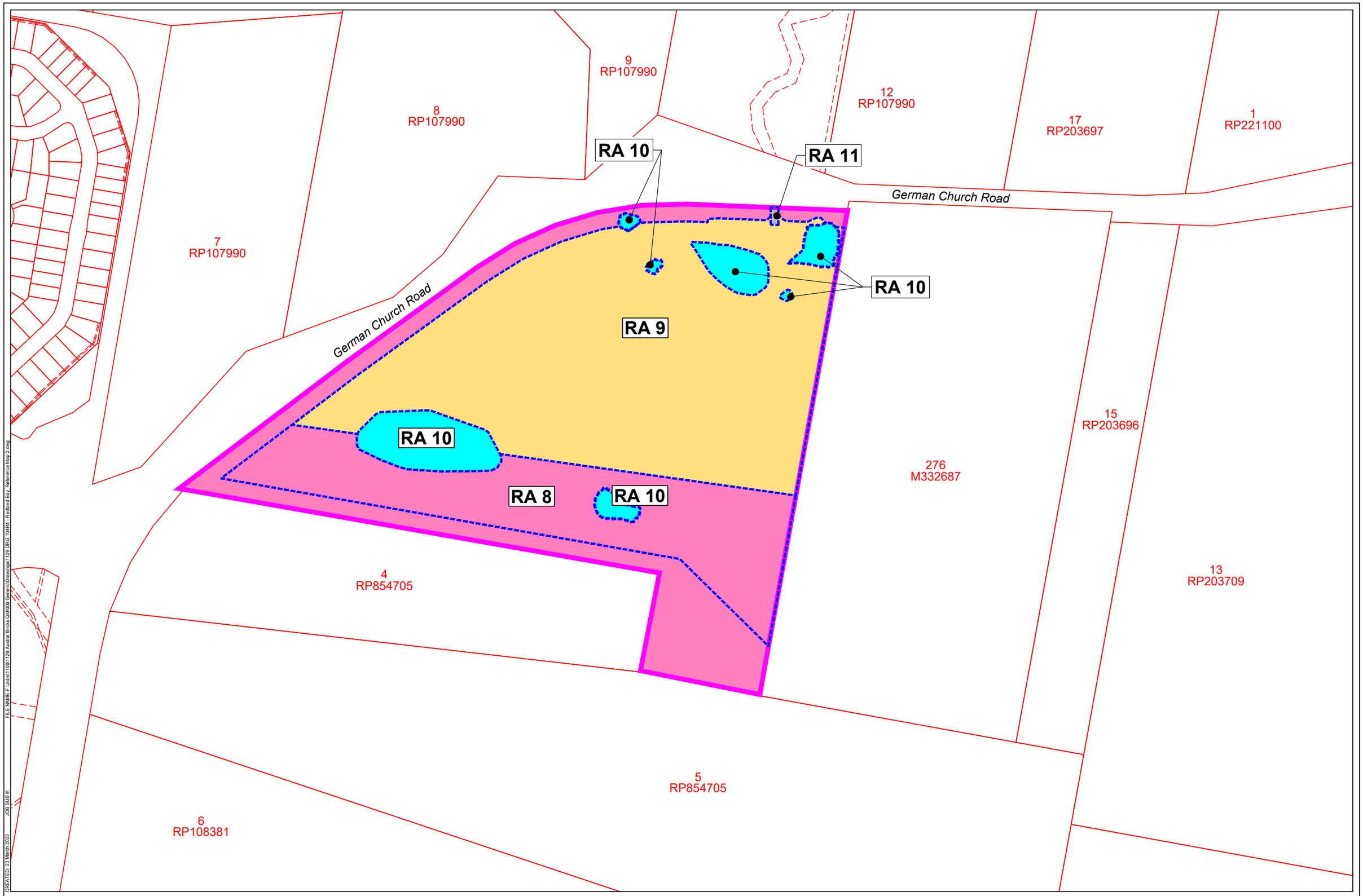
PROJECT: Redland Bay

CLIENT: The Austral Brick Co. Pty Ltd

TITLE: Final Site Design

GROUNDWORK plus
PH: +61 7 3871 0411
WWW.GROUNDWORK.COM.AU

SCALE: 1:4000 When Printed On A3 — 0 — 80m
DRAWING NUMBER: 1129.DRG.103
REVISION: 5
DATE: 23 March 2023 | DRAWN: MR
PRINTED: 23 March 2023 | CHECKED: YD
DATUM: HORIZONTAL / VERTICAL / ZONE: GDA94 / MGA / AHD /



FILE NAME:F:\Jobs\100\1129 Austral Bricks Qld\000 General\Drawings\1129.DRG.104R4 - Redland Bay Reference Map 2.dwg
JOB SUB #:
CREATED: 23 March 2023

REV	DESCRIPTION	DATE	BY
2	Rural Residential area added	26/04/2022	MR
3	Remove Pink Boundary and Edit RA labels	15/01/2023	KB
4	Modify Native Ecosystem Area	13/03/2023	JHV

Data Sources:
Photography:
Topography:
Cadastre:
Ecosystem:
Other:

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Legend:
- Mining Lease Boundary
- Native Ecosystem
- Wetland Ecosystem
- Rural Residential
- Access Road
- Rehabilitation Area

PROJECT: Redland Bay

CLIENT: The Austral Brick Co. Pty Ltd

TITLE: Reference Map 2

GROUNDWORK plus
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SCALE: 1:4000 When Printed On A3 — 0 — 80m
DRAWING NUMBER: 1129.DRG.104
REVISION: 4
DATE: 23 March 2023 | DRAWN: MR
PRINTED: 23 March 2023 | CHECKED: YD
DATUM: HORIZONTAL / VERTICAL / ZONE: GDA94 / MGA / AHD /

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E 511800m
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N 6951800m
N 6951600m
N 6951400m
N 6951200m

ML 1151

ML 1156

Gardner Road

Prebble Street

FILE NAME: F:\Jobs\1100\1129 Austral Bricks Qld\000 Generic\Drawings\1129.DRG.101 - Rochedale Final Site Design.dwg
CREATED: 10 March 2022 JOB SUB #:

REV	DESCRIPTION	DATE	BY

Data Sources:
Photography:
Topography:
Cadastre:
Ecosystem:
Other:

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Legend:
- Mining Lease Boundary
- Industrial Area
- Wetland Ecosystem
- Native Ecosystem
- Maximum Mining Footprint

PROJECT: Rochedale

CLIENT: The Austral Brick Co. Pty Ltd

TITLE: Final Site Design

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SCALE: 1:4,000 When Printed On A3 — 0 — 80m
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REVISION:
DATE: 10 March 2022 DRAWN: MR
PRINTED: 10 March 2022 CHECKED: YD
DATUM: HORIZONTAL / VERTICAL / ZONE
GDA94 / MGA / AHD / 56

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N 6951600m
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Bulimba Creek
Gateway Motorway
Gardner Road
Prebble Street
ML 1151
ML 1156
RA 13
RA 14
RA 12

FILE NAME: F:\Jobs\1100\1129 Austral Bricks Qld\000 Generic\Drawings\1129.DRG.102R2 - Rochedale Reference Map 3.dwg
CREATED: 28 February 2023 JOB SUB #:

REV	DESCRIPTION	DATE	BY
1	Change and remove RA Lables	25/01/2023	KB
2	Rehabilitation Area revised	21/02/2023	MR

Data Sources:
Photography:
Topography:
Cadastre:
Ecosystem:
Other:

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Legend:
- Mining Lease Boundary
- Industrial Area
- Wetland Ecosystem
- Native Ecosystem
- Rehabilitation Area

PROJECT: Rochedale

CLIENT: The Austral Brick Co. Pty Ltd

TITLE: Reference Map 3

GROUNDWORK plus
PH: +61 7 3871 0411
WWW.GROUNDWORK.COM.AU

SCALE: 1:4,000 When Printed On A3 — 0 — 80m
DRAWING NUMBER: 1129.DRG.102
REVISION: 2
DATE: 28 February 2023
DRAWN: MR
PRINTED: 23 March 2023
CHECKED: YD
DATUM: HORIZONTAL / VERTICAL / ZONE
GDA94 / MGA / AHD / 56

ATTACHMENTS

Attachment 1

External Environmental Communication Record

External Environmental Communication Record ~ SHE-Frm-Env-03.331

Issue date: 1/09/17 Authorised by: C. McCormick Review date: 1/09/20

stakeholder meetings, site visits, investigating and resolving complaints, as well as donations and other forms of support for community members and projects.

SITE: QLD

Note: *These fields are not mandatory. Fill-in only when relevant (use 24-hour hh:mm format)

Copy & paste from a previous entry if reason is the same.

DATE	Site	WHO	Govt. Dept. or Business	Contact	*Time	#Issue / Reason	DETAILS (including who initiated the conversation)	*Attachments
11/03/2020	ABQLD	Jodie Hawley	s developers around Roc	'Neil - Wolter Consulting	09:00 AM	Rochedale Neighbourhood plan	Wolter Consulting Group has been engaged by a local development company to investigate the future opportunities around the northern portion of the Rochedale Neighbourhood Plan, which for various reasons has failed to achieve the original vision to date. As part of this high level investigations we are seeking input from those key stakeholders in this region to understand their individual plans moving forward, and potential planning changes that would unlock/ enable them to achieve their desired outcomes. Australs response has been documented via a letter.	See external communicatic
15/10/2020	AB-Burbank	Kyrien Nolan	Member for Mansfield	Ms Corrine McMillan		Update for Ford Rd	Letter emailled to MP to update her on all the improvements completed at Ford Rd since she received complaints in Jan 2019	

Attachment 2

227 Gardner Rd, Rochedale: Conceptual Rehabilitation Plan

Received
17/05/2019
BCC DS

Conceptual Rehabilitation Plan



Brisbane City Council
227 Gardner Road, Rochedale

Level 1
139 Coronation Drive
MILTON QLD 4064

Issue Date: 15 May 2019
mail@e2mconsulting.com.au
www.e2mconsulting.com.au

Document Management

Rev.	Issue Date	Description	Author (s)	Approved	Signature
A	26/04/2019	Issued for review	Lindsay Wickson	H. Rowan	
0	15/05/2019	Final for use	Lindsay Wickson	H. Rowan	

Document Reference: QEJ19021_Conceptual Rehabilitation Plan_Rev0

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1 Introduction

1.1 Background

SLR Consulting Australia Pty Ltd (SLR) has been commissioned by Brisbane City Council (BCC) to prepare necessary documentation to support a Development Application (DA) (App. Ref.: A005056710) for a preliminary approval to vary the effect of the planning scheme and development permit for Reconfiguring a Lot (RaL) at 227 Gardner Road, Rochedale. Formally described as Lot 1 on Plan SP213452 the RaL has proposed to subdivide the property into three lots (Figure 1):

- Proposed Lot 1 (western lot) – 3.46 hectares
- Proposed Lot 2 (central lot) – 1.52 hectares; and
- Proposed Lot 3 (eastern lot) – 13.21 hectares.

Currently, the property is leased to Austral Bricks and is being utilised as a quarry. In addition to the proposed lots mentioned above, Lot 101 on SP213452 separates the western lot and the central lot and comprises a tributary to Bulimba Creek and associated BCC Waterway corridor. The proposed DA includes earthworks which will rehabilitate the site to a safe and stable landform, consistent with the profile of surrounding lands.

Subsequent to the lodgement of the DA, BCC issued a Request for Information (RFI) on Friday 11 January 2019. The RFI requested further information pertaining to ecological matters associated with the DA. As such, SLR has commissioned E2M Pty Ltd (E2M) to prepare the necessary documentation to respond to the RFI. This correspondence aims to address Item 1 of the RFI: the development of a Conceptual Rehabilitation Plan (CRP). The CRP (as per the RFI) will only target Proposed Lot 1, Proposed Lot 2 and the waterway corridor (herein referred to as 'the site').

1.2 Objectives

The specific objectives of the CRP are described in Item 1 of the RFI:

"Rehabilitation of Proposed Lot 1 and Lot 2 is required. Submit a Concept Rehabilitation Plan for the area identified as 'Habitat Areas and Ecological Corridors (public)' as per Figure A of the RUCNP and the mapped waterway corridor.

Development must enhance biodiversity, native habitat and fauna movement. This plan is to be in the form of scaled plans and supporting documentation that includes at least the following information:

- *Description of proposed rehabilitation, including earthworks, methods, objectives; and,*
- *Details of maintenance access and fire maintenance tracks."*

In order to achieve these objectives, this CRP will:

- summarise the threatening processes limiting the amelioration of existing environmental values and ecological function on site
- describe the strategies recommended to rehabilitate the environmental values and ecological function on site
- provide an overview of rehabilitation methods; and
- provide ongoing monitoring and maintenance requirements (including fire track access and maintenance).





N

Scale 1:4,000 (A4)

0 40 80 120 160

Metres

Coordinate System: GDA 1994 MGA Zone 56
Projection: Transverse Mercator

Notes:
Aerial Imagery: © Google Earth 2019
Cadastre: © DNRME 2019
Road: © PSMA 2014
Drainage: © DNRME 2016

Rev	Description	Drawn	Approved	Date
A	Issued for Review	SF	LW	26/04/2019

FIGURE 1: SITE DESCRIPTION

Conceptual Rehabilitation Plan
SLR

Map Number	Job Number	Rev
1 of 1	QEJ19021	A

Document Path: X:\JOBS\-2019\QEJ19021\GIS\WORKING\QEJ19021_F1_SiteDescription.mxd

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2 Existing Environmental Values

The site has been exposed to varying levels of modification from activities associated with the existing quarry. The vegetation in Proposed Lot 1 and 2 is generally characterised by mature eucalypt open forest (Regional Ecosystem (RE) 12.9-10.17) with a structurally complex understorey. The canopy is dominated by rusty gum (*Angophora leiocarpa*) and grey ironbark (*Eucalyptus siderophloia*) with pink bloodwood (*Corymbia intermedia*) and brown bloodwood (*C. trachyphloia*) and to a lesser extent grey gum (*E. propinqua*). The shrub layer is comprised largely of juvenile species found in the canopy with the addition of monkey rope (Parsonsia straminea) and weed species *Lantana camara* and *Ochna serrulata*.

The forest opens to the north extent of the lot into regenerating wattle shrub land and exposed soil, particularly evident in the northern part of Proposed Lot 2 which has been partially cleared of vegetation in association with the quarry. Additionally, recent improvement works concerning the bund wall surrounding the overflow dam within Proposed Lot 1 and the sediment dam in Proposed Lot 2 has resulted in the clearing of vegetation.

The waterway corridor which separates Proposed Lot 1 and 2 flows through an approximately 10-15m wide floodplain (SLR 2018) and supports a full canopy of paper bark (*Melaleuca quinquenervia*) and a dense (91-95%) ground cover of native and introduced species of grass, sedges and rushes.

The vegetated areas within the site currently support diverse habitat features including:

- Trees containing arboreal termite mounds (some mounds with hollows)
- Aquatic habitat (although in its current state is of nominal value)
- Dense shrub layer, leaf litter, course woody debris habitat for reptiles and small mammals
- Decorticating bark for microchiropteran bats and arboreal reptiles
- Flowering trees and shrubs that provide a food source for birds and flying foxes; and
- Existing bird nests

The existing environmental values within the site are mapped within:

- the Rochedale Urban Community Neighbourhood Plan (RUCNP) *'Habitat Areas and Ecological Corridors (public)'* map
- the Biodiversity areas overlay code, subcategory 'High Ecological Significance' (Brisbane City Planning Scheme, 2014)
- the mapped koala habitat 'High Value Bushland' and 'High Value Rehabilitation' (Koala State Planning Regulatory Provision); and
- BCC mapped waterway corridor.

2.1 Ecological function

Existing vegetation within the site contributes positively to the ecological function by serving as a fauna movement corridor between the existing habitat on site, habitat within adjacent properties and Bulimba Creek (of which the site's waterway corridor is a tributary to). Evidence of recent koala activity was detected during an ecological survey conducted by E2M in March 2019 (Plate 1) indicating that koalas are utilising the site as habitat despite its proximity to the quarry, Prebble Street and Gardner Road.



Plate 1. Evidence of recent koala activity within Proposed Lot 2

2.2 Threatening processes

Key threatening processes affecting the existing environmental values on site include:

- Previous/historic vegetation clearing
- Introduction and establishment of invasive plant species (i.e. weeds). Weed presence on site is discussed in Table 1 and Table 2
- Erosion and sedimentation - affects soil quality and successful establishment of native plants as well as the quality of aquatic habitat; and
- Illegal rubbish disposal – particularly along the length of Prebble Street.

2.2.1 Weed species recorded on site

Four weed species listed under the state *Biosecurity Act 2014* and BCC's *Biosecurity Plan for the Brisbane LGA 2018* were recorded within the site (Table 1). Where weed species do not fall under The *Biosecurity Act 2014* but still pose a risk to the biodiversity values of a region, The *Biosecurity Act 2014* authorises the use of local laws by councils to manage species under the Natural Assets Local Law (NALL). An additional nine weed species recorded on site may be managed by BBC under the NALL (Table 2). Weed species are dispersed widely across the site.

Table 1. Recorded weed species on site subject to state and local legislation

Scientific name	Common name	*Biosecurity Act 2014* category	*Biosecurity Plan for the Brisbane Local Government Area 2018*
Schinus terebinthifolius	Broad-leaved pepper tree	3	High Risk
Asparagus aethiopicus	Ground asparagus fern	3	Moderate Risk
Cinnamomum camphora	Camphor laurel	3	Low Risk
Lantana camara	Lantana	3	Very Low Risk

Table 2. Recorded weed species on site subject to the discretion of BCC under the NALL

Scientific name	Common name
Chloris gayana	Rhodes Grass
Dyschoriste depressa	Butterfly heaven
Megathyrsus maximus	Guinea grass
Ochna serrulata	Ochna
Passiflora suberosa	Corky passionflower
Setaria sphacelata	Pigeon grass
Solanum seaforthianum	Brazilian nightshade
Syagrus romanzoffiana	Queen palm
Urochloa decumbens	Signal grass

2.2.1.1 Legislative responsibilities

The State and BCC legislation triggered by the weeds listed in Table 1 and Table 2 are outlined as follows:

- *Biosecurity Act 2014* (the Act): The Act provides comprehensive biosecurity measures to safeguard Queensland's economy, agricultural and tourism industries, environment and way of life, from: pests (e.g. weeds), diseases and contaminants. The Act groups weed species into categories based on risk:
  - Category 1 and 2 weed species must be reported within 24 hours
  - Category 3 weed species must not be distributed or released into the environment (including improper disposal)
  - Category 4 weed species must not be moved
  - Category 5 weed species must not be possessed or kept

  Under Part 1 of the Act, the 'General Biosecurity Obligation' (GBO) states all individuals and organisations are responsible for biosecurity risks and threats under their control. The GBO requires the individual or organisation to:
  - take all reasonable and practicable measures to prevent or minimise the biosecurity risk

- minimise the likelihood of the risk causing a biosecurity event and limit the consequences of such an event; and
- prevent or minimise the adverse effects the risk could have and refrain from carrying out any activities that might exacerbate any associated adverse effects.

The Act also authorises the use of local laws by BCC to manage weed species not declared in the Act that pose a risk to the biodiversity values of a region.

- *Biosecurity Plan for the Brisbane Local Government Area* (LGA) *2018*: The Biosecurity Plan delivers BCC's obligations and commitment to the management of invasive species that have the potential to impact lifestyle, threaten natural environments and harm biodiversity.

  The Biosecurity Plan identifies priorities for management based on a risk-based methodology that considers social, economic or environmental impact to the Brisbane LGA. The risk categories are as follows:

  - Extreme: Extremely serious impact. Requires significant investment to manage but the cost of not responding is likely to be catastrophic
  - Significant: Serious social, economic and/or ecological impacts expected. Once established, these species are extremely difficult to eradicate
  - High: Likely to be well established in the Brisbane LGA. These species have significant impacts are priorities for immediate management
  - Moderate: Where left unmanaged, these species can present significant impacts
  - Low: Species that may be established, naturalised or that are not causing severe impacts across the Brisbane LGA. They include species that may be significant at local or property scales for management
  - Very Low: Impacts are likely to be significant in some places but not equally across the Brisbane LGA. Where detected, these species are priorities for containment, surveillance and long-term monitoring.

- *Natural Assets Local Law* (NALL) *2003*: BCC's NALL helps to protect natural assets, including bushland areas, wetlands, waterway corridors and trees in urban areas. Under the NALL, BCC has the potential to require weed species management on a discretionary basis.

3 Rehabilitation Strategy

The CRP is divided into three treatment areas as summarised below.

3.1 Treatment Area 1 - Revegetation

The objective of revegetating Treatment Area 1 is to:

- Provide soil stability where vegetation has been previously cleared. Revegetation is particularly imperative within the overflow and sediment dams to minimise erosion
- Increase available fauna habitat, connectivity and function; as well as to,
- Prevent weed species from taking hold and outcompeting native species.

Treatment Area 1 is in the northern extent of Proposed Lot 2 and the central portion of Proposed Lot 1, as depicted on Figure 3. This Treatment Area encompasses the overflow dam located in Proposed Lot 1 (between the top of the bund and the Q100 line) and the sediment dam located in Proposed Lot 2. Revegetation within this treatment area will include:

- Site preparation
- Revegetation, focusing of improving riparian values of the dams; and,
- Ongoing weed management.

Species selection within Treatment Area 1 is to be in accordance with Table 3. Species have been selected to represent a vegetation community that existed before disturbance.

Methods to be implemented within this Treatment Area 1 are outlined in Section 4.

Table 3. Revegetation species palette for Treatment Area 1

Species	Common Name
Canopy	
Eucalyptus acmenoides	White mahogany
Eucalyptus major	Grey gum
Eucalyptus propinqua	Grey gum
Eucalyptus siderophloia	Grey ironbark
Eucalyptus carnea	Broad-leaved white mahogany
Eucalyptus microcorys	Tallowwood
Corymbia trachyphloia	Brown bloodwood
Corymbia intermedia	Pink blood wood
Corymbia citriodora	Spotted gum
Angophora leiocarpa	Rusty gum
Ground/Riparian Cover	
Carex appressa	tall sedge

Species	Common Name
Dianella caerulea	blue flax lily
Dianella rara	blue flax lily
Dianella revoluta	blue flax lily
Juncus usitatus	-
Lomandra laxa	-
Lomandra longifolia	spiny-headed mat-rush
Lophostemon suaveolens	swamp box
Melaleuca quinquenervia	Paperbark tea tree

3.2 Treatment Area 2 - Weed Management

Treatment Area 2 is located throughout vegetated areas within Proposed Lot 1 and throughout the southern section of Proposed Lot 2, as depicted on Figure 2. This treatment area is generally characterised by mature eucalypt open forest (Regional Ecosystem (RE) 12.9-10.17). Rehabilitation within this area will include limited weed management to remove weed species listed in Table 1 and Table 2 where dense infestations are observed. Revegetation may also be required if bare areas exist following weed management within Treatment Area 2 should natural revegetation not occur.

Waste management at the southern extent of this Treatment Area will be required, as depicted on Figure 2.

Bushfire access will follow an existing track along the western edge of Proposed Lot 1 (Figure 2). The access will be maintained to ensure it remains clear of debris and regrowth vegetation.

Methods to be implemented within this Treatment Area are outlined in Section 4.

3.3 Treatment Area 3 - Watercourse Weed Management

Treatment Area 3 is located within the waterway corridor (Figure 2). Rehabilitation within this area will include limited weed management to remove weed species listed in Table 1 and Table 2 where dense infestations are observed. This treatment area differs from Treatment Area 2 as weed treatment adjacent to the watercourse will require a modified approach. Revegetation may also be required if bare areas exist following weed management within Treatment Area 3 should natural revegetation not occur.

Waste management at the southern extent of this Treatment Area will be required, as depicted on Figure 2.

Methods to be implemented within this Treatment Area are outlined in Section 4.



N

Scale 1:2,000 (A4)

0 20 40 60 80

Metres

Coordinate System: GDA 1994 MGA Zone 56
Projection: Transverse Mercator

Notes:
Aerial Imagery: © Google Earth 2019
Cadastre: © DNRME 2019
Road: © PSMA 2014
Drainage: © DNRME 2016

Rev	Description	Drawn	Approved	Date
A	Issued for Review	SF	LW	26/04/2019

FIGURE 3: REHABILITATION STRATEGY WITHIN TREATMENT ZONES

Conceptual Rehabilitation Plan
SLR

Map Number	Job Number	Rev
1 of 1	QEJ19021	A

Document Path: X:\JOBS\~2019\QEJ19021\GIS\WORKING\QEJ19021_F2_RehabTreatmentAreas.mxd

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4 Rehabilitation Methods

4.1 Revegetation

Within Treatment Area 1, extensive revegetation is required. Revegetation may also be required if bare areas exist following weed management within Treatment Area 2 and 3, should natural revegetation not occur. The following methods apply when undertaking revegetation activities.

4.1.1 Site preparation

The successful growth of plantings relies on careful and appropriate preparation of rehabilitation areas prior to planting. Site preparation involves:

- Signage to designate the area as a "Native Plant Rehabilitation Area". Signage should be in place before revegetation commences and all relevant personnel (e.g. contractors) should be made aware of associated restrictions
- Treatment of weeds using appropriate methods prior to any supplementary planting
- Removing rubbish and other foreign material, including discarded items within the waterway; and
- Carefully clearing a circular area of approximately 60 cm diameter at the site of each planting.

4.1.2 Planting stock

Species to be utilised are to be selected in accordance with Table 3 to reinstate a community consistent with RE 12.9-10.17.

All planting stock should be:

- Preferably local provenance
- Healthy and displaying signs of active growth. Plants should be rejected if they display 'yellowing', leaf or stem damage or disease, root curling or restriction related to being 'pot bound', or have weed species in the container
- A minimum of 20 cm tall for (75 mm) tube-stock (larger for potted stock); and
- Sun-hardened.

Planting densities are to be determined on the ground, in accordance with the SEQ restoration framework (Chenoweth EPLA and Bushland Restoration Services, 2012). Determination of planting densities is to take in to consideration:

- the effectiveness of natural regeneration
- established canopy cover; and
- flood control measures outlined within the Natural Channel Guideline. Specifically, the Natural Channel Guideline states that '*trees at 5 metre spacing, no low branches, few shrubs*' is a suitable density to achieve a Manning's roughness of 0.07, which is the maximum Manning's roughness for revegetation.

4.1.3 Planting

Planting holes are to be at least twice the width and half as deep again as the pot size. In the case of tube-stock, plants are to be placed in a hole deeper than the pot, with the root ball just below the soil surface after planting.

Due to the potential for run-off during rainfall events, the use of mulching around planting should be avoided. Where required, weed/jute matting and tree guards should be used to stabilise soil around plantings and suppress any potential weed growth.

4.1.4 Fertilising and watering

Each planting should be fertilised with a 10 g slow release fertiliser pellet (Agriform or similar). The fertiliser pellet should be placed adjacent (but not in contact) with the root ball; 2-4 cm below the soil surface. Any sedges and aquatic species are not to be fertilised.

4.2 Weed management

As weed species were found dispersed throughout the site, the following weed control techniques are applicable to relevant weeds in Treatment Areas 2 and 3, as well as during ongoing management of Treatment Area 1.

Many of the weed species identified on site can be managed using one, or a combination of techniques designed to target a specific type of plant form (Table 4). Two common techniques include mechanical removal of weeds and chemical treatment.

Mechanical control methods include:

- Manual removal by hand or grubbing using loppers, hatchets or small saws to remove the weed (including roots); or
- Mowing or brush-cutting to remove seed heads

Chemical treatment should be used when mechanical controls are not appropriate (i.e. within erosion prone areas). Chemical control should only be undertaken by a suitably qualified person (i.e. Agriculture Chemical Distribution Control certified) in accordance with the Material Safety Data Sheet (MSDS). Herbicides used in the vicinity of waterways should be designed accordingly (e.g. Roundup® BioactiveTM Herbicide or Weedmaster® Herbicide) and no broad scale spraying or overspray methods should be used.

Table 4. General weed control techniques

Plant Form	Examples	Method - Treatment Area 1	Method - Treatment Area 2	Method - Treatment Area 3
Woody weeds	Lantana, camphor laurel, broad leaved pepper tree	Juvenile woody weeds may be removed by hand or treated with chemical spraying.	Woody shrubs and trees may require felling followed by immediate application of herbicide to the cut stump. Alternatively, individuals may be killed in-situ through the stem-injection of herbicide via drilled holes or frilling. Control smaller woody weeds including lantana and through the cut-scrape-paint technique, where stems are cut near the ground and are immediately painted with herbicide. Juvenile woody weeds may be removed by hand or treated with chemical spraying.	Juvenile woody weeds may be removed by hand. Woody shrubs and trees may require felling followed by immediate application of herbicide to the cut stump. Chemicals are not to be mixed within this Treatment Area.
Herbs	blue billygoat weed cobbler's pegs emilia	Herbaceous plants may be controlled through manual hand weeding, crowning or spraying with herbicides using the spot-spray technique.	Herbaceous plants may be controlled through manual hand weeding, crowning or spraying with herbicides using the spot-spray technique	Herbaceous plants may be controlled through manual hand weeding or crowning .
Grasses	guinea grass para grass	Dense infestations of grasses may require mechanical slashing before applying herbicide to regrowth. Isolated individual plants may be hand pulled or crowned.	Dense infestations of grasses may require mechanical slashing before applying herbicide to regrowth. Isolated individual plants may be hand pulled or crowned.	Dense infestations of grasses may require mechanical slashing before applying herbicide to regrowth. Isolated individual plants may be hand pulled or crowned.

Plant Form	Examples	Method - Treatment Area 1	Method - Treatment Area 2	Method - Treatment Area 3
Vines	morning glory Singapore daisy	Use the cut-scrape-paint method to kill mature vines. If the vine has extended into the canopy, avoid pulling the vine from the canopy to avoid damage to the tree. Regrowth of weed vine species may be treated using spot-spray treatment with herbicide.	Use the cut-scrape-paint method to kill mature vines. If the vine has extended into the canopy, avoid pulling the vine from the canopy to avoid damage to the tree. Regrowth of weed vine species may be treated using spot-spray treatment with herbicide.	Use the cut-scrape-paint method to kill mature vines. If the vine has extended into the canopy, avoid pulling the vine from the canopy to avoid damage to the tree.

Further details regarding species-specific weed control techniques and herbicide application rates can be found in:

- Queensland Government fact sheets for restricted weed species, available at https://www.business.qld.gov.au/industries/farms-fishing-forestry/agriculture/land-management/health-pests-weeds-diseases/weeds-diseases/invasive-plants
- South-east Queensland Ecological Restoration Framework Manual (Prepared on behalf of SEQ Catchments and South East Queensland Local Governments by Chenoweth EPLA and Bushland Restoration Services, 2012); and
- BCC Weed Identification Tool, Controlling weeds, available at http://weeds.brisbane.qld.gov.au/controlling-weeds.

4.2.1 Weed disposal

Waste weed material must be disposed of in such a manner that does not result in further contamination. Disposal must be in accordance with BCC requirements which prescribes disposal as general waste. Waste weed material is not to be burnt.

4.3 Waste Management

The southern edge of Proposed Lot 1, Proposed Lot 2 and to a lesser extent, the watercourse, has been subject to regular illegal dumping. Disposed items include furniture and industrial components. Rubbish removal will improve habitat quality within the site. Where waste removal occurs, it is to be conducted by a licenced contractor and disposed of at a BCC waste facility. Signage or fencing may be considered to dissuade future illegal rubbish dumping.

5 Maintenance and Management

5.1 Rehabilitation Works

The proposed rehabilitation schedule including establishment, monitoring, maintenance and reporting requirements, are outlined in Table 5.

The proposed rehabilitation monitoring schedule outlines actions required to ensure that rehabilitation objectives are fulfilled. The monitoring schedule may be altered to account for changes to rehabilitation success, methods and/or timeframes. At a minimum, the following should be monitored:

- Effectiveness of weed control measures
- Indicators of growth and survival of all plantings
- Effectiveness of any erosion and sediment controls (where necessary); and
- Adequacy of site preparation, tree (and plant) protection and maintenance.

At the completion of the rehabilitation efforts, an on-maintenance period of 24 months will commence, as outlined in Table 5. Maintenance of the rehabilitation areas should commence at the completion of rehabilitation works and continue until to the end of the on-maintenance period. Where the objectives are not being achieved, relevant actions should be undertaken to improve the performance of rehabilitation activities.

Table 5. General schedule for rehabilitation works, monitoring and maintenance

Frequency	Task	Action	Responsibility
Initial	Site inspection	• Verify the location of rehabilitation treatment areas • Identify weeds and rubbish to be removed • Determine appropriate weed treatment measures	Restoration ecologist and rehabilitation contractor
	Weed management	• Treatment of weeds • Stabilise exposed areas	Rehabilitation contractor
	Erosion and sediment control	• Ensure erosion and sediment control measures are installed	Rehabilitation contractor
	Restoration Planting	• Plant as required within each treatment area • Ensure species composition and density is in accordance with the rehabilitation plan	Rehabilitation contractor

Frequency	Task	Action	Responsibility
Monthly for the first 6 months following completion of initial planting	Monitor seedling health	• Replace damaged seedlings	Rehabilitation contractor
	Check for disturbance (e.g. pest fauna, weed incursion, vandals, erosion, etc.)	• Treat and manage weeds listed in Section 2.2.1 • Undertake appropriate measures to address any disturbances / illegal dumping • Re-instate erosion and sediment control devices where required	Rehabilitation contractor
	Watering	• Water if rainfall has not been sufficient	Rehabilitation contractor
Bi-monthly for 6 months (following initial 6-month monitoring)	Monitor rehabilitation and regeneration success	• Replace damaged seedlings	Rehabilitation contractor
	Monitor weeds	• Treat and manage weeds listed in Section 2.2.1	Rehabilitation contractor
	Check for disturbance (e.g. pest fauna, weed incursion, vandals, erosion, etc.)	• Undertake appropriate measures to address any disturbances / illegal dumping	Rehabilitation contractor
Quarterly for 12 months (after the first year)	Monitor rehabilitation and regeneration success	• In-fill plant as required	Rehabilitation contractor
	Monitor weeds	• Treat and manage weeds listed in Section 2.2.1	Rehabilitation contractor
	Check for disturbance (e.g. pest fauna, weed incursion, vandals, erosion, etc.)	• Undertake appropriate measures to address any disturbances / illegal dumping	Rehabilitation contractor
Completion of 24 months	Confirm completion of all rehabilitation works	• Verify that all rehabilitation performance criteria have been met	Rehabilitation contractor and restoration ecologist
	Complete report on rehabilitation success	• Document that all rehabilitation performance criteria have been met	Rehabilitation contractor and restoration ecologist

6 Conclusion

This CRP was developed in response to a BCC RFI concerning ecological matters associated with a DA for a preliminary approval for a MCU and Development Permit for a RaL. The CRP pertains to the restoration of an open eucalypt forest mapped as 'Habitat Areas and Ecological Corridors (public)' by the Rochedale Urban Community Neighbourhood Plan, in addition to an associated waterway corridor. The environmental values and ecological function of the area are currently limited by a series of threatening processes including previous vegetation clearing, weed establishment, erosion and sedimentation and illegal rubbish disposal.

This CRP:

- summarises the threatening processes limiting the amelioration of existing environmental values and ecological function on site
- describes the strategies recommended to rehabilitate the environmental values and ecological function on site
- provides an overview of rehabilitation methods; and
- provide ongoing monitoring and maintenance requirements (including fire track location and maintenance).

The effective application of an integrated and multifaceted approach focusing on revegetation in cleared areas, weed management throughout the site and rubbish removal will increase native habitat extent, promote biodiversity and is likely to encourage wildlife use and movement through and between sites thus achieving the objectives of the RFI.

Attachment 3

Rochedale Flood Study

Rochedale Industrial Estate, Gardner Road, Rochedale

Flood Study

J11036



Prepared for
Brickworks Pty Ltd

24 October 2012

APPROVED PLAN

PLANNING & ENVIRONMENT COURT DECISION

APPEAL NO: 1419/2011

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Appendices

Appendix A	Flood Modelling Results
Appendix B	Detention and Bio-retention Basin Details

1 Introduction

Cardno was commissioned by Brickworks Pty Ltd to prepare a Flood Study in support of the proposed Rochedale Industrial Estate. The location of the development site is shown in Figure 1.

This Flood Study provides detailed information about the proposed stormwater drainage strategy to deal with the external runoff draining to the development site, while ensuring that development has no significant adverse impacts external to the site. This report should be read in conjunction with the Stormwater Management Plan prepared concurrently for the project by Cardno.

2 Site Descriptions

2.1 Locality

The proposed development site is situated in the suburb of Rochedale, within the jurisdiction of Brisbane City Council. The site covers an area of approximately 78ha, and is bounded by Mount Gravatt-Capalaba Road to the north, Prebble Street to the south, Gardner Road to the east and the Gateway Motorway to the west. Figure 1 shows the site location.

2.2 Existing Drainage

The site drains in an east-west direction discharging to the existing culverts under the Gateway Motorway. A significant external catchment to the east of Gardner Road drains through the site.

2.3 Proposed Land Use

The site is planned to be developed into 20 industrial lots, with internal roads, dedicated open space, Riparian Zone and Fauna Corridor.

3 Hydrology

3.1 General

A detailed hydrologic analysis was undertaken to estimate the peak discharge draining to the subject site for use as an input to the hydraulic modelling discussed in Section 4 of this report. The hydrologic analysis used both the Rational Method and RAFTS hydrologic modelling. The following sections present the hydrologic analysis.

3.2 Rational Method

The Rational Method was used to calculate the 100 year peak discharge from external catchments (assuming fully developed conditions as per Council's Planning Scheme) and the site itself, for the purpose of comparing to the hydrologic model.

In order to calculate the peak discharge using the Rational Method, the following data were used.

3.2.1 Catchment Data

The catchment plan is shown in Figure 2, and Table 3-1 lists the catchment areas. External catchments AG, AG1, AH, and AH1 drain to the northern part of the site, whereas catchments Trib 2, AB and AC drain to the main flow path in the southern part of the site.

Table 3-1 Catchment Areas

Catchment ID	Area (ha)	Catchment ID	Area (ha)
Trib 1	78.6	E	2.2
Trib 2	452.2	F	0.41
AG	13.1	G	0.54
AG1	2.23	AB	2.26
AH	6.0	AC	8.18
AH1	1.68	AE	1.52
D	9.13	AF	0.94
AA	9.93	AK	2.21
AD	26.9	AL	0.9
AI	24.4	AN	0.83
AM	8.01		

3.2.2 Rainfall Intensity

For the analysis, the rainfall intensity data provided in Table B2.3 of the Brisbane City Council Subdivision and Development Guidelines (2008) was adopted.

3.2.3 Runoff of Coefficient

The appropriate runoff coefficients for the external catchment were determined based on the ultimate land use in accordance with the *Brisbane City Plan (2000)*. Accordingly, a fraction impervious value of 0.2 was adopted for the vast majority of the external catchment, which was identified as rural and environment protection from the City Plan. The 10 year ARI Runoff of Coefficient (C_{10}) was determined in accordance with the *Subdivision and Development Guidelines.*

Table 3-2 lists the adopted runoff coefficients.

Table 3-2 Runoff Coefficients

Catchment ID	C10	C100	Catchment ID	C10	C100
Trib 1	0.78	0.94	E	0.70	0.84
Trib 2	0.74	0.89	F	0.70	0.84
AG	0.74	0.89	G	0.76	0.91
AG1	0.88	1.0	AB	0.88	1.00
AH	0.74	0.89	AC	0.85	1.00
AH1	0.88	1.0	AE	0.74	0.89
D	0.70	0.84	AF	0.70	0.84
AA	0.70	0.84	AK	0.70	0.84
AD	0.73	0.88	AL	0.77	0.93
AI	0.72	0.86	AN	0.75	0.90
AM	0.70	0.84			

3.2.4 Time of Concentration

The time of concentration was calculated in accordance with QUDM 2007. Table 3-3 and Table 3-4 present the parameters used and the calculated times of concentration.

Table 3-3 Time of Concentration for Upstream External Catchment

Bransby-Williams Equation				
Catchment	Length (km)	Area (ha)	Slope (m/km)	Tc (min)
Trib 1	1.60	78.6	19.8	52.8
Trib 2	3.12	452.2	20.9	85.4
AG	0.45	13.1	31.3	16.2
AH	0.23	6.0	35.3	8.9

Catchment	Inlet Time (min)	Pipe Flow			Total Tc (min)
		Length (m)	Velocity (m/s)	Travel Time (min)	
AG1	5	250	3	1.4	6.4
AH1	5	278	3	1.5	6.5

Table 3-4 Site Catchment Time of Concentration

Friend's Equation				
Catchment	Length (m)	Slope (%)	n	Overland Flow (min)
D	100	5.0	0.045	12.6
AA	100	5.5	0.045	12.3
AD	100	8.0	0.045	14.7
AI	50	5.0	0.0275	7.8
AM	50	2.0	0.045	15.4
Channel Flow Time				
Catchment	Length (m)	Slope (%)	Velocity (m/s)	Time of Concentration (min)
D	252	4.0	0.9	17.2
AA	222	4.5	0.9	16.5
AD	480	4.6	0.9	23.6
AI	420	5.6	0.9	15.6
AM	733	1.5	0.9	29.0

3.2.5 Calculated Peak Discharges

Based on the parameters defined in the preceding sections, the 100 year ARI peak discharges from the catchments were calculated. Table 3-5 lists a summary of the adopted parameters and the calculated flows.

Table 3-5 Rational Method Peak Discharges

Catchment	Area (ha)	C10	C100	I100 (mm/h)	Q100 (m^3/s)
Trib 1	78.60	0.78	0.94	118.1	24.20
Trib 2	452.20	0.74	0.89	88.8	99.90
AG	13.10	0.74	0.89	210.2	6.80
AG1	2.23	0.88	1.00	297.2	1.84
AH	6.00	0.74	0.89	264.8	3.90
AH1	1.68	0.88	1.00	294.8	1.38
D	9.13	0.70	0.84	205.0	4.40
AA	9.93	0.70	0.84	209.2	4.80
AD	26.90	0.73	0.88	178.8	11.70
AI	24.40	0.72	0.86	213.3	12.50
AM	8.01	0.70	0.84	162.2	3.00
E	2.20	0.70	0.84	197.0	1.01

Catchment	Area (ha)	C10	C100	I100 (mm/h)	Q100 (m^3/s)
F	0.41	0.70	0.84	229.0	0.22
G	0.54	0.76	0.91	237.0	0.32
AB	2.26	0.88	1.00	304.0	1.91
AC	8.18	0.85	1.00	269.0	6.11
AE	1.52	0.74	0.89	229.0	0.86
AF	0.94	0.70	0.84	223.0	0.49
AK	2.21	0.70	0.84	201.0	1.04
AL	0.90	0.77	0.93	253.0	0.59
AN	0.83	0.75	0.90	253.0	0.53

3.3 Hydrologic Modelling

A RAFTS hydrologic model of the catchment system was developed to generate the runoff hydrographs for a range of average recurrence intervals (ARIs).

The main parameters adopted for the RAFTS modelling are listed in Table 3-6. The RAFTS model was run for a range of storm durations, with the 1 hour duration producing the peak discharge draining to the subject site. Table 3-7 presents a comparison of the 100 year ARI peak discharges estimated by the RAFTS model and the Rational Method. The results show that the peak discharges predicted by the RAFTS model match closely with those calculated using the Rational Method.

Table 3-6 Common RAFTS Parameters

Parameters	Values	
	Pervious Surface	Impervious Surface
Initial Loss (mm)	0	0
Continuous Loss (mm/h)	2.5	0
% Impervious	0	100
Manning's n	0.025	0.015
Bx	1	

Table 3-7 Comparison of Peak Discharges

Catchment	100 Year ARI Peak Discharge (m^3/s)		Catchment	100 Year ARI Peak Discharge (m^3/s)	
	Rational Method	RAFTS		Rational Method	RAFTS
Trib 1	24.20	24.6	E	1.01	1.02
Trib 2	99.90	105.3	F	0.22	0.23
AG	6.80	6.8	G	0.32	0.35
AG1	1.84	1.90	AB	1.91	2.00
AH	3.90	3.5	AC	6.11	6.10
AH1	1.38	1.45	AE	0.86	0.87
D	4.40	4.6	AF	0.49	0.50
AA	4.80	5.0	AK	1.04	1.02
AD	11.70	11.4	AL	0.59	0.58
AI	12.50	12.5	AN	0.53	0.51
AM	3.00	3.1			

4 Peak Discharge Attenuation

It is proposed to include detention basins within the development site to reduce the developed peak discharges from the site back to the pre-development flow rates. To this effect, it is proposed to provide 4 end-of-line detention basins within the site. The proposed detention areas are provided in Table 4-1 and the detailed sizing of the basins is discussed in Section 4 of Cardno's *Stormwater Management Plan (24 October 2012)*. Appendix B shows the site grading plan and details of detention basins and outlet levels.

Table 4-1 Proposed Detention Basin Areas

Detention Basin Parameters	Values			
	Basin 1	Basin 2	Basin 3	Basin 4
Base Area (m^2)	1,714	2,788	8,100	5,550
Surface Area (m^2)	3,204	4,624	11,067	8,046
Depth including 0.3m freeboard and 0.3m bio-retention (m)	1.9	1.9	1.9	1.9
Batter Slope (V:H)	1:4	1:4	1:4	1:4

5 Hydraulic Analysis

5.1 General

A detailed hydraulic analysis was undertaken based on the two-dimensional unsteady flow software, TUFLOW (Build 2009-07-DB-iSP). The extent of the TUFLOW model is shown in Figure 3. A fine 2 metre grid spacing was used to define the flow paths within the 2D domain.

5.2 Model Setup

The TUFLOW model set up is discussed below.

5.2.1 Topography

For the pre-development model, a digital terrain model (DTM) of the study area was set up based on 1 metre contour data (pre-existing contour) supplied by GHD Pty Ltd. The DTM for Gardner Road was set up based on the site survey data and a DEM provided by the *Department of Environment and Resources Management (DERM)*. For the Gateway Motorway, a digital elevation model of the motorway was developed based on the As-Constructed plans provided by the *Department of Transport and Main Roads*. Figure 5 shows the pre-development topography.

For the post-development case, the DTM within the development site was modified to reflect the proposed channels and filling. Figure 6 shows the post-development topography.

5.2.2 Inflow Data

The peak inflow hydrographs used in the TUFLOW model were derived from the RAFTS hydrological models, which were detailed in Section 3 of this report.

Figure 3 shows the locations where the inflow hydrographs were applied.

5.2.3 Manning's Roughness Values

The Manning's roughness values adopted in the modelling are listed in Table 5-1.

Table 5-1 Manning's Roughness Values

Ground Cover	Manning's n Value
Road Reserve	0.02
Vegetation within the site	0.15
Proposed Channel	0.15
Proposed Trapezoidal Diversion Channel	0.15

5.2.4 Downstream Boundary Conditions

Figure 3 shows the location of the downstream boundary condition of the hydraulic model. For the analysis, four downstream boundaries were included, and the boundary conditions were defined based on the Normal Depth, based on the existing contour slopes.

Table 5-2 lists the downstream boundary conditions.

Table 5-2 Downstream Normal Flow Conditions

Boundary Location	Normal Depth Slope (%)
Boundary 1	2.0
Boundary 2	3.3
Boundary 3	1.4
Boundary 4	2.0

5.2.5 Initial Water Level

The model was assumed to be dry at the commencement of the run.

5.2.6 Simulation Time

The model was run with a timestep of 1 second, for 1.5 hour duration.

5.2.7 Existing Cross Drainage Structures

The existing culverts under Gardner Road and Gateway Motorway were included in the TUFLOW model. The diameter and number of barrels of the culverts under Gardner Road were sourced from the Brisbane City Council eBimap. As the eBimap did not contain the invert levels and lengths of the culverts, these values were estimated based on the existing topography. In the case of the culverts under the Gateway Motorway, the detailed characteristics were supplied by the *Department of Transport and Main Roads*.

Figure 3 shows the locations and identifications of the culverts and Table 5-3 lists the main culvert characteristics included in the TUFLOW model.

Table 5-3 Existing Culverts

Culvert ID (Refer to Figure 3)	Size and Type	Invert Level (mAHD)	
		Upstream	Downstream
A	3 x 1350mm RCPs	21.50	20.84
B	2 x 1500mm RCPs	17.00	16.53
C	5 x 3600mm by 2700mm RCBCs	16.50	16.44
D	5 x 2700mm by 1500mm RCBCs	19.70	19.65
E	3 x 2400mm by 1800 mm RCBCs	23.10	23.00
F	1200mm by 800mm RCBC	32.14	32.03
G	900mm by 600mm RCBC	29.49	29.33

5.2.8 Scenarios

For the flood modelling, two scenarios were considered namely pre- and post-development. For both scenarios, the fully developed peak discharges from the external catchments were used.

The pre-development scenario represents the base case flood model, based on the existing topographic information, and assuming the site to be in its existing undeveloped condition.

The post-development scenario incorporated the proposed main and diversion channels, culvert upgrades, proposed internal stormwater pipes and fill. The post-development hydraulic analysis does not specifically include the retardation basins noted above. It has been assumed that sufficient flow attenuation volume will be provided so that the post-development hydrographs are identical to the pre-development cases. This is normal analysis practice in situations where the final sizing of the retardation basins is still be to be completed, as it is in this case.

The net result is that the analysis is conservative such that post-development flood levels are overestimated slightly. It is noted that, while the analysis uses the pre-development hydrographs, the nominated peak flow rate at each of the Gateway Motorway culverts (see Table 5.8 below) actually increases in comparison to pre-development conditions because of the increased capacity and efficiency of the post-development channels. This increase will not occur in reality because the retardation basins will operate to ensure no-worsening as a consequence of development.

When the location and size of the retardation basins is finalised during detailed design, further hydraulic analysis incorporating the unattenuated post-development flows will be completed to demonstrate that sufficient retardation is achieved to comply with the no-worsening criterion.

5.2.9 Proposed Mitigation Measures

The proposed mitigation measures are discussed below.

- **Proposed Main Channel**

It is proposed to construct an open uniform trapezoidal channel within the site to convey the peak discharge from the southern external catchment (approximately 454ha) through the site. The proposed channel is shown in Figure 4.

The appropriate channel type for the site was selected in accordance with Table 9.02.1 of *QUDM 2007*. The table recommends channel type "C6" for a catchment area of greater than 60ha; thus, this channel type was selected for the site. The characteristics of the channel and its floodway were also designed in accordance with Section 9.02 of *QUDM 2007*. Accordingly, the main channel was sized such that its conveyance capacity is less than or equal to the 10 year ARI peak discharge draining to the subject site (52.7 m^3/s). Flows in excess of the 10 year ARI event are conveyed in the floodway above the main channel.

The channel capacity was calculated using the Manning's equation. Table 5-4 lists the channel parameters and the calculated capacity. The results show that the capacity of the proposed channel is not greater than the 10 year ARI peak discharge draining to the subject site. Thus, the channel design complies with the requirements of QUDM 2007.

Table 5-4 Characteristics of Proposed Channel

Channel Parameter	Value
Base Width (m)	32.0
Depth (m)	2.0
Bank Slope (V:H)	1:4
Top Width (m)	48
Manning's Roughness 'n'	0.15
Longitudinal Slope (%)	0.5
Calculated Channel Capacity (m^3/s)	52.7

- **Proposed Northern Channel**

It is proposed to construct an open uniform trapezoidal channel in Stage 1 to convey the peak discharge from the northern external catchments (AH, AH1, AG and AG1) draining to the subject site. This diversion channel was sized to convey the 100 year ARI peak discharge from external catchments. Figures 4 and 5 show the proposed channel. Table 5-5 lists the characteristics of the channels. The analysis includes piped road crossings in appropriate locations.

Table 5-5 Characteristics of Proposed Diversion Channel

Channel Parameter	Value
Base Width (m)	16
Depth (m)	1.0
Batter Slope (V:H)	1:4
Top Width (m)	24
Manning's Roughness 'n'	0.15
Longitudinal Slope (%)	Varies (1%: 2%)

- **Proposed Road Crossings and Stormwater Pipes**

As part of the proposed northern channels, it is proposed to provide road crossings and stormwater pipes to allow the transfer of external runoff into the channels and provide access to the proposed roads. The proposed structures are shown in Figure 5. Table 5-6 lists the main characteristics of the proposed stormwater pipes.

Table 5-6 Proposed Stormwater Pipes

Pipe ID (Refer to Figure 4)	Size and Type	Invert Level (mAHD)		Length (m)
		Upstream	Downstream	
Culvert 1	2 x 1200mm by 800mm RCBCs	31.7	31.47	16
Culvert 2	3 x2100mm by 600mm RCBCs	29.33	28.26	43
Culvert 3	5x1200mm RCPs	28.35	28.15	28
Culvert 4	7 x1050mm RCPs	26.51	26.00	24
Culvert 5	5 x 3600mm by 3600mm RCBCs	20.69	20.50	35

- **Proposed Culvert Upgrade**

It is proposed to upgrade the existing culverts (E, F and G) under Gardner Road to allow for piping of the peak discharge from the external catchment and to minimise upstream flood impacts. The characteristics of the proposed culvert upgrades are listed in

Table 5-7. Figure 4 shows the proposed culvert upgrades.

Table 5-7 Proposed Culvert Upgrade

Culvert ID (Refer to Figure 4)	Size and Type	Invert Level (mAHD)	
		Upstream	Downstream
E	13 x 2400mm by 1800mm RCBCs	23.10	22.90
F	2 x 1200mm by 800mm RCBCs	31.90	31.76
G	2 x 1500mm by 600mm RCBCs	29.49	29.33

- **Proposed Filling**

The developable areas within the site were assumed to be filled to above the 100 year ARI peak flood elevation predicted by the TUFLOW model. Figure 4 shows the fill areas.

5.3 Flood Modelling Results

The results of the flood modelling are contained in Appendix A in the form of figures. These figures are:

Figure A1 to Figure A6: Pre-development Flood Inundation

Figure A7 to Figure A12: Post-development Flood Inundation

Figure A13 to Figure A18: Afflux

Figure A19: Post-development 100 Year ARI Flood Depth

Figure A20: Post-development 100 Year Flood Velocity

The results are summarised in the subsequent sections.

5.3.1 Flood Inundation

Figures A1 to A6 show the pre-development flood inundation. The figures show that the majority of the site is not affected by the extent of the flood inundation for all ARI design storm events, and the Gateway Motorway is overtopped at one of the 4 road crossings (culvert location C) in the 20 to 100 year ARI events (with a maximum flow depth of approximately 200mm). In the case of Gardner Road, the road is inundated at all the three road crossings for all ARIs.

Figures A7 to A12 show the post-development flood inundation. In contrast to the pre-development scenario, the Gateway Motorway was not overtopped for all storm events. In the case of Gardner Road, the road will not be inundated at culvert locations F and G due to the proposed culvert upgrades for all events, whereas at culvert E, only the 50 and 100 year ARI storm events would cause the road to be overtopped.

5.3.2 Afflux

Figure A13 to A18 show the impact of the proposed development on flood levels. These figures show that development of the site has no significant adverse flooding impact on the upstream properties including Gardner Road. Similarly on the downstream side, the proposed development will not adversely affect the flood immunity of the Gateway Motorway.

A localised afflux was obtained at culvert outlets. However, this localised afflux does not cause any significant adverse impact on downstream properties and drainage infrastructure.

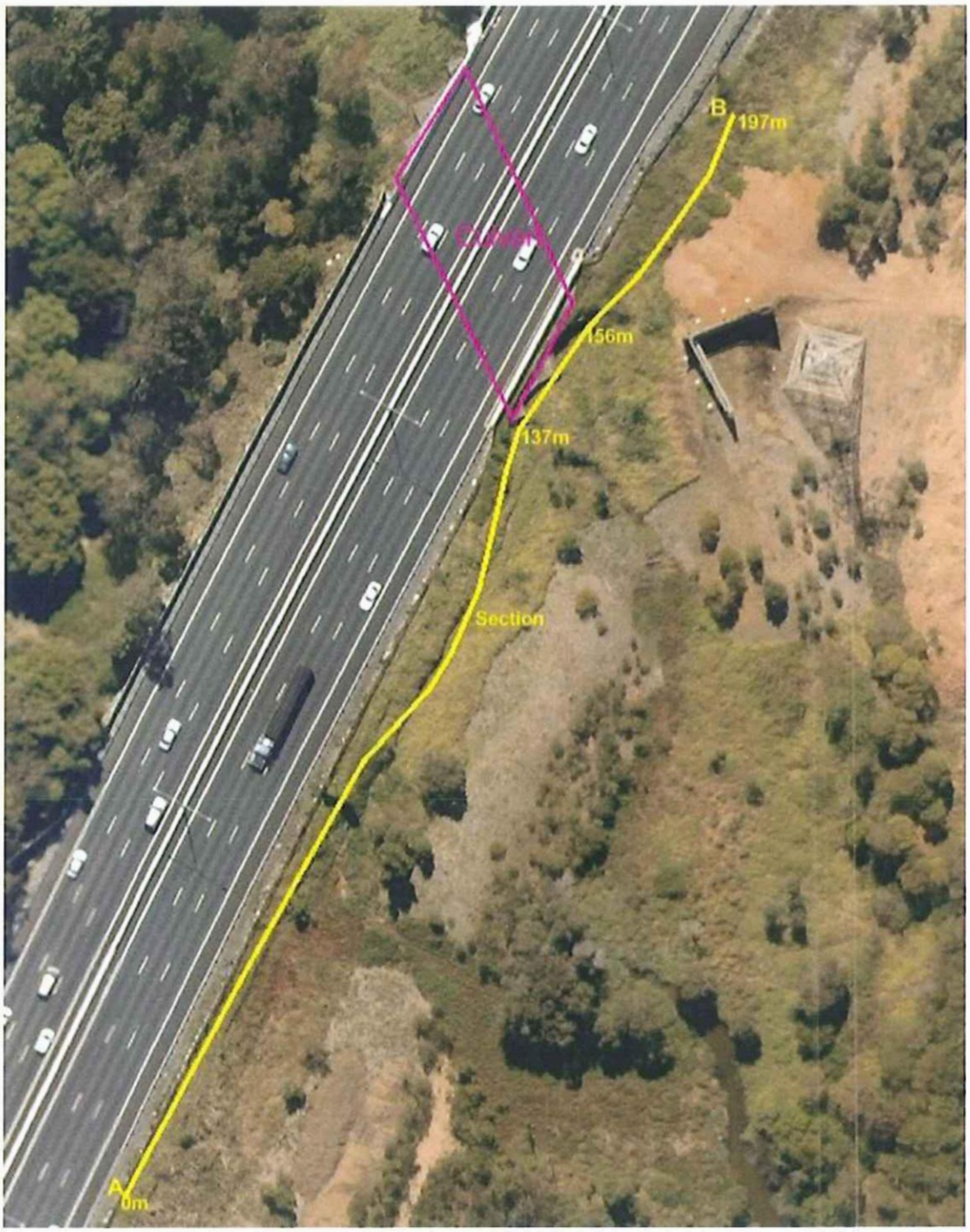
5.3.3 Peak Discharges

Comparisons of the peak discharges through the existing culverts under the Gateway Motorway and the overtopping of the motorway are presented in Table 5-8. The results show that the Gateway Motorway is overtopped for 20 to 100 year ARIs at culvert location C for the pre-development scenario. For the post-development scenario, the 100 year ARI overtopping decreased significantly with no overtopping now occurring for those events less than the 100 Year ARI. The reduction in flows over the road can be

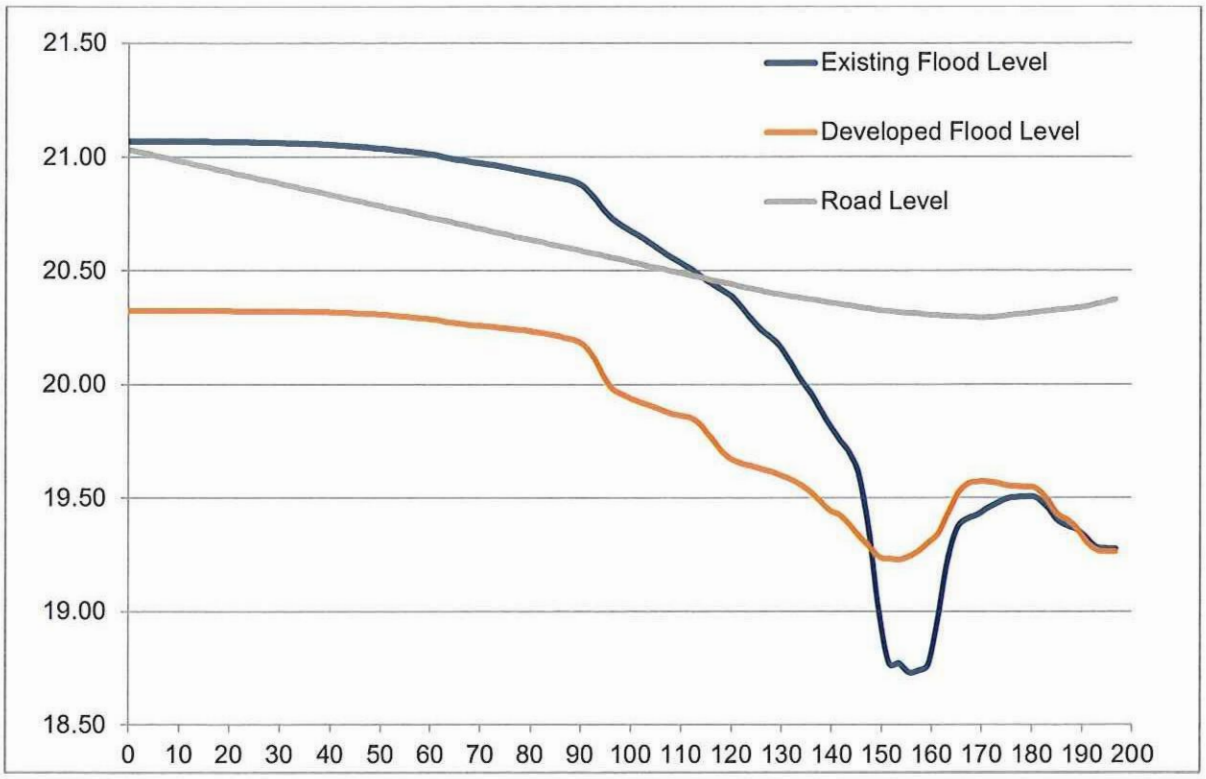
attributed to the culvert flows slightly increasing at culvert location C for the post-development scenario due to a localised increase in flood levels at the upstream end of the culverts.

The change in flow characteristics at this location between the pre- and post-development scenarios is explained in detail with reference to the figures below showing the plan and section views of the motorway, and the 100 year ARI pre-and post-development peak water level profile immediately upstream of the Gateway Motorway culverts of the main channel. The existing water level profile shows the expected drawdown to the culvert structure which is such that the road is overtopped marginally from the area on the southern side of the culverts. The peak water level at the culverts themselves is actually at a level less than the road level.

During the post-development scenario, the proposed main channel capacity and profile result in a flattening of the drawdown water level profile with peak levels reducing on either side of the culvert structure and a marginal increase at the culverts themselves. This effectively results in less flow over the road itself and a small increase in flows through the culverts. Ultimately the proposed development works result in a reduction in total 100 year ARI flows discharging across the Gateway Motorway at this location, from 103.4 m^3/s to 101.8 m^3/s. The increased flow in the culverts themselves will not cause any significant adverse impacts on the downstream properties and stormwater drainage infrastructure.



Plan View



Section A-B 100 Year ARI Peak Flood Level Profile

Table 5-8 Peak Discharge Under and Over Gateway Motorway

100 Year ARI Discharge (m^3/s)				
Culvert ID	Pipe		Overtopping	
	Pre-development	Post-development	Pre-development	Post-development
Culvert A	16.00	17.10	0.0	0.0
Culvert B	0.82	0.78	0.0	0.0
Culvert C	95.30	101.70	8.1	0.0
Culvert D	24.10	24.10	0.0	0.0
50 Year ARI Discharge (m^3/s)				
Culvert ID	Pre-development	Post-development	Pre-development	Post-development
Culvert A	14.90	15.80	-	-
Culvert B	0.72	0.71	-	-
Culvert C	85.5	88.50	2.6	0.0
Culvert D	21.00	21.00	-	-
20 Year ARI Discharge (m^3/s)				
Culvert ID	Pre-development	Post-development	Pre-development	Post-development
Culvert A	13.40	13.90	-	-
Culvert B	0.60	0.60	-	-
Culvert C	71.80	73.40	0.03	0.0
Culvert D	17.90	17.80	-	-
10 Year ARI Discharge (m^3/s)				
Culvert ID	Pre-development	Post-development	Pre-development	Post-development
Culvert A	11.40	12.10	-	-
Culvert B	0.49	0.49	-	-
Culvert C	58.60	60.50	-	-
Culvert D	14.80	14.80	-	-
5 Year ARI Discharge (m^3/s)				
Culvert ID	Pre-development	Post-development	Pre-development	Post-development
Culvert A	9.90	10.40	-	-
Culvert B	0.41	0.41	-	-
Culvert C	49.00	51.10	-	-
Culvert D	12.70	12.70	-	-
2 Year ARI Discharge (m^3/s)				
Culvert ID	Pre-development	Post-development	Pre-development	Post-development
Culvert A	7.40	7.59	-	-
Culvert B	0.31	0.30	-	-
Culvert C	34.00	36.98	-	-
Culvert D	10.50	9.42	-	-

5.3.4 Flood Depth

The flood depth in the proposed channel and road crossing in Stage 1 (northern part of the development) is shown in Figure A19. The maximum flood depth in the proposed channel is less than 1m except at the downstream end of the channel, demonstrating that the channel has sufficient capacity to contain the major flow within its banks.

5.3.5 Velocity

Figure A19 in Appendix A shows the velocity of the flood in the northern channel. The figure shows that the maximum velocity is less than 2 m/s, demonstrating that no further scour protection measures are necessary in the channel.

6 Conclusion

A stormwater drainage strategy was adopted for the proposed Rochedale Industrial Estate to attenuate the increased runoff from the site and to deal with site runoff and the external runoff draining to the development site.

The adopted strategy is summarised below.

- **Peak Discharge Attenuation**

It is proposed to construct end-of-line detention basins within the site to attenuate the developed peak discharges from the site back to the pre-development flow rates.

- **Northern External Catchment Drainage**

It is proposed to convey peak discharges from the northern external catchments through the site by the use of a constructed open channel. As part of the drainage strategy, it is also proposed to upgrade the existing culverts at two locations under Gardner Road, and provide culverts under the proposed internal roads.

- **Southern External Catchment Drainage**

As part of this stormwater drainage strategy, it is proposed to construct an open channel within the site to convey the runoff from the southern external catchments.

A detailed two-dimensional flood study was undertaken using the TUFLOW software to assess impacts of the proposed drainage measures. The results of the flood modelling demonstrated that developed site will not have any significant adverse impacts external to the development site.

FIGURES

Figure 1 Locality Map

Figure 2 Catchment Map

Figure 3 Pre-development TUFLOW Model Layout

Figure 4 Post-development TUFLOW Model Layout

Figure 5 Northern Channel and Pipe Details

Figure 6 Existing Case Topography

Figure 7 Developed Case Topography

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LEGEND

Locality Plan

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Figure 1 : Locality Plan

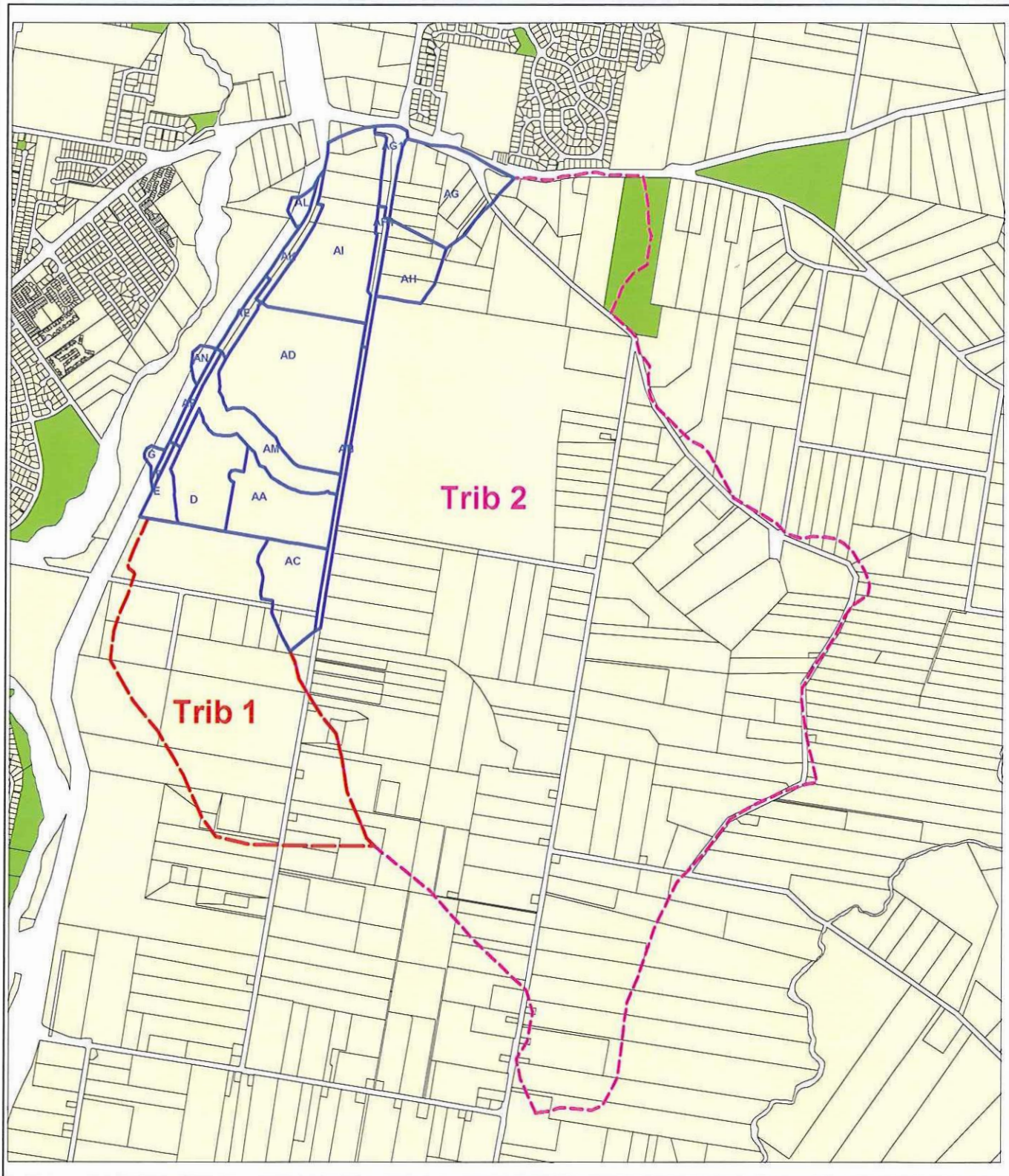
Rochedale Industrial Estate, Gardner Rd, Rochedale

Flood Study

Scale: 1:6,000

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- D — Catchment
- Tributary 1 Catchment
- Tributary 2 Catchment

N W E S

Figure 2 : Catchment Plan

Rochedale Industrial Estate, Gardner Rd, Rochedale

Flood Study

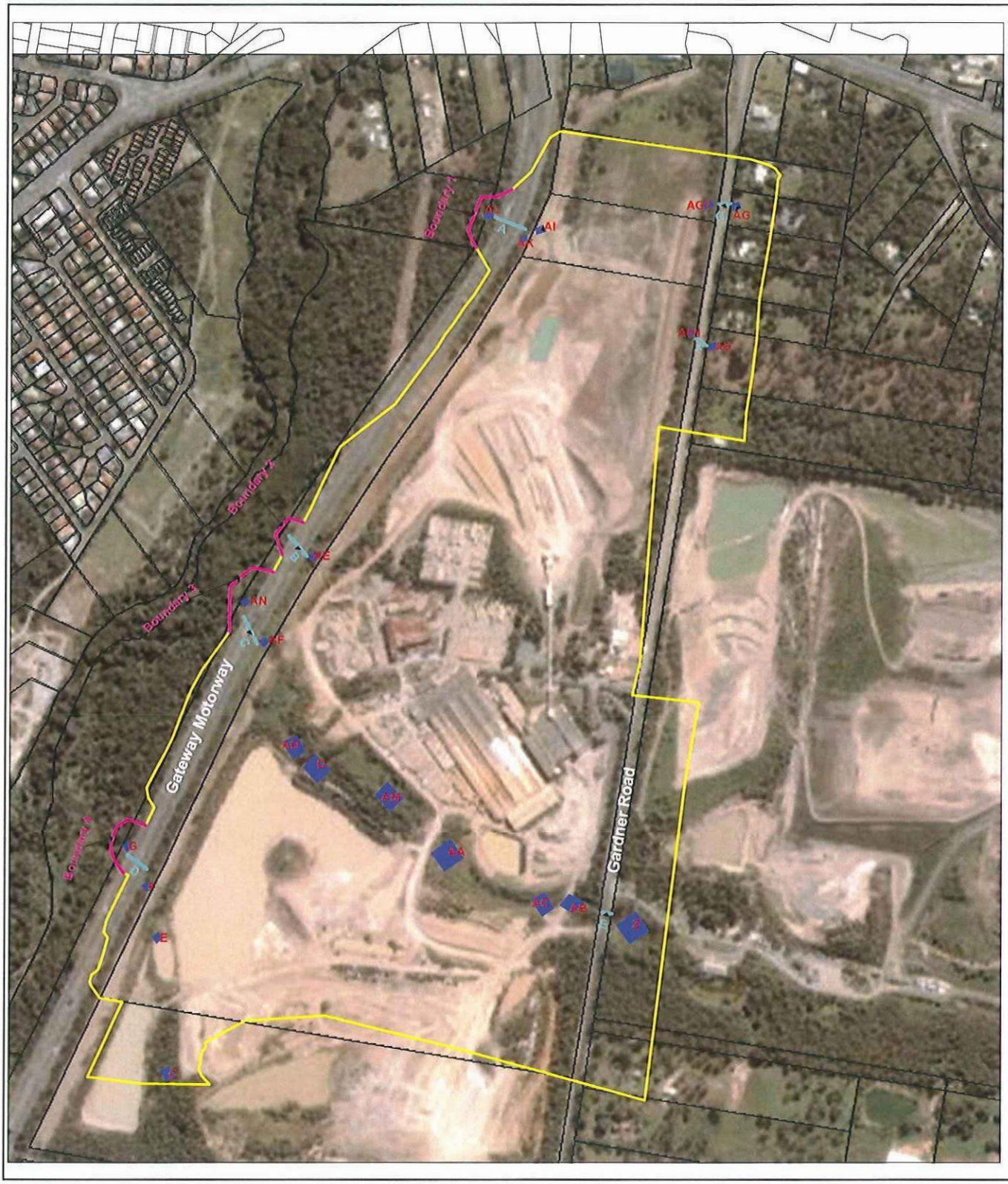
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LEGEND

- 2D Domain
- 2D Inflow Location
- Boundary Condition
- Existing Culvert

N W E S

Figure 3 : Existing Case TUFLOW Model Layout

Rochedale Industrial Estate, Gardner Rd, Rochedale

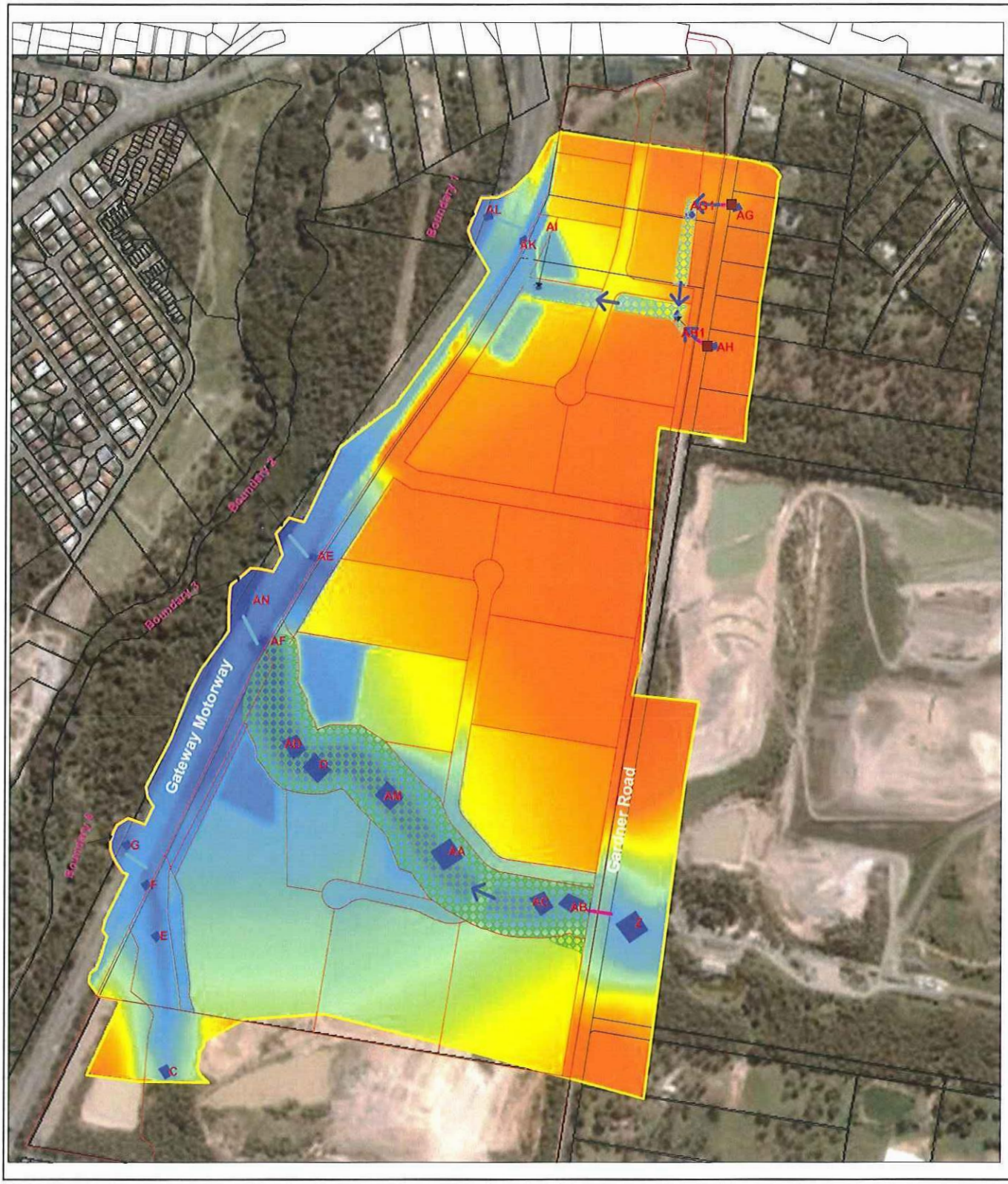
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Legend

- 1D Inflow
- Proposed Road Crossing/Pipe
- Culvert Upgrade
- 2D Inflow
- 2D Domain
- Northern Channel
- Main Channel

N W E S

Figure 4 : Developed TUFLOW Model Layout

Rochedale Industrial Estate, Gardner Rd, Rochedale

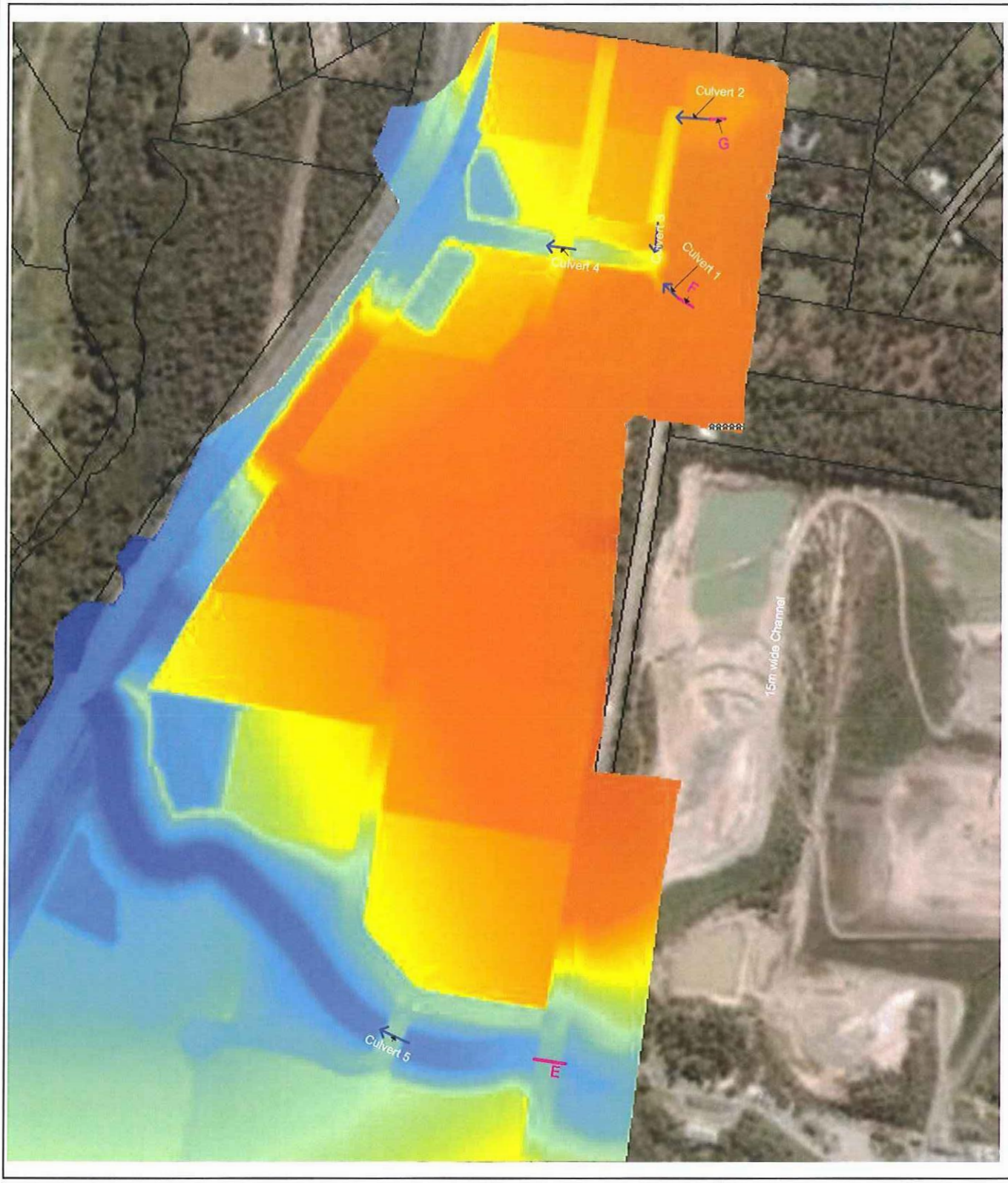
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Legend

Proposed Road Crossing/Pipe

Culvert Upgrade

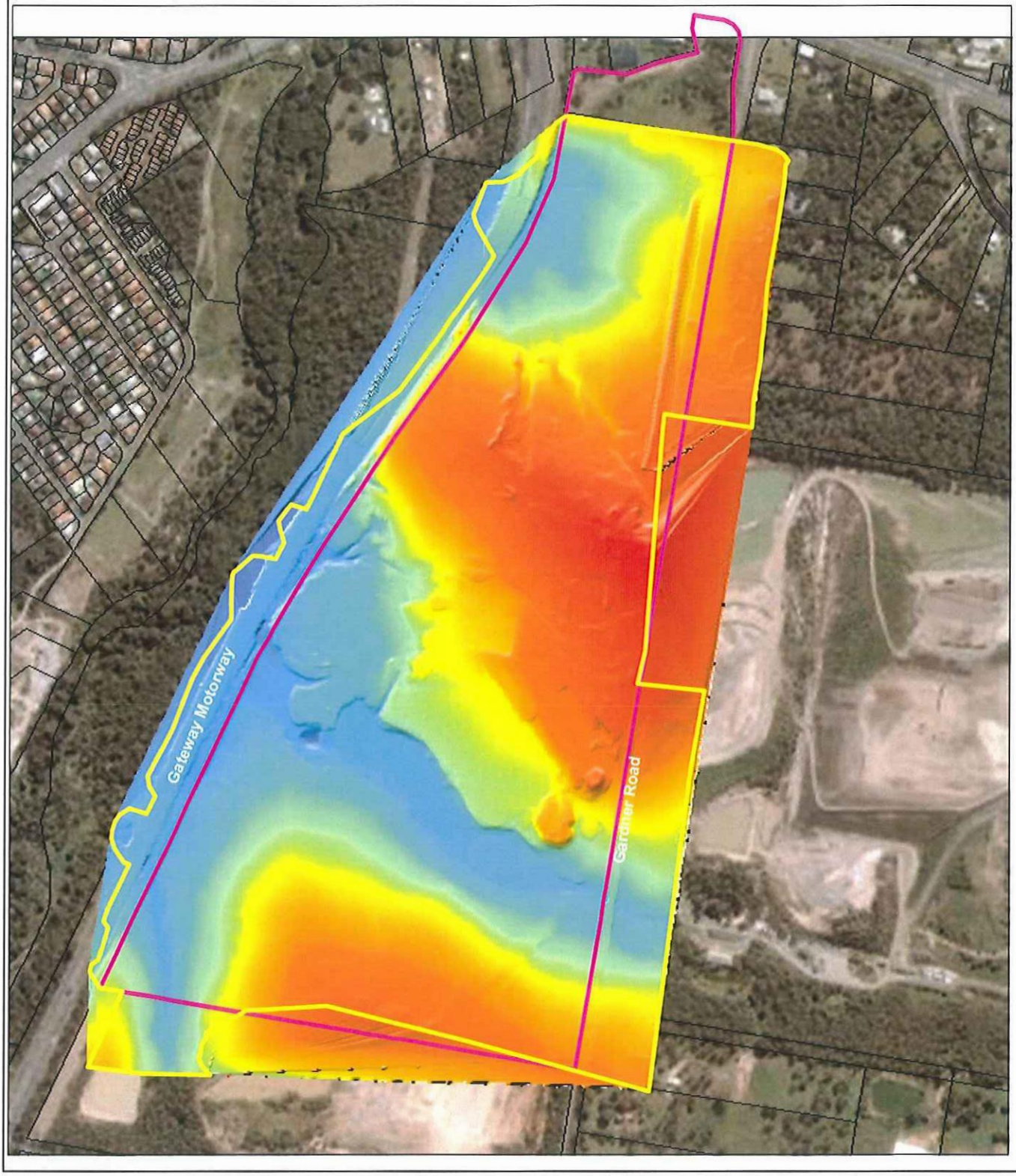
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Figure 5 : Proposed Channel and Culvert Locations

Rochedale Industrial Estate, Gardner Rd, Rochedale

Flood Study

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Legend

- 2D Domain
- Development Site

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Figure 6 : Existing Topography

Rochedale Industrial Estate, Gardner Rd, Rochedale

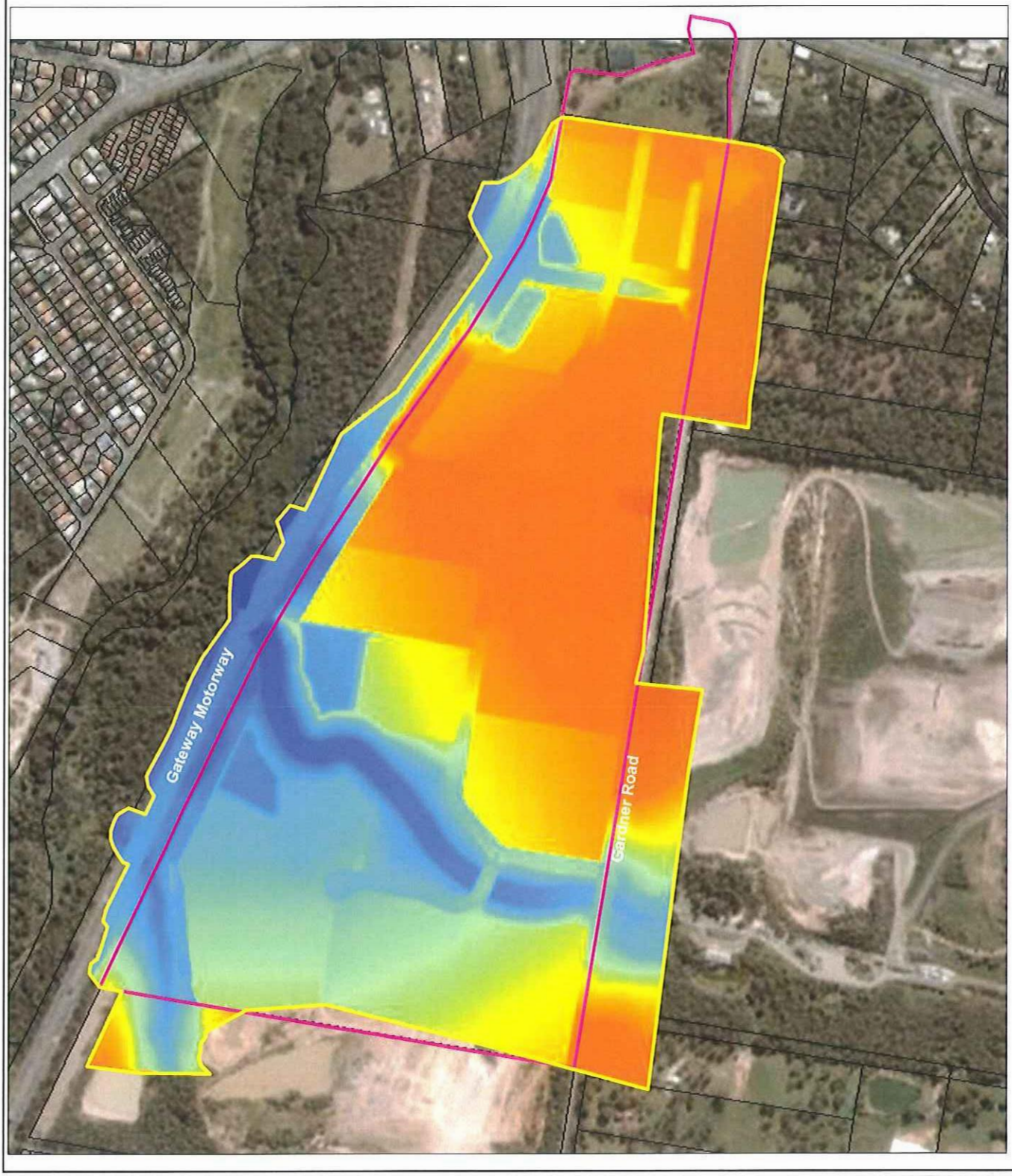
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Legend

- 2D Domain
- Development Site

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Figure 7 : Developed Topography

Rochedale Industrial Estate, Gardner Rd, Rochedale

Flood Study

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Rochedale Industrial Estate, Gardner Road, Rochedale

APPENDIX A

Flood Modelling Results

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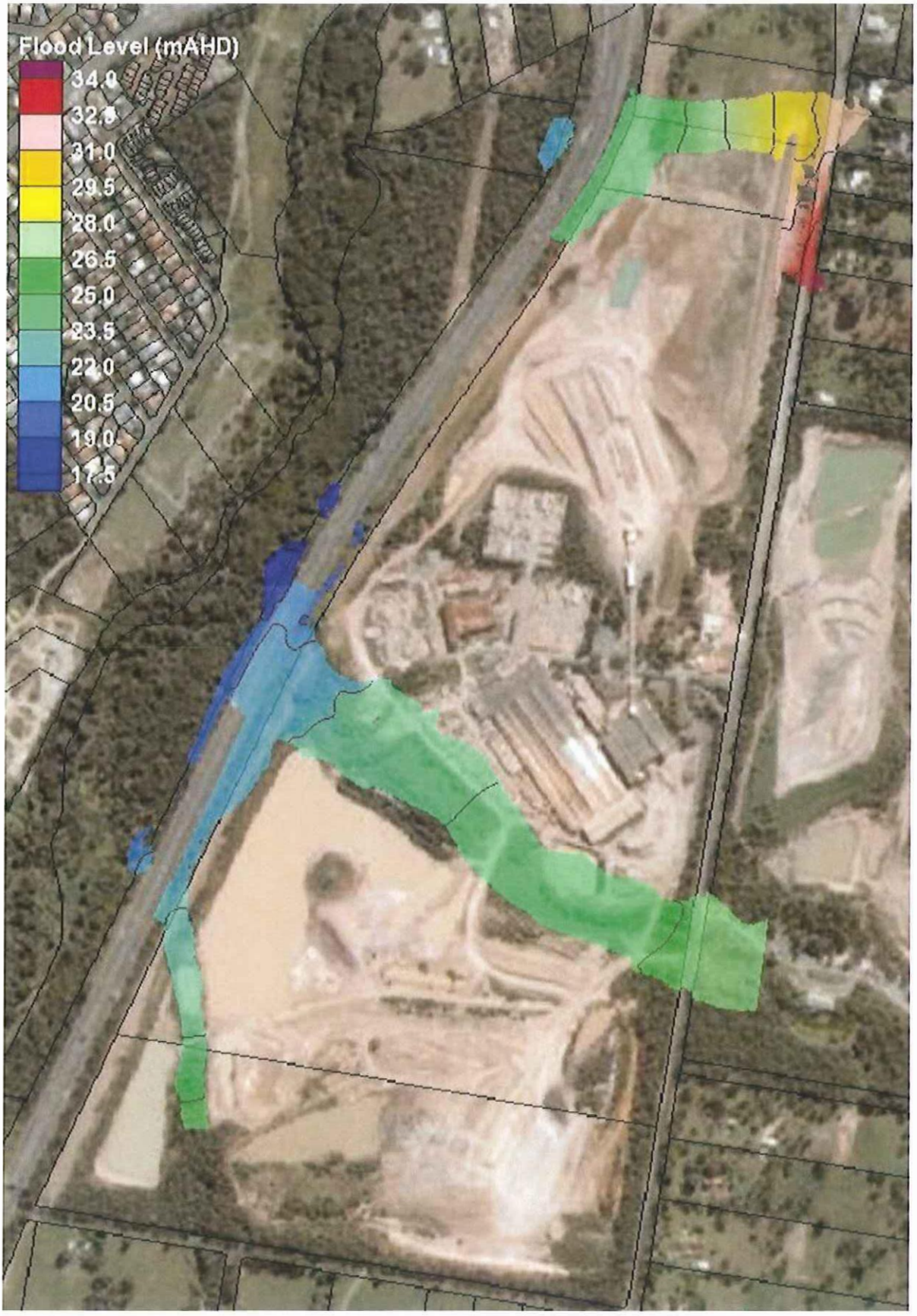


Figure A1. Pre-development 100 Year ARI Flood Levels

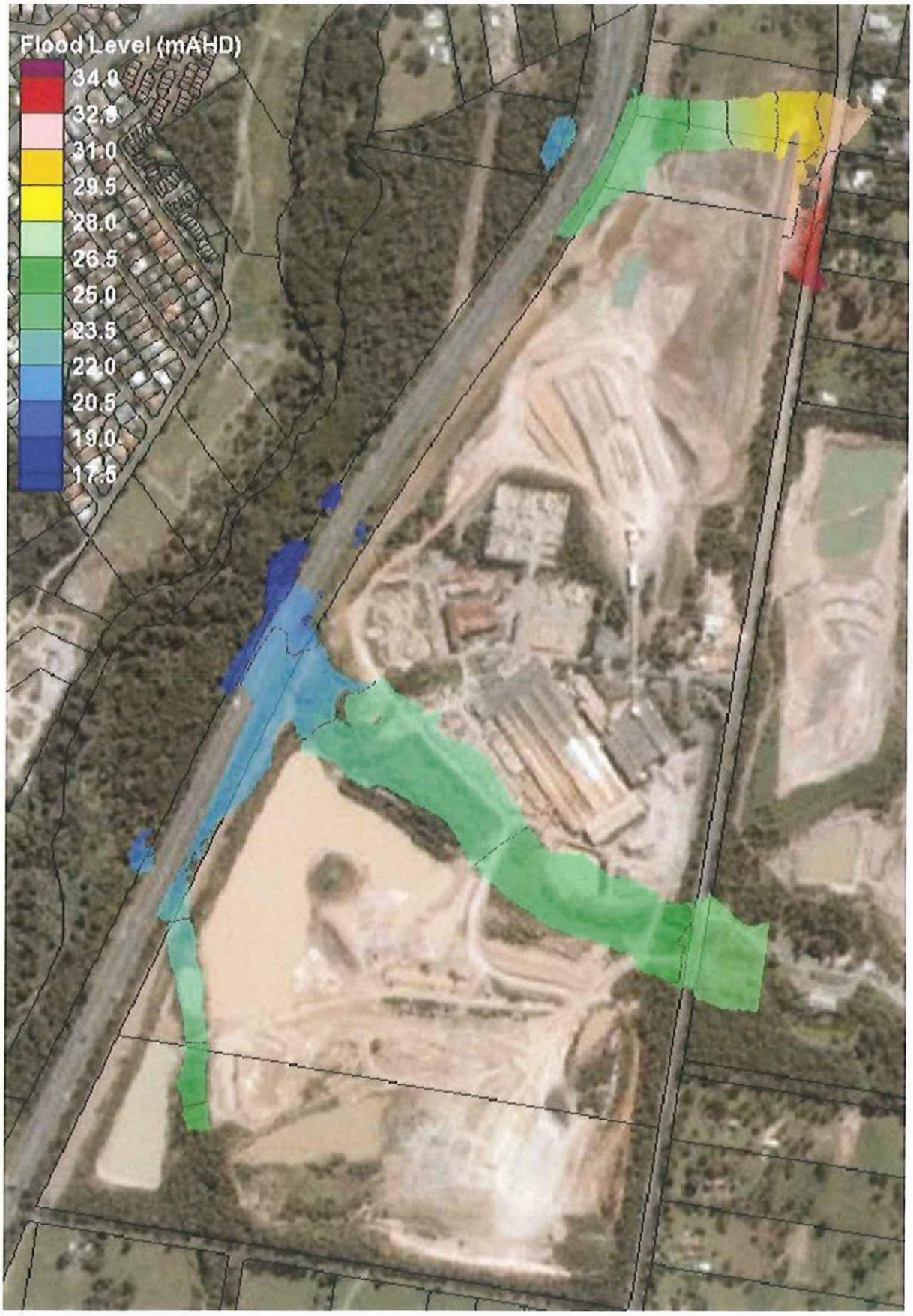


Figure A2. Pre-development 50 Year ARI Flood Levels

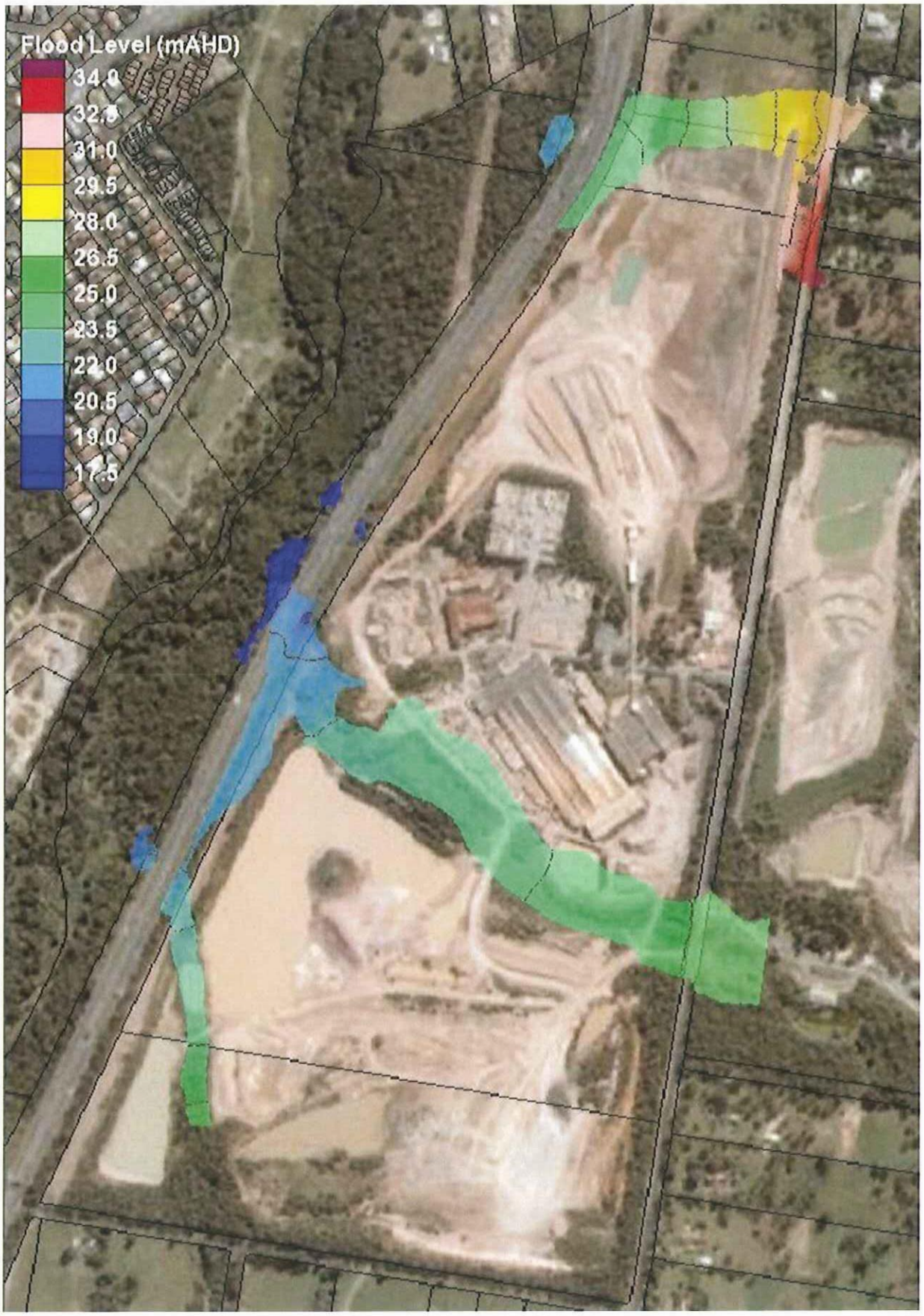


Figure A3. Pre-development 20 Year ARI Flood Levels

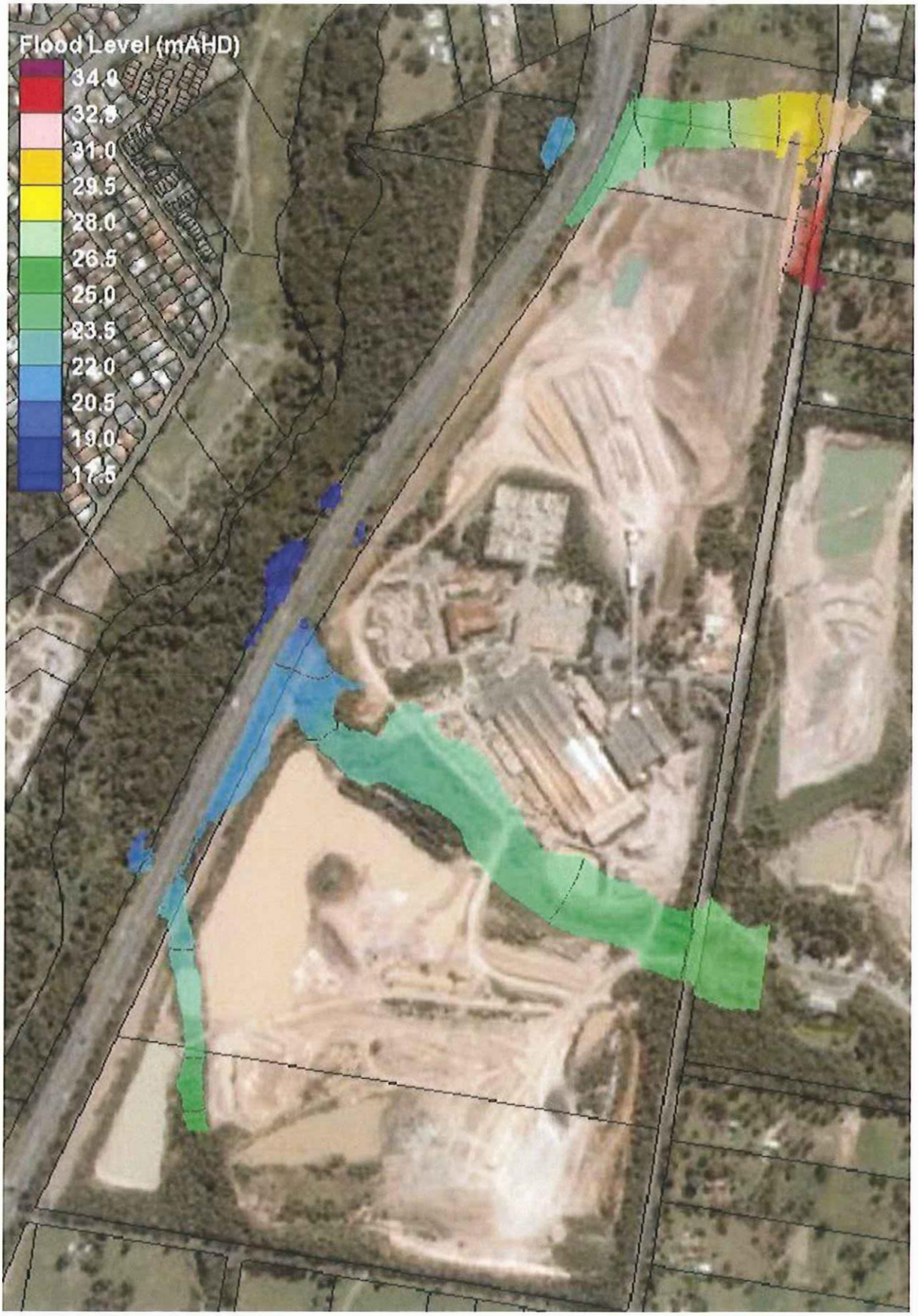


Figure A4. Pre-development 10 Year ARI Flood Levels

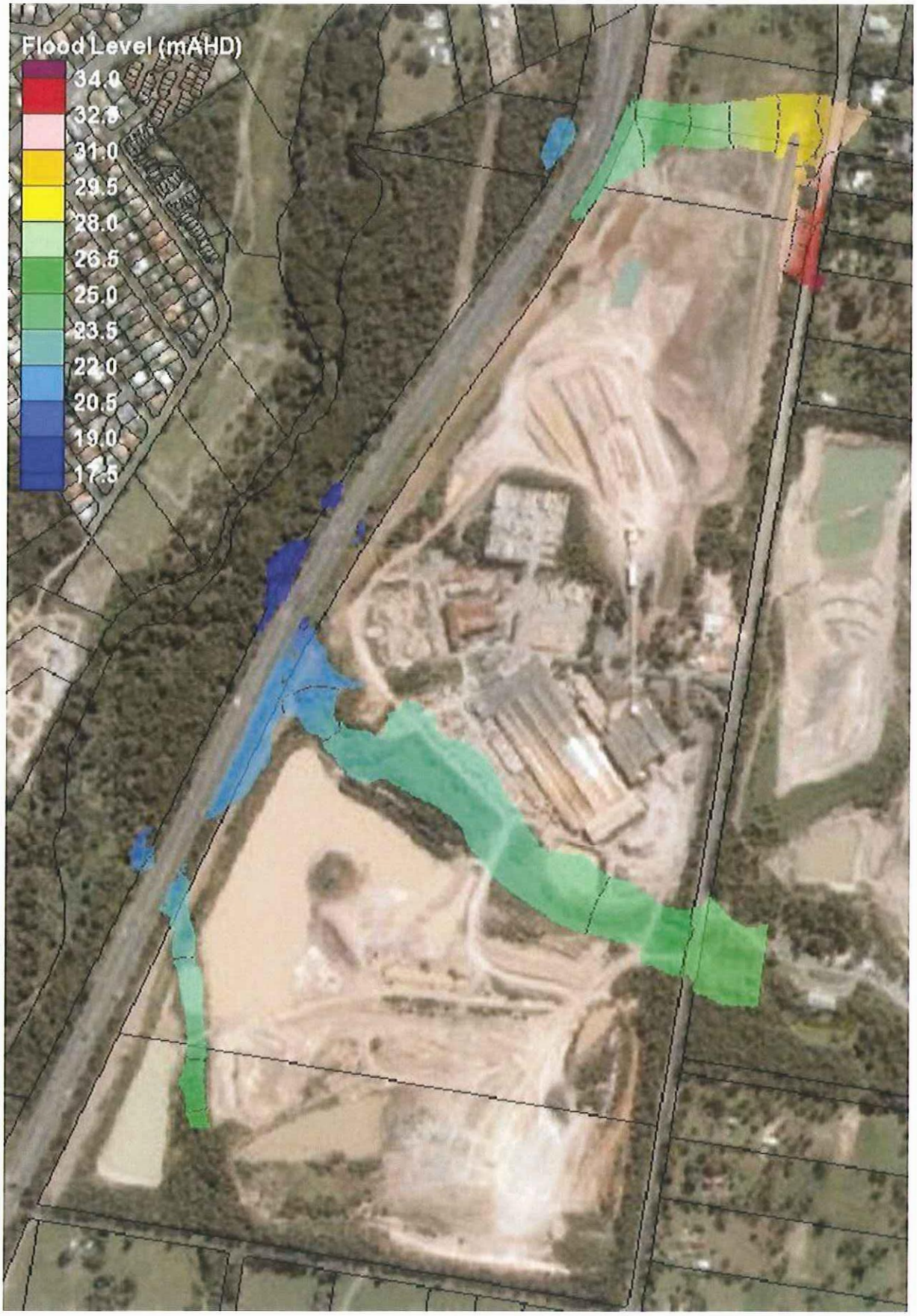


Figure A5. Pre-development 5 Year ARI Flood Levels

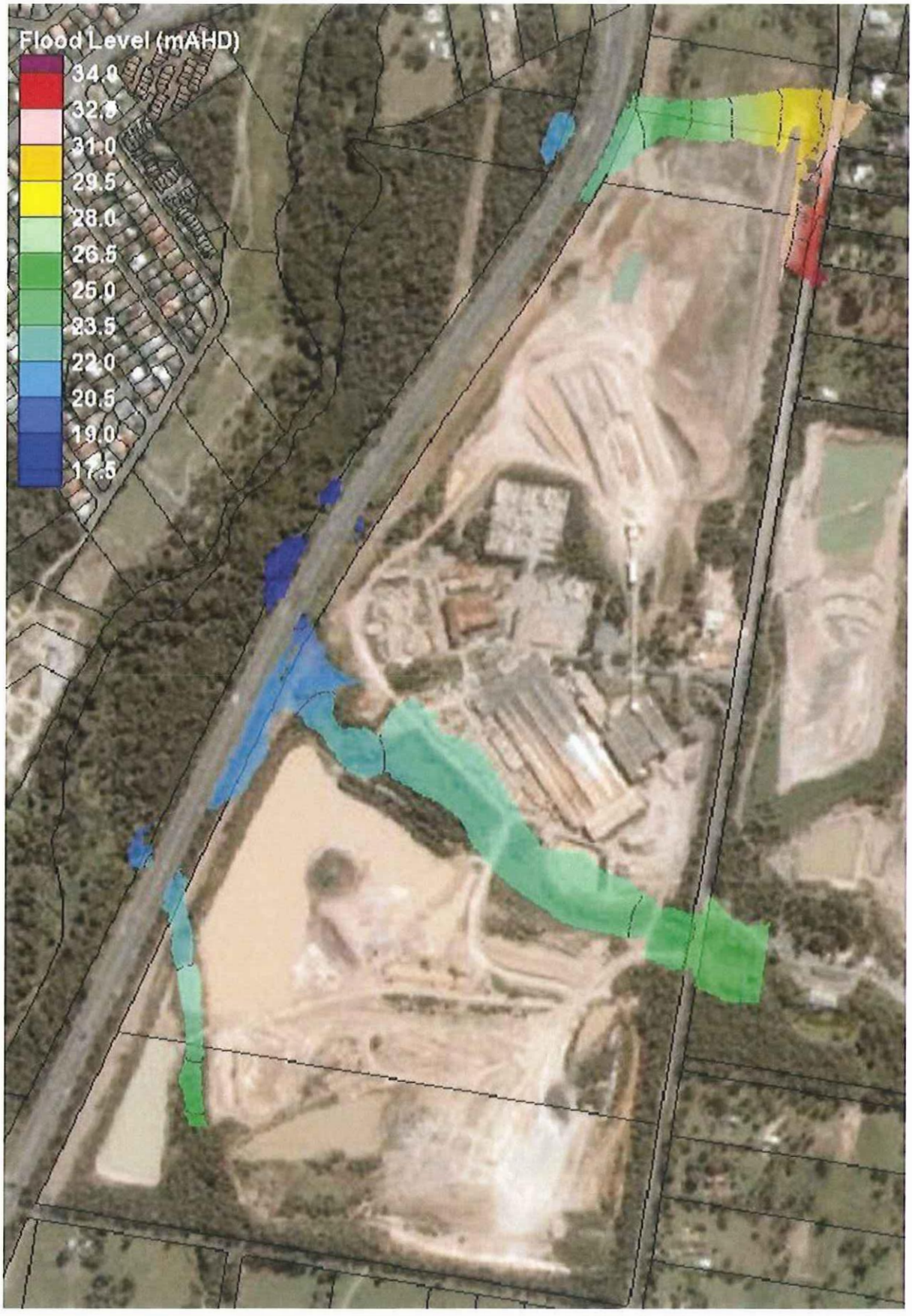


Figure A6. Pre-development 2 Year ARI Flood Levels

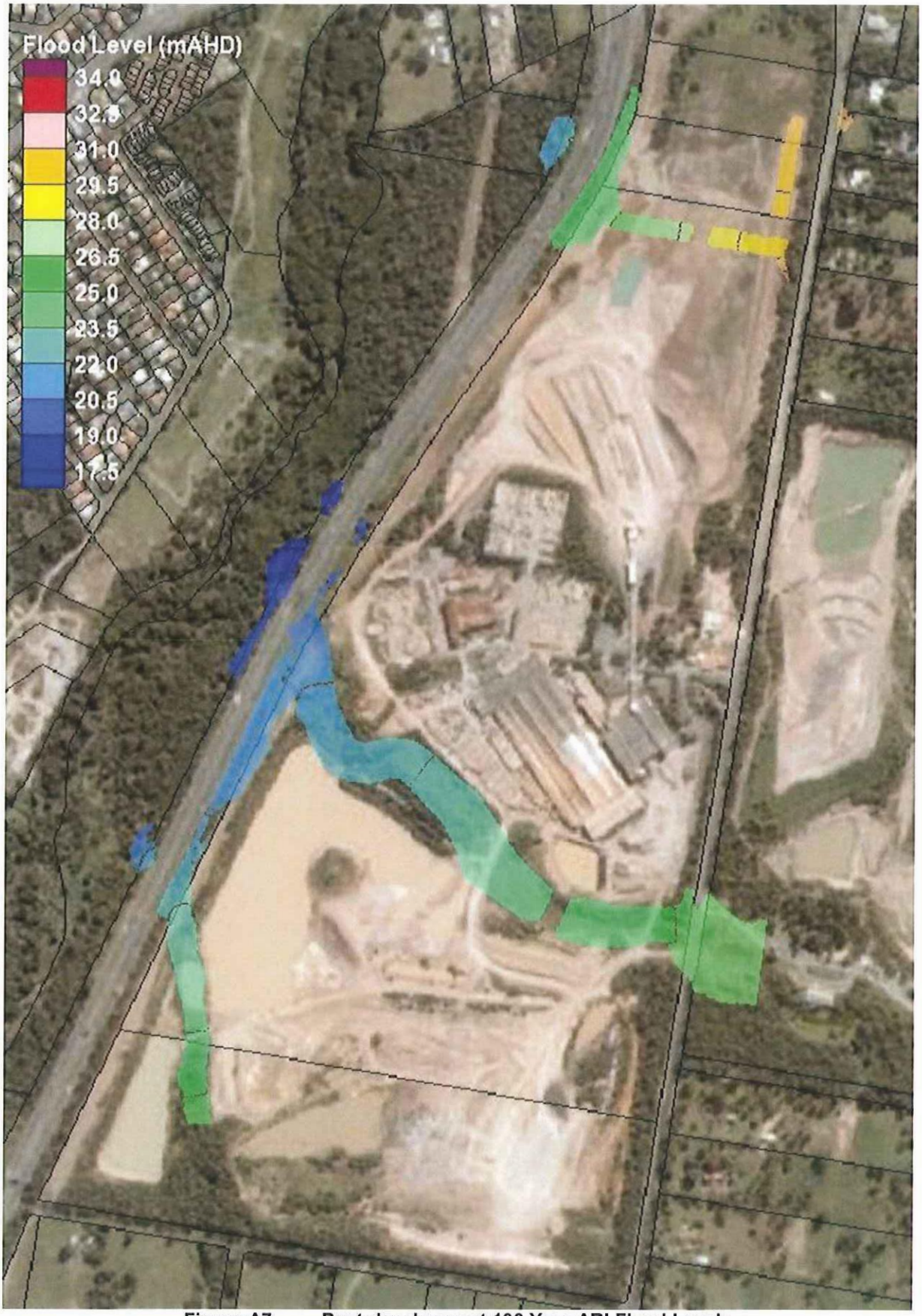


Figure A7. Post-development 100 Year ARI Flood Levels

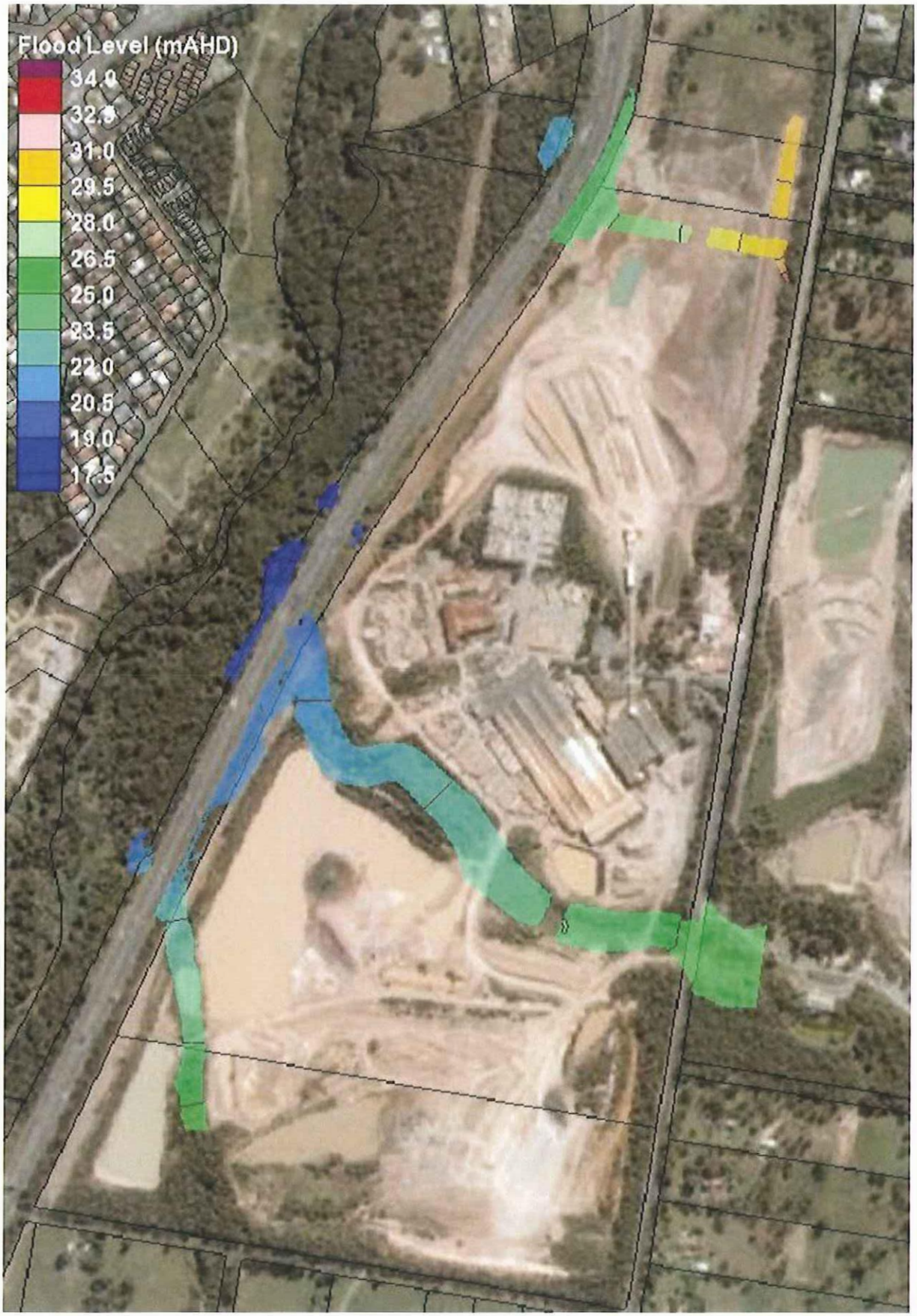


Figure A8. Post-development 50 Year ARI Flood Levels

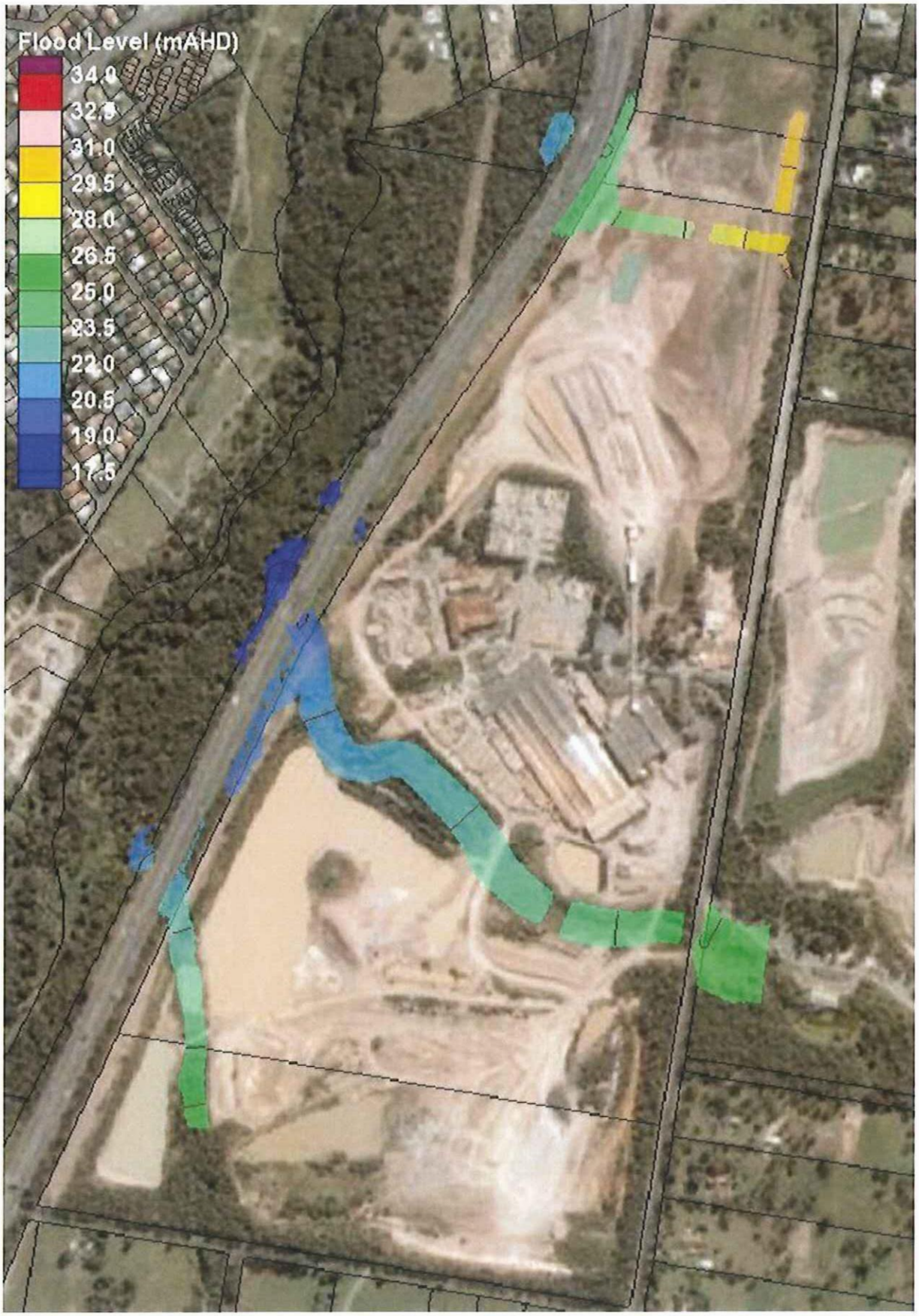


Figure A9. Post-development 20 Year ARI Flood Levels

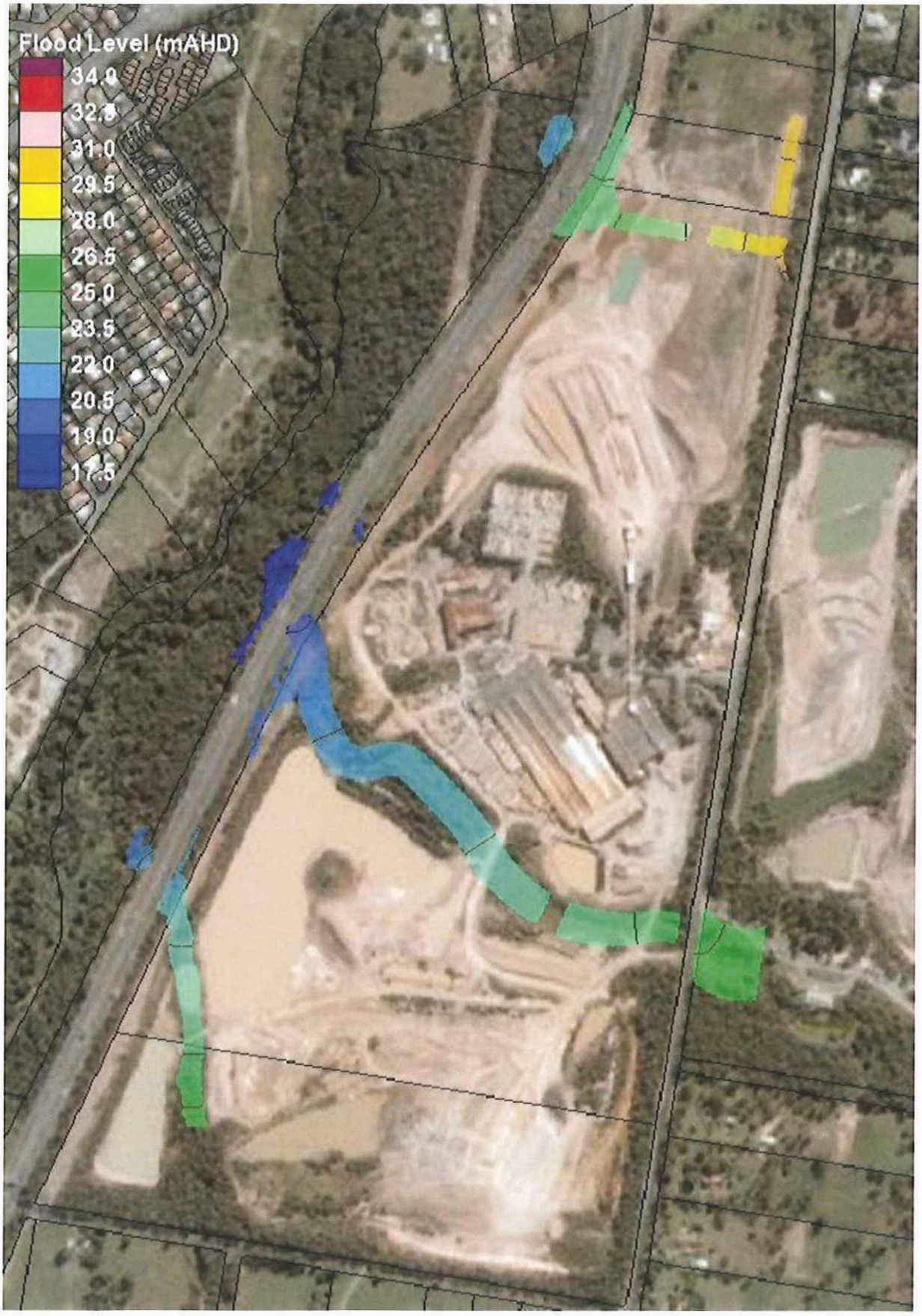


Figure A10. Post-development 10 Year ARI Flood Levels

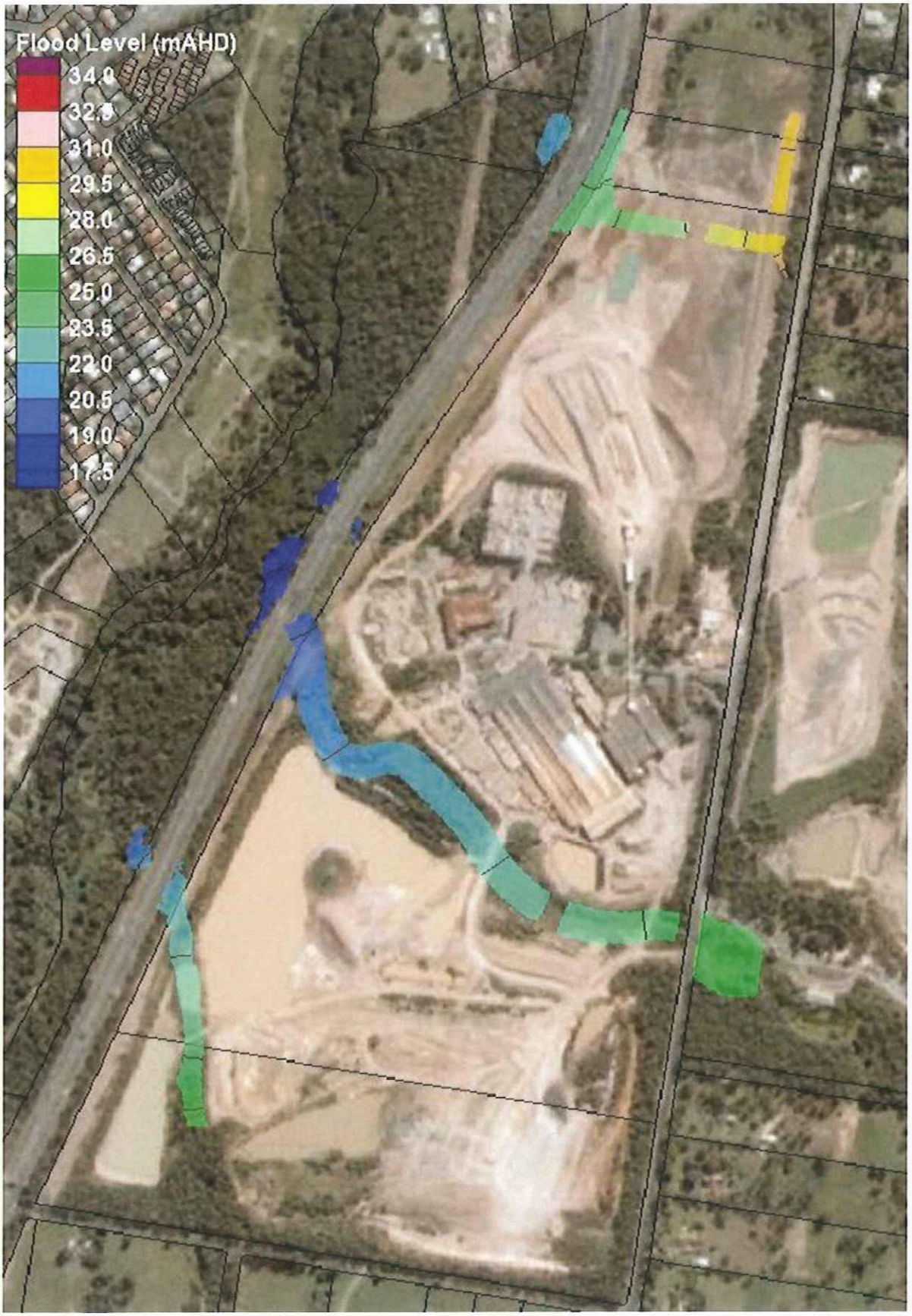


Figure A11. Post-development 5 Year ARI Flood Levels

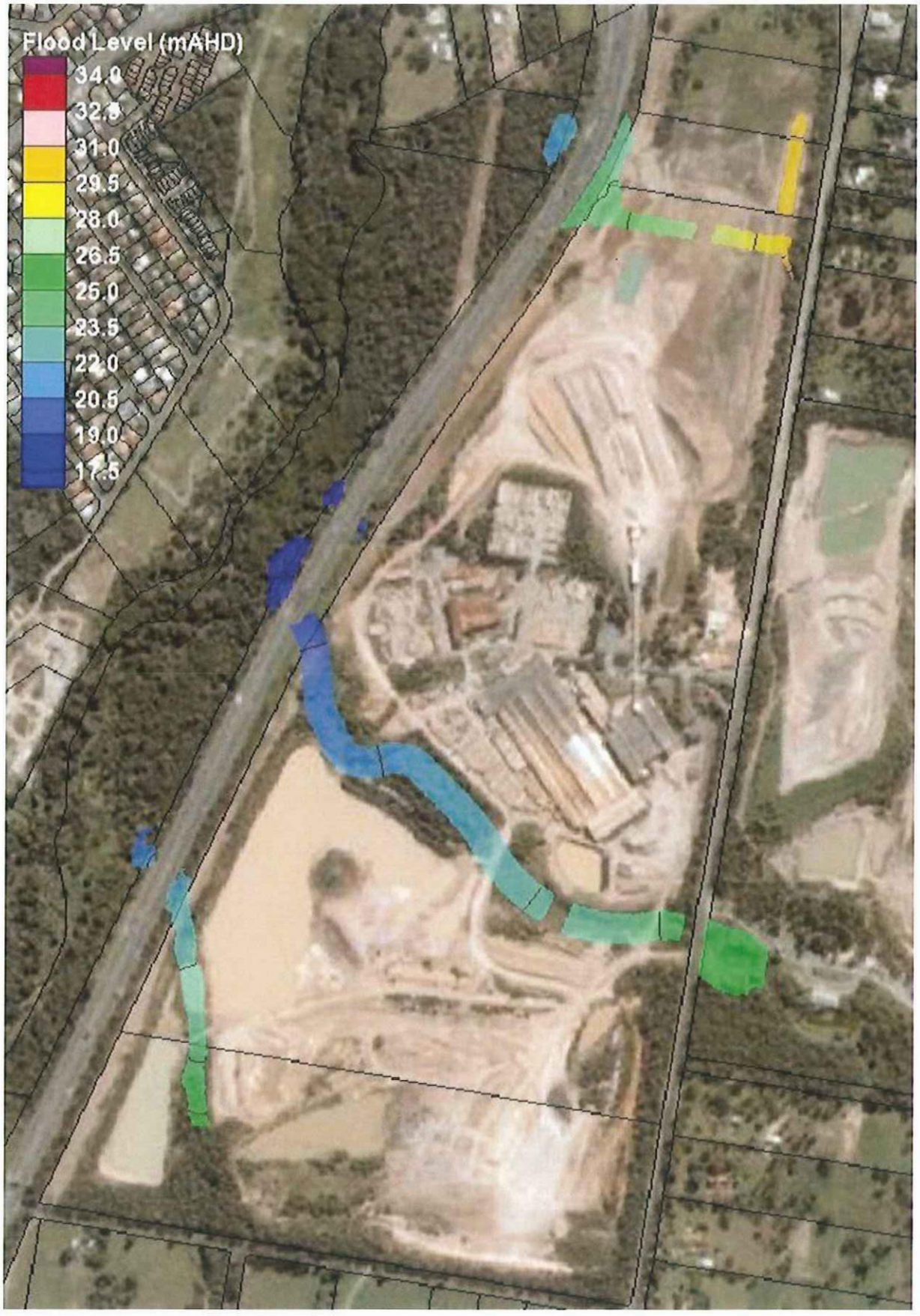


Figure A12. Post-development 2 Year ARI Flood Levels

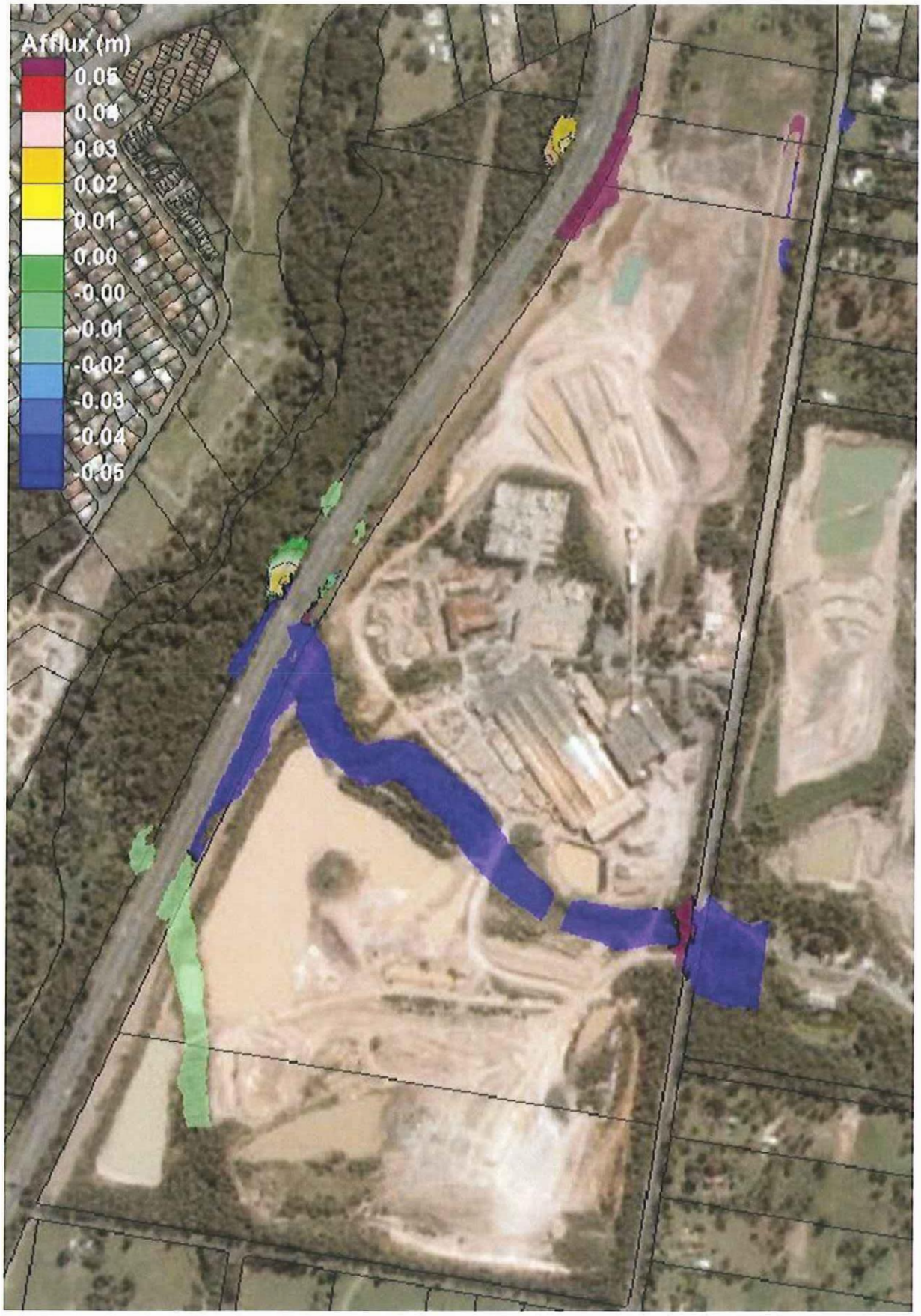


Figure A13. 100 Year ARI Afflux

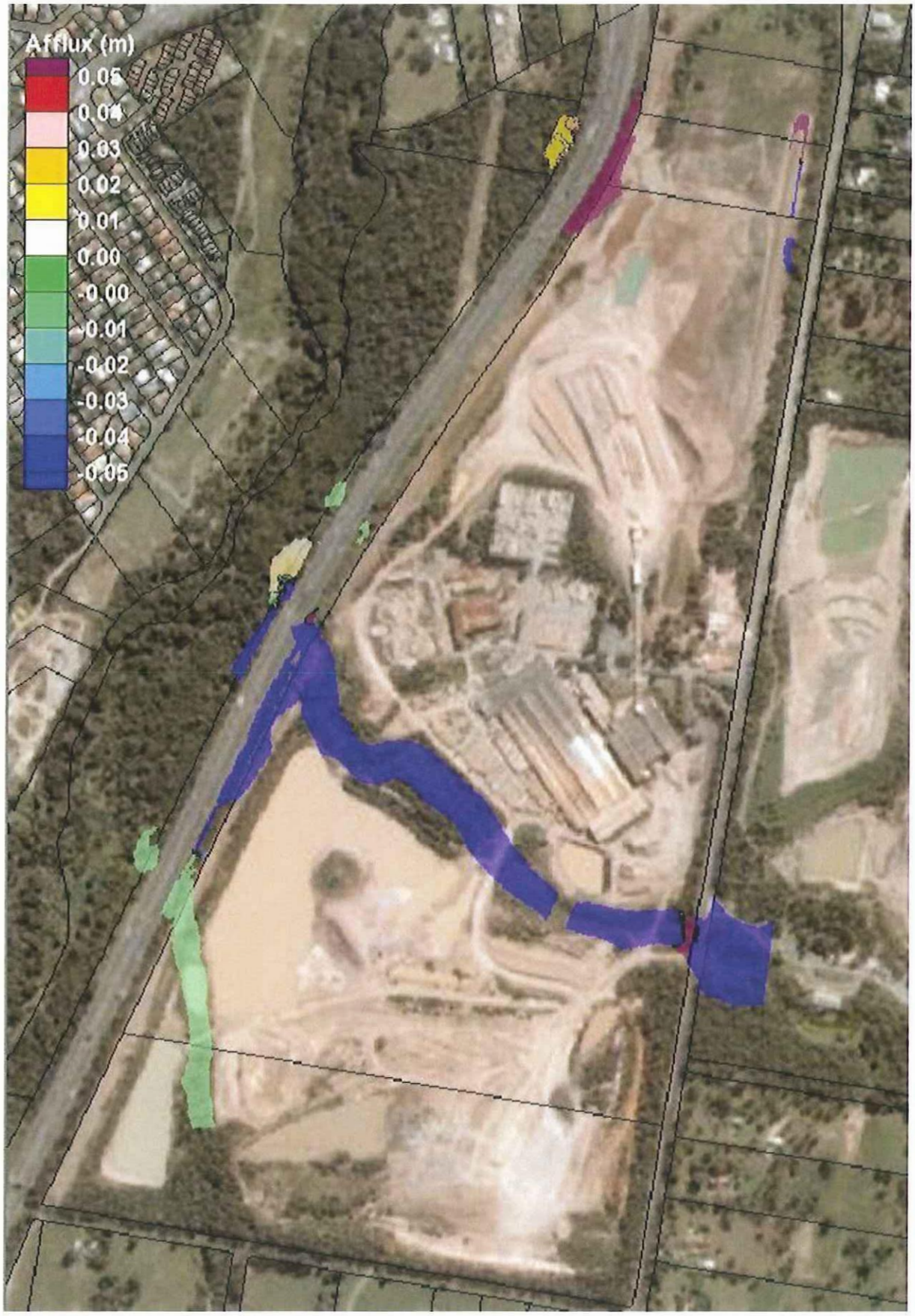


Figure A14. 50 Year ARI Afflux

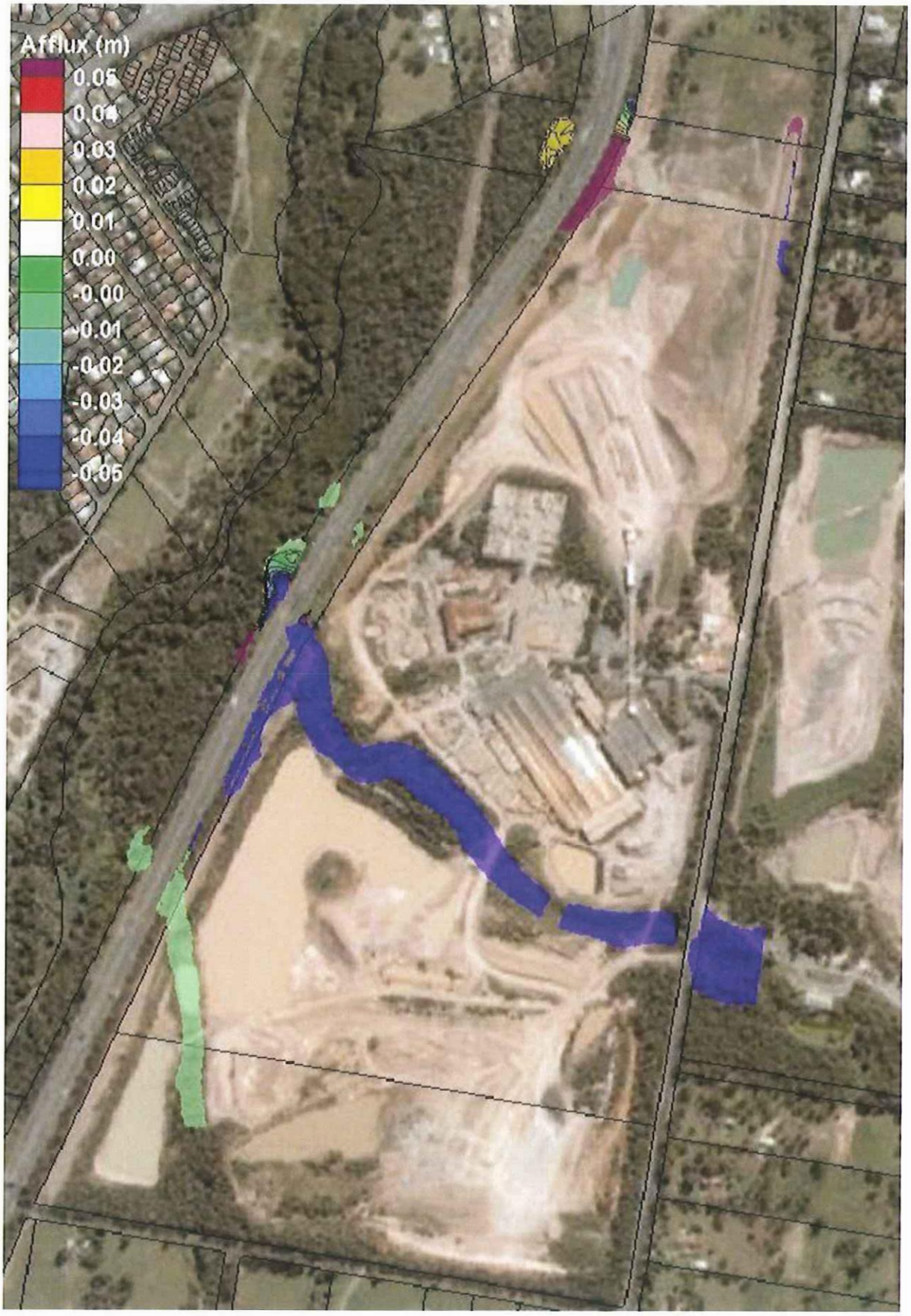


Figure A15. 20 Year ARI Afflux

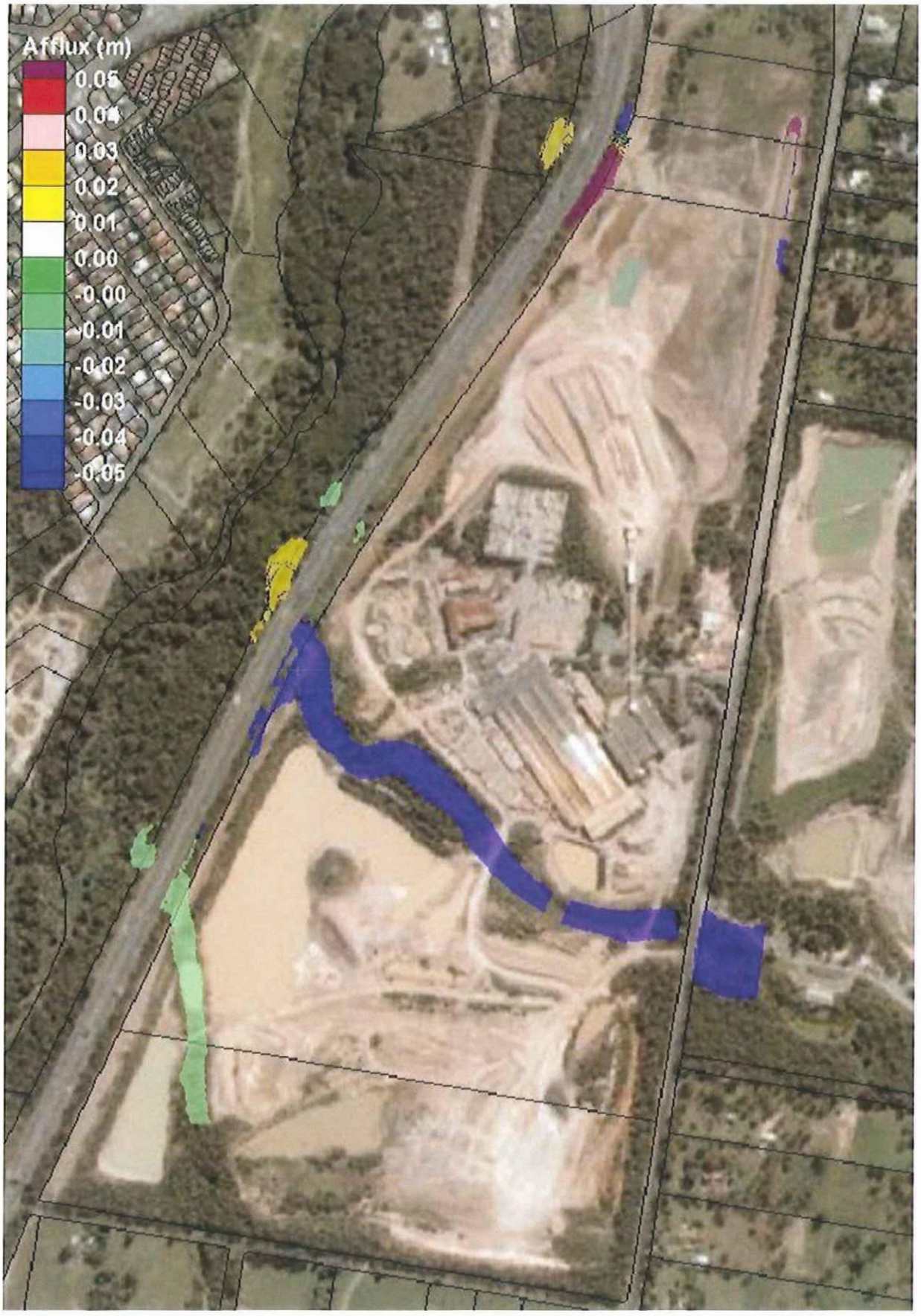


Figure A16. 10 Year ARI Afflux

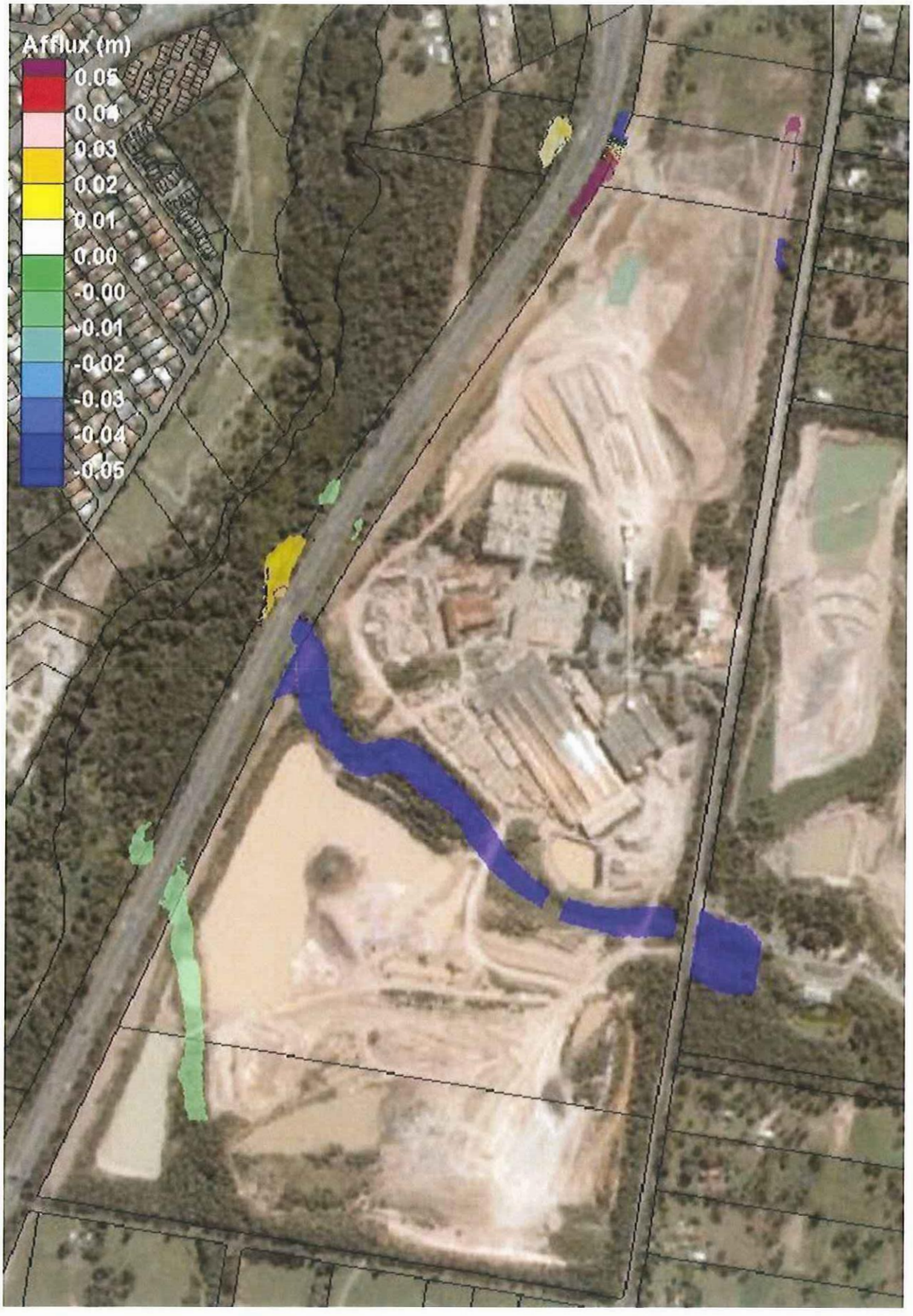


Figure A17. 5 Year ARI Afflux

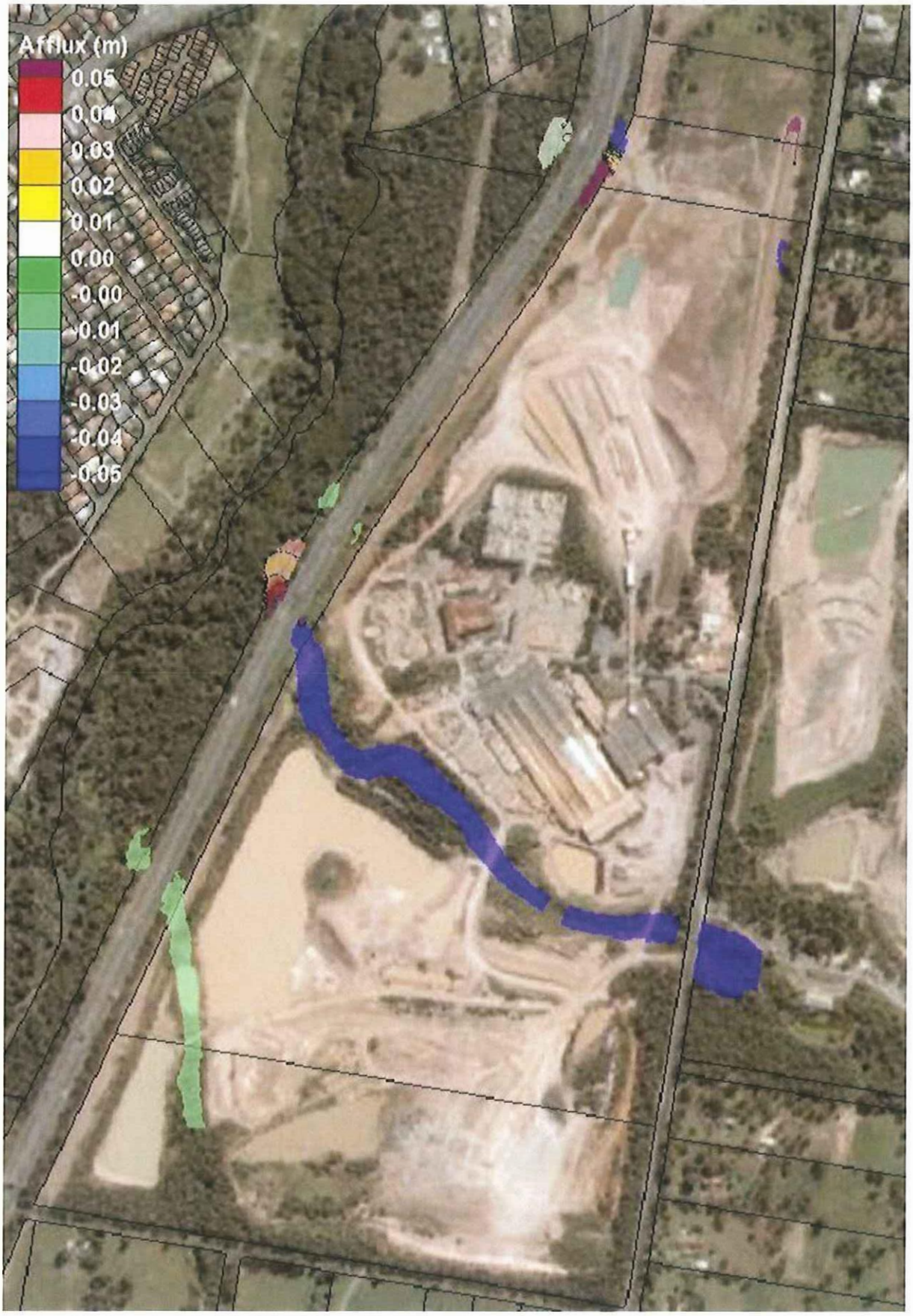


Figure A18. 2 Year ARI Afflux

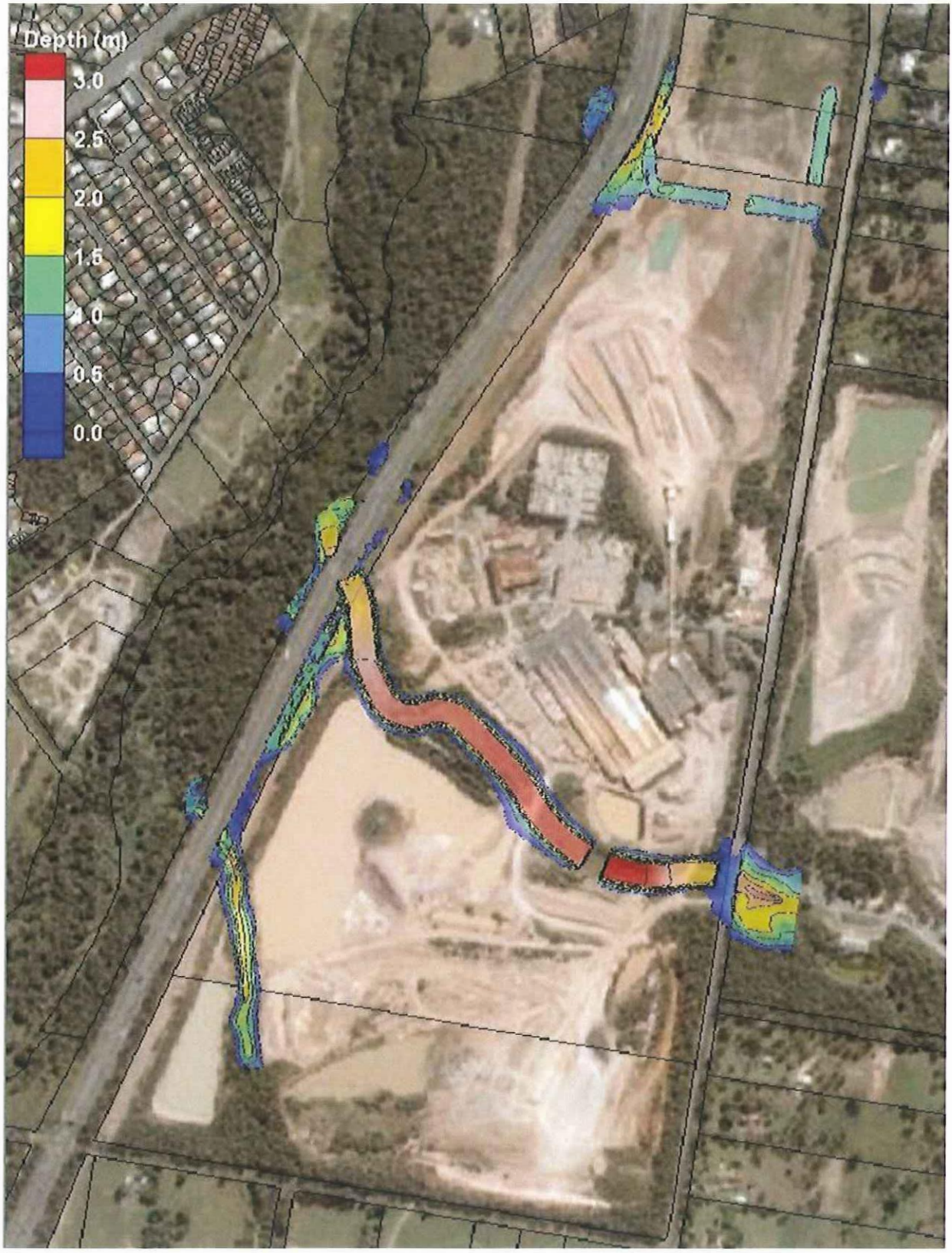


Figure A19. 100 Year ARI Flood Depth

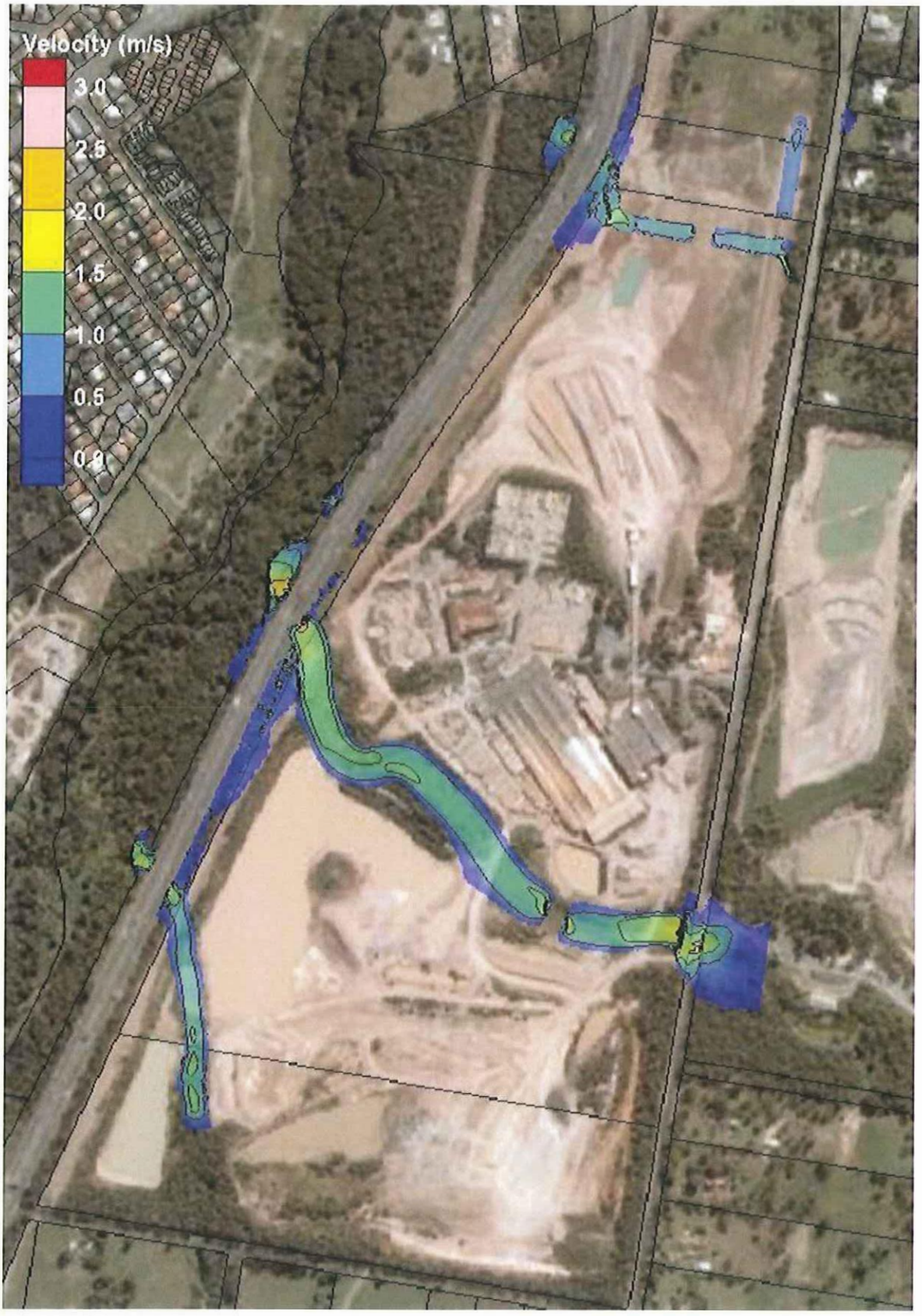


Figure A20. 100 Year ARI Velocity

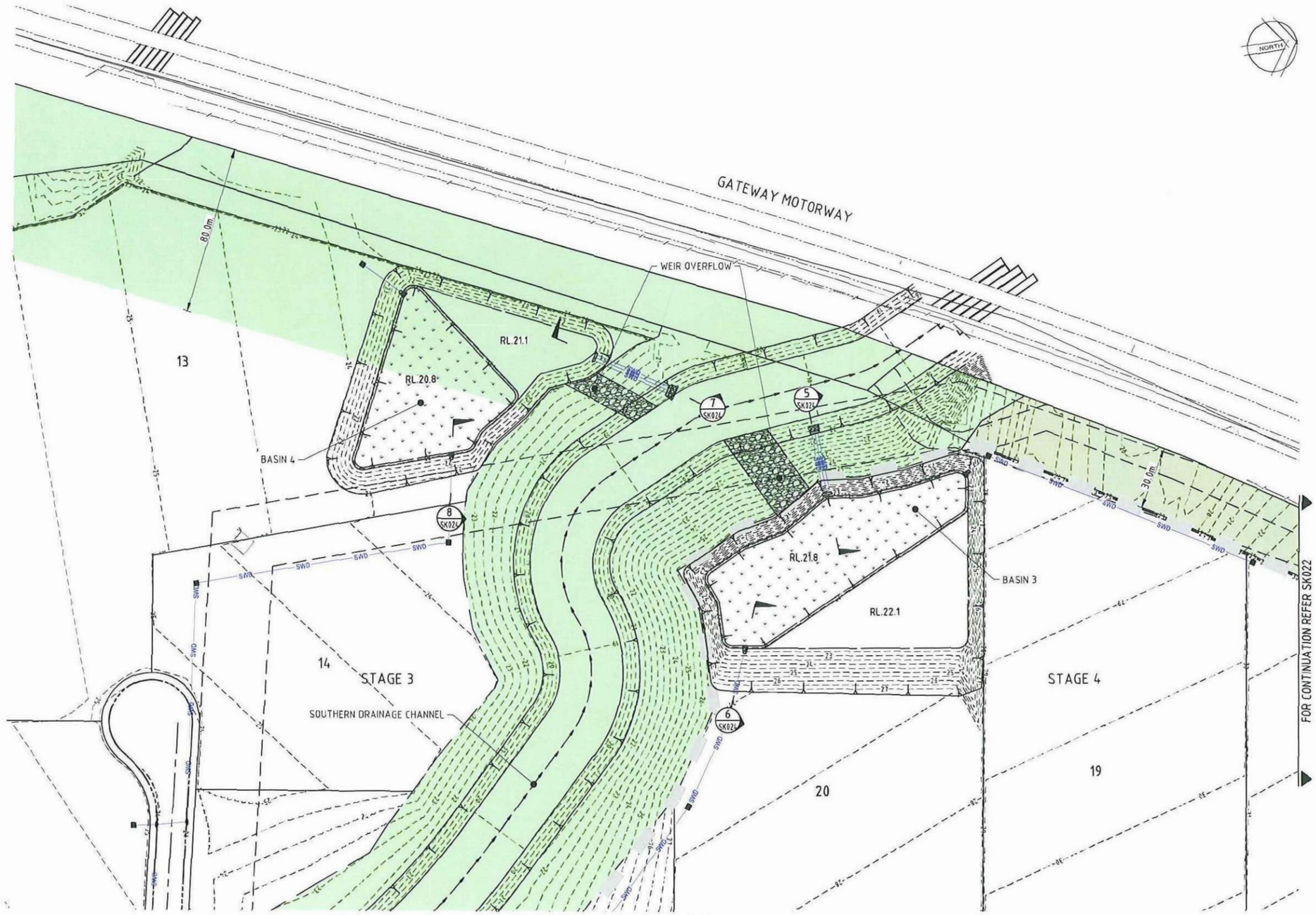
Rochedale Industrial Estate, Gardner Road, Rochedale

APPENDIX B

Detention and Bio-retention Basin Details

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LAYOUT PLAN
Scale 1:1000

LEGEND

- STAGE BOUNDARY
- PROPOSED PROPERTY BOUNDARY
- EXISTING PROPERTY BOUNDARY
- PROPOSED CONTROL LINE
- PROPOSED CONTOURS
- PROPOSED STORMWATER DRAINAGE
- FAUNA CORRIDOR
- SECONDARY TERRESTRIAL FAUNA CORRIDOR

0 20 40 60 80 100m
20 15 10 5
SCALE 1:1000

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PROPOSED INDUSTRIAL ESTATE
GARDNER ROAD, ROCHEDALE
ENGINEERING CONCEPTS

DETENTION/BIO-RETENTION BASIN
LAYOUT PLAN - SHEET 1 OF 2

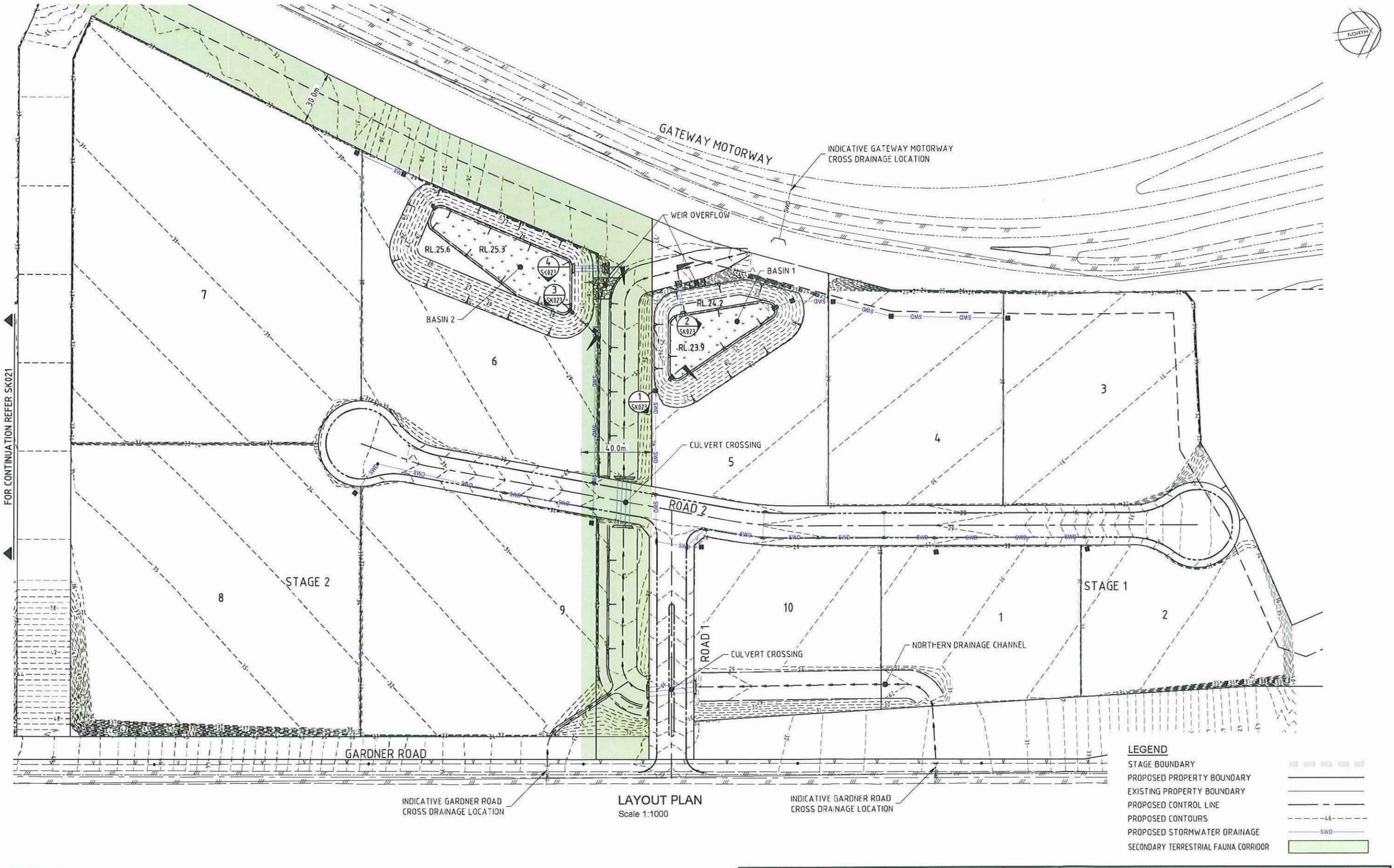
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LAYOUT PLAN
Scale 1:1000

LEGEND

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- PROPOSED PROPERTY BOUNDARY
- EXISTING PROPERTY BOUNDARY
- PROPOSED CONTROL LINE
- PROPOSED CONTOURS -46-
- PROPOSED STORMWATER DRAINAGE SWD
- SECONDARY TERRESTRIAL FAUNA CORRIDOR

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0 20 40 60 80 100m
20 15 10 5
SCALE 1:1000

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GARDNER ROAD, ROCHEDALE
ENGINEERING CONCEPTS

DETENTION/BIO-RETENTION BASIN
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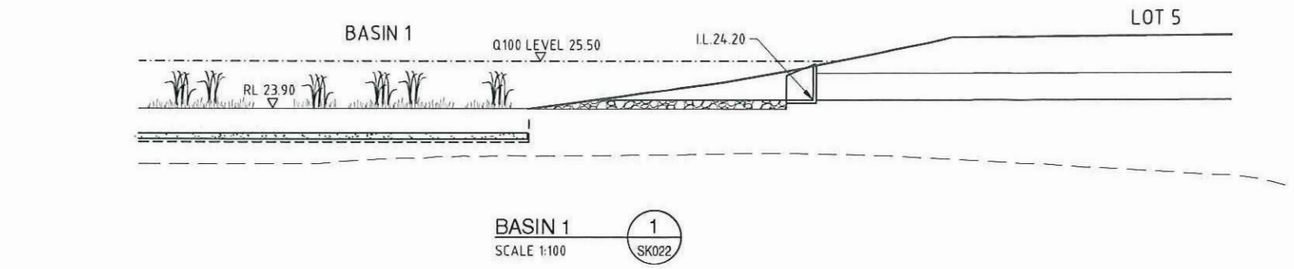
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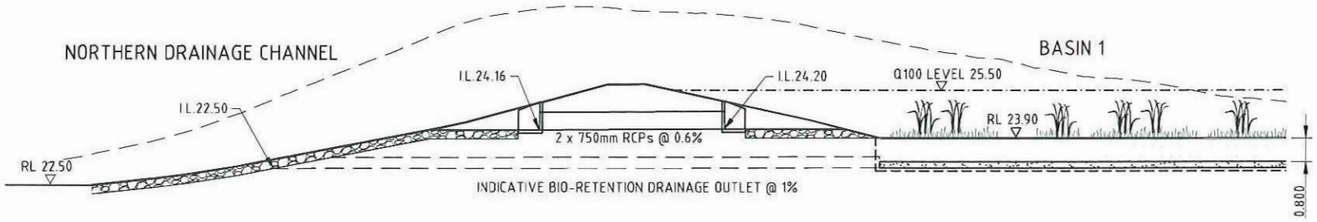
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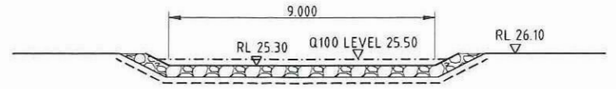
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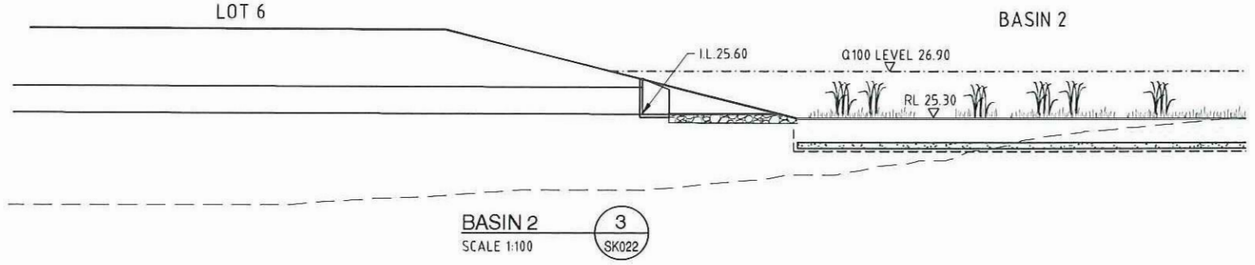
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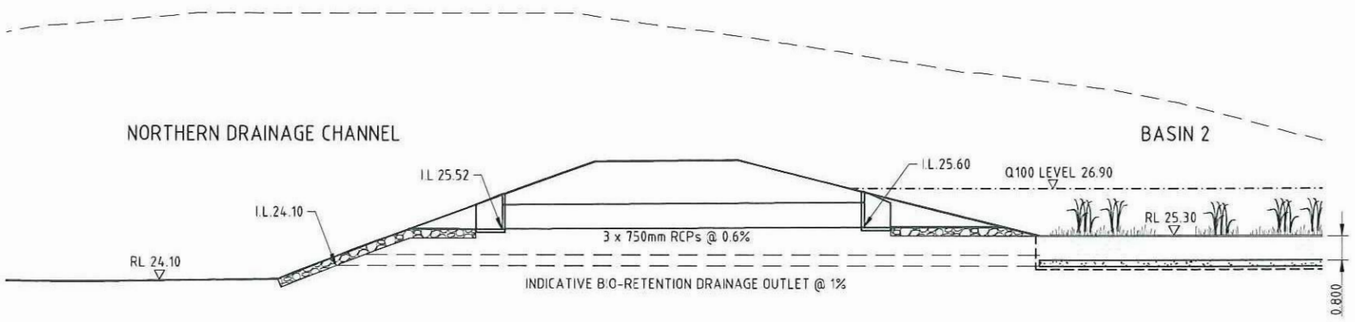
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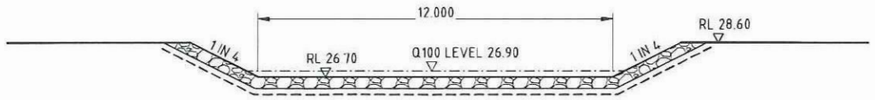
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BASIN 2 3
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BASIN 2 4
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BASIN 2 WEIR DETAIL
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SCALE 1:100

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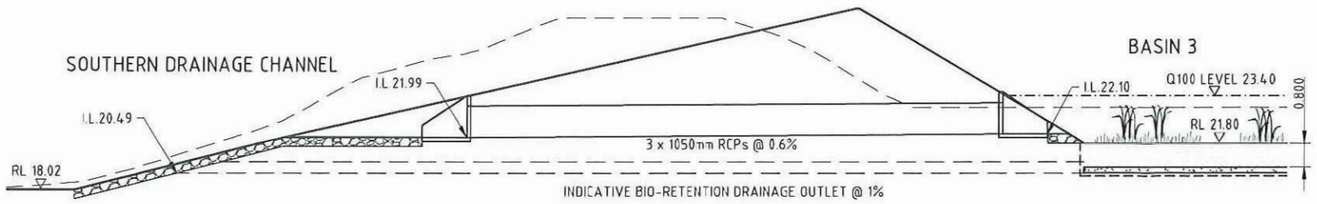
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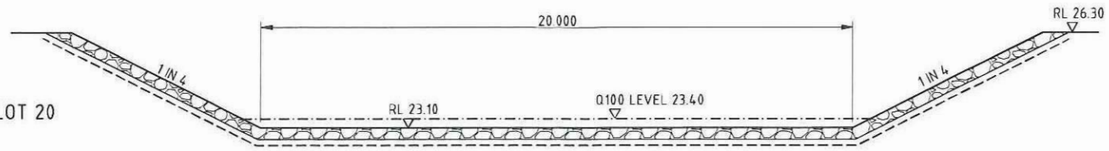
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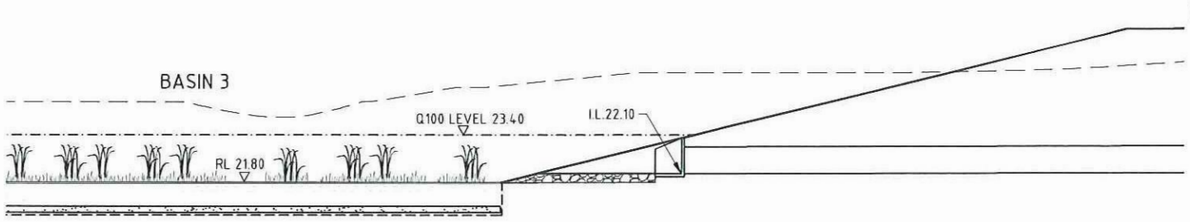
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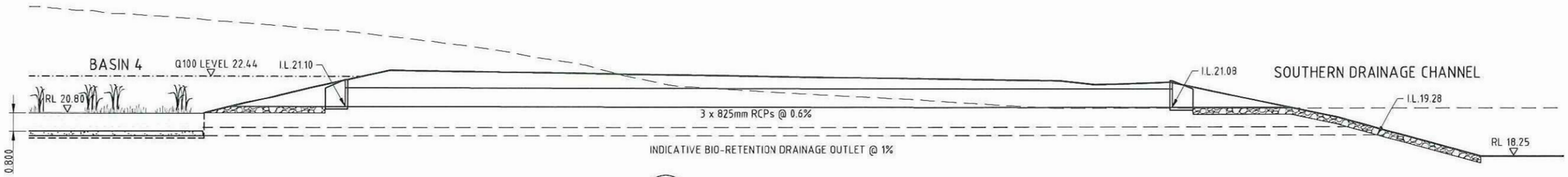
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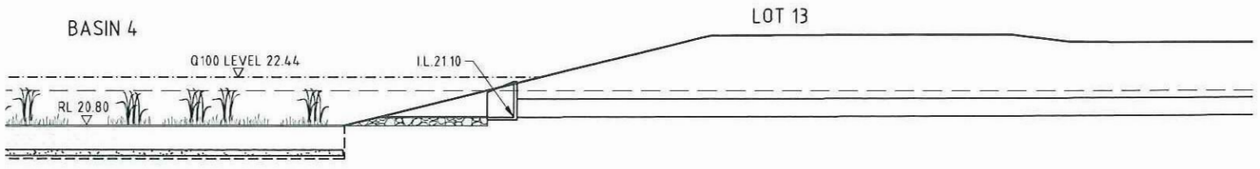
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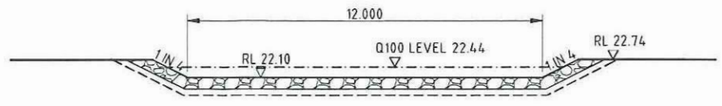
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SCALE 1:100



BASIN 4 — 8 — SK021
SCALE 1:100



BASIN 4 WEIR DETAIL
SCALE 1:100



SCALE 1:100

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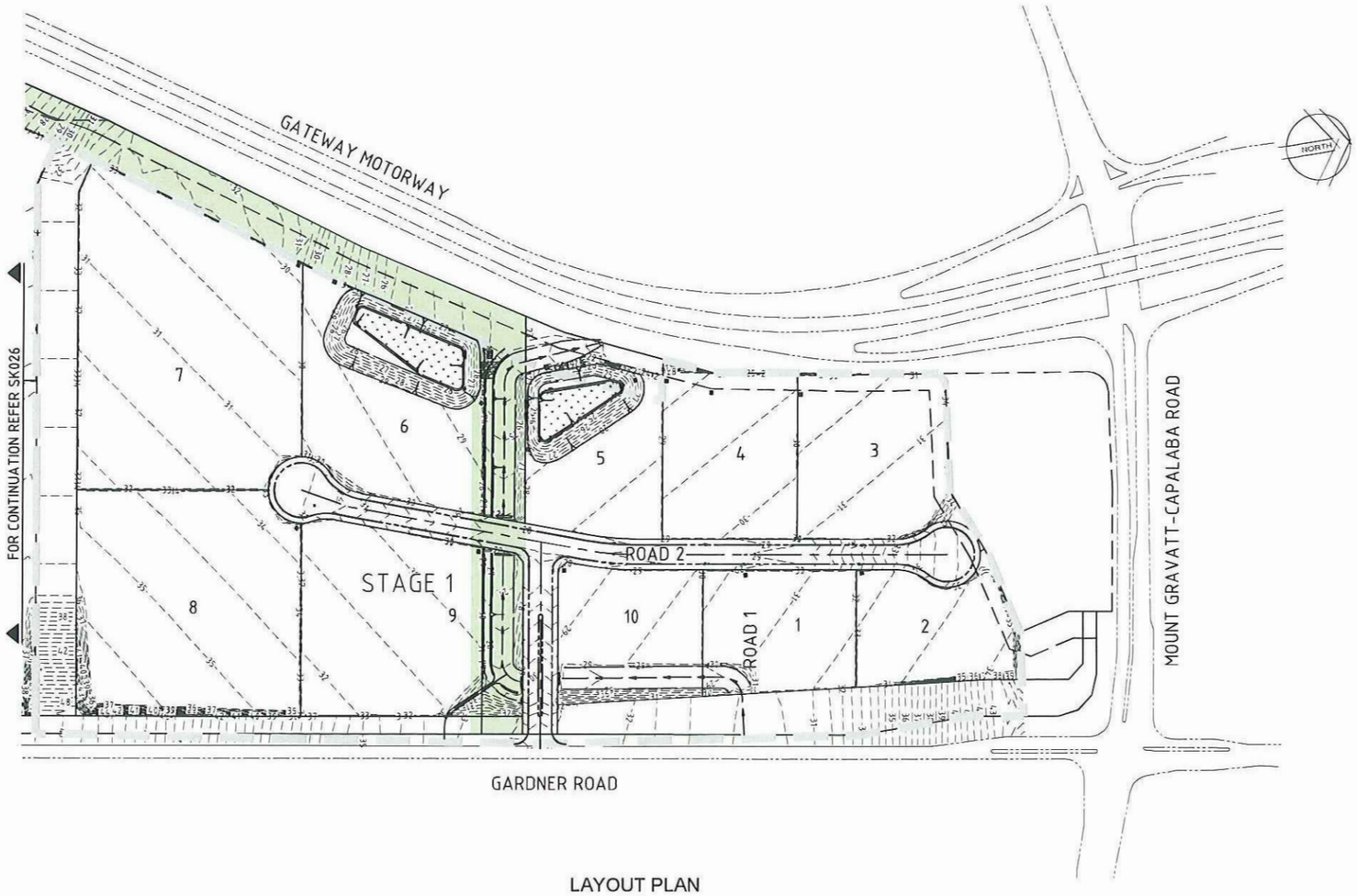
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LAYOUT PLAN
Scale 1:2000

LEGEND

- STAGE BOUNDARY
- PROPOSED PROPERTY BOUNDARY
- EXISTING PROPERTY BOUNDARY
- PROPOSED CONTROL LINE
- PROPOSED CONTOURS
- SECONDARY TERRESTRIAL FAUNA CORRIDOR

0 40 80 120 160 200m
40 30 20 10
SCALE 1:2000

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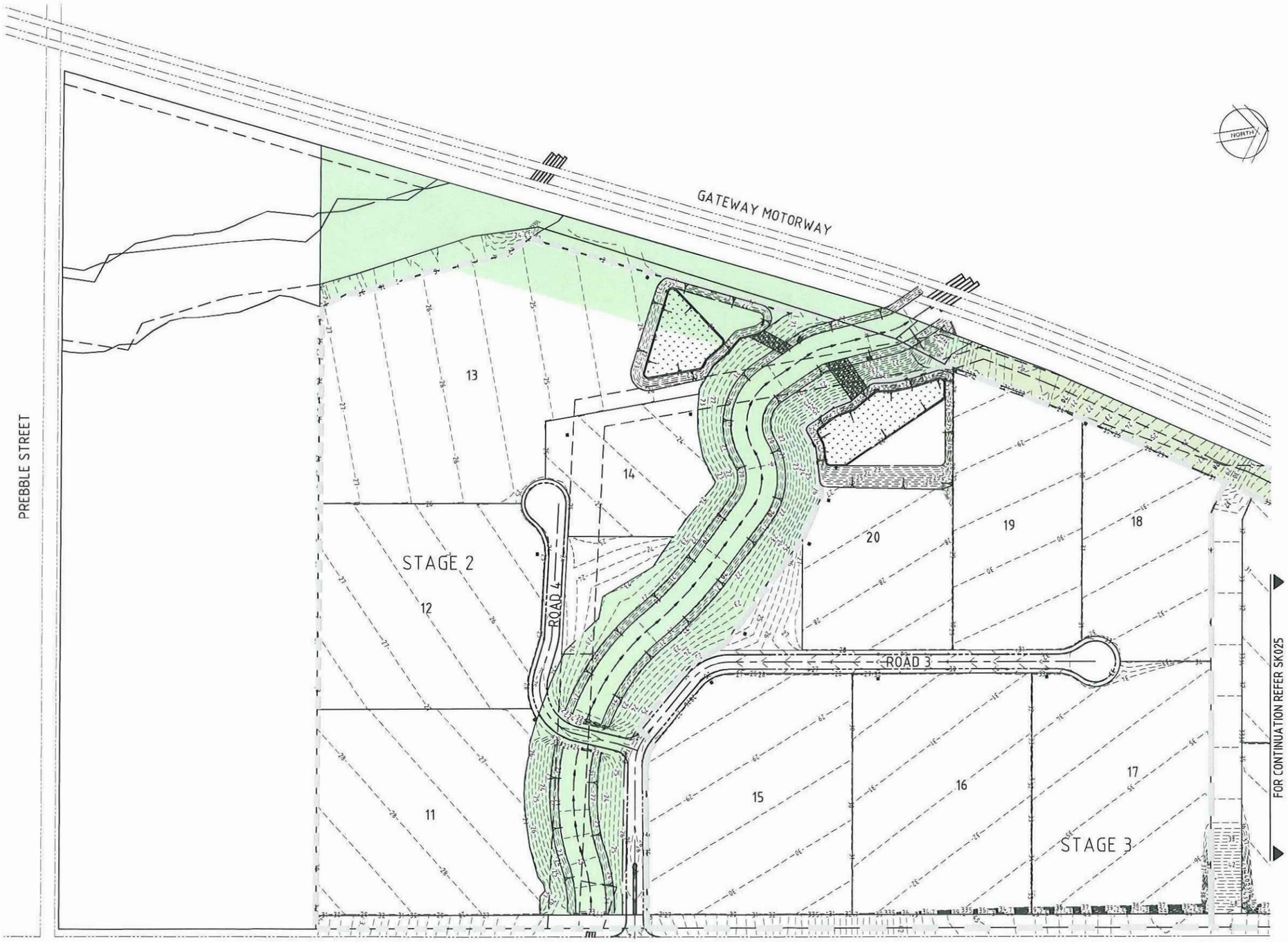
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LAYOUT PLAN
Scale 1:2000

LEGEND

- STAGE BOUNDARY
- PROPOSED PROPERTY BOUNDARY
- EXISTING PROPERTY BOUNDARY
- PROPOSED CONTROL LINE
- PROPOSED CONTOURS
- FAUNA CORRIDOR
- SECONDARY TERRESTRIAL FAUNA CORRIDOR

0 20 40 60 80 100m
20 15 10 5
SCALE 1:1000

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Attachment 4

Landowner Statement

Landowner Statement - EPML00912113

Department of Environment and Heritage Protection
GPO Box 2454
Brisbane QLD 4001

Dear Sir / Madam,

I, Daniel Blaser, the General Manager of Austral Bricks (Qld) Pty Ltd, being the entity recognised as the landowner of the properties described as:

- Lots 23 and 24 on RP30624;
- Lot 43 on SP266231;
- Lot 2 on SP266230; and
- Lot 1 on RP854704

confirm that the items of infrastructure including, but not limited to:

- holding sheds;
- stockpile yards;
- brick hardstand yards;
- internal haulage roads;
- sediment retention dams / water storages;
- voids and batters;
- site buildings (demountable and fixed); and
- processing plant, manufacturing facilities, and associated infrastructure and services

are to be retained for ongoing use by Austral Bricks (Qld) Pty Ltd as the landowner following cessation of the resource activity.

Further to this, I declare that:

- I am authorised to sign on behalf of the landowner being Austral Bricks (Qld) Pty Ltd for land described above.
- The information provided is true and correct to the best of my knowledge. I understand that it is an offence under section 480 of the *Environmental Protection Act 1994* to give to the administering authority or an authorised person a document containing information that I know is false, misleading or incomplete in a material particular.
- I understand that all information supplied in this statement may be disclosed publicly in accordance with the *Right to Information Act 2009* and the *Evidence Act 1977*.

Name: Daniel Blaser
Position of Signatory: General Manager

Signature: DBlaser.

Date: 25/8/17

Contact Details
Austral Bricks (QLD) Pty Ltd
ABN. 62 125 934 858
105 Gardner Road
Rochedale QLD 4123
PO Box 269
Mt Gravatt QLD 4122
Tel +61 7 3347 2111
Fax +61 7 3849 4028
Mob 0404 847 341
infoqld@australbricks.com.au
www.australbricks.com.au

Environmentally Relevant Activity Details
Environmental Authority EPML00912113
Mining Leases (MLs) 1152, 1151, 1156, 1165, 50165, 50189, 50035

Attachment 5

Easement Documents

QUEENSLAND LAND REGISTRY
Land Title Act 1994 and Land Act 1994

EASEMENT

Duty Imprint

FORM 9 Version 4
Page 1 of 9

715226091

$157.40
26/07/2013 15:12

BE 600

department's website.

Client No: 1009804 Duties Act 2001
Transaction No: 506-572-759
Duty Paid $ Nil ☐ Exempt
UTI $
Date: 15/7/13 Signed:

1. Grantor

BRISBANE CITY COUNCIL

Lodger (Name, address, E-mail & phone number)
Cooper Grace Ward Lawyers
GPO Box 834, Brisbane Qld 4001
Phone: 3231 2941
Email: leanne.doxey@cgw.com.au

Lodger Code
131B

2. Description of Easement/Lot on Plan Servient Tenement (burdened land)	**County**	**Parish**	**Title Reference**
Easement AG on SP179796 in Lot 101 on SP213452	STANLEY	TINGALPA	50738891
Easement AH on SP179796 in Lot 201 on SP213447	STANLEY	TINGALPA	50746769

#Dominant Tenement (benefited land)

NOT APPLICABLE

3. Interest being burdened

FEE SIMPLE

#4. Interest being benefited

NOT APPLICABLE

5. Grantee Given names | Surname/Company name and number | (include tenancy if more than one)

CENTRAL SEQ DISTRIBUTOR-RETAILER AUTHORITY ABN 86 673 835 011

6. Consideration

$1.00

7. Purpose of easement

SEWERAGE

8. Grant/Execution

The Grantor for the above consideration grants to the Grantee the easement over the servient tenement for the purpose stated in item 7 and the Grantor and Grantee covenant with each other in terms of the attached schedule.

Witnessing officer must be aware of his/her obligations under section 162 of the Land Title Act 1994

signature
full name Craig Charles Silva
qualification Solicitor

Witnessing Officer

(Witnessing officer must be in accordance with Schedule 1 of the Land Title Act 1994 eg Legal Practitioner, JP, C Dec)

5/7/13
Execution Date

The Seal of BRISBANE CITY COUNCIL was hereunto affixed this 5th day of July 2013 by me JANINE ELIZABETH BOYD being the proper officer to affix such seal. J.E. BOYD Appointed Officer

Grantor's Signature

signature
full name Simon Lew
qualification JP(Qual) 114745

Witnessing Officer

(Witnessing officer must be in accordance with Schedule 1 of the Land Title Act 1994 eg Legal Practitioner, JP, C Dec)

17/6/13
Execution Date

Grantee's Signature

Executed by CENTRAL SEQ DISTRIBUTOR-RETAILER AUTHORITY by its delegate under section 53 of the *South-East Queensland Water (Distribution and Retail Restructuring) Act 2009*

© The State of Queensland (Natural Resources, Mines and Energy) 2019

Title Reference: 50738891 and 50746769

This is the schedule referred to in the Form 9 Easement dated 17 June , 2013.

1. Definitions and interpretation

1.1 Definitions

In this easement:

Authorised Persons means tenants, employees, agents, contractors, licensees and invitees of and other persons claiming (or authorised) by, through or under, either the Grantee or the Grantor (as the case may require).

Easement Area means the land described as the burdened land in Item 2 of the Form 9.

Easement Purpose means the purpose stated in Item 7 of the Form 9.

Grantee means the person shown as "Grantee" in Item 5 of the Form 9 and that person's assignees and successors.

Grantee's Rights means the rights granted under clause 3.

Grantor means the person shown as "Grantor" in Item 1 of the Form 9 and each assignee or successor of that person in respect of the Easement Area.

Grantor's Land means the parcel or parcels of the Grantor's land that includes the Easement Area.

Improvements means everything, including vegetation, on the Easement Area.

Relevant Works means the Sewerage Works.

Sewerage Works means all pipes for carrying, treating or disposing of sewage and other wastewater, all ancillary plant, equipment, fittings and attachments (including pumps and pump stations) and works of any nature to protect or support any of them.

1.2 Interpretation

In this grant of easement:

(a) headings are for convenience only and do not affect interpretation;

and unless the context indicates a contrary intention:

(b) an obligation or a liability assumed by, or a right conferred on, 2 or more persons binds or benefits them jointly and severally;

(c) "person" includes an individual, the estate of an individual, a corporation, an authority, an association or a joint venture (whether incorporated or unincorporated), a partnership and a trust;

(d) a reference to a party includes that party's executors, administrators, successors and permitted assigns, including persons taking by way of novation, and, in the case of a trustee, includes a substituted or an additional trustee;

(e) a word importing the singular includes the plural (and vice versa), and a word indicating a gender includes every other gender;

Title Reference: 50738891 and 50746769

(f) if a word or phrase is given a defined meaning, any other part of speech or grammatical form of that word or phrase has a corresponding meaning;

(g) if the Easement Area is defined using a horizontal plane and references to marks on the surface of land:

(i) a reference to a thing on, or the doing of any thing on or in respect of, land in the Easement Area includes a reference to a thing, or the doing of the thing, through, over, across or under the land;

(ii) a reference to land in the Easement Area includes the land's surface, sub-surface and strata above the surface;

(h) if the Easement Area is defined using 3 dimensionally located points to identify the position, shape and dimensions of each bounding surface:

(i) a reference to a thing on, or the doing of any thing on or in respect of, land in the Easement Area includes a reference to a thing, or the doing of the thing, in or through the land;

(ii) if the Easement Area includes a surface of land, a reference to land in the Easement Area includes that surface, and any sub-surface of, and strata above that, land (in the Easement Area);

(i) "includes" in any form is not a word of limitation.

2. Public utility easement

This easement is a public utility easement for:

(a) the Easement Purpose;

(b) undertaking or engaging in any service, facility or activity that directly or indirectly refers to or is related to the Easement Purpose and which the Grantee has authority to undertake or engage in under a law; and

(c) the exercise by the Grantee of the other rights given to the Grantee by this easement.

3. Grantee's Rights

The Grantor grants the Grantee the right for the Grantee and its Authorised Persons:

(a) to transmit, or permit to be transmitted sewage and other wastewater in and through Sewerage Works on the Easement Area;

(b) to construct, place, lay, deepen, widen, inspect, clean, maintain, change, add to, remove, repair, replace, relay, renew, use and manage the Relevant Works on, or inspect or survey, the Easement Area at all times and from time to time;

(c) to run and pass electric current, electric transmissions, electronic signals, electronic transmissions and other substances through the Easement Area (including the Relevant Works);

(d) in order to exercise the rights in clauses 3 (a) to (c), the right to:

(i) enter the Easement Area, remain on it, and pass and repass on it, with or without vehicles, machinery, plant, equipment, tools and materials;

Title Reference: 50738891 and 50746769

(ii) place on the Easement Area the machinery, plant, equipment, tools and materials required to exercise those rights and leave them there;

(iii) dig into, sink shafts in, and erect scaffolding on and open and break up the Easement Area;

(iv) remove and dispose of spoil created by the exercise of those rights;

(v) construct and maintain on the Easement Area those access tracks, gates and ancillary works that the Grantee reasonably considers necessary;

(vi) clear vegetation from the Easement Area by any method and burn it off;

(vii) cross any part of the Grantor's Land that the Grantee considers convenient or necessary to go from the Easement Area to the public road that is nearest to the Easement Area and back again;

(viii) remove fences or gates on the Grantor's Land;

(ix) do anything else on the Easement Area that the Grantee considers reasonably necessary to exercise those rights; and

4. Grantor's obligations

(a) The Grantor must:

(i) allow the Relevant Works to remain on the Easement Area;

(ii) keep the Easement Area in good order and repair and suitable for exercising the Grantee's Rights;

(iii) pay all rates, taxes and imposts in the nature of a tax payable in connection with the Easement Area or the Grantor's ownership of it, on time;

(iv) not, unless it has the Grantee's written consent:

A. erect any structure or other thing on the Easement Area;

B. remove from or stockpile on the Easement Area soil, sand, gravel or any other substance or material;

C. install concrete, bitumen or other pavement or driveways on the Easement Area or gardens or landscaping involving concrete, brick or other permanent materials or otherwise build over the Relevant Works;

D. alter the ground level, or alter or disturb the existing grades of the Easement Area or change its topography;

E. inundate the Easement Area with water;

F. plant any tree or other vegetation or crop on the Easement Area;

G. light a fire on the Easement Area, or allow a fire to escape onto the Easement Area from the Grantor's Land (that is not part of the Easement Area);

H. construct any road or other earthwork on the Easement Area; or

I. do or cause or permit anything (including granting rights to another person) in connection with the Easement Area that could obstruct or

interfere with the Relevant Works or their proper and effective use or the proper exercise of the Grantee's Rights; and

(v) notify the Grantee within 14 days if the Grantor receives or becomes aware of any application for, or grant of, a mining or petroleum tenement under the Mineral Resources Act 1989, Petroleum Act 1923, Petroleum and Gas (Production and Safety) Act 2004 or any other law in respect of the Easement Area.

(b) If the Grantor does not comply with any of its obligations under this easement (whether a positive or negative obligation) the Grantee may remedy the Grantor's breach and recover the cost of doing so from the Grantor as a debt owing to the Grantee.

(c) The Grantor must comply with its obligations under a law relating to the Easement Area and the Relevant Works, including the Water Supply (Safety and Reliability) Act 2008 and the South-East Queensland Water (Distribution and Retail Restructuring) Act 2009.

5. Property in and expenses of Relevant Works

(a) The Relevant Works are the Grantee's property and do not become the Grantor's property.

(b) The Grantee is responsible for and must pay all expenses in connection with the Relevant Works.

6. Exercise of Grantee's Rights

(a) In exercising the Grantee's rights, the Grantee must, at its own cost:

(i) ensure all work is done in a proper and workmanlike manner;

(ii) comply with all relevant laws;

(iii) cause as little inconvenience or obstruction as practicable to the Grantor and any occupier of the Grantor's Land;

(iv) cause as little damage as practicable to the Grantor's Land, including the Easement Area, and any Improvements;

(v) if damaged by the Grantee, restore the Grantor's Land as nearly as practicable to its former condition; and

(vi) make good any collateral damage.

(b) Without limiting clause 6(a), the Grantee must:

(i) reinstate all fences and gates damaged by it in the exercise of any of the Grantee's Rights; or

(ii) in lieu of reinstating any such fence, install a gate the quality of materials and workmanship of which, except with the Grantor's consent, must be not less than the quality and materials of workmanship of the existing fence.

(c) Section 85B(2) of the Land Title Act 1994 and section 366(2) of the Land Act 1994 are excluded from this easement.

(d) This easement does not affect any rights or powers the Grantee may have under a statute, including the Water Supply (Safety and Reliability) Act 2008 and the South-East Queensland Water (Distribution and Retail Restructuring) Act 2009. The Grantee may exercise its rights and powers under a statute in respect of the Easement Area and its Relevant Works in lieu of, or without regard to, its rights and powers under this easement.

Title Reference: 50738891 and 50746769

7. Waiver

(a) Failure to exercise or enforce, or a delay in exercising or enforcing, or the partial exercise or enforcement of, a right, power or remedy provided by law or under this easement by a party does not preclude, or operate as a waiver of, the exercise or enforcement, or further exercise or enforcement, of that or any other right, power or remedy provided by law or under this easement.

(b) A waiver or consent given by a party under this easement is only effective and binding on that party if it is given or confirmed in writing by that party.

(c) No waiver of a breach of a term of this easement operates as a waiver of another breach of that term or of a breach of any other term of this easement.

8. Costs

(a) Unless stated otherwise in this easement, each party must pay its own costs and expenses in connection with negotiating, preparing, executing, registering and stamping, and performing its obligations under this easement.

(b) In respect of this easement, the Grantor must pay:

(i) the costs and expenses of and incidental to preparing any survey required to register it;

(ii) any duty payable on it; and

(iii) the fees for registering it.

9. Registration

So that this easement can be registered, the Grantor must promptly:

(a) produce the relevant instrument of title (if any) to the Grantor's Land to the Registrar of Titles or other appropriate officer; and

(b) obtain and produce to the Registrar of Titles or other appropriate officer any consent required from any person having any interest in that party's land.

10. Burden

(a) The burden of this easement passes with the Easement Area.

(b) Each promise made in this easement by the Grantor binds the Grantor's successors in title and is for the benefit of the Grantee and its assignees.

(c) Subject to clause 10(e), from the date the Grantor ceases to be the owner of the Easement Area, the Grantor is released from all obligations under this easement

(d) Despite clause 10(c), the Grantor is not released and remains liable for breaches of obligations that occurred before the date the Grantor ceases to be the owner of the Easement Area.

(e) The Grantor, at its own cost, must, before it sells or otherwise disposes of the Easement Area, obtain from any buyer or disponee of the Easement Area a covenant, in favour of the Grantee, by which the buyer or disponee agrees to comply with the terms (whether positive or negative) of this easement.

(f) Clause 10(c) does not apply unless clause 10(e) is complied with.

Title Reference: 50738891 and 50746769

11. Governing law

The laws of Queensland govern this easement.

12. Severance

If at any time a provision of this easement is or becomes illegal, invalid or unenforceable in any respect, that will not affect or impair the legality, validity or enforceability of any other provision of this easement.

13. Goods and Services Tax

(a) For the purpose of this clause unless the context otherwise requires:

(i) **GST Legislation** means A New Tax System (Goods and Services Tax) Act 1999 (Cth) and any related tax imposition Act (whether imposing tax as a duty of customs excise or otherwise) and includes any legislation which is enacted to validate recapture or recoup the tax imposed by any of such Acts;

(ii) **Applicable GST** has the meaning ascribed to it in clause 13(b);

(iii) **GST** means any tax imposed by or through the GST Legislation on a supply (without regard to any input tax credit);

(iv) **Recipient** means the party treated by the GST Legislation as the recipient of a supply from the Supplier;

(v) **Representative** means a representative member of a GST group to which the relevant Supplier belongs;

(vi) **Supply** means any supply (within the meaning which it bears in the GST Legislation) by the Supplier under this easement;

(vii) **Supplier** means any party to this easement treated by the GST Legislation as making a taxable supply under or in connection with this easement;

(viii) where any other term is used in this clause which is defined in the GST legislation it will have the meaning which it bears in the GST Legislation.

(b) In the case of a Supply which is a taxable supply:

(i) the consideration payable or otherwise provided (apart from under this clause) to the Supplier (under the other provisions of this easement) will be increased by an amount equal to the Applicable GST;

(ii) the Applicable GST will be the GST payable on the Supply;

(iii) the Applicable GST will be added to the consideration payable or otherwise provided (apart from under this clause) for the Supply under the other provisions of this easement so as to form an additional part of the consideration for the Supply.

(c) The Recipient will pay on demand to the Supplier an amount equal to any increment in consideration which is payable under this clause in respect of any Supply, and such amount will be a debt due and owing by the Recipient to the Supplier which is recoverable without setting off any refund or counter claim.

(d) The Supplier will provide the Recipient with tax invoices and/or adjustment notes in relation to the Supply (but will not be obliged or requested to create such invoices for amounts in excess of amounts received from the Recipient) and do all things reasonably necessary to assist the

Title Reference: 50738891 and 50746769

Recipient to enable it to claim and obtain any input tax credit available to the Recipient in respect of the Supply.

(e) Where the consideration for a Supply consists (in whole or in part) of the recovery by the Supplier of all or a proportion of the Supplier's costs, the amount recoverable will be reduced by the amount (or the corresponding proportion) of the input tax credits available to the Supplier in respect of such costs and then increased by any Applicable GST under clause 13(b).

(f) In the event that liability for payment of GST in respect of a Supply under this easement is imposed upon a Representative of a Supplier this clause will nonetheless apply and the Adjustments will be calculated in all respects as if the Supplier was liable for the GST imposed on such Supply and entitled to input tax credits properly allocated to the making of that Supply.

14. Where the Easement Area is trust land under the Land Act 1994

Where the Easement Area is included in trust land under the Land Act 1994 this clause 14 will also apply:

(a) If the trust land is a reserve, in clause 1.1 the definition of "Grantor" is replaced by the following:

Grantor means the person shown as "Grantor" in Item 1 of the Form 9 and, where the context permits, any trustee of the Easement Area.

(b) In this clause 14:

Minister means the Minister administering the Land Act 1994;

(c) Despite anything else, the Grantee may not cut or remove any timber or trees from the Easement Area without first giving reasonable notice to the Grantor and obtaining all necessary approvals at law. Such notice will not be required under this clause if there is an actual or potential danger to persons or property or if there is any interference or jeopardy to the supply of the Relevant Works.

(d) Release and Indemnity

(i) The Grantee indemnifies and agrees to keep indemnified the Minister, the State of Queensland and the Grantor (the **Indemnified Parties**) against all actions, suits, proceedings, claims, demands, costs, losses, damages and expenses (**Claim**) arising out of or in any way connected to or resulting from the granting of this easement to the Grantee or which is connected to or resulting from the Grantee's use and occupation of the Easement Area (all of which are referred to as "the indemnified acts or omissions") save to the extent that the Claim arises as a result of any negligent act or omission of the Indemnified Parties, however, any negligent act or omission of one of the Indemnified Parties does not negate the indemnity to any of the other Indemnified Parties.

(ii) The Grantee hereby releases and discharges the Indemnified Parties from any Claim relating to the indemnified acts or omissions which may be made against the Indemnified Parties, save to the extent that the Claim arises as a result of any negligent act or omission of the Indemnified Parties, however, any negligent act or omission of one of the Indemnified Parties does not negate the release and discharge in favour of any of the other Indemnified Parties.

(iii) To remove doubt, the Grantee specifically agrees that the indemnity provided by the Grantee in this clause 14(d) extends to any Claim (as defined by this clause 14) arising from the use of any other area of the trust land by the Grantee.

(e) Public Liability Insurance

Title Reference: 50738891 and 50746769

(i) The Grantee must effect a public liability insurance policy with an insurer authorised under the Insurance Act 1973 (Commonwealth) or, in any other case, to the satisfaction of the Minister, naming the Grantee as the insured covering legal liability for any loss of or damage to any property and for the injury (including death) to any person arising out of anything done or omitted on or about the Easement Area and against all claims, demands, proceedings, costs, charges and expenses whatsoever in respect thereof subject to the terms and conditions of the insurance policy.

Such policy must:

A. be for an amount of not less than twenty million dollars ($20,000,000.00) in respect of all claims arising out of a single event or such higher amounts as the Minister may reasonably require; and

B. be effected on a "claims occurring" basis so that any claim made by the Grantee under the policy after the expiration of the period of policy cover but relating to an event occurring during the currency of the policy will be covered by the policy subject to the claim meeting the policy's other terms and conditions; and

C. be maintained at all times during the currency of this easement, and upon receipt of any Notice of Cancellation, the Grantee must immediately effect another public liability insurance policy in accordance with the terms and conditions of this easement.

(ii) The Grantee must forward a certificate of currency to the Grantor within 10 business days of the commencement of each respective renewal period.

(iii) The Grantee must, as soon as practicable, inform the Minister and the Grantor, in writing, of the occurrence of any event that the Grantee considers is likely to give rise to a claim under the policy of insurance effected and must ensure that the Minister and the Grantor are kept fully informed of subsequent actions and developments concerning the claim.

(iv) To remove doubt, the requirements of this clause 14(e) apply to any other area of the Grantor's Land used by the Grantee.

By authority of the Real Property Regulations 1988 — Form

K114235V

$72.00

[redacted]

30 NOV 1989
11:38 AM

5500 EASEMENT

Consent of Caveator given 8.

EASEMENT IN GROSS
(Insert type of dealing)

I/CODE –

ENTERED IN THE REGISTER BOOK

VOLUME 7115

FOLIO 42

AT 2.36 AM/PM

22 MAY 1990

REGISTRAR OF TITLES

4/ Plan noted.

Real Property Regulations 1988 — BACKING SHEET

CORRESPONDENCE NUMBER .....

REQUISITIONS /

601995185

K114235V EAS IN GROSS

BELOW THIS LINE TO BE COMPLETED BY LODGER

LODGER CODE

LODGED BY: CROWN SOLICITOR (STATE)
CONVEYANCING BRANCH
BOX 1601 GPO
BRISBANE Q. 4001
DX 40121 BRISBANE UPTOWN

66

ADDRESS: .....

CERTIFICATES OF TITLE, DEEDS OF GRANT, DECLARATIONS ETC. LODGED WITH THIS DOCUMENT (TO BE COMPLETED BY LODGING PARTIES)

1. ..... LODGED BY Austral Brick Co
2. .....
3. Deed

BELOW THIS LINE FOR DELIVERY NOTATIONS

RECEIPT NOTATIONS — OFFICE USE

ITEMS RECEIVED 1 deed.

FIRM NAME: .....

PER: .....

AUTHORITY: .....

DATE: 4.12.90

ITEMS DELIVERED BY POST

.....

.....

FORWARDED TO LODGER OF THIS DOCUMENT ON.....

IMAGED FROM MICROFILM

F 213 (Amd. 5/86)

© The State of Queensland (Natural Resources, Mines and Energy) 2019

140/U13A/187

Form 35

Queensland

Real Property Act 1861-1985

Real Property Regulations 1985

GENERAL CONSENT

Item

(Instrument to which this consent is to be bound)

(1) Type of instrument: Easement in Gross

Dealing number: OR Names of parties: K114235Y

Date of instrument: 26 June 89

(2) Title Reference: Vol: 7115 Fol: 42

(full name of party consenting) (3) I, (John J. Stankiewicz) PACIFIC WASTE MANAGEMENT PTY. LTD.

(status) being the: Caveator

Caveat No. K72485N

(type and dealing number of instrument on which authority to consent is based) (nature of consent) under .....

hereby consent to the registration of the instrument specified in Item (1) above.

(4) Signed this 12 day of April 19 90

PACIFIC WASTE MANAGEMENT PTY. LIMITED THE Common Seal OF

Party consenting

(signature of witness) .....

(qualification) Justice of the Peace

(full name to be printed) John Geoffrey SHAW.

This form can be used for mortgagees consent to a Building Units/Group Title Plan.

Jackson & O'Sullivan Pty Ltd, Brisbane

By Authority—Licence 2/85

By authority - Licence No. 3/85

Form 11
Queensland
Real Property Act 1861 - 1985
Real Property Regulations 1988

EASEMENT IN GROSS

Item		
GRANTOR *(full name)*	(1)	THE AUSTRAL BRICK COMPANY PROPRIETARY LIMITED
ESTATE OR INTEREST BEING BURDENED	(2)	FEE SIMPLE
HOW ESTATE OR INTEREST BEING BURDENED IS HELD *(if more than one grantor)*	(3)	#03/08/89 R/R130#112 BRIS STAMP DUTIES OFFICER #2411596 31 $0.00
GRANTEE *(full name)*	(4)	QUEENSLAND ELECTRICITY COMMISSION

DESCRIPTION OF SERVIENT TENEMENT *(burdened land)* (5)

*Delete if inapplicable

Volume	Folio	County	Parish	Description
*PART OF 7115	42	Stanley	Tingalpa	Easement B in Lot 44 on R.P. 207847 on R.P. 207905

MORTGAGES, ENCUMBRANCES, ETC.	(6)	NIL
CONSIDERATION	(7)	ONE DOLLAR
SHORT GENERAL DESCRIPTION OF PURPOSE OF EASEMENT	(8)	ELECTRICAL WORKS PURPOSES

#Delete inapplicable words *(if any)* *(Schedule should be completed in FORM 33 and document securely bound)*

(9) THE GRANTOR FOR THE ABOVE CONSIDERATION HEREBY GRANTS TO THE GRANTEE THE EASEMENT HEREIN DESCRIBED AND THE GRANTOR AND THE GRANTEE HEREBY COVENANT WITH EACH OTHER IN TERMS OF THE #SCHEDULE HERETO AND# MEMORANDUM No. ....H922452. FILED IN THE OFFICE OF THE REGISTRAR OF TITLES.

(10) SIGNED THIS 26th DAY OF JUNE 1989.

EXECUTION

(11) BY GRANTOR *(signature)* .....

THE AUSTRAL BRICK COMPANY PROPRIETARY LIMITED Common Seal

X .....Director

X .....Secretary

who certify that they are the proper officers to affix the seal

WITNESS

(12) IN MY PRESENCE *(signature)* ..... A Justice of the Peace / Solicitor

(Full name to be printed) MARGARET O'LEARY

GRANTEE MUST ACCEPT PERSONALLY

(13) ACCEPTED BY GRANTEE AND CERTIFIED CORRECT FOR THE PURPOSE OF REGISTRATION BY – GRANTEE *(signature)*

QUEENSLAND ELECTRICITY COMMISSION) By Its Attorney BERNARD RAYMOND) HOUGH under Power of Attorney No.) J928020F)

QUEENSLAND ELECTRICITY COMMISSION By Its Attorney:

.....

OR

his/her SOLICITOR *(signature)* .....

(full name of Solicitor to be printed) .....

NOTE: If the servient tenement is subject to a bill of mortgage/encumbrance, lease etc., then the consent of the mortgagee/encumbrancee/lessee etc. should be completed in FORM 35 and securely bound into this document.

F246 (Amd. 5/87)

Queensland Titles Office

DISTRICT OFFICES:

BRISBANE 4001	TOWNSVILLE 4810	ROCKHAMPTON 4700
203 Adelaide St. P.O. Box 1449 Ph: (07) 227 8241	418 Flinders St., P.O. Box 687 Ph: (077) 221420	Bolsover St. P.O. Box 923 Ph: (079) 27 8633

AUTHORITY TO DELIVER

I/We THE AUSTRAL BRICK COMPANY PTY LTD
(full name of Proprietor/s)

request that you will forward or deliver
to SEPTIMUS JOHN HINES
EDWARD ST BRISBANE
the instrument of Title and/or relative document at per margin or registration or for correction if required.

* ADDRESS REQUIRED FOR DELIVERY BY POST.

DESCRIPTION
Lot No. ..... on Plan No. .....
County .....
Parish .....

TITLE REFERENCE
Volume 7115
Folio 142

DOCUMENT
No. K114235V

WITNESS: IN MY PRESENCE
(Signature) J.P.
A Justice of the Peace

APPLICANT/S
(Signature) .....
SECRETARY

THE AUSTRAL BRICK COMPANY PROPRIETARY LIMITED
Common Seal

NOTE: AUTHORITY MUST BE SIGNED IN THE PRESENCE OF A JUSTICE OF THE PEACE

QUEENSLAND LAND REGISTRY
Land Title Act 1994, Land Act 1994 and Water Act 2000

GENERAL REQUEST

FORM 14 Version 4

Duty Imprint

713503982

NO FEE
07/10/2010 09:12

BE 600

Client No.: 1050399 Duties Act 2001
Transaction No.: 502-362-692
Duty Paid $ NIL ☑ Exempt
UTI $ NIL
Date: 6/10/10 Signed:

1. Nature of request

Request to Register a Resumption of Easement

Lodger (Name, address & phone number)
THE COORDINATOR-GENERAL
PO Box 15009
CITY EAST QLD 4002
Attn: Ms Jacqui Vock
Phone: (07) 3405 8576
Acquisition@dip.qld.gov.au

Lodger Code
163A

2. Lot on Plan Description

Lot on Plan Description	County	Parish	Title Reference
Easement C in Lot 201 on Survey Plan 213447 on Survey Plan 229877	Stanley	Tingalpa	50746769

3. Registered Proprietor/State Lessee

Brisbane City Council

4. Interest

Fee Simple

5. Applicant

The Coordinator-General
PO Box 15009, City East QLD 4002, Attn: Land Acquisition and Management Branch

6. Request

I hereby request that: in accordance with the Gazette Resumption Notice dated 23 October 2009 and Amending Gazette Resumption Notice dated 17 September 2010 deposited herewith, you register a resumption of easement for an infrastructure corridor over the easement described in Item 2.

7. Execution by applicant

Colin Leslie Bunker
Department of Infrastructure and Planning
As delegate of The Coordinator-General under s 11 of the *State Development and Public Works Organisation Act 1971*

6/10/10 — Colin Bunker
Execution Date — **Applicant's ~~or Solicitor's~~ Signature**

Note: A Solicitor is required to print full name if signing on behalf of the Applicant

WCRW30792

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State Development and Public Works Organisation Act 1971
Acquisition of Land Act 1967

TAKING OF LAND NOTICE (No. 12) 2009

Short title

1. This notice may be cited as the *Taking of Land Notice (No.12) 2009.*

Easements taken

2. The Easement described in Schedule 1 is taken by The Coordinator-General pursuant to the *State Development and Public Works Organisation Act 1971* for the purpose of works to be undertaken for the Western Corridor Recycled Water Scheme, and vests in The Coordinator-General on and from 23 October 2009.

Rights and obligations

3. That the rights and obligations conferred and imposed by the Easement in Schedule 1 includes the matters set out in Schedule 2.

SCHEDULE 1
Easement Taken

An area of about 5 853 square metres being part of Lot 201 on Survey Plan 213447 in Title Reference 50746769 and shown on Plan Property Reference 30792 dated 3 March 2009 held in the office of The Coordinator-General.

(SCHEDULE ENDS).

SCHEDULE 2
State Development and Public Works Organisation Act 1971
Rights and Obligations Under Easement

1 INTERPRETATION

1.1 In this Schedule:

"**Burdened Land**" means the land over which the Easement is taken.

"**Coordinator-General**" means The Coordinator-General, the corporation solely constituted under the *State Development and Public Works Organisation Act 1971* and where the context permits, the servants, agents, contractors, subcontractors and licensees of the Coordinator-General and other persons authorised by the Coordinator-General to exercise the Coordinator-General's rights under the Easement, and, where applicable, means the assignee or transferee of the Coordinator-General.

"**Easement**" means the easement taken by the Coordinator-General over the Burdened Land including but not limited to the terms and conditions contained in this Schedule.

"**Easement Area**" means that portion of the Burdened Land over which the Easement is obtained.

"**Infrastructure**" means infrastructure of any kind required for and/or incidental to the Project and without limitation includes infrastructure relating to the transportation, movement, transmission or flow of anything, including, for example, goods, material, substances, matter, particles with or without charge, light, energy, information and anything generated or produced.

"**Landowner**" means the person who is a registered owner of the Burdened Land from time to time.

"**Project**" means the Western Corridor Recycled Water Scheme as referred to in the *Water Regulation 2002.*

1.2 If the Landowner or the party having the benefit of the Easement consists of two or more persons at any time:

(a) a reference in the Easement to that party is to be read as a reference to each of those persons individually, and each combination of them jointly; and

(b) those persons are bound and benefited by the Easement both individually and in each combination of them jointly.

1.3 A reference in the Easement to a person includes a reference to a body corporate (including a local government) and every other kind of legal person.

1.4 The Easement is intended to burden that part of the land in accordance with the *State Development and Public Works Organisation Act 1971* and the process set out in section 6(2) of the *Acquisition of Land Act 1967.* The Coordinator-General is a public utility provider under the *Land Title Act 1994* and the *Land Act 1994.* The Easement may be registered as a public utility easement.

2 RIGHTS AND OBLIGATIONS OF COORDINATOR-GENERAL

2.1 The Coordinator-General may:

(a) install, repair, maintain, remove, replace, clean, clear, add to and alter any Infrastructure on, in or through the Easement Area from time to time;

(b) inspect or survey the Easement Area, or any Infrastructure on it, from time to time;

(c) undertake mowing, slashing and vegetation (including without limitation timber, trees and crops) control or removal in relation to the Easement Area from time to time;

(d) break open the soil of the Easement Area (both on the surface and subsurface) for the purpose of doing or getting ready to do any of the other things that the Coordinator-General can do under the Easement;

(e) enter, exit and traverse by whatever means, and remain on (for so long as is necessary) the Easement Area for the purpose of doing or getting ready to do any of the things the Coordinator-General can do under the Easement;

(f) pull down or break open any fencing on the Easement Area in order to enter or exit it (but only after, except in the case of an emergency, giving reasonable prior notice to the Landowner if any livestock are contained within the fenced area);

(g) take anything onto the Easement Area and use and operate what has been taken onto the Easement Area; and

(h) do on the Easement Area anything which in the Coordinator-General's opinion is necessary or convenient for, or incidental to, exercising the Coordinator-General's rights under the Easement, including, as examples but without limitation:

(1) temporary stockpiling Infrastructure or items required for or relating to the installation, repair, maintenance, removal, replacement, cleaning, clearing, addition or alteration of Infrastructure;

(2) temporary stockpiling soil dug up on or from under the Easement Area; and

(3) temporarily restricting access to the Easement Area or parts of it, by whatever means the Coordinator-General thinks fit including temporarily fencing off the Easement Area or parts of it, and doing other things to provide for the security of Infrastructure or persons or livestock, items referred to in subparagraph (1) or soil referred to in subparagraph (2).

2.2 The Coordinator-General shall have the right to authorise, permit or license other parties to use the Easement Area for all or any of the purposes as the Coordinator-General may do so under the Easement, and otherwise to exercise the same rights and powers as the Coordinator-General under the Easement subject to all the conditions and restrictions upon such rights as are set out in the Easement.

2.3 In exercising rights and powers under the Easement, the Coordinator-General and/or persons authorised, permitted or licensed from time to time by the Coordinator-General to use the Easement Area for the purposes of the Easement must:

(a) ensure that any work done on the Easement Area is done in a proper workman like manner in accordance with relevant standards, specifications, good construction practice, accepted industry standards, including local government planning schemes and policies, and any development approval(s);

(b) cause as little inconvenience as is reasonably practicable to the Landowner;

(c) restore the Easement Area as nearly as is reasonably practicable to its former condition if the Easement Area is damaged or changed by the work done on the Easement Area, including restoring any infrastructure or improvement located on or passing through or under the Easement Area; and

(d) comply with all applicable laws regarding occupational, health and safety in the undertaking of any work done on the Easement Area.

2.4 If the Landowner breaches the Easement, the Coordinator-General may do anything that is reasonably necessary to correct the breach (such as removing a structure erected on the Easement Area in breach of the Easement). Any action in rectifying such breach shall be taken without the Coordinator-General incurring any liability to the Landowner.

3 RIGHTS AND OBLIGATIONS OF LANDOWNER

3.1 The Landowner:

(a) must not erect or permit to be erected any new improvement, building, structure, pipeline, services, road, fence, driveway or paving on or through the Easement Area without the prior written consent of the Coordinator-General;

(b) must not change (other than to maintain), any existing improvement, building, structure, pipeline, services, road, fence, driveway or paving on or through the Easement Area (other than the Infrastructure);

(c) must not alter the ground level of the Easement Area or change its topography or do anything to cause inundation of the Easement Area by water without the prior written consent of the Coordinator-General;

(d) must not plant trees on the Easement Area without the prior written consent of the Coordinator-General;

(e) must not crop, dig or plough the Easement Area or cause the lighting of fires on the Easement Area without the prior written consent of the Coordinator-General;

(f) must exercise reasonable care to ensure that any Infrastructure on the Easement Area is not damaged;

(g) must not interfere with, damage or place at risk any Infrastructure on the Easement Area from time to time or interfere with anything that the Coordinator-General is storing or has placed on the Easement Area from time to time (including plant and equipment, stockpiles of soil dug up from or from under the Easement Area or any other stockpiles) without the prior written consent of the Coordinator-General;

(h) must not cause a nuisance that adversely affects the Coordinator-General's rights and powers under the Easement or any Infrastructure on the Easement Area from time to time, but if any nuisance is caused, then promptly abate such nuisance;

(i) must use the Landowner's reasonable endeavours to prevent anyone else doing any of the things that the Landowner is required not to do under the Easement and not allow or authorise anyone else to do any of those things;

(j) must not interfere with or obstruct the Coordinator-General in the exercise or enjoyment of its rights and powers under the Easement; and

(k) must not grant any rights to any person in relation to the Easement Area to the extent the granting of those other rights could or will conflict or interfere with the Infrastructure or the exercise of any of the Coordinator-General's rights and powers under the Easement.

4 OTHER MATTERS

4.1 **Ownership of Infrastructure**

All Infrastructure and other things brought onto or installed on, in or through the Easement Area from time to time by the Coordinator-General will, as between the Landowner and the Coordinator-General, notwithstanding any affixation to the Easement Area, remain the property of the Coordinator-General (unless otherwise assigned).

4.2 **Fences**

If the Coordinator-General pulls down or breaks open any fencing under the Easement:

(a) the Coordinator-General may either repair the fencing it has pulled down or broken open or install a gate in place of that fencing to at least a standard reasonably equivalent to that of the fencing before it was pulled down or broken open;

(b) the owner of the fencing that was pulled down or broken open will become the owner of the repaired fencing or gate; and

(c) that owner must maintain the repaired fencing or gate.

4.3 **Stamping and registering of Easement**

The Coordinator-General must stamp (if required) and register the Easement and pay all duty and registration fees on the Easement.

4.5 **Mining or petroleum tenement**

The Landowner is to use its reasonable endeavours to give the Coordinator-General a copy of any notification received by the Landowner in respect of any application for a mining or petroleum tenement under the *Mineral Resources Act 1989*, the *Petroleum Act 1923*, the *Petroleum and Gas (Production and Safety) Act 2004* or any similar or replacement legislation, in respect of land which includes all or any part of the Easement Area, within 7 days after the Landowner receives such notification.

4.6 **Further assurances**

The Landowner will use its reasonable endeavours to execute every deed, instrument, assurance or other document and do all such things as may be necessary to secure the rights of the Coordinator-General conferred by the Easement as the Coordinator-General may reasonably require, including (without limitation) obtaining the consent of any person necessary and producing the title document for the Easement Area and executing all documents necessary to give effect to any proposed assignment, transfer, encumbrance or other dealing by the Coordinator-General in respect of the Easement Area.

5 NOTICE

5.1 **General**

Any notice, demand, certification, process or other communication given in relation to the Easement must be in writing in English and may be signed by an authorised officer or agent of the party giving the notice.

5.2 **How to give a communication**

A communication may be given by being:

(a) personally delivered;

(b) left at the party's current address for notices;

(c) sent to the party's current address for notices by pre-paid ordinary mail or, if the address is outside Australia, by pre-paid airmail; or

(d) sent by fax to the party's current fax number for notices.

5.3 **Particulars for delivery of notices**

The address and facsimile number of the Coordinator-General and Landowner is that specified below or that which a party specifies by written notice to the other party from time to time:

The Coordinator-General:

Address: The Coordinator-General
PO Box 15009
Brisbane City East Qld 4002

Fax: (07) 3224 2978

Attention: Executive Director, Land Acquisition, Department of Infrastructure and Planning

Landowner:

The address and facsimile notified to the Coordinator-General and in the absence of such notice, the address shall be the land of which the Burdened Land forms part.

6 COORDINATOR-GENERAL'S CONSENT

(a) Subject to clause 6(b), the Coordinator-General may conditionally or unconditionally give or withhold any consent to be given under the Easement and is not obliged to give reasons for doing so.

(b) The Coordinator-General will not unreasonably refuse or withhold its consent to the Landowner erecting any new improvement, building, structure, pipeline, services, road, fence, driveway or paving on or through the Easement Area.

(c) It will be reasonable for the Coordinator-General to refuse or withhold its consent if the actions of the Landowner are, in the Coordinator-General's opinion, likely to jeopardise the safety, security or operation of, or interfere with the Infrastructure or

restrict the Coordinator-General's access or other rights under the Easement along or across the Easement Area.

7 SEVERABILITY

(a) Subject to clause 7(b), if a provision of the Easement is illegal or unenforceable in any relevant jurisdiction, it may be severed for the purposes of that jurisdiction without affecting the enforceability of the other provisions of the Easement.

(b) Clause 7(a) does not apply if severing the provision materially alters the scope and nature of the Easement or the relative commercial or financial positions of the parties, or would be contrary to public policy.

8 INDEMNITY FOR LANDOWNER

The Coordinator-General indemnifies the Landowner including any successors in title to the Burdened Land, against all actions, suits, proceedings, demands, claims, losses, damages, costs and expenses, excluding any indirect or consequential loss ("Claims") arising from:

(a) any breach by the Coordinator-General of the terms of the Easement; and

(b) any act or omission of the Coordinator-General in the exercise of its rights under the Easement;

except to the extent that any Claims are:

(c) caused; or

(d) contributed to (but only to the extent of that contribution),

by the act or omission of the Landowner or its employees, officers, agents or contractors.

(SCHEDULE ENDS)

ENDNOTES

1. Made by the Governor in Council on 22 October 2009.
2. Published in the Gazette on 23 October 2009.
3. Not required to be laid before the Legislative Assembly.
4. The administering agency is the Department of Infrastructure and Planning.

~~*Government Owned Corporations Act 1993*~~

~~**Section 114**~~

~~We hereby give notice that the public sector policy entitled *Sport and Recreation Sponsorships Policy*, as amended from time to time, is to apply to SunWater Limited and, as far as practicable, to all of its subsidiaries.~~

~~ANDREW FRASER MP~~
~~Treasurer and Minister for Employment and Economic Development~~

~~STEPHEN ROBERTSON MP~~
~~Minister for Natural Resources, Mines and Energy and Minister for Trade~~

~~**DECLARATION OF POLICE ESTABLISHMENT**~~

~~I, Kathleen Rynders, Deputy Commissioner (Regional Operations) of the Queensland Police Service, pursuant to s.10.10 of the *Police Service Administration Act 1990*, and the powers delegated to me, hereby declare the following place to be a police establishment:~~

~~**Coomera District Police Complex, 11 De Barnett Street, Coomera from Saturday 24 October 2009.**~~

~~This declaration is made at Brisbane in the State of Queensland on the 16th day of October 2009.~~

~~KATHY RYNDERS~~
~~DEPUTY COMMISSIONER~~
~~(REGIONAL OPERATIONS)~~

~~*Government Owned Corporations Act 1993*~~

~~**Section 114**~~

~~**NOTICE**~~

~~We hereby give notice that the public sector policy entitled *Sport and Recreation Sponsorships Policy*, as amended from time to time, is to apply to CS Energy Limited and, as far as practicable, to all of its subsidiaries.~~

~~ANDREW FRASER MP~~
~~Treasurer and Minister for Employment and Economic Development~~

~~STEPHEN ROBERTSON MP~~
~~Minister for Natural Resources, Mines and Energy and Minister for Trade~~

~~*Government Owned Corporations Act 1993*~~

~~**Section 114**~~

~~**NOTICE**~~

~~We hereby give notice that the public sector policy entitled *Sport and Recreation Sponsorships Policy*, as amended from time to time, is to apply to ENERGEX Limited and, as far as practicable, to all of its subsidiaries.~~

~~ANDREW FRASER MP~~
~~Treasurer and Minister for Employment and Economic Development~~

~~STEPHEN ROBERTSON MP~~
~~Minister for Natural Resources, Mines and Energy and Minister for Trade~~

~~*Government Owned Corporations Act 1993*~~

~~**Section 114**~~

~~**NOTICE**~~

~~We hereby give notice that the public sector policy entitled *Sport and Recreation Sponsorships Policy*, as amended from time to time, is to apply to Ergon Energy Corporation Limited and, as far as practicable, to all of its subsidiaries.~~

~~ANDREW FRASER MP~~
~~Treasurer and Minister for Employment and Economic Development~~

~~STEPHEN ROBERTSON MP~~
~~Minister for Natural Resources, Mines and Energy and Minister for Trade~~

State Development and Public Works Organisation Act 1971

Acquisition of Land Act 1967

AMENDING TAKING OF LAND NOTICE (No. 11) 2010

Short title

1. This notice may be cited as the *Amending Taking of Land Notice (No. 11) 2010.*

Amendment of Land to be taken [s.11(1) of the *Acquisition of Land Act 1967*]

2. Schedule 1 to the Taking of Land Notice (No. 12) 2009 dated 23 October 2009 and published in the Gazette No. 57 at page 581 relating to the taking of land and easements by The Coordinator-General pursuant to the *State Development and Public Works Organisation Act 1971* for the purpose of works to be undertaken for Western Corridor Recycled Water Scheme, is amended as described in the Schedule 1.

~~3. Schedule 2 to the Taking of Land Notice (No. 15) 2008 dated 11 July 2008 and published in the Gazette No. 74 at page 1569 relating to the taking of land and easements by The Coordinator-General pursuant to the *State Development and Public Works Organisation Act 1971* for the purpose of works to be undertaken for Western Corridor Recycled Water Scheme, is amended as described in the Schedule 2.~~

~~4. Schedule 7 to the Amending Taking of Land Notice (No. 2) 2010 dated 19 March 2010 and published in the Gazette No. 74 at page 664 relating to the taking of land and easements by The Coordinator-General pursuant to the *State Development and Public Works Organisation Act 1971* for the purpose of works to be undertaken for Western Corridor Recycled Water Scheme, is amended as described in the Schedule 3.~~

~~5. Schedule 2 to the Amending Taking of Land Notice (No. 9) 2009 dated 23 October 2009 and published in the Gazette No. 57 at page 572 relating to the taking of land and easements by The Coordinator-General pursuant to the *State Development and Public Works Organisation Act 1971* for the purpose of works to be undertaken for Western Corridor Recycled Water Scheme, is amended as described in the Schedule 4.~~

SCHEDULE 1

Amend Schedule 1 to the Taking of Land Notice (No. 12) of 2009 dated 23 October 2009 as follows:

Omit: "An area of about 5 853 square metres being part of Lot 201 on Survey Plan 213447 contained in Title Reference 50746769 and shown on Plan WCRW30792 dated 3 March 2009 held in the office of the Coordinator-General."

Insert: "Easement C in Lot 201 on SP213447 on Survey Plan 229877 (being a Plan to be registered in the Queensland Land Registry) County of Stanley Parish of Tingalpa being part of the land contained in Title Reference 50746769."

(SCHEDULE ENDS)

~~SCHEDULE 2~~

~~Amend Schedule 2 to the Taking of Land Notice (No. 15) of 2008 dated 11 July 2008 as follows:~~

~~Omit: "An area of about 3 836 square metres being part of Lot 320 on Crown Plan SL149 contained in Title Reference 11871246 and shown on Plan WCRWS32000 dated 9 July 2007 held in the office of The Coordinator-General."~~

~~Insert: "Easement C in Lot 320 on SL149 on Survey Plan 228092 (being a Plan to be registered in the Queensland Land Registry) County of Stanley Parish of Goodna being part of the land contained in Title Reference 11871246."~~

~~(SCHEDULE ENDS)~~

~~SCHEDULE 3~~

~~Amend Schedule 7 to the Amending Taking of Land Notice (No. 2) of 2010 dated 19 March 2010 as follows:~~

~~Omit:~~ ~~"Easement G in Lot 5 on SP190957 on Survey Plan 230717 (being a Plan to be registered in the Queensland Land Registry) County of Stanley Parish of Bulimba being part of the land contained in Title Reference 50797124."~~

~~Insert:~~ ~~"Easement A in Lot 51 on SP225274 on Survey Plan 236508 (being a Plan to be registered in the Queensland Land Registry) County of Stanley Parish of Bulimba being part of the land contained in Title Reference 50801649."~~

~~(SCHEDULE ENDS)~~

~~SCHEDULE 4~~

~~Amend Schedule 2 to the Amending Taking of Land Notice (No. 9) of 2009 dated 23 October 2009 as follows:~~

~~Omit:~~ ~~"Easement Q in Lot 13 on SP222633 on Survey Plan 228077 (being a Plan to be registered in the Queensland Land Registry) County of Stanley Parish of Goodna being part of the land contained in Title Reference 50760003."~~

~~Insert:~~ ~~"Easement R in Lot 13 on SP227111 on Survey Plan 236542 (being a Plan to be registered in the Queensland Land Registry) County of Stanley Parish of Goodna being part of the land contained in Title Reference 50795920."~~

~~(SCHEDULE ENDS)~~

ENDNOTES

1. Published in the Gazette on 17 September 2010.
2. Not required to be laid before the Legislative Assembly.
3. The administering agency is the Department of Infrastructure and Planning.

QUEENSLAND LAND REGISTRY
Land Title Act 1994, Land Act 1994 and Water Act 2000

GENERAL REQUEST

Duty Imprint (9)

FORM 14 Version 4
Page 1 of 1

713141696

NO FEE
26/03/2010 11:04

BE 210

Client No.: 1050399 *Duties Act 2001*
Transaction No.: 501-470-470
Duty Paid $.....NIL..... ☑ Exempt
UTI $.....NIL.....
Date: 25/3/10 Signed: [signature]

1. Nature of request
REQUEST TO REGISTER A RESUMPTION OF EASEMENT

Lodger (Name, address & phone number)
THE COORDINATOR-GENERAL
PO Box 15009
CITY EAST QLD 4002
Attn: Ms Sarah Faulks
Phone: (07) 3405 8555
Acquisition@dip.qld.gov.au

Lodger Code
163A

2. Lot on Plan Description	County	Parish	Title Reference
EASEMENTS D & H IN LOT 2 ON SP213447 on SP229878	STANLEY	TINGALPA	50746768

3. Registered Proprietor/State Lessee
Austral Brick Company Proprietary Limited A.C.N. 000 005 550

4. Interest
FEE SIMPLE

5. Applicant
THE COORDINATOR-GENERAL
PO Box 15009, City East QLD 4002, Attn: Land Acquisition Branch

6. Request
I hereby request that: in accordance with the Gazette Resumption Notice dated 4 September 2009 and Amending Gazette Resumption Notice dated 5 March 2010 deposited herewith, you register a resumption of easement for an infrastructure corridor over the easement described in Item 2.

7. Execution by applicant

Colin Leslie Bunker
Department of Infrastructure and Planning
As delegate of The Coordinator-General under s 11 of the *State Development and Public Works Organisation Act 1971*

23/3/10 [signature]
Execution Date **Applicant's ~~or Solicitor's~~ Signature**

Note: A Solicitor is required to print full name if signing on behalf of the Applicant

WCRW 30791

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GAZ 36 Proof 35 NSD 1-6#

~~*State Development and Public Works Organisation Act 1971*~~
~~*Acquisition of Land Act 1967*~~

~~**REVOCATION OF TAKING OF LAND NOTICE**~~

~~**Short title**~~

~~1. This notice may be cited as the *Revocation of Taking of Land Notice (No.1) 2009.*~~

~~**Easements revoked**~~

~~2. The Easements described in Schedule 1 taken by The Coordinator-General pursuant to the *State Development and Public Works Organisation Act 1971* for the purpose of works to be undertaken for the Western Corridor Recycled Water Scheme, and which vested in The Coordinator-General on and from the date of publication of the Taking of Land Notice (No 9) on 23 May 2008 are now revoked.~~

~~**SCHEDULE 1**~~
~~**Easements Revoked**~~

~~An area of about 2 181 square metres being part of Lot 47 on Registered Plan 207848 contained in Title Reference 17046123 and shown on Plan WCRWS30780 dated 16 November 2007 held in the office of The Coordinator-General.~~

~~An area of about 2 062 square metres being part of Lot 48 on Registered Plan 207848 contained in Title Reference 17046125 and shown on Plan WCRWS30770 dated 16 November 2007 held in the office of The Coordinator-General.~~

~~An area of about 5 381 square metres being part of Lot 51 on Survey Plan 163681 contained in Title Reference 50489550 and shown on Plan WCRWS30760 dated 16 November 2007 held in the office of The Coordinator-General.~~

~~**ENDNOTES**~~

~~1. Made by the Governor in Council on 3 September 2009~~
~~2. Published in the Gazette on 4 September 2009~~
~~3. Not required to be laid before the Legislative Assembly.~~
~~4. The administering agency is the Department of Infrastructure and Planning.~~

State Development and Public Works Organisation Act 1971
Acquisition of Land Act 1967

TAKING OF LAND NOTICE (No. 11) 2009

Short title

3. This notice may be cited as the *Taking of Land Notice (No.11) 2009.*

Easements taken

4. The Easements described in Schedule 1 are taken by The Coordinator-General pursuant to the *State Development and Public Works Organisation Act 1971* for the purpose of works to be undertaken for the Western Corridor Recycled Water Scheme, and vest in The Coordinator-General on and from 4 September 2009.

Rights and obligations

5. That the rights and obligations conferred and imposed by the Easements in Schedule 1 includes the matters set out in Schedule 2.

SCHEDULE 1
Easement Taken

~~An area of about 4 395 square metres being part of Lot 51 on Survey Plan 163681 in Title Reference 50489550 and shown on Plan Property Reference 30760, 30770, 30780, 30790 and 30800 dated 30 July 2008 held in the office of The Coordinator-General.~~

~~An area of about 1 236 square metres being part of Lot 48 on Registered Plan 207848 in Title Reference 17046125 and shown on Plan Property Reference 30760, 30770, 30780, 30790 and 30800 dated 30 July 2008 held in the office of The Coordinator-General.~~

~~An area of about 1 298 square metres being part of Lot 47 on Registered Plan 207848 in Title Reference 17046123 and shown on Plan Property Reference 30760, 30770, 30780, 30790 and 30800 dated 30 July 2008 held in the office of The Coordinator-General.~~

An area of about 10 697 square metres being part of Lot 2 on Survey Plan 213447 in Title Reference 50746768 and shown on Plan Property Reference 30760, 30770, 30780, 30790 and 30800 dated 30

July 2008 held in the office of The Coordinator-General.

~~An area of about 3 130 square metres being part of Lot 1 on Survey Plan 213452 in Title Reference 50738890 and shown on Plan WCRWS30800 dated 17 October 2008 held in the office of The Coordinator-General.~~

(SCHEDULE ENDS).

SCHEDULE 2
State Development and Public Works Organisation Act 1971
Rights and Obligations Under Easement

1 INTERPRETATION

1.1 In this Schedule:

"**Burdened Land**" means the land over which the Easement is taken.

"**Coordinator-General**" means The Coordinator-General, the corporation solely constituted under the *State Development and Public Works Organisation Act 1971* and where the context permits, the servants, agents, contractors, subcontractors and licensees of the Coordinator-General and other persons authorised by the Coordinator-General to exercise the Coordinator-General's rights under the Easement, and, where applicable, means the assignee or transferee of the Coordinator-General.

"**Easement**" means the easement taken by the Coordinator-General over the Burdened Land including but not limited to the terms and conditions contained in this Schedule.

"**Easement Area**" means that portion of the Burdened Land over which the Easement is obtained.

"**Infrastructure**" means infrastructure of any kind required for and/or incidental to the Project and without limitation includes infrastructure relating to the transportation, movement, transmission or flow of anything, including, for example, goods, material, substances, matter, particles with or without charge, light, energy, information and anything generated or produced.

"**Landowner**" means the person who is a registered owner of the Burdened Land from time to time.

"**Project**" means the Western Corridor Recycled Water Scheme as referred to in the *Water Regulation 2002*.

1.2 If the Landowner or the party having the benefit of the Easement consists of two or more persons at any time:

(a) a reference in the Easement to that party is to be read as a reference to each of those persons individually, and each combination of them jointly; and

(b) those persons are bound and benefited by the Easement both individually and in each combination of them jointly.

1.3 A reference in the Easement to a person includes a reference to a body corporate (including a local government) and every other kind of legal person.

1.4 The Easement is intended to burden that part of the land in accordance with the *State Development and Public Works Organisation Act 1971* and the process set out in section 6(2) of the *Acquisition of Land Act 1967*. The Coordinator-General is a public utility provider under the *Land Title Act 1994* and the *Land Act 1994*. The Easement may be registered as a public utility easement.

2 RIGHTS AND OBLIGATIONS OF COORDINATOR-GENERAL

2.1 The Coordinator-General may:

(a) install, repair, maintain, remove, replace, clean, clear, add to and alter any Infrastructure on, in or through the Easement Area from time to time;

(b) inspect or survey the Easement Area, or any Infrastructure on it, from time to time;

(c) undertake mowing, slashing and vegetation (including without limitation timber, trees and crops) control or removal in relation to the Easement Area from time to time;

(d) break open the soil of the Easement Area (both on the surface and subsurface) for the purpose of doing or getting ready to do any of the other things that the Coordinator-General can do under the Easement;

(e) enter, exit and traverse by whatever means, and remain on (for so long as is necessary) the Easement Area for the purpose of doing or getting ready to do any of the things the Coordinator-General can do under the Easement;

(f) pull down or break open any fencing on the Easement Area in order to enter or exit it (but only after, except in the case of an emergency, giving reasonable prior notice to the Landowner if any livestock are contained within the fenced area);

(g) take anything onto the Easement Area and use and operate what has been taken onto the Easement Area; and

(h) do on the Easement Area anything which in the Coordinator-General's opinion is necessary or convenient for, or incidental to, exercising the Coordinator-General's rights under the Easement, including, as examples but without limitation:

(1) temporary stockpiling Infrastructure or items required for or relating to the installation, repair, maintenance, removal, replacement, cleaning, clearing, addition or alteration of Infrastructure;

(2) temporary stockpiling soil dug up on or from under the Easement Area; and

(3) temporarily restricting access to the Easement Area or parts of it, by whatever means the Coordinator-General thinks fit including temporarily fencing off the Easement Area or parts of it, and doing other things to provide for the security of Infrastructure or persons or livestock, items referred to in subparagraph (1) or soil referred to in subparagraph (2).

2.2 The Coordinator-General shall have the right to authorise, permit or license other parties to use the Easement Area for all or any of the purposes as the Coordinator-General may do so under the Easement, and otherwise to exercise the same rights and powers as the Coordinator-General under the Easement subject to all the conditions and restrictions upon such rights as are set out in the Easement.

2.3 In exercising rights and powers under the Easement, the Coordinator-General and/or persons authorised, permitted or licensed from time to time by the Coordinator-General to use the Easement Area for the purposes of the Easement must:

(a) ensure that any work done on the Easement Area is done in a proper workman like manner in accordance with relevant standards, specifications, good construction practice, accepted industry standards, including local government planning schemes and policies, and any development approval(s);

(b) cause as little inconvenience as is reasonably practicable to the Landowner;

(c) restore the Easement Area as nearly as is reasonably practicable to its former condition if the Easement Area is damaged or changed by the work done on the Easement Area, including restoring any infrastructure or improvement located on or passing through or under the Easement Area; and

(d) comply with all applicable laws regarding occupational, health and safety in the undertaking of any work done on the Easement Area.

2.4 If the Landowner breaches the Easement, the Coordinator-General may do anything that is reasonably necessary to correct the breach (such as removing a structure erected on the Easement Area in breach of the Easement). Any action in rectifying such breach shall be taken without the Coordinator-General incurring any liability to the Landowner.

3 RIGHTS AND OBLIGATIONS OF LANDOWNER

3.1 The Landowner:

(a) must not erect or permit to be erected any new improvement,

building, structure, pipeline, services, road, fence, driveway or paving on or through the Easement Area without the prior written consent of the Coordinator-General;

(b) must not change (other than to maintain), any existing improvement, building, structure, pipeline, services, road, fence, driveway or paving on or through the Easement Area (other than the Infrastructure);

(c) must not alter the ground level of the Easement Area or change its topography or do anything to cause inundation of the Easement Area by water without the prior written consent of the Coordinator-General;

(d) must not plant trees on the Easement Area without the prior written consent of the Coordinator-General;

(e) must not crop, dig or plough the Easement Area or cause the lighting of fires on the Easement Area without the prior written consent of the Coordinator-General;

(f) must exercise reasonable care to ensure that any Infrastructure on the Easement Area is not damaged;

(g) must not interfere with, damage or place at risk any Infrastructure on the Easement Area from time to time or interfere with anything that the Coordinator-General is storing or has placed on the Easement Area from time to time (including plant and equipment, stockpiles of soil dug up from or from under the Easement Area or any other stockpiles) without the prior written consent of the Coordinator-General;

(h) must not cause a nuisance that adversely affects the Coordinator-General's rights and powers under the Easement or any Infrastructure on the Easement Area from time to time, but if any nuisance is caused, then promptly abate such nuisance;

(i) must use the Landowner's reasonable endeavours to prevent anyone else doing any of the things that the Landowner is required not to do under the Easement and not allow or authorise anyone else to do any of those things;

(j) must not interfere with or obstruct the Coordinator-General in the exercise or enjoyment of its rights and powers under the Easement; and

(k) must not grant any rights to any person in relation to the Easement Area to the extent the granting of those other rights could or will conflict or interfere with the Infrastructure or the exercise of any of the Coordinator-General's rights and powers under the Easement.

4 OTHER MATTERS

4.1 Ownership of Infrastructure

All Infrastructure and other things brought onto or installed on, in or through the Easement Area from time to time by the Coordinator-General will, as between the Landowner and the Coordinator-General, notwithstanding any affixation to the Easement Area, remain the property of the Coordinator-General (unless otherwise assigned).

4.2 Fences

If the Coordinator-General pulls down or breaks open any fencing under the Easement:

(a) the Coordinator-General may either repair the fencing it has pulled down or broken open or install a gate in place of that fencing to at least a standard reasonably equivalent to that of the fencing before it was pulled down or broken open;

(b) the owner of the fencing that was pulled down or broken open will become the owner of the repaired fencing or gate; and

(c) that owner must maintain the repaired fencing or gate.

4.3 Stamping and registering of Easement

The Coordinator-General must stamp (if required) and register the Easement and pay all duty and registration fees on the Easement.

4.5 Mining or petroleum tenement

The Landowner is to use its reasonable endeavours to give the Coordinator-General

a copy of any notification received by the Landowner in respect of any application for a mining or petroleum tenement under the *Mineral Resources Act 1989*, the *Petroleum Act 1923*, the *Petroleum and Gas (Production and Safety) Act 2004* or any similar or replacement legislation, in respect of land which includes all or any part of the Easement Area, within 7 days after the Landowner receives such notification.

4.6 **Further assurances**

The Landowner will use its reasonable endeavours to execute every deed, instrument, assurance or other document and do all such things as may be necessary to secure the rights of the Coordinator-General conferred by the Easement as the Coordinator-General may reasonably require, including (without limitation) obtaining the consent of any person necessary and producing the title document for the Easement Area and executing all documents necessary to give effect to any proposed assignment, transfer, encumbrance or other dealing by the Coordinator-General in respect of the Easement Area.

5 NOTICE

5.1 **General**

Any notice, demand, certification, process or other communication given in relation to the Easement must be in writing in English and may be signed by an authorised officer or agent of the party giving the notice.

5.2 **How to give a communication**

A communication may be given by being:

(a) personally delivered;

(b) left at the party's current address for notices;

(c) sent to the party's current address for notices by pre-paid ordinary mail or, if the address is outside Australia, by pre-paid airmail; or

(d) sent by fax to the party's current fax number for notices.

5.3 **Particulars for delivery of notices**

The address and facsimile number of the Coordinator-General and Landowner is that specified below or that which a party specifies by written notice to the other party from time to time:

The Coordinator-General:
Address: The Coordinator-General
PO Box 15009
Brisbane City East Qld 4002

Fax: (07) 3224 2978

Attention: Executive Director, Land Acquisition, Department of Infrastructure and Planning

Landowner:
The address and facsimile notified to the Coordinator-General and in the absence of such notice, the address shall be the land of which the Burdened Land forms part.

6 COORDINATOR-GENERAL'S CONSENT

(a) Subject to clause 6(b), the Coordinator-General may conditionally or unconditionally give or withhold any consent to be given under the Easement and is not obliged to give reasons for doing so.

(b) The Coordinator-General will not unreasonably refuse or withhold its consent to the Landowner erecting any new improvement, building, structure, pipeline, services, road, fence, driveway or paving on or through the Easement Area.

(c) It will be reasonable for the Coordinator-General to refuse or withhold its consent if the actions of the Landowner are, in the Coordinator-General's opinion, likely to jeopardise the safety, security or operation of, or interfere with the Infrastructure or restrict the Coordinator-General's access or other rights under the Easement along or across the Easement Area.

7 SEVERABILITY

(a) Subject to clause 7(b), if a provision of the Easement is illegal or unenforceable in any relevant jurisdiction, it may be severed for the purposes of that jurisdiction without affecting the enforceability of the other provisions of the Easement.

(b) Clause 7(a) does not apply if severing the provision materially alters the scope and nature of the Easement or the relative commercial

or financial positions of the parties, or would be contrary to public policy.

INDEMNITY FOR LANDOWNER

The Coordinator-General indemnifies the Landowner including any successors in title to the Burdened Land, against all actions, suits, proceedings, demands, claims, losses, damages, costs and expenses, excluding any indirect or consequential loss ("Claims") arising from:

(a) any breach by the Coordinator-General of the terms of the Easement; and

(b) any act or omission of the Coordinator-General in the exercise of its rights under the Easement;

except to the extent that any Claims are:

(c) caused; or

(d) contributed to (but only to the extent of that contribution),

by the act or omission of the Landowner or its employees, officers, agents or contractors.

(SCHEDULE ENDS)

ENDNOTES

5. Made by the Governor in Council on 3 September 2009.
6. Published in the Gazette on 4 September 2009.
7. Not required to be laid before the Legislative Assembly.
8. The administering agency is the Department of Infrastructure and Planning.

State Development and Public Works Organisation Act 1971
Acquisition of Land Act 1967

AMENDING TAKING OF LAND NOTICE (No.1) 2010

Short title

1. This notice may be cited as the *Amending Taking of Land Notice (No.1) 2010.*

Amendment of Land to be taken [s.11(1) of the *Acquisition of Land Act 1967*]

2. Schedule 1 to the Taking of Land Notice (No.22) 2008 dated 3 October 2008 and published in the Gazette No. 40 at page 680 relating to the taking of land and easements by The Coordinator-General pursuant to the *State Development and Public Works Organisation Act 1971* for the purpose of works to be undertaken for Western Corridor Recycled Water Scheme, is amended as described in the Schedule 1.

3. Schedule 1 to the Taking of Land Notice (No.25) 2008 dated 7 November 2008 and published in the Gazette No. 70 at page 1305 relating to the taking of land and easements by The Coordinator-General pursuant to the *State Development and Public Works Organisation Act 1971* for the purpose of works to be undertaken for Western Corridor Recycled Water Scheme, is amended as described in the Schedule 2.

4. Schedule 2 to the Taking of Land Notice (No.28) 2008 dated 5 December 2008 and published in the Queensland Government Gazette No. 95 at page 1804 relating to the taking of easements by The Coordinator-General pursuant to the *State Development and Public Works Organisation Act 1971* for the purpose of works to be undertaken for the Western Corridor Recycled Water Scheme, is amended as described in Schedule 3.

5. Schedule 1 to the Taking of Land Notice (No.11) 2009 dated 4 September 2009 and published in the Gazette No. 6 at page 69 relating to the taking of land and easements by The Coordinator-General pursuant to the *State Development and Public Works Organisation Act 1971* for the purpose of works to be undertaken for Western Corridor Recycled Water Scheme, is amended as described in the Schedule 4.

~~SCHEDULE 1~~

~~Amend Schedule 1 to the Taking of Land Notice (No.22) 2008 dated 3 October 2008 as follows:~~

~~Omit:~~ ~~"An area of about 5 550 square metres being part of Lot 3 on Registered Plan 7764 in Title Reference 13004049 and shown on Plan WCRWS50210 dated 9 November 2007 held in the office of the Coordinator-General."~~

~~Insert:~~ ~~"Easement A in Lot 3 on RP7764 on SP229891 (being a Plan to be registered in the Queensland Land Registry) County of Cavendish Parish of Biarra being part of the land contained in Title Reference 13004049."~~

~~(SCHEDULE ENDS)~~

~~SCHEDULE 2~~

~~Amend Schedule 1 to the Taking of Land Notice (No. 25) 2008 dated 7 November 2008 as follows:~~

~~Omit:~~ ~~"An area of about 4 071 square metres being part of Lot 3 on Registered Plan 56024 in Title Reference 12074022 and shown on Plan WCRWS50220 dated 3 November 2007 and held in the office of the Coordinator-General."~~

~~Insert:~~ ~~"Easement B in Lot 3 on RP56024 on SP229891 (being a Plan to be registered in the Queensland Land Registry) County of Cavendish Parish of Biarra being part of the land contained in Title Reference 12074022."~~

~~(SCHEDULE ENDS)~~

SCHEDULE 3

Amend Schedule 2 to the Taking of Land Notice (No. 28) 2008 dated 5 December 2008 as follows:

~~Omit:~~ ~~"An area of about 7 square metres being part of Lot 466 on Crown Plan SL2445 in Title Reference 12882215 and shown on Plan WCRWS30068 dated 8 April 2008 held in the office of the Coordinator-General."~~

~~Insert:~~ ~~"Easement A in Lot 466 on SL2445 on SP227013 (being a Plan to be registered in the Queensland Land Registry) County of Stanley Parish of Toombul being part of the land contained in Title Reference 12882215."~~

~~Omit:~~ ~~"An area of about 805 square metres being part of Lot 1 on Crown Plan SL2446 in Title Reference 12882214 and shown on Plan WCRWS30071 dated 8 April 2008 held in the office of the Coordinator-General.~~

~~Insert: "Easement C in Lot 1 on SL2446 on SP227013 (being a Plan to be registered in the Queensland Land Registry) County of Stanley Parish of Toombul being part of the land contained in Title Reference 12882214."~~

~~Omit: "An area of about 1 230 square metres being part of Lot 2 on Crown Plan SL2446 in Title Reference 12882214 and shown on Plan WCRWS30075 dated 8 April 2008 held in the office of the Coordinator-General."~~

~~Insert: "Easement D in Lot 2 on SL2446 on SP227013 (being a Plan to be registered in the Queensland Land Registry) County of Stanley Parish of Toombul being part of the land contained in Title Reference 12882214."~~

~~(SCHEDULE ENDS)~~

SCHEDULE 4

Amend Schedule 1 to the Taking of Land Notice (No. 11) 2009 dated 4 September 2009 as follows:

~~Omit: "An area of about 4 395 square metres being part of Lot 51 on Survey Plan 163681 in Title Reference 50489550 and shown on Plan Property Reference 30760, 30770, 30780, 30790 and 30800 dated 30 July 2008 held in the office of The Coordinator-General."~~

~~Insert: "Easement G in Lot 51 on SP163681 on SP229879 (being a Plan to be registered in the Queensland Land Registry) County of Stanley Parish of Tingalpa being part of the land contained in Title Reference 50489550."~~

~~Omit: "An area of about 1 236 square metres being part of Lot 48 on Registered Plan 207848 in Title Reference 17046125 and shown on Plan Property Reference 30760, 30770, 30780, 30790 and 30800 dated 30 July 2008 held in the office of The Coordinator-General."~~

~~Insert: "Easement F in Lot 48 on RP207848 on SP229879 (being a Plan to be registered in the Queensland Land Registry) County of Stanley Parish of Tingalpa being part of the land contained in Title Reference 17046125."~~

~~Omit: "An area of about 1 298 square metres being part of Lot 47 on Registered Plan 207848 in Title Reference 17046123 and shown on Plan Property Reference 30760, 30770, 30780, 30790 and 30800 dated 30 July 2008 held in the office of The Coordinator-General."~~

~~Insert: "Easement E in Lot 47 on RP207848 on SP229879 (being a Plan to be registered in the Queensland Land Registry) County of Stanley Parish of Tingalpa being part of the land contained in Title Reference 17046123."~~

Omit: "An area of about 10 697 square metres being part of Lot 2 on Survey Plan 213447 in Title Reference 50746768 and shown on Plan Property Reference 30760, 30770, 30780 30790 and 30800 dated 30 July 2008 held in the office of The Coordinator-General."

Insert: "Easements D & H in Lot 2 on SP213447 on SP229878 (being a Plan to be registered in the Queensland Land Registry) County of Stanley Parish of Tingalpa being part of the land contained in Title Reference 50746768."

~~Omit: "An area of about 3 130 square metres being part of Lot 1 on Survey Plan 213452 in Title Reference 50738890 and shown on Plan WCRWS30800 dated 17 October 2008 held in the office of The Coordinator-General."~~

~~Insert: "Easement A in Lot 1 on SP213452 on SP229876 (being a Plan to be registered in the Queensland Land Registry) County of Stanley Parish of Tingalpa being part of the land contained in Title Reference 50738890."~~

~~(SCHEDULE ENDS)~~

ENDNOTES

1. Published in the Gazette on 5 March 2010.
2. Not required to be laid before the Legislative Assembly.
3. The administering agency is the Department of Infrastructure and Planning.

QUEENSLAND TITLES REGISTRY

EASEMENT

FORM 9 Version 4
Page 1 of 1

719259843

$187.00
13/02/2019 16:27

BE 601

Duty Imprint

Client No: 1050409 Duties Act 2001
Transaction No: SLT-046-3L4
Duty Paid $0.00 ☐ Exempt
UTI $.....
Date: 23/1/19 Signed: .....

the Department's website.

1. Grantor
AUSTRAL BRICKS (QLD) PTY LTD A.B.N. 62 125 934 858

Lodger (Name, address, E-mail & phone number) **Lodger Code**
ATBL level 11, Suite A,
127 Creek street, Brisbane
4000 3211 9581

2. Description of Easement/Lot on Plan
Servient Tenement (burdened land)
EASEMENT E IN LOT 8 ON SP283241
ON SP288130

#Dominant Tenement (benefited land)

Title Reference
51038103

not applicable if easement in gross
NOT APPLICABLE

3. Interest being burdened
FEE SIMPLE

#4. Interest being benefited
NOT APPLICABLE
not applicable if easement in gross

5. Grantee Given names | Surname/Company name and number (include tenancy if more than one)
CENTRAL SEQ DISTRIBUTOR-RETAILER AUTHORITY ABN 86 673 835 011

6. Consideration
$1.00

7. Purpose of easement
SEWERAGE

8. Grant/Execution

The Grantor for the above consideration grants to the Grantee the easement over the servient tenement for the purpose stated in item 7 and the Grantor and Grantee covenant with each other in terms of:- document no. 718657873

Witnessing officer must be aware of his/her obligations under section 162 of the Land Title Act 1994

Susan Leppinus ..... signature
SUSAN LEPPINUS ..... full name
SOLICITOR ..... qualification
Witnessing Officer

AUSTRAL BRICKS (QLD) PTY LTD ACN 125 934 858
14/11/2018
Execution Date

GRANT DOUGLAS
ROBERT BAKEWELL
.....
Grantor's Signature
DIRECTORS

(Witnessing officer must be in accordance with Schedule 1 of Land Title Act 1994 eg Legal Practitioner, JP, C Dec)

..... signature
Diane Coffin ..... full name
Solicitor ..... qualification
Witnessing Officer

(Witnessing officer must be in accordance with Schedule 1 of Land Title Act 1994 eg Legal Practitioner, JP, C Dec)

30/10/2018
Execution Date

.....
SARAH EDWARDS, SENIOR LEGAL COUNSEL
Grantee's Signature

Executed by CENTRAL SEQ DISTRIBUTOR-RETAILER AUTHORITY by its delegate under *section 53 of the South-East Queensland Water (Distribution and Retail Restructuring) Act 2009*

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QUEENSLAND TITLES REGISTRY
Land Title Act 1994, Land Act 1994 and Water Act 2000

SCHEDULE

Title Reference [51038103]

Statement about alteration or minor correction to Land Registry Form

Form being altered or corrected: Form 9 - Easement

Name of authorised person or solicitor:

Jack Vidler

Name of authorised person's firm or employer (legal practice, commercial lender or settlement agency):

Massons (legal practice)

Item/s being altered or corrected:

Item 8 - Grantor execution

Details of alteration or minor correction:

Minor correction being the hand insertion of the Grantor's company name and ACN

Party represented (where signed by solicitor):

Grantor being Austral Bricks (QLD) Pty Ltd ACN 125 934 858

.....
Authorised person's or Solicitor's Signature

Name of authorised person or solicitor:

Name of authorised person's firm or employer (legal practice, commercial lender or settlement agency):

Item/s being altered or corrected:

Details of alteration or minor correction:

Party represented (where signed by solicitor):

.....
Authorised person's or Solicitor's Signature

717184783
W10 RIE
17/05/2016

QUEENSLAND LAND REGISTRY
Land Title Act 1994 and Land Act 1994

EASEMENT

FORM 9 Version 4
Page 1 of 7

717252359
$169.00
$169.00
17/05/2016 10:17

BE 600

Duty Imprint
Client No: 58230900 Duties Act 2001
Transaction No: S1T-41-4 OF 3
Duty Paid $ NIL Exempt
UTI $
Date: 12 2 16 Signed:

1. Grantor

AUSTRAL BRICKS (QLD) PTY LTD ACN 125 934 858

Lodger (Name, address, E-mail & phone number)
CLX for HDY

Lodger Code
HSA

4221442/DE

2. Description of Easement/Lot on Plan	County	Parish	Title Reference
Servient Tenement (burdened land) EASEMENT N IN LOT 8 ON SP283241	STANLEY	TINGALPA	TO ISSUE OUT OF 50938251
#Dominant Tenement (benefited land) # not applicable if easement in gross LOT 7 ON SP283241	STANLEY	TINGALPA	TO ISSUE OUT OF 50938251

3. Interest being burdened
Fee simple

#4. Interest being benefited
Fee simple
not applicable if easement in gross

5. Grantee Given names | Surname/Company name and number | (include tenancy if more than one)
BGMG 9 PTY LTD ACN 167 478 140
AS TRUSTEE UNDER INSTRUMENT
715652304

6. Consideration
$1.00

7. Purpose of easement
OPEN CUT DRAINAGE & ACCESS

8. Grant/Execution

The Grantor for the above consideration grants to the Grantee the easement over the servient tenement for the purpose stated in item 7 and the Grantor and Grantee covenant with each other in terms of the attached schedule.

Witnessing officer must be aware of his/her obligations under section 162 of the Land Title Act 1994

..... signature
PHILLIP LEE
..... full name
JP (Reg no: 127804) ..... qualification
Witnessing Officer

12 / 2 / 16
Execution Date

(Witnessing officer must be in accordance with Schedule 1 of Land Title Act 1994 eg Legal Practitioner, JP, C Dec)

..... signature
PHILLIP LEE
..... full name
JP (Reg no: 127804) ..... qualification
Witnessing Officer

11 / 2 / 16
Execution Date

(Witnessing officer must be in accordance with Schedule 1 of Land Title Act 1994 eg Legal Practitioner, JP, C Dec)

BGMG 9 PTY LTD ACN 167 478 140 BY ITS DULY CONSTITUTED ATTORNEYS
(NAMES)
PURSUANT TO POWER OF ATTORNEY REGISTERED NUMBER 715619389

MEGAN M KUBLIN Signature of attorney

Signature of attorney

AUSTRAL BRICKS (QLD) PTY LTD ACN 125 934 858 IN ACCORDANCE WITH CORPORATIONS ACT 2001 (CTH)
Alexander J. Payne
CFO/Director

Signature of director
Name of director

M.A. FIMMEL

Signature of director/~~company secretary~~
Name of director/ ~~company secretary~~

Printed 10 February 2016 (15:07)

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Title Reference TO ISSUE OUT OF 50938251

This is the Form 20 Schedule referred to in item 8 of the attached Form 9 Easement.

1. **Terms of right of open cut drainage & access labelled "EMT N" in the Plan**

1.1 **Grant**

(a) The Grantor grants to the Grantee a non-exclusive right to:

(i) drain storm water through an open-cut drain in the form of a drain swale and bio-basin on the Easement Area, and

(ii) do anything reasonably necessary for that purpose, including:

(A) installing or constructing the drain swale and bio-basin on the Easement Area;

(B) using any existing line of pipes;

(C) carrying out works to install pipes and equipment and connect those pipes and equipment to any existing line of pipes on, in or under the Easement Area but not above the surface of the Easement Area;

(D) repairing or maintaining the drain swale and bio-basin on the Easement Area;

(E) enter, pass and repass over and return from the Servient Tenement with or without vehicles and remain on or in the Servient Tenement for so long as may be necessary to carry out any necessary works to the drain swale and bio-basin on the Easement Area; and

(F) bring, place and use on the Servient Tenement and remove from the Servient Tenement such plant, machinery, tools, implements, materials or things as may be necessary or convenient to carry out any necessary works to the drain swale and bio-basin on the Easement Area,

provided that the Grantee must repair and maintain the bioretention basin and associated stormwater infrastructure and pipes on the Easement Area in a reasonable manner as required by the Grantor, including repairs or maintenance that are capital or structural in nature.

(b) The Grantee acknowledges and agrees that:

(i) the rights granted under clause 1.1(a) are granted only on a non-exclusive basis and, to the fullest extent permitted by Law, do not:

(A) affect or limit the rights of the Grantor in its capacity as the owner of all of the freehold estate and interest in the Servient Tenement; or

(B) confer on the Grantee any right to exclusive possession of any part of the Servient Tenement; and

(ii) nothing in this Easement creates the relationship of landlord and tenant between the Grantor and the Grantee.

1.2 **Use of Easement Area**

In exercising any rights or complying with any obligations under this Easement, the Grantee must:

Title Reference TO ISSUE OUT OF 50938251

(a) comply with all Laws;

(b) cause as little inconvenience to the Grantor as possible and any occupier of the Servient Tenement;

(c) not damage the Easement Area beyond fair wear and tear;

(d) remove any rubbish or other waste brought onto the Servient Tenement from the Dominant Tenement or by the Grantee;

(e) not obstruct access to or otherwise interfere with the Easement Area;

(f) not do anything that contaminates or pollutes the Easement Area;

(g) as far as reasonably practicable, enter onto the Servient Tenement only over the Easement Area;

(h) ensure all work is done properly, to a high standard and in a tradesmanlike manner;

(i) cause as little damage as is practicable to the Servient Tenement and any buildings, improvements, plant, equipment, machinery, utilities or things on it;

(j) restore the Servient Tenement as nearly as is practicable to its former condition; and

(k) make good any collateral damage, including any damage to any improvements or plant, equipment, machinery, utilities or things on or about the Servient Tenement.

1.3 **What the Grantor must not do in or on the Servient Tenement**

The Grantor must not:

(a) allow stormwater runoff from the Servient Tenement to be directed into the bioretention basin on the Easement Area;

(b) use or allow to be used the Servient Tenement for any purposes which may obstruct or prevent the Grantee from having full and free access to the Easement Area;

(c) do or allow to be done anything whatever that may adversely affect support of the Easement Area;

(d) place, erect or construct or allow to be placed, erected or constructed upon the Easement Area any building or other structure whatever;

(e) make or allow to be made by any means whatever any alteration to the existing surface levels of the Easement Area;

(f) place or construct or allow to be placed or constructed or allow to remain on the Easement Area any pavement or concrete or having any form of bituminous surface with or without a base course of ballast or rock fill or like material;

(g) place or allow to be placed or to remain on the Easement Area any timber, article of plant or any stores, filling, rubbish or other material whatever;

(h) park or place or allow to be parked or placed or to remain on the Easement Area any vehicle whatever, other than vehicles temporarily parked or placed on the Easement Area so that they may be removed without delay when necessary; or

Title Reference TO ISSUE OUT OF 50938251

(i) plant or allow to be planted in or upon the Easement Area any tree or shrub other than shrubs that may be removed and reinstated if necessary,

without the consent of the Grantee, which may not be unreasonably withheld or given with unreasonable conditions.

1.4 **Risk, release and indemnity**

(a) The Grantee accesses and uses the Easement Area at its sole risk and cost.

(b) The Grantee releases the Grantor to the fullest extent permitted by Law from and against all Liabilities that arise in any way from the use or misuse of the Easement Area by the Grantee.

(c) The Grantee indemnifies the Grantor from and against all Liabilities arising in any way from the use or misuse of the Easement Area by the Grantee.

(d) A release or indemnity in this Easement does not apply to the extent that any Liability is caused or contributed to by the default or negligence of the Grantor.

(e) Every indemnity in this Easement is a continuing indemnity which survives the release, extinguishment or termination of this Easement, to the fullest extent permitted by Law. The Grantor does not have to incur any cost or expense, or make any payment, before enforcing any indemnity in this Easement.

1.5 **Proprietary right**

For the avoidance of any doubt, the rights and obligations in this Easement attach to and run with the Servient Tenement and the Dominant Tenement even if the successors in title to the Grantor or the Grantee have not expressly bound themselves personally.

1.6 **Resumption or restriction by Authority**

If any Authority resumes any part of the Easement Area for any purpose or restricts access to the Easement Area for any reason, the Grantee may not claim any compensation or any other amounts from the Grantor.

1.7 **Termination**

(a) If the Grantee is in breach of any of the terms, conditions, obligations or covenants of this Easement, the Grantor may at its discretion give notice of that breach and allow the Grantee a reasonable time to rectify that breach, having regard to the nature of the breach.

(b) If the Grantee is in Unremedied Breach after the Grantor gives notice under 1.7(a), the Grantor may terminate this Easement by giving a Termination Notice and this Easement and the rights granted to the Grantee by the Easement are immediately terminated upon the giving of the Termination Notice under this clause 1.7(b), notwithstanding that this Easement is or remains registered on the title to the Servient Tenement or the title to the Dominant Tenement.

1.8 **Notices**

(a) Any notice given in connection with this Easement must be in legible writing and must be addressed to a party and either:

(i) hand delivered to, or sent by post to, the party's registered office, principal place of business or any other address the party notifies for the service of notices;

Title Reference TO ISSUE OUT OF 50938251

(ii) sent by fax to any fax number the party notifies for the service of notices; or

(iii) sent by email to any email address the party notifies for the service of notices.

(b) A notice is taken to have been given:

(i) in the case of being hand delivered, on the date on which it is delivered;

(ii) in the case of being sent by post, on the third (seventh if sent to an address in another country) day after the date of posting;

(iii) in the case of being sent by fax, at the time of dispatch as confirmed by a transmission report by the sending machine; and

(iv) in the case of delivery by email, at the time sent, unless the sender is notified, by a system or person involved in the delivery of the email, that the email was not successfully sent.

1.9 **Further assurance**

Each party must do everything necessary, or reasonably required, by the other party, to give effect to this Easement and the transactions contemplated by this Easement.

1.10 **No merger and survival**

A party's right or obligation which is of a continuing nature or which is not fully satisfied and discharged on completion of any transaction contemplated by this Easement:

(a) does not merge on completion of that transaction;

(b) continues in favour of the party to which it is owed; and

(c) remains in full effect.

1.11 **Definitions**

In this Easement, the following words have the following meanings, unless the context requires otherwise:

"Authority" includes any government or semi-government, statutory, public or other authority or body with jurisdiction over a lot or any matter or thing in relation to a lot.

"Easement Area" means those parts of the Servient Tenement that are shown on the Plan as "EMT N".

"Easement" means this instrument under section 82 of the Land Title Act 1994 (QLD) and includes the Plan.

"Form 9" means the Form 9 under the *Land Title Act 1994* and *Land Act 1994* to which this schedule is attached.

"Grantee" means the grantee named in item 5 of the Form 9 and also includes any person to which the rights or interest under this Easement of the grantee are transferred, or pass by operation of law, from time to time, and where the context permits, includes the servants, agents, contractors, subcontractors and licensees of the Grantee.

"Grantor" means the grantor named in item 1 of the Form 9 and also includes any person who is a registered owner of the Servient Tenement, or who has an estate or interest in the Servient Tenement, from

Title Reference TO ISSUE OUT OF 50938251

time to time and where the context permits, includes the servants, agents, contractors, subcontractors and licensees of the Grantor.

"Law" includes any law, principle of equity, statute and official directive of any governmental authority or any order or notice by a governmental authority.

"Liability" means each and every cost, expense, liability, obligation, action, demand, loss, claim and all damages.

"Dominant Tenement" means the land referred to in item 2 of the Form 9 as being the land benefited.

"Servient Tenement" means the land referred to in item 2 of the Form 9 as being the land burdened.

"Plan" means the plan registered together with this Easement.

"Termination Notice" means any notice given by the Grantor in respect of an Unremedied Breach.

"Unremedied Breach" means a breach by Grantee in respect of which the Grantor has given a notice in accordance with this Easement requiring remedy of the breach within a reasonable period (having regard to the nature of the breach), and the Grantee has failed to comply with the notice from the Grantor.

1.12 **Interpretation**

The following apply in the interpretation of this Easement, unless the context requires otherwise.

(b) A reference to this agreement, this deed, this document or a similar term means either the agreement set out in this Easement or the Easement itself, as the context requires.

(c) A reference to this Easement or any other document is a reference to this Easement or that other document as varied, novated or replaced in any way.

(d) A reference to any statute, regulation, rule or similar Easement includes any consolidations, amendments or re-enactments of it, any replacements of it, and any regulation or other statutory Easement issued under it.

(e) A reference to the singular includes the plural number and vice versa.

(f) A reference to a gender includes a reference to each gender.

(g) A reference to a party means a person who is named as a party to this Easement.

(h) A reference to a person includes a firm, corporation, body corporate, unincorporated association and a governmental authority.

(i) A reference to a party or a person includes that party's or person's executors, legal personal representatives, successors, liquidators, administrators, trustees in bankruptcy and similar officers and, where permitted under this Easement, their substitutes and assigns.

(j) An agreement on the part of, or in favour of, 2 or more persons binds or is for the benefit of them jointly and severally.

(k) A reference to includes means includes but without limitation.

(l) Where a word or expression has a defined meaning, its other grammatical forms have a corresponding meaning.

Title Reference TO ISSUE OUT OF 50938251

(m) A reference to doing something includes an omission, statement or undertaking (whether or not in writing) and executing a document.

(n) A reference to a clause, schedule or annexure is a reference to a clause of, or a schedule or an annexure to this Easement.

(o) A reference to time is to the time in the place where a thing is to be done, unless specified otherwise.

A heading is for reference only. It does not affect the meaning or interpretation of this Easement.

717184614

W100 R|E 17/05/2016

QUEENSLAND TITLE REGISTRY

EASEMENT

FORM 9 Version 4

Page 1 of 4

Duty Imprint

Client No: 38230990

Transaction No: S11-4137734

Duty Paid $ NIL

Exempt

UNI $

Date: 17/2/2016 Signed:

Duties Act 2001

717252265

$169.00

$169.00

17/05/2016 10:11

BE 601

1. Grantor	Lodger (Name, address, E-mail & phone number)	Lodger Code
AUSTRAL BRICKS (QLD) PTY LTD A.B.N. 62 125 934 858	GLX for HDY	OLSA

H221442

2. Description of Easement/Lot on Plan Servient Tenement (burdened land)	County	Parish	Title Reference
EASEMENT O IN LOT 8 ON SP283241	STANLEY	TINGALPA	TO ISSUE OUT OF 50938251

#Dominant Tenement (benefited land)

not applicable if easement in gross

NOT APPLICABLE

3. Interest being burdened	#4. Interest being benefited
Fee Simple	N/A

not applicable if easement in gross

5. Grantee	Given names	Surname/Company name and number	(include tenancy if more than one)
		BRISBANE CITY COUNCIL	

6. Consideration	7. Purpose of easement
$1.00	Drainage (Overland Flow and Open Cut)

8. Grant/Execution

The Grantor for the above consideration grants to the Grantee the easement over the servient tenement for the purpose stated in item 7 and the Grantor and Grantee covenant with each other in terms of the attached schedule

Witnessing officer must be aware of his/her obligations under section 162 of the Land Title Act 1994

AUSTRAL BRICKS (QLD) PTY LTD A.B.N. 62 125 934 858

.....signature

PHILLIP LEE

.....full name

JP (Reg No: 127804)

.....qualification

Witnessing Officer

(Witnessing officer must be in accordance with Schedule 1 of Land Title Act 1994 eg Legal Practitioner, JP, C Dec)

Alexander J. Payne CFO/Director ..... Director

11/02/2016 **Execution Date**

M.A.FINNEY.

..... Director/Secretary

Grantor's Signature

The Seal of BRISBANE CITY COUNCIL was hereunto affixed this 19th day of February 2016, by me MARCIA JANE FLINT I being the proper officer to affix such seal.

M.J. FLINT

Appointed Officer

SAMANTHA JO-ANNE HOLLOWAY .....signature

.....full name

.....qualification

Witnessing Officer

(Witnessing officer must be in accordance with Schedule 1 of Land Title Act 1994 eg Legal Practitioner, JP, C Dec)

COMMISSIONER FOR DECLARATIONS 119474 DEPARTMENT OF JUSTICE & ATTORNEY-GENERAL

19/2/16

Execution Date

..... **Grantee's Signature**

BRISBANE CITY COUNCIL

© The State of Queensland (Natural Resources, Mines and Energy) 2019

Title Reference TO ISSUE OUT OF 50938251

AUSTRAL BRICKS (QLD) PTY LTD A.B.N. 62 125 934 858 (hereinafter called "the Grantor") and BRISBANE CITY COUNCIL (hereinafter called "the Grantee") DO HEREBY COVENANT AND AGREE with each other in the following terms:

1. The Grantor hereby grants and transfers to the Grantee the full and free right and liberty at all times and from time to time to have, lay, construct and thereafter forever to use and maintain on, over, through or under the land described in Item (2) hereof (which land is hereinafter called "the servient tenement") drains, pipes, conduits and channels including open cut drains and channels, rain water conduits and pipes and covered and uncovered drains for the passage or conveyance of rain water together with all associated drainage and stormwater run off and all manholes, manhole chambers, inlets, equipment and fittings in connection therewith or for the accommodation of any adjoining or neighbouring property or properties or otherwise in the execution of its drainage powers and for the purposes aforesaid and for the purpose of obtaining free and uninterrupted access to the said drains, pipes, conduits and channels, manholes, manhole chambers, inlets, equipment and fittings from the surface of the servient tenement and for the purposes of changing the size and number of, operating, inspecting, patrolling, altering, removing, replacing, reconstructing and/or repairing the said drains, pipes, conduits and channels, manholes, manhole chambers, inlets, equipment and fittings as aforesaid, full free and uninterrupted right and liberty at all times by day and by night and from time to time to enter upon and to go, pass and repass over, along and under the servient tenement or any part or parts thereof with or without engineers, surveyors, servants, agents, licensees, contractors, subcontractors, workmen and others authorised by the Grantee together with all vehicles, equipment, machinery, tools and materials considered necessary by the Grantee and to dig into, sink shafts in, erect scaffolding upon and to open and break up the soil of the servient tenement or any part or parts thereof as well the subsurface as the surface thereof and to bring and place in and upon the servient tenement or any part or parts thereof and remove such vehicles, equipment, machinery, tools and materials and to do such other incidental works and things in the servient tenement as the Grantee shall in its discretion think fit doing as little damage as may be but being responsible or held liable only for such damage or inconvenience to the owners or occupiers for the time being of any part or parts of the land of which the servient tenement forms part or any subdivisions or subdivision thereof as may be caused or suffered by reason only of the neglect or default of the Grantee and its successors and its and their contractors, agents, servants and employees and also the full and free right at all times and from time to time to the uninterrupted flow of rain water and associated drainage and stormwater run off flowing in concentration either intermittently or occasionally (all of which is hereinafter called "stormwater drainage") over and along the surface of the servient tenement without

   (1) any obstruction, interruption, impeding, hampering or interference, diversion, scouring, change or alteration in or to the flow or escape of stormwater drainage or its or their natural outlet (if any) or

   (2) any ponding of waters caused by or consequent upon

      (a) any use to which the servient tenement may be put or

      (b) the erection, raising, making, placing or suffering to stand or to remain of any building, fence, wall, structure (whether of the class just mentioned or not) paving or vegetation (except grass which is kept properly mown at all times) or thing whatsoever upon the servient tenement or

      (c) any alteration in level or gradient of the servient tenement or any change to the surface of the servient tenement or to the natural or artificial features of the servient tenement which contain or direct or assist in containing or directing the flow of stormwater drainage over the servient tenement along and within a defined course

   other than as is or are permitted in writing by the Grantee and only on such terms and conditions as the Grantee may impose or stipulate in the event of such permission being granted with power for the Grantee and its contractors, agents and servants and others authorised by it (but without prejudice to any other powers or remedies of the Grantee)

      (i) to demolish, remove or otherwise dispose of any building, fence, wall, structure (whether of the class just mentioned or not) paving or vegetation (except grass which is kept properly mown at all

Title Reference TO ISSUE OUT OF 50938251

times) or thing whatsoever at any time on or in the servient tenement in contravention of the foregoing provisions, and

(ii) to perform any works necessary for restoring or reinstating the servient tenement (including the grass thereon) and the natural or artificial features of or on the servient tenement containing or directing or assisting in containing or directing the flow of stormwater drainage along and within a defined course or channel over the servient tenement to their former state and condition, and also

(iii) to alter, grade, pave, prepare, grass, fertilize or mow the surface of the servient tenement or place, install, establish or construct and keep any earthworks and any other works whatsoever (whether of the class just mentioned or not) thereon or therein for the purpose of the exercise of the rights hereinbefore given or incidental thereto or for the purpose of forming the surface of the servient tenement in such a way as to contain or direct the flow of stormwater drainage along and within a defined course or channel or for the purpose of rectifying or alleviating any scouring of the servient tenement due to the flow of stormwater drainage thereover

at the cost of the owner or owners, registered proprietor or registered proprietors or occupier or occupiers from time to time and for the time being of the servient tenement or any of them where he or they act or omit to act or suffer an act or omission in contravention of the provisions herein contained or implied and in other cases at the cost of the Grantee.

2. For the purposes aforesaid and for the purpose of obtaining free and uninterrupted access to the servient tenement and any works or things thereon or therein the Grantor hereby grants and transfers to the Grantee the full free and uninterrupted right and liberty at all times by day and by night to enter upon and to go, pass and repass over, along and under the servient tenement or any part or parts thereof with or without engineers, surveyors, servants, agents, licensees, contractors, subcontractors, workmen and others authorised by the Grantee together with all vehicles, equipment, machinery, tools and materials considered necessary by the Grantee and to dig into, sink shafts in, erect scaffolding upon and to open and break up the soil of the servient tenement or any part or parts thereof as well the subsurface as the surface thereof and to bring and place in and upon the servient tenement or any part or parts thereof and remove such vehicles, equipment, machinery, tools and materials and to do such other incidental works and things in the servient tenement as the Grantee shall in its discretion think fit doing as little damage as may be but being responsible or held liable only for such damage or inconvenience to the owners or occupiers for the time being of any part or parts of the land of which the servient tenement forms part or any subdivisions or subdivision thereof as may be caused or suffered by reason only of the neglect or default of the Grantee and its successors and its and their contractors, subcontractors, agents, servants and employees.

3. For all or any of the purposes aforesaid the Grantee its surveyors, engineers, servants, agents, licensees, contractors, subcontractors, workmen and others authorised by it with or without vehicles, equipment, machinery, tools and materials, shall have the right to use such land of the Grantor immediately adjacent to the servient tenement as may reasonably be required by the Grantee in connection with all or any of the purposes aforesaid.

4. Notwithstanding the generality of the foregoing the following provisions shall apply:

(i) The Grantor shall at all times maintain and keep the servient tenement reasonably grassed and properly mown.

(ii) The Grantor shall not erect any buildings, fences, walls, structures, (whether of the class just mentioned or not) or pavings (hereinafter called "obstructions") nor permit nor suffer to grow or remain any vegetation (other than grass which is kept properly mown at all times) on the servient tenement nor shall the Grantor erect permit or suffer to remain any obstructions or vegetation other than grass which is kept properly mown at all times on the land of the Grantor immediately adjacent to the servient tenement whereby the rights of the Grantee set out herein are materially restricted or diminished unless and to the extent only that any such obstructions or vegetation are permitted in writing by the Grantee and only on such terms and conditions as the Grantee may impose or require in the event of such permission being granted.

Title Reference TO ISSUE OUT OF 50938251

5. Where the context so admits or requires:-

(a) the expression "the Grantor" shall include the respective transferees and assigns of the Grantor and the registered proprietor or proprietors owner or owners (and their and each of their respective successors, executors, administrators and assigns as the case may be) and the occupier or occupiers for the time being of the servient tenement;

(b) the expression "the Grantee" shall include the successors of the Grantee; and

(c) words importing the singular number include the plural number and vice versa and words importing any gender include the other genders and words importing only persons include corporations and/or associations and/or bodies and vice versa in each respective case.

OCDOLFES

717184744 W10 o R/E 17/05/2016

QUEENSLAND TITLES REGISTRY
Land Title Act 1994 and Land Act 1994

EASEMENT

FORM 9 Version 4
Page 1 of 1

717252321
$169.00
$169.00
17/05/2016 10:16

BE 601

Duty Imprint
Client No: 38930 90 Duties Act 200
Transaction No: 511-552382
Duty Paid $ NIL ☐ Exempt
UTI $
Date: 14/3/16 Signed:

1. Grantor (parcel 3')
AUSTRAL BRICKS (QLD) PTY LTD A.B.N. 62 125 934 858 &
BGMG 9 PTY LTD A.C.N. 167 478 140 TRUSTEE UNDER
INSTRUMENT 715652304 ('parcels 1 & 2')

Lodger (Name, address, E-mail & phone number) GLX for HDY 4221442/DE — Lodger Code 45A

2. Description of Easement/Lot on Plan — Title Reference
Servient Tenement (burdened land)

EASEMENT R IN LOT 6 ON SP283241
EASEMENT S IN LOT 7 ON SP283241
EASEMENT T IN LOT 8 ON SP283241
('parcel 3')

#Dominant Tenement (benefited land)

not applicable if easement in gross
NOT APPLICABLE

3. Interest being burdened
FEE SIMPLE

#4. Interest being benefited
NOT APPLICABLE
not applicable if easement in gross

5. Grantee Given names — Surname/Company name and number (include tenancy if more than one)
CENTRAL SEQ DISTRIBUTOR-RETAILER AUTHORITY ABN 86 673 835 011

6. Consideration
$1.00

7. Purpose of easement
SEWERAGE

8. Grant/Execution

The Grantor for the above consideration grants to the Grantee the easement over the servient tenement for the purpose stated in item 7 and the Grantor and Grantee covenant with each other in terms of the attached schedule.

Witnessing officer must be aware of his/her obligations under section 162 of the Land Title Act 1994

.....signature
PHILLIP LEE .....full name
JP (Reg No: 127804) .....qualification
Witnessing Officer

(Witnessing officer must be in accordance with Schedule 1 of Land Title Act 1994 eg Legal Practitioner, JP, C Dec)

11/2/16
Execution Date

AUSTRAL BRICKS (QLD) PTY LTD
A.B.N. 62 125 934 858
Alexander J. Payne
CFO/Director
DIRECTOR
M.A. FINNEY
Grantor's Signature

.....signature
PHILLIP LEE .....full name
JP (Reg No: 127804) .....qualification
Witnessing Officer

Lodey Handler Solicitor

(Witnessing officer must be in accordance with Schedule 1 of Land Title Act 1994 eg Legal Practitioner, JP, C Dec)

11/2/16
Execution Date

BGMG 9 PTY LTD A.C.N. 167 478 140
TRUSTEE UNDER INSTRUMENT 715652304
MEGAN M KUBLINS
Grantor's Signature

signature
full name Saul Jacob Squires
qualification Solicitor
Witnessing Officer
(Witnessing officer must be in accordance with Schedule 1 of the Land Title Act 1994 eg Legal Practitioner, JP, C Dec)

3/2/2016
Execution Date

KYLIE PRIDEAUX
DEPUTY GENERAL COUNSEL
Grantee's Signature

Executed by CENTRAL SEQ DISTRIBUTOR-RETAILER AUTHORITY by its delegate under section 53 of the *South-East Queensland Water (Distribution and Retail Restructuring) Act 2009*

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SCHEDULE

Title Reference [~~Title Reference~~] to issue.

Statement about alteration or minor correction to Land Registry Form

Form being altered or corrected: Form 9

Name of authorised person or solicitor: Annlaise Bougaure

Name of authorised person's firm or employer (legal practice, commercial lender or settlement agency):
Global x Legal Solutions

Item/s being altered or corrected:
Items 1 & 2

Details of alteration or minor correction: The following amendments were recommended by Peter Jamieson (examiner Titles office). In Item 1 above Austral Bacs (Qld) Pty Ltd insert 'parcel 3' in brackets. Under easement T insert the words 'parcel 3' in brackets. In Item 1 after BGMG 9 Pty Ltd after instrument 715623044 insert the words 'parcel 1 & 2'. There is brackets to the left of the words Easement R 2S to indicate lot ownership

Party represented (where signed by solicitor):

Annlaise Bougaure
.....
Authorised person's or Solicitor's Signature

Name of authorised person or solicitor:

Name of authorised person's firm or employer (legal practice, commercial lender or settlement agency):

Item/s being altered or corrected:

Details of alteration or minor correction:

Party represented (where signed by solicitor):

.....
Authorised person's or Solicitor's Signature

Title Reference:

This is the schedule referred to in the Form 9 Easement dated , 2016.

1. Definitions and interpretation

1.1 Definitions

In this easement:

Authorised Persons means tenants, employees, agents, contractors, licensees and invitees of and other persons claiming (or authorised) by, through or under, either the Grantee or the Grantor (as the case may require).

Easement Area means the land described as the burdened land in Item 2 of the Form 9.

Easement Purpose means the purpose stated in Item 7 of the Form 9.

Grantee means the person shown as "Grantee" in Item 5 of the Form 9 and that person's assignees and successors.

Grantee's Rights means the rights granted under clause 3.

Grantor means the person shown as "Grantor" in Item 1 of the Form 9 and each assignee or successor of that person in respect of the Easement Area.

Grantor's Land means the parcel or parcels of the Grantor's land that includes the Easement Area.

Improvements means everything, including vegetation, on the Easement Area.

Relevant Works means the Sewerage Works.

Sewerage Works means all pipes for carrying, treating or disposing of sewage and other wastewater, all ancillary plant, equipment, fittings and attachments (including pumps and pump stations) and works of any nature to protect or support any of them.

1.2 Interpretation

In this grant of easement:

(a) headings are for convenience only and do not affect interpretation;

and unless the context indicates a contrary intention:

(b) an obligation or a liability assumed by, or a right conferred on, 2 or more persons binds or benefits them jointly and severally;

(c) "person" includes an individual, the estate of an individual, a corporation, an authority, an association or a joint venture (whether incorporated or unincorporated), a partnership and a trust;

(d) a reference to a party includes that party's executors, administrators, successors and permitted assigns, including persons taking by way of novation, and, in the case of a trustee, includes a substituted or an additional trustee;

(e) a word importing the singular includes the plural (and vice versa), and a word indicating a gender includes every other gender;

(f) if a word or phrase is given a defined meaning, any other part of speech or grammatical form of that word or phrase has a corresponding meaning;

Title Reference:

(g) if the Easement Area is defined using a horizontal plane and references to marks on the surface of land:

(i) a reference to a thing on, or the doing of any thing on or in respect of, land in the Easement Area includes a reference to a thing, or the doing of the thing, through, over, across or under the land;

(ii) a reference to land in the Easement Area includes the land's surface, sub-surface and strata above the surface;

(h) if the Easement Area is defined using 3 dimensionally located points to identify the position, shape and dimensions of each bounding surface:

(i) a reference to a thing on, or the doing of any thing on or in respect of, land in the Easement Area includes a reference to a thing, or the doing of the thing, in or through the land;

(ii) if the Easement Area includes a surface of land, a reference to land in the Easement Area includes that surface, and any sub-surface of, and strata above that, land (in the Easement Area);

(i) "includes" in any form is not a word of limitation.

2. Public utility easement

This easement is a public utility easement for:

(a) the Easement Purpose;

(b) undertaking or engaging in any service, facility or activity that directly or indirectly refers to or is related to the Easement Purpose and which the Grantee has authority to undertake or engage in under a law; and

(c) the exercise by the Grantee of the other rights given to the Grantee by this easement.

3. Grantee's Rights

The Grantor grants the Grantee the right for the Grantee and its Authorised Persons:

(a) to transmit, or permit to be transmitted sewage and other wastewater in and through Sewerage Works on the Easement Area;

(b) to construct, place, lay, deepen, widen, inspect, clean, maintain, change, add to, remove, repair, replace, relay, renew, use and manage the Relevant Works on, or inspect or survey, the Easement Area at all times and from time to time;

(c) to run and pass electric current, electric transmissions, electronic signals, electronic transmissions and other substances through the Easement Area (including the Relevant Works);

(d) in order to exercise the rights in clauses 3 (a) to (c), the right to:

(i) enter the Easement Area, remain on it, and pass and repass on it, with or without vehicles, machinery, plant, equipment, tools and materials;

(ii) place on the Easement Area the machinery, plant, equipment, tools and materials required to exercise those rights and leave them there;

(iii) dig into, sink shafts in, and erect scaffolding on and open and break up the Easement Area;

Title Reference:

(iv) remove and dispose of spoil created by the exercise of those rights;

(v) construct and maintain on the Easement Area those access tracks, gates and ancillary works that the Grantee reasonably considers necessary;

(vi) clear vegetation from the Easement Area by any method and burn it off;

(vii) cross any part of the Grantor's Land that the Grantee considers convenient or necessary to go from the Easement Area to the public road that is nearest to the Easement Area and back again;

(viii) remove fences or gates on the Grantor's Land;

(ix) do anything else on the Easement Area that the Grantee considers reasonably necessary to exercise those rights; and

4. Grantor's obligations

(a) The Grantor must:

(i) allow the Relevant Works to remain on the Easement Area;

(ii) keep the Easement Area in good order and repair and suitable for exercising the Grantee's Rights;

(iii) pay all rates, taxes and imposts in the nature of a tax payable in connection with the Easement Area or the Grantor's ownership of it, on time;

(iv) not, unless it has the Grantee's written consent:

A. erect any structure or other thing on the Easement Area;

B. remove from or stockpile on the Easement Area soil, sand, gravel or any other substance or material;

C. install concrete, bitumen or other pavement or driveways on the Easement Area or gardens or landscaping involving concrete, brick or other permanent materials or otherwise build over the Relevant Works;

D. alter the ground level, or alter or disturb the existing grades of the Easement Area or change its topography;

E. inundate the Easement Area with water;

F. plant any tree or other vegetation or crop on the Easement Area;

G. light a fire on the Easement Area, or allow a fire to escape onto the Easement Area from the Grantor's Land (that is not part of the Easement Area);

H. construct any road or other earthwork on the Easement Area; or

I. do or cause or permit anything (including granting rights to another person) in connection with the Easement Area that could obstruct or interfere with the Relevant Works or their proper and effective use or the proper exercise of the Grantee's Rights; and

(v) notify the Grantee within 14 days if the Grantor receives or becomes aware of any application for, or grant of, a mining or petroleum tenement under the Mineral

Title Reference:

Resources Act 1989, Petroleum Act 1923, Petroleum and Gas (Production and Safety) Act 2004 or any other law in respect of the Easement Area.

(b) If the Grantor does not comply with any of its obligations under this easement (whether a positive or negative obligation) the Grantee may remedy the Grantor's breach and recover the cost of doing so from the Grantor as a debt owing to the Grantee.

(c) The Grantor must comply with its obligations under a law relating to the Easement Area and the Relevant Works, including the Water Supply (Safety and Reliability) Act 2008 and the South-East Queensland Water (Distribution and Retail Restructuring) Act 2009.

5. Property in and expenses of Relevant Works

(a) The Relevant Works are the Grantee's property and do not become the Grantor's property.

(b) The Grantee is responsible for and must pay all expenses in connection with the Relevant Works.

6. Exercise of Grantee's Rights

(a) In exercising the Grantee's rights, the Grantee must, at its own cost:

(i) ensure all work is done in a proper and workmanlike manner;

(ii) comply with all relevant laws;

(iii) cause as little inconvenience or obstruction as practicable to the Grantor and any occupier of the Grantor's Land;

(iv) cause as little damage as practicable to the Grantor's Land, including the Easement Area, and any Improvements;

(v) if damaged by the Grantee, restore the Grantor's Land as nearly as practicable to its former condition; and

(vi) make good any collateral damage.

(b) Without limiting clause 6(a), the Grantee must:

(i) reinstate all fences and gates damaged by it in the exercise of any of the Grantee's Rights; or

(ii) in lieu of reinstating any such fence, install a gate the quality of materials and workmanship of which, except with the Grantor's consent, must be not less than the quality and materials of workmanship of the existing fence.

(c) Section 85B(2) of the Land Title Act 1994 and section 366(2) of the Land Act 1994 are excluded from this easement.

(d) This easement does not affect any rights or powers the Grantee may have under a statute, including the Water Supply (Safety and Reliability) Act 2008 and the South-East Queensland Water (Distribution and Retail Restructuring) Act 2009. The Grantee may exercise its rights and powers under a statute in respect of the Easement Area and its Relevant Works in lieu of, or without regard to, its rights and powers under this easement.

7. Waiver

(a) Failure to exercise or enforce, or a delay in exercising or enforcing, or the partial exercise or enforcement of, a right, power or remedy provided by law or under this easement by a party

Title Reference:

does not preclude, or operate as a waiver of, the exercise or enforcement, or further exercise or enforcement, of that or any other right, power or remedy provided by law or under this easement.

(b) A waiver or consent given by a party under this easement is only effective and binding on that party if it is given or confirmed in writing by that party.

(c) No waiver of a breach of a term of this easement operates as a waiver of another breach of that term or of a breach of any other term of this easement.

8. Costs

(a) Unless stated otherwise in this easement, each party must pay its own costs and expenses in connection with negotiating, preparing, executing, registering and stamping, and performing its obligations under this easement.

(b) In respect of this easement, the Grantor must pay:

(i) the costs and expenses of and incidental to preparing any survey required to register it;

(ii) any duty payable on it; and

(iii) the fees for registering it.

9. Registration

So that this easement can be registered, the Grantor must promptly:

(a) produce the relevant instrument of title (if any) to the Grantor's Land to the Registrar of Titles or other appropriate officer; and

(b) obtain and produce to the Registrar of Titles or other appropriate officer any consent required from any person having any interest in that party's land.

10. Burden

(a) The burden of this easement passes with the Easement Area.

(b) Each promise made in this easement by the Grantor binds the Grantor's successors in title and is for the benefit of the Grantee and its assignees.

(c) Subject to clause 10(d), from the date the Grantor ceases to be the owner of the Easement Area, the Grantor is released from all obligations under this easement

(d) The Grantor, at its own cost, must, before it sells or otherwise disposes of the Easement Area, obtain from any buyer or disponee of the Easement Area a covenant, in favour of the Grantee, by which the buyer or disponee agrees to comply with the terms (whether positive or negative) of this easement.

(e) Clause 10(c) does not apply unless clause 10(d) is complied with.

11. Governing law

The laws of Queensland govern this easement.

Title Reference:

12. Severance

If at any time a provision of this easement is or becomes illegal, invalid or unenforceable in any respect, that will not affect or impair the legality, validity or enforceability of any other provision of this easement.

13. Goods and Services Tax

(a) For the purpose of this clause unless the context otherwise requires:

(i) **GST Legislation** means A New Tax System (Goods and Services Tax) Act 1999 (Cth) and any related tax imposition Act (whether imposing tax as a duty of customs excise or otherwise) and includes any legislation which is enacted to validate recapture or recoup the tax imposed by any of such Acts;

(ii) **Applicable GST** has the meaning ascribed to it in clause 13(b);

(iii) **GST** means any tax imposed by or through the GST Legislation on a supply (without regard to any input tax credit);

(iv) **Recipient** means the party treated by the GST Legislation as the recipient of a supply from the Supplier;

(v) **Representative** means a representative member of a GST group to which the relevant Supplier belongs;

(vi) **Supply** means any supply (within the meaning which it bears in the GST Legislation) by the Supplier under this easement;

(vii) **Supplier** means any party to this easement treated by the GST Legislation as making a taxable supply under or in connection with this easement;

(viii) where any other term is used in this clause which is defined in the GST legislation it will have the meaning which it bears in the GST Legislation.

(b) In the case of a Supply which is a taxable supply:

(i) the consideration payable or otherwise provided (apart from under this clause) to the Supplier (under the other provisions of this easement) will be increased by an amount equal to the Applicable GST;

(ii) the Applicable GST will be the GST payable on the Supply;

(iii) the Applicable GST will be added to the consideration payable or otherwise provided (apart from under this clause) for the Supply under the other provisions of this easement so as to form an additional part of the consideration for the Supply.

(c) The Recipient will pay on demand to the Supplier an amount equal to any increment in consideration which is payable under this clause in respect of any Supply, and such amount will be a debt due and owing by the Recipient to the Supplier which is recoverable without setting off any refund or counter claim.

(d) The Supplier will provide the Recipient with tax invoices and/or adjustment notes in relation to the Supply (but will not be obliged or requested to create such invoices for amounts in excess of amounts received from the Recipient) and do all things reasonably necessary to assist the Recipient to enable it to claim and obtain any input tax credit available to the Recipient in respect of the Supply.

(e) Where the consideration for a Supply consists (in whole or in part) of the recovery by the Supplier of all or a proportion of the Supplier's costs, the amount recoverable will be reduced by the amount (or the corresponding proportion) of the input tax credits available to the

Title Reference:

Supplier in respect of such costs and then increased by any Applicable GST under clause 13(b).

(f) In the event that liability for payment of GST in respect of a Supply under this easement is imposed upon a Representative of a Supplier this clause will nonetheless apply and the Adjustments will be calculated in all respects as if the Supplier was liable for the GST imposed on such Supply and entitled to input tax credits properly allocated to the making of that Supply.

14. Where the Easement Area is trust land under the Land Act 1994

Where the Easement Area is included in trust land under the Land Act 1994 this clause 14 will also apply:

(a) If the trust land is a reserve, in clause 1.1 the definition of "Grantor" is replaced by the following:

Grantor means the person shown as "Grantor" in Item 1 of the Form 9 and, where the context permits, any trustee of the Easement Area.

(b) In this clause 14:

Minister means the Minister administering the Land Act 1994;

(c) Despite anything else, the Grantee may not cut or remove any timber or trees from the Easement Area without first giving reasonable notice to the Grantor and obtaining all necessary approvals at law. Such notice will not be required under this clause if there is an actual or potential danger to persons or property or if there is any interference or jeopardy to the supply of the Relevant Works.

(d) Release and Indemnity

(i) The Grantee indemnifies and agrees to keep indemnified the Minister, the State of Queensland and the Grantor (the **Indemnified Parties**) against all actions, suits, proceedings, claims, demands, costs, losses, damages and expenses (**Claim**) arising out of or in any way connected to or resulting from the granting of this easement to the Grantee or which is connected to or resulting from the Grantee's use and occupation of the Easement Area (all of which are referred to as "the indemnified acts or omissions") save to the extent that the Claim arises as a result of any negligent act or omission of the Indemnified Parties, however, any negligent act or omission of one of the Indemnified Parties does not negate the indemnity to any of the other Indemnified Parties.

(ii) The Grantee hereby releases and discharges the Indemnified Parties from any Claim relating to the indemnified acts or omissions which may be made against the Indemnified Parties, save to the extent that the Claim arises as a result of any negligent act or omission of the Indemnified Parties, however, any negligent act or omission of one of the Indemnified Parties does not negate the release and discharge in favour of any of the other Indemnified Parties.

(iii) To remove doubt, the Grantee specifically agrees that the indemnity provided by the Grantee in this clause 14(d) extends to any Claim (as defined by this clause 14) arising from the use of any other area of the trust land by the Grantee.

(e) Public Liability Insurance

(i) The Grantee must effect a public liability insurance policy with an insurer authorised under the Insurance Act 1973 (Commonwealth) or, in any other case, to the satisfaction of the Minister, naming the Grantee as the insured covering legal liability for any loss of or damage to any property and for the injury (including death) to any person arising out of anything done or omitted on or about the Easement Area and against all claims, demands, proceedings, costs, charges and expenses

Title Reference:

whatsoever in respect thereof subject to the terms and conditions of the insurance policy.

Such policy must:

A. be for an amount of not less than twenty million dollars ($20,000,000.00) in respect of all claims arising out of a single event or such higher amounts as the Minister may reasonably require; and

B. be effected on a "claims occurring" basis so that any claim made by the Grantee under the policy after the expiration of the period of policy cover but relating to an event occurring during the currency of the policy will be covered by the policy subject to the claim meeting the policy's other terms and conditions; and

C. be maintained at all times during the currency of this easement, and upon receipt of any Notice of Cancellation, the Grantee must immediately effect another public liability insurance policy in accordance with the terms and conditions of this easement.

(ii) The Grantee must forward a certificate of currency to the Grantor within 10 business days of the commencement of each respective renewal period.

(iii) The Grantee must, as soon as practicable, inform the Minister and the Grantor, in writing, of the occurrence of any event that the Grantee considers is likely to give rise to a claim under the policy of insurance effected and must ensure that the Minister and the Grantor are kept fully informed of subsequent actions and developments concerning the claim.

(iv) To remove doubt, the requirements of this clause 14(e) apply to any other area of the Grantor's Land used by the Grantee.

Deed to Issue Req'd 6838404

23 NOV 1982

NO. G838465

MEMORANDUM OF TRANSFER OF EASEMENT

BRICKWORKS LIMITED

the Grantor

THE QUEENSLAND ELECTRICITY GENERATING BOARD

the Grantee

Particulars entered in the Register Book

Volume 6396 Folio 223

6 DEC 1982 at 4 25pm

Registrar of Titles

Plan noted

98853

42-00

RECEIVED REGR OF TITLES OCT 25 2 33 PM '82

602489058

G838465 EAS IN GROSS

Deed Auth Regd

THE QUEENSLAND ELECTRICITY GENERATING BOARD

BRISBANE

MEMORANDUM OF ENCUMBRANCES, LIENS AND INTERESTS

Stamp Duties Office

29 JUL 1982

— BRISBANE —

Auth Regd

Deed 6396/223

Received / deed mentioned herein.

O.E.G.B

Per 1/3/83

EASEMENT No. G838465 is vested in Queensland Electricity Commission No. H.89745 PRODUCED 30 Apr 1986

REGD

27 MAY 1986

REGISTRAR OF TITLES

© The State of Queensland (Natural Resources, Mines and Energy) 2019

The Grantee its servants, agents, workmen, linesmen, contractors and others authorised by it shall have full and free right to enter upon and remain, pass and repass on and over the said easement for all or any of the purposes aforesaid or for the purpose of preventing any breach by the Grantor of the Grantor's obligations herein contained and with or without vehicles, plant and equipment of any description and for all or any of the purposes aforesaid the Grantee, its agents, servants, workmen, linesmen and others authorised by the Grantee with or without vehicles, plant and equipment of any description shall have the right of ingress and egress to and from the said easement over the land of the Grantor adjoining or adjacent to the said easement to permit access to the nearest surveyed road or to such point on the land of the Grantor as the Grantee shall consider convenient or necessary to enable the Grantee, its agents, servants, workmen, linesmen and others authorised by the Grantee to obtain access to and from the said easement.

IN WITNESS WHEREOF the Seal of BRICKWORKS LIMITED was hereunto affixed this Twenty-fourth day of May 1982

THE SEAL of BRICKWORKS LIMITED was hereunto affixed by authority of the Board in the presence of:-

Secretary

Director

In the presence of:

A JUSTICE OF THE PEACE

Correct for the Purpose of Registration

THE SEAL of THE QUEENSLAND ELECTRICITY GENERATING BOARD was hereunto affixed by Neil Herbert Davis the Acting General Manager in the presence of Ian Wilson Secretary

THE QUEENSLAND ELECTRICITY GENERATING BOARD SEAL

Acting General Manager

~~$0.75~~ $1-50.

Sec/Lown

QUEENSLAND 23-11-82

W

MEMORANDUM OF TRANSFER OF EASEMENT

#29/07/82 R/N15G3339 6 BRIS
STAMP DUTIES OFFICE
2114284 31 $1.50

BRICKWORKS LIMITED

(hereinafter with his her or their executors administrators and assigns and other successors in title to the land herein described called "the Grantor") being the registered proprietor of an estate in fee simple, subject however to such encumbrances liens and interests as are notified by memorandum endorsed hereon, in all that piece of land described as Subdivision 24 of Portion 371, County of Stanley, Parish of Tingalpa, City of Brisbane being the whole of the land contained in Certificate of Title Volume 6396 Folio 223 and containing an area of 43 acres and one perch (2 roods issued from V. 1926 F. 235)
(which land is hereinafter called "the said land")
IN CONSIDERATION of the sum of Fifty Dollars
($ 50.00) paid to the Grantor by THE QUEENSLAND ELECTRICITY GENERATING BOARD
(hereinafter with its successors and assigns called "the Grantee") the receipt of which sum is hereby acknowledged
DO HEREBY GRANT AND TRANSFER to the Grantee an Easement (hereinafter called "the said easement") over the area of 2 roods 32.2 perches

of the said land and described as Easement A in Subdivision 24 of Portion 371 as shown on Registered Plan Number 104790

in perpetuity to permit and allow the Grantee at all times and in all manner hereafter full right to convey electricity on, over, in, under, across and through the said easement in accordance with the provisions of the Electricity Act 1976 (or as amended) by electric power transmission lines or any such means as may be appropriate, and the Grantor hereby authorises the Grantee by its servants, agents, employees, workmen, linesmen and others authorised by it to:

1. construct, inspect, maintain, repair, renew, reconstruct, replace on, in, under, over, across, through or remove from the said easement the electric line or lines herein referred to, comprising one or more conductors with all necessary cables, poles, towers, ground stays, supports and appurtenant works as shall be required for conveying electricity;

2. clear and keep cleared by any means or method the said easement of timber, trees and undergrowth and to burn off on the said easement all such timber, trees and undergrowth;

3. construct and maintain on the said easement all such access tracks, gates and other works as the Grantee shall consider necessary.

The land comprising the said easement may be used by the Grantor for any purpose not inconsistent with the rights of the Grantee herein provided and not capable of causing interference with or damage or risk to the electric lines, towers, poles, ground stays, supports, access tracks or appurtenant works erected on, in, over, across or through the said easement, AND IN PARTICULAR THE GRANTOR SHALL NOT WITHOUT THE CONSENT IN WRITING OF THE GRANTEE:

(a) make or permit to be made any alterations or additions to the structures or buildings affecting their overall dimensions existing on the said easement at the date hereof;

(b) erect or permit the erection of any buildings or structures;

(c) erect any fence of a height of more than three (3) metres;

(d) stockpile or fill with or permit the stockpiling of or filling with any soil, sand, gravel, other substance or materials or the construction of any roads, dam walls or other earthworks on the said easement which would in any way reduce the clearance above the ground level of the conductors or transmission lines below the statutory clearance as may exist from time to time;

(e) cause or permit the inundation of the said easement where any existing towers, poles, ground stays or supports are erected or located or proposed to be located from the date hereof;

AND FURTHER THE GRANTOR SHALL NOT:

(f) lay or permit the laying of any metal pipe on, in or across the said easement within four (4) metres from the base of any tower, ground stay or support;

(g) grow or permit the growing of sugar cane upon the said easement where it is not assigned sugar cane land as at the date hereof and if assigned land at the date hereof grow or permit the growing of sugar cane within ten (10) metres of any tower base or pole;

(h) reside in or permit the residing in or occupation of any caravan or mobile home which may be parked or located on the said easement irrespective of whether the said easement is part of a caravan park or private property;

(i) remove or permit the removal of or filling with any soil, sand, gravel or other substance within a distance of twenty (20) metres from the base of any pole, tower, ground stay or support in, on or under the said easement.

NO. G838462

MEMORANDUM OF ENCUMBRANCES, LIENS AND INTERESTS

MEMORANDUM OF TRANSFER OF EASEMENT

Stamp Duties Office
29 JUL 1982
— BRISBANE —

BRICKWORKS LIMITED

the Grantor

THE QUEENSLAND ELECTRICITY GENERATING BOARD

the Grantee

EASEMENT No. G.838462 is vested in Queensland Electricity Commission
No. 487985 PRODUCED 13 May 1985
REGD
27 MAY 1986
REGISTRAR OF TITLES

Particulars entered in the Register Book
Volume 2063 Folio 158

Plan noted

12 NOV 1982
(ACTING) Registrar of Titles

Received deed mentioned herein.
QEGB
Per [illegible] 7/3/83

98853
42-00

RECEIVED
REGISTRAR OF TITLES
OCT 25 2 33 PM '82

602032590

G838462 EAS IN GROSS

THE QUEENSLAND ELECTRICITY GENERATING BOARD
BRISBANE

O/D

© The State of Queensland (Natural Resources, Mines and Energy) 2019

The Grantee its servants, agents, workmen, linesmen, contractors and others authorised by it shall have full and free right to enter upon and remain, pass and repass on and over the said easement for all or any of the purposes aforesaid or for the purpose of preventing any breach by the Grantor of the Grantor's obligations herein contained and with or without vehicles, plant and equipment of any description and for all or any of the purposes aforesaid the Grantee, its agents, servants, workmen, linesmen and others authorised by the Grantee with or without vehicles, plant and equipment of any description shall have the right of ingress and egress to and from the said easement over the land of the Grantor adjoining or adjacent to the said easement to permit access to the nearest surveyed road or to such point on the land of the Grantor as the Grantee shall consider convenient or necessary to enable the Grantee, its agents, servants, workmen, linesmen and others authorised by the Grantee to obtain access to and from the said easement.

IN WITNESS WHEREOF the Seal of BRICKWORKS LIMITED was hereunto affixed this Twenty-fourth day of May 1982

THE SEAL of BRICKWORKS LIMITED was hereunto affixed by authority of the Board in the presence of:- Secretary

Director

In the presence of:-

A JUSTICE OF THE PEACE

Correct for the Purpose of Registration

THE SEAL of THE QUEENSLAND ELECTRICITY GENERATING BOARD was hereunto affixed by Neil Herbert Davis the Acting General Manager in the presence of Ian Wilson Secretary

Acting General Manager

THE QUEENSLAND ELECTRICITY GENERATING BOARD SEAL

~~$1.50~~ $1.50

Bell/Loan

9/11/82

QUEENSLAND

W

MEMORANDUM OF TRANSFER OF EASEMENT

#29/07/82 R/N1503338 G BRIS
STAMP DUTIES OFFICES
2114283 31 $1.50

BRICKWORKS LIMITED

(hereinafter with his her or their executors administrators and assigns and other successors in title to the land herein described called "the Grantor") being the registered proprietor of an estate in fee simple, subject however to such encumbrances liens and interests as are notified by memorandum endorsed hereon, in all that piece of land described as Subdivision 23 of Portion 371, County of Stanley, Parish of Tingalpa, City of Brisbane being the whole of the land contained in Certificate of Title Number 394068 Volume 2063 Folio 158 and containing an area of 41 acres 3 roods 30 perches
(which land is hereinafter called "the said land")
IN CONSIDERATION of the sum of Fifty Dollars
($50.00) paid to the Grantor by THE QUEENSLAND ELECTRICITY GENERATING BOARD
(hereinafter with its successors and assigns called "the Grantee") the receipt of which sum is hereby acknowledged
DO HEREBY GRANT AND TRANSFER to the Grantee an Easement (hereinafter called "the said easement") over the area of 3 roods 37 perches

Servient

of the said land and described as Easement A in Subdivision 23 of Portion 371 as shown on Registered Plan Number 104791

in perpetuity to permit and allow the Grantee at all times and in all manner hereafter full right to convey electricity on, over, in, under, across and through the said easement in accordance with the provisions of the Electricity Act 1976 (or as amended) by electric power transmission lines or any such means as may be appropriate, and the Grantor hereby authorises the Grantee by its servants, agents, employees, workmen, linesmen and others authorised by it to:

1. construct, inspect, maintain, repair, renew, reconstruct, replace on, in, under, over, across, through or remove from the said easement the electric line or lines herein referred to, comprising one or more conductors with all necessary cables, poles, towers, ground stays, supports and appurtenant works as shall be required for conveying electricity;

2. clear and keep cleared by any means or method the said easement of timber, trees and undergrowth and to burn off on the said easement all such timber, trees and undergrowth;

3. construct and maintain on the said easement all such access tracks, gates and other works as the Grantee shall consider necessary.

The land comprising the said easement may be used by the Grantor for any purpose not inconsistent with the rights of the Grantee herein provided and not capable of causing interference with or damage or risk to the electric lines, towers, poles, ground stays, supports, access tracks or appurtenant works erected on, in, over, across or through the said easement, AND IN PARTICULAR THE GRANTOR SHALL NOT WITHOUT THE CONSENT IN WRITING OF THE GRANTEE:

(a) make or permit to be made any alterations or additions to the structures or buildings affecting their overall dimensions existing on the said easement at the date hereof;

(b) erect or permit the erection of any buildings or structures;

(c) erect any fence of a height of more than three (3) metres;

(d) stockpile or fill with or permit the stockpiling of or filling with any soil, sand, gravel, other substance or materials or the construction of any roads, dam walls or other earthworks on the said easement which would in any way reduce the clearance above the ground level of the conductors or transmission lines below the statutory clearance as may exist from time to time;

(e) cause or permit the inundation of the said easement where any existing towers, poles, ground stays or supports are erected or located or proposed to be located from the date hereof;

AND FURTHER THE GRANTOR SHALL NOT:

(f) lay or permit the laying of any metal pipe on, in or across the said easement within four (4) metres from the base of any tower, ground stay or support;

(g) grow or permit the growing of sugar cane upon the said easement where it is not assigned sugar cane land as at the date hereof and if assigned land at the date hereof grow or permit the growing of sugar cane within ten (10) metres of any tower base or pole;

(h) reside in or permit the residing in or occupation of any caravan or mobile home which may be parked or located on the said easement irrespective of whether the said easement is part of a caravan park or private property;

(i) remove or permit the removal of or filling with any soil, sand, gravel or other substance within a distance of twenty (20) metres from the base of any pole, tower, ground stay or support in, on or under the said easement.

NO. G838460

601995184

G838460 EAS IN GROSS

MEMORANDUM OF ENCUMBRANCES, LIENS AND INTERESTS

Land Titles Office

29 JUL 1982

BRICKWORKS LIMITED

the Grantor

THE QUEENSLAND ELECTRICITY GENERATING BOARD

the Grantee

Particulars entered in the Register Book

Volume 4615 Folio 209

Plans noted

Received 1 deed mentioned herein.

QEGB SR88838 7/12/82

EASEMENT No. G.838.460 is vested in Queensland Electricity Commission

No. H.869.740 PRODUCED 20 Apr 1986

REGD

22 MAY 1986

REGISTRAR OF TITLES

STAMPER LARGE BLANK NEEDED

6 DEC 1982

Registrar of Titles

98853

42-00

10

not affected by East G201334

2660m² being part of Easement A on R.P. 97658 5777m² being part of Easement A on R.P. 97659 2501m² being part of Easement A on R.P. 97660 and 3213m² being part of Easement A on R.P. 97661 in Cancelled Grade Resumption No. H928065

PRODUCED

REGISTERED 19 SEP 1986

REGISTRAR OF TITLES

RECEIVED REGR OF TITLES OCT 25 2 33 PM '82

SHORT FEE $4.50 REGISTRATION FEE 26 NOV 1982 Paid Vide No. E6742

area of parcel

B 2/11/82

THE QUEENSLAND ELECTRICITY GENERATING BOARD BRISBANE

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150

Bill/Logan

3-12-82

QUEENSLAND

W

MEMORANDUM OF TRANSFER OF EASEMENT

*29/07/82 R/N1503340 6 BRIS
STAMP DUTIES OFFICE
* 2114285 31 $7.50

MC BRICKWORKS LIMITED
(hereinafter with his her or their executors administrators and assigns and other successors in title to the land herein described called "the Grantor") being the registered proprietor of an estate in fee simple, subject however to such encumbrances liens and interests as are notified by memorandum endorsed hereon, in all that piece of land described as Portion 323, Subdivisions 1 and 2 of Portion 321, Subdivisions 1 and 2 of Portion 322 and Subdivisions 1 to 5 and 7 of Portions 324 and 325 County of Stanley Parish of Tingalpa City of Brisbane being the whole of the land contained in Certificate of Title Volume 4615 Folio 209 and containing an area of 275 acres 20 perches
(which land is hereinafter called "the said land")
IN CONSIDERATION of the sum of Five Hundred Dollars
($ 500.00) paid to the Grantor by THE QUEENSLAND ELECTRICITY GENERATING BOARD
(hereinafter with its successors and assigns called "the Grantee") the receipt of which sum is hereby acknowledged
DO HEREBY GRANT AND TRANSFER to the Grantee an Easement (hereinafter called "the said easement") over the area of 2 acres 1 rood 29 perches (Easement A in Portion 323), 1 acre 24 perches (Easement A in Subdivision 1 of Portion 321), 1 acre 20.4 perches (Easement A in Subdivision 2 of Portion 321), ~~1 acre~~ 3 roods 13.6 perches (Easement A in Subdivision 1 of Portion 322), 1 acre 2 roods 27.8 perches (Easement A in Subdivision 2 of Portion 322), 1 acre 1.9 perches (Easement A in Subdivision 3 of Portion 324), 1 acre 1 rood 28 perches (Easement A in Subdivision 4 of Portion 324), 16 perches (Easement A in Subdivision 5 of Portion 324), 0.03 perches (Easement B in Subdivision 5 of Portion 324) and 2 acres 1.5 perches (Easement A in Subdivision 7 of Portion 324)

0-3-13.6

of the said land and described as Easement A in Portion 323 as shown on Registered Plan Number 97658, Easement A in Subdivision 1 of Portion 321 as shown on Registered Plan Number 97661, Easement A in Subdivision 2 of Portion 321 as shown on Registered Plan Number 97396, Easement A in Subdivision 1 of Portion 322 as shown on Registered Plan Number 97660, Easement A in Subdivision 2 of Portion 322 as shown on Registered Plan Number 97659, Easement A in Subdivision 3 of Portion 324 as shown on Registered Plan Number 97655, Easement A in Subdivision 4 of Portion 324 as shown on Registered Plan Number 97656, Easement A in Subdivision 5 of Portion 324 as shown on Registered Plan Number 97657, Easement B in Subdivision 5 of Portion 324 as shown on Registered Plan Number 97657 and Easement A in Subdivision 7 of Portion 324 as shown on Registered Plan Number 97654

evient

A/Loc – as underlined

in perpetuity to permit and allow the Grantee at all times and in all manner hereafter full right to convey electricity on, over, in, under, across and through the said easement in accordance with the provisions of the Electricity Act 1976 (or as amended) by electric power transmission lines or any such means as may be appropriate, and the Grantor hereby authorises the Grantee by its servants, agents, employees, workmen, linesmen and others authorised by it to:

1. construct, inspect, maintain, repair, renew, reconstruct, replace on, in, under, over, across, through or remove from the said easement the electric line or lines herein referred to, comprising one or more conductors with all necessary cables, poles, towers, ground stays, supports and appurtenant works as shall be required for conveying electricity;

2. clear and keep cleared by any means or method the said easement of timber, trees and undergrowth and to burn off on the said easement all such timber, trees and undergrowth;

3. construct and maintain on the said easement all such access tracks, gates and other works as the Grantee shall consider necessary.

The land comprising the said easement may be used by the Grantor for any purpose not inconsistent with the rights of the Grantee herein provided and not capable of causing interference with or damage or risk to the electric lines, towers, poles, ground stays, supports, access tracks or appurtenant works erected on, in, over, across or through the said easement, AND IN PARTICULAR THE GRANTOR SHALL NOT WITHOUT THE CONSENT IN WRITING OF THE GRANTEE:

(a) make or permit to be made any alterations or additions to the structures or buildings affecting their overall dimensions existing on the said easement at the date hereof;

(b) erect or permit the erection of any buildings or structures;

(c) erect any fence of a height of more than three (3) metres;

(d) stockpile or fill with or permit the stockpiling of or filling with any soil, sand, gravel, other substance or materials or the construction of any roads, dam walls or other earthworks on the said easement which would in any way reduce the clearance above the ground level of the conductors or transmission lines below the statutory clearance as may exist from time to time;

(e) cause or permit the inundation of the said easement where any existing towers, poles, ground stays or supports are erected or located or proposed to be located from the date hereof;

AND FURTHER THE GRANTOR SHALL NOT:

(f) lay or permit the laying of any metal pipe on, in or across the said easement within four (4) metres from the base of any tower, ground stay or support;

(g) grow or permit the growing of sugar cane upon the said easement where it is not assigned sugar cane land as at the date hereof and if assigned land at the date hereof grow or permit the growing of sugar cane within ten (10) metres of any tower base or pole;

(h) reside in or permit the residing in or occupation of any caravan or mobile home which may be parked or located on the said easement irrespective of whether the said easement is part of a caravan park or private property;

(i) remove or permit the removal of or filling with any soil, sand, gravel or other substance within a distance of twenty (20) metres from the base of any pole, tower, ground stay or support in, on or under the said easement.

The Grantee its servants, agents, workmen, linesmen, contractors and others authorised by it shall have full and free right to enter upon and remain, pass and repass on and over the said easement for all or any of the purposes aforesaid or for the purpose of preventing any breach by the Grantor of the Grantor's obligations herein contained and with or without vehicles, plant and equipment of any description and for all or any of the purposes aforesaid the Grantee, its agents, servants, workmen, linesmen and others authorised by the Grantee with or without vehicles, plant and equipment of any description shall have the right of ingress and egress to and from the said easement over the land of the Grantor adjoining or adjacent to the said easement to permit access to the nearest surveyed road or to such point on the land of the Grantor as the Grantee shall consider convenient or necessary to enable the Grantee, its agents, servants, workmen, linesmen and others authorised by the Grantee to obtain access to and from the said easement.

IN WITNESS WHEREOF the Seal of BRICKWORKS LIMITED was hereunto affixed this Twenty-Fourth day of May 19 82 by authority of the Board

THE SEAL of BRICKWORKS LIMITED was hereunto affixed in the presence of: Secretary

Director

in the presence of:

A Justice of the Peace

Correct for the Purpose of Registration

THE SEAL of THE QUEENSLAND ELECTRICITY GENERATING BOARD was hereunto affixed by Neil Herbert Davis the Acting General Manager in the presence of Ian Wilson Secretary

Acting General Manager

QUEENSLAND LAND REGISTRY
Land Title Act 1994 and Land Act 1994

EASEMENT

FORM 9 Version 4
~~Page 1 of 8~~

715547402

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~~Duty Imprint~~
Client No: 1008554
Transaction No: 507-481-471
Duty Paid $ NIL ☐ Exempt
UTI $ —
Date: 16/1/14 Signed:
Duties Act 2001

1. Grantor

Austral Bricks (Qld) Pty Ltd ABN 62 125 934 858

Lodger (Name, address, E-mail & phone number) **Lodger Code**

~~HWL Ebsworth Lawyers~~
~~GPO Box 2083~~, Brisbane QLD 4001 ~~80A~~
~~Ph: (07) 3002 6700~~
~~Email: mtodkill@hwle.com.au~~ CLAYTON UTZ BE232A
Ref: ~~JJE:MLT:~~250249

2. Description of Easement/Lot on Plan

	County	Parish	Title Reference
Servient Tenement (burdened land)			
Easement A on SP 266231	Stanley	Tingalpa	To issue from 16956060
#Dominant Tenement (benefited land)			
# not applicable if easement in gross			
Lot 42 on SP 266231 and Lot 43 on SP266231	Stanley	Tingalpa	To issue from 16956060 and 17115043

3. Interest being burdened

Fee Simple

#4. Interest being benefited

Fee Simple

not applicable if easement in gross

5. Grantee Given names Surname/Company name and number (include tenancy if more than one)

Austral Bricks (Qld) Pty Ltd ABN 62 125 934 858

6. Consideration

$1.00

7. Purpose of easement

Access and Services

8. Grant/Execution

The Grantor for the above consideration grants to the Grantee the easement over the servient tenement for the purpose stated in item 7 and the Grantor and Grantee covenant with each other in terms of the attached schedule.

Witnessing officer must be aware of his/her obligations under section 162 of the Land Title Act 1994

Austral Bricks (Qld) Pty Ltd ABN 62 125 934 858
by its duly constituted attorney Daniel Blaser
under power of attorney no. 715534837

.....signature
MELINDA KATE LEACY .....full name
SOLICITOR .....qualification
Witnessing Officer
(Witnessing officer must be in accordance with Schedule 1 of Land Title Act 1994 eg Legal Practitioner, JP, C Dec)

13/1/14
Execution Date

.....
Grantor's Signature

Austral Bricks (Qld) Pty Ltd ABN 62 125 934 858
by its duly constituted attorney Daniel Blaser
under power of attorney no. 715534837

.....signature
MELINDA KATE LEACY .....full name
SOLICITOR .....qualification
Witnessing Officer
(Witnessing officer must be in accordance with Schedule 1 of Land Title Act 1994 eg Legal Practitioner, JP, C Dec)

13/1/14
Execution Date

.....
Director

.....
Director/ Secretary
Grantee's Signature

149407321/v2

© The State of Queensland (Natural Resources, Mines and Energy) 2019

Title Reference to issue from 16956060 and 17115043

Statement about alteration or minor correction to Land Registry Form

Form being altered or corrected: Form 9 Easement

Name of authorised person or solicitor: Brian Noble

Name of authorised person's firm or employer (legal practice, commercial lender or settlement agency): Clayton Utz Lawyers, Level 28, Riparian Plaza, 71 Eagle Street, Brisbane Qld 4000

Item/s being altered or corrected: Item 2 and Page numbers

Details of alteration or minor correction: Item 2 - Dominant Tenement amended to add "and Lot 43 on SP 266231" after the words "Lot 42"and the words "and 17115043" are added after the words "To issue from 16956060" . The page number is amended to be" Page 1 of 7"

Party represented (where signed by solicitor):

.....
Authorised person's or Solicitor's Signature

Name of authorised person or solicitor:

Name of authorised person's firm or employer (legal practice, commercial lender or settlement agency):

Item/s being altered or corrected:

Details of alteration or minor correction:

Party represented (where signed by solicitor):

.....
Authorised person's or Solicitor's Signature

The Grantor and the Grantee agree on the following terms:

1. Definitions and interpretation

1.1 In this Easement unless the context otherwise indicates:

(a) **"Dominant Tenement"** means the land described as the Dominant Tenement in Item 2 of the Form 9 and includes any part of that land having the benefit of this Easement and, where the context requires, means that portion of the whole of the Dominant Tenement owned by a particular Grantee;

(b) **"Easement"** means this Schedule and the Form 9 and includes any annexures;

(c) **"Form 9"** means the Form 9 Easement to which this Schedule is annexed;

(d) **"Grantee"** means the person named in Item 5 of the Form 9. A reference to the Grantee includes each party comprising the Grantee severally and jointly, as the context requires;

(e) **"Grantee's Works"** means any works undertaken by the Grantee in relation to:

(i) repair, maintenance or replacement of the Roadway; and

(ii) any Services;

(f) **"Grantor"** means the person named in Item 1 of the Form 9. A reference to the Grantee includes each party comprising the Grantee severally and jointly, as the context requires;

(g) **"Grantor's Land"** means Lot 201 on SP 266231, Count of Stanley, Parish of Tingalpa;

(h) **"Grantor's Works"** means any works undertaken by the Grantor in relation to:

(i) repair or maintenance or replacement of the Roadway;

(ii) any Services; or

(iii) the building of any improvements on the Grantor's Land (other than on the Servient Tenement) by the Grantor.

(i) **"Purpose"** means:

(i) a right of access, egress and regress of people, animals and/or Vehicles over the Servient Tenement;

(ii) to lay, install, repair, maintain, replace, inspect, connect to and use the Services;

(iii) to bring machinery, tools and equipment on the Servient Tenement for purposes associated with the rights granted under this Easement; and

(iv) to do such other works and things through, across, in or under the Servient Tenement as are incidental to the proper exercise of the rights granted under this Easement;

(j) **"Roadway"** means any road, path, driveway or track constructed of any material for the carriage of people, animals or Vehicles located upon the Servient Tenement;

(k) **"Services"** means subterranean supply of electricity, water, drainage, sewerage, stormwater, telecommunications and/or other utility services situated in, on and/or under the Servient Tenement and includes pipes, drains, wires, cables and other conducting media and infrastructure for the passage of those services;

(l) **"Servient Tenement"** means the land described as the Servient Tenement in Item 2 of the Form 9 and includes any part of that land subject to the burden of this Easement;

(m) **"Traffic"** means the passage of any person, animal or Vehicle; and

(n) **"Vehicles"** means motor vehicles, howsoever described, including without limitation, cars, utes, vans, trucks, buses, mini buses, bikes, motor bikes, scooters, tractors and lawn mowers.

1.2 References to a person include a corporation, partnership, incorporated association, body corporate, unincorporated body, instrumentality of the Crown and any statutory, public or local authority.

1.3 If a party consists of more than one person, this Easement binds them jointly and each of them individually. A party that is a trustee is bound both personally and as a trustee.

1.4 References to a party includes the party's personal representatives, executors, administrators, successors, permitted assigns and persons authorised by them.

1.5 References to a corporation have the same meaning as in the *Corporations Act 2001* (Cth).

1.6 References to statutes, regulations and statutory provisions includes all statutes, regulations and statutory provisions amending, consolidating, or replacing them.

1.7 Words importing any gender include all other genders.

1.8 Words importing the singular include the plural and vice versa.

1.9 Headings are for convenience only and do not affect interpretation.

1.10 The word "including" or similar expressions are not words of limitation.

1.11 In any combination or list of options, the use of the word "or" is not used as a word of limitation.

1.12 Reference to items, parts and clauses are references to items, parts and clauses of this Easement.

2. Grant of easement

The Grantor grants to the Grantee (in common with the Grantor and others now or hereafter having a grant or right) the Easement for the Purpose.

3. Grantor's rights and obligations

3.1 Subject to sub-clause 2 and except in the case of an emergency, the Grantor must not:

(a) prevent or restrict the Grantee in the exercise of the rights granted by this Easement;

(b) obstruct the Grantee's access over the Servient Tenement;

(c) interrupt or disturb the Grantee's right to enjoy the Servient Tenement; and

(d) erect any buildings, structures or other improvements upon the Servient Tenement or any part of it other than the Roadway.

3.2 If the Grantor is attending to any Grantor's Works, the Grantor may temporarily obstruct the Servient Tenement for reasonable periods as are necessary to carry out the Grantor's Works. Any obstruction must be minimised so far as is reasonably possible. If the Grantor's Works require the breaking of the surface of the Roadway, the Grantor must reinstate the Roadway to its former condition.

4. Grantee's rights and obligations

4.1 The Grantee may do anything reasonably necessary for the Purpose.

4.2 In exercising the Grantee's rights under sub-clause 1, the Grantee must, at its own cost:

(a) ensure all of the Grantee's Works are done in a proper and workmanlike manner;

(b) cause as little inconvenience as reasonably practicable to occupiers of the Grantor's Land;

(c) cause as little damage as reasonably practicable to the Grantor's Land and the Servient Tenement and any improvements on them;

(d) restore the Grantor's Land to its former condition following completion of any Grantee's Works;

(e) make good any collateral damage;

(f) not construct any improvements (other than those required to give effect to any Grantee's Works) on, in or under the Servient Tenement without the prior written consent of the Grantor (such consent not to be unreasonably withheld); and

(g) repair, keep and maintain the Servient Tenement in good repair and suitable for the purpose for which it was granted, including:

(i) ensuring that the Roadway is kept in good and trafficable condition; and

(ii) ensuring that the Services are kept in serviceable condition;

(h) not hinder or allow any persons to hinder the flow of Traffic; and

(i) not bring or leave on the Servient Tenement any offensive, hazardous or dangerous substance or thing or anything which is or may become a danger, material nuisance, material annoyance or material inconvenience to the Grantor or other occupants of the Grantor's Land or any adjacent or nearby land.

4.3 Upon reasonable notice to the Grantor, the Grantee may temporarily obstruct the Servient Tenement for reasonable periods as are necessary to carry out the Grantee's Works. Any obstruction must be minimised so far as is reasonably possible. If the Grantee's Works require the breaking of the surface of the Roadway, the Grantee (being the party comprising the Grantee who is responsible for the offending Grantee's Works) must reinstate the Roadway to its former condition.

5. Costs and maintenance

5.1 The Grantee must:

(a) keep current public liability insurance (for an amount of not less than $10,000,000.00 per event) and general all risks insurance for the Servient Tenement; and

(b) at its cost, repair, keep and maintain the Servient Tenement in good condition and suitable for the Purpose, including:

(i) ensuring that the Roadway is kept in good and trafficable condition; and

(ii) ensuring that the Services are kept in serviceable condition.

5.2 The Grantee must carry out all Grantee's Works at its own cost.

5.3 It is sufficient compliance with sub-clause 1(a) if the Grantee keeps current a single public liability insurance policy globally for the Dominant Tenement (and any other land) which also incorporates the Servient Tenement.

6. Acknowledgements about this Easement

6.1 The Grantor and Grantee acknowledge that unless inconsistent with the subject matter or context of other provisions of this Easement, the benefit of this Easement will extend to and include the tenants, employees, agents, workmen, visitors, licensees and all other persons claiming through or under the Grantee as if each of those persons is the Grantee.

7. Governing law and jurisidiction

7.1 This Easement is governed by and is to be construed in accordance with the laws of Queensland.

7.2 Each party irrevocably and unconditionally submits to the non-exclusive jurisdiction of the courts of Queensland and any courts which have jurisdiction to hear appeals from any of those courts and waives any right to object to any proceedings being brought before those courts.

8. Further steps

8.1 Each party must promptly do whatever any other party reasonably requires of the first party to give effect to this Easement and to enable the other party to perform its obligations under this Easement.

8.2 Without limiting sub-clause 1, if requested to do so by a party, each party will promptly produce the Certificate of Title (if issued) of their respective properties as is necessary to enable registration of this Easement and any agreed variation to this Easement.

9. Rights cumulative

Except as expressly stated otherwise in this Easement, the rights of a party under this Easement are cumulative and are in addition to any other rights of that party.

10. Waiver and exercise of rights

10.1 Notwithstanding that the law of contract may no longer recognise or might never have recognised a doctrine or concept of waiver, a party may waive its right to insist upon the performance of a condition or obligation under this Easement which is to be performed by another party provided such waiver is in writing and signed for or on behalf of the party waiving the right to performance of such obligation or condition.

10.2 In the absence of a waiver in writing as permitted by sub-clause 1, no failure or forbearance by a party to insist upon any right to performance of a condition or obligation of another party can amount to, under any circumstances, an election between existing rights, a representation sufficient to ground an estoppel or a variation whereby that other party is relieved or excused from performance of such condition or obligation.

11. Liability / Risk

(a) An obligation of two or more persons binds them jointly and severally.

(b) The use of the Servient Tenement by the Grantee is at the Grantee's risk.

(c) The Grantee:

(i) hereby releases the Grantor to the full extent permitted by law for any incident or accident whilst the Grantee exercise their right to pass and re-pass (unless caused by default or negligence of the Grantor); and

(ii) agrees that the Grantor will have no responsibility or liability for any loss of or damage to personal property of the Grantee whilst exercising its rights to pass and re-pass.

12. Indemnity and insurance

12.1 Each party indemnifies the other against any loss which occurs as a result of the other party's failure to strictly observe or perform the provisions of this Easement.

12.2 Each party is responsible for keeping current their own public liability insurance for each of their respective rights and obligations under this Easement.

13. Entire understanding

This Easement contains the entire understanding between the parties as to the subject matter of this Easement.

14. Costs and duty

14.1 The Grantor must pay the cost of transfer duty on this Easement and any agreed variation of this Easement.

14.2 The Grantor and Grantee must pay their own costs of and incidental to the preparation, negotiation and signing of this Easement and any agreed variation of this Easement.

14.3 The Grantor must pay any lodgement fee required to register this Easement and any agreed variation of this Easement with the Queensland Land Registry.

15. Variation and extinguishment

15.1 A variation of this Easement must be in writing and signed by the Grantor and the Grantee.

15.2 This Easement is extinguished only if the Grantor and the Grantee so agree in writing.

16. Severance

If it is held by a court of law that:

(a) any part, clause or part of a clause of the Form 9 or this Schedule is void, voidable, illegal or unenforceable; or

(b) the Form 9 or this Schedule is void, voidable, illegal or unenforceable unless any part, clause or part of a clause of the Form 9 or this Schedule is severed from the Form 9 or this Schedule,

that part, clause or part of the clause will be severed from the Form 9 or this Schedule unless to do so would change the underlying principal commercial purposes of this Easement.

17. Goods and services tax

(a) For the purpose of this clause unless the context otherwise requires:

"GST Legislation" means *A New Tax System (Goods and Services Tax) Act* 1999 and any related tax imposition Act (whether imposing tax as a duty of customs excise or otherwise) and includes any legislation which is enacted to validate recapture or recoup the tax imposed by any of such Acts;

"Applicable GST" has the meaning ascribed to it in clause 17(b);

"GST" means any tax imposed by or through the GST Legislation on a supply (without regard to any input tax credit);

"Recipient" means the party treated by the GST Legislation as the recipient of a supply from the Supplier;

"Representative" means a representative member of a GST group to which the relevant Supplier belongs;

"Supply" means any supply (within the meaning which it bears in the GST Legislation) by the Supplier under this easement;

"Supplier" means any party to this easement treated by the GST Legislation as making a taxable supply under or in connection with this easement;

where any other term is used in this clause which is defined in the GST legislation it shall have the meaning which it bears in the GST Legislation.

(b) In the case of a Supply which is a taxable supply:

(i) the consideration payable or otherwise provided (apart from under this clause) to the Supplier (under the other provisions of this easement) will be increased by an amount equal to the Applicable GST;

(ii) the Applicable GST shall be the GST payable on the Supply;

(iii) the Applicable GST shall be added to the consideration payable or otherwise provided (apart from under this clause) for the Supply under the other provisions of this easement so as to form an additional part of the consideration for the Supply.

(c) The Recipient will pay on demand to the Supplier an amount equal to any increment in consideration which is payable under this clause in respect of any Supply, and such amount will be a debt due and owing by the Recipient to the Supplier which is recoverable without setting off any refund or counter claim.

(d) The Supplier shall provide the Recipient with tax invoices and/or adjustment notes in relation to the Supply (but shall not be obliged or requested to create such invoices for amounts in excess of amounts received from the Recipient) and do all things reasonably necessary to assist the Recipient to enable it to claim and obtain any input tax credit available to the Recipient in respect of the Supply.

(e) Where the consideration for a Supply consists (in whole or in part) of the recovery by the Supplier of all or a proportion of the Supplier's costs, the amount recoverable shall be reduced by the amount (or the corresponding proportion) of the input tax credits available to the Supplier in respect of such costs and then increased by any Applicable GST under clause 17(b).

(f) In the event that liability for payment of GST in respect of a Supply under this easement is imposed upon a Representative of a Supplier this clause shall nonetheless apply and the Adjustments shall be calculated in all respects as if the Supplier was liable for the GST imposed on such Supply and entitled to input tax credits properly allocated to the making of that Supply.

Title Reference [to issue from 16956060]

Oaths Act 1867

STATUTORY DECLARATION

QUEENSLAND
TO WIT

I, Daniel Blaser, of 9-105 Gardner Road, Rochedale in the State of Queensland, General Manager, do solemnly and sincerely declare that:

1. On 13 January 2014 I executed, with full authority from Austral Bricks (Qld) Pty Ltd ABN 62 125 934 858, a Queensland Land Registry Form 9 Easement (Easement) under Power of Attorney No. 715534837.

2. I confirm that the land dealt with by the Easement is located in Rochedale, Queensland.

And I make this solemn declaration conscientiously believing the same to be true and by virtue of the provisions of the Oaths Act 1867.

Taken and declared at Brisbane)
this 23rd day of January 2014 before me:)
)
)

.....
Declarant Name: Daniel Blaser

.....

☑ Solicitor ☐ Justice of the Peace
☐ Commissioner for declarations
☐ Other (specify):

JOEL DAVID MCANDREW
Solicitor

QUEENSLAND LAND REGISTRY
Land Title Act 1994 and Land Act 1994

EASEMENT

Duty Imprint

FORM 9 Version 4
Page 1 of 9

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26/07/2013 15:12

BE 600

department's website.

Client No: 1009804 Duties Act 2001
Transaction No: 506-572-759
Duty Paid $ Nil ☐ Exempt
UTI $
Date: 15/7/13 Signed:

1. Grantor

BRISBANE CITY COUNCIL

Lodger (Name, address, E-mail & phone number)
Cooper Grace Ward Lawyers
GPO Box 834, Brisbane Qld 4001
Phone: 3231 2941
Email: leanne.doxey@cgw.com.au

Lodger Code
131B

2. Description of Easement/Lot on Plan Servient Tenement (burdened land)	**County**	**Parish**	**Title Reference**
Easement AG on SP179796 in Lot 101 on SP213452	STANLEY	TINGALPA	50738891
Easement AH on SP179796 in Lot 201 on SP213447	STANLEY	TINGALPA	50746769

#Dominant Tenement (benefited land)

NOT APPLICABLE

3. Interest being burdened

FEE SIMPLE

#4. Interest being benefited

NOT APPLICABLE

5. Grantee Given names | Surname/Company name and number | (include tenancy if more than one)

CENTRAL SEQ DISTRIBUTOR-RETAILER AUTHORITY ABN 86 673 835 011

6. Consideration

$1.00

7. Purpose of easement

SEWERAGE

8. Grant/Execution

The Grantor for the above consideration grants to the Grantee the easement over the servient tenement for the purpose stated in item 7 and the Grantor and Grantee covenant with each other in terms of the attached schedule.

Witnessing officer must be aware of his/her obligations under section 162 of the Land Title Act 1994

signature
full name Craig Charles Silva
qualification Solicitor

Witnessing Officer

(Witnessing officer must be in accordance with Schedule 1 of the Land Title Act 1994 eg Legal Practitioner, JP, C Dec)

5/7/13
Execution Date

The Seal of BRISBANE CITY COUNCIL was hereunto affixed this 5th day of July 2013 by me JANINE ELIZABETH BOYD being the proper officer to affix such seal. J.E. BOYD Appointed Officer

Grantor's Signature

signature
full name Simon Lew
qualification JP(Qual) 114745

Witnessing Officer

(Witnessing officer must be in accordance with Schedule 1 of the Land Title Act 1994 eg Legal Practitioner, JP, C Dec)

17/6/13
Execution Date

Grantee's Signature

Executed by CENTRAL SEQ DISTRIBUTOR-RETAILER AUTHORITY by its delegate under section 53 of the *South-East Queensland Water (Distribution and Retail Restructuring) Act 2009*

© The State of Queensland (Natural Resources, Mines and Energy) 2019

Title Reference: 50738891 and 50746769

This is the schedule referred to in the Form 9 Easement dated 17 June , 2013.

1. Definitions and interpretation

1.1 Definitions

In this easement:

Authorised Persons means tenants, employees, agents, contractors, licensees and invitees of and other persons claiming (or authorised) by, through or under, either the Grantee or the Grantor (as the case may require).

Easement Area means the land described as the burdened land in Item 2 of the Form 9.

Easement Purpose means the purpose stated in Item 7 of the Form 9.

Grantee means the person shown as "Grantee" in Item 5 of the Form 9 and that person's assignees and successors.

Grantee's Rights means the rights granted under clause 3.

Grantor means the person shown as "Grantor" in Item 1 of the Form 9 and each assignee or successor of that person in respect of the Easement Area.

Grantor's Land means the parcel or parcels of the Grantor's land that includes the Easement Area.

Improvements means everything, including vegetation, on the Easement Area.

Relevant Works means the Sewerage Works.

Sewerage Works means all pipes for carrying, treating or disposing of sewage and other wastewater, all ancillary plant, equipment, fittings and attachments (including pumps and pump stations) and works of any nature to protect or support any of them.

1.2 Interpretation

In this grant of easement:

(a) headings are for convenience only and do not affect interpretation;

and unless the context indicates a contrary intention:

(b) an obligation or a liability assumed by, or a right conferred on, 2 or more persons binds or benefits them jointly and severally;

(c) "person" includes an individual, the estate of an individual, a corporation, an authority, an association or a joint venture (whether incorporated or unincorporated), a partnership and a trust;

(d) a reference to a party includes that party's executors, administrators, successors and permitted assigns, including persons taking by way of novation, and, in the case of a trustee, includes a substituted or an additional trustee;

(e) a word importing the singular includes the plural (and vice versa), and a word indicating a gender includes every other gender;

Title Reference: 50738891 and 50746769

(f) if a word or phrase is given a defined meaning, any other part of speech or grammatical form of that word or phrase has a corresponding meaning;

(g) if the Easement Area is defined using a horizontal plane and references to marks on the surface of land:

(i) a reference to a thing on, or the doing of any thing on or in respect of, land in the Easement Area includes a reference to a thing, or the doing of the thing, through, over, across or under the land;

(ii) a reference to land in the Easement Area includes the land's surface, sub-surface and strata above the surface;

(h) if the Easement Area is defined using 3 dimensionally located points to identify the position, shape and dimensions of each bounding surface:

(i) a reference to a thing on, or the doing of any thing on or in respect of, land in the Easement Area includes a reference to a thing, or the doing of the thing, in or through the land;

(ii) if the Easement Area includes a surface of land, a reference to land in the Easement Area includes that surface, and any sub-surface of, and strata above that, land (in the Easement Area);

(i) "includes" in any form is not a word of limitation.

2. Public utility easement

This easement is a public utility easement for:

(a) the Easement Purpose;

(b) undertaking or engaging in any service, facility or activity that directly or indirectly refers to or is related to the Easement Purpose and which the Grantee has authority to undertake or engage in under a law; and

(c) the exercise by the Grantee of the other rights given to the Grantee by this easement.

3. Grantee's Rights

The Grantor grants the Grantee the right for the Grantee and its Authorised Persons:

(a) to transmit, or permit to be transmitted sewage and other wastewater in and through Sewerage Works on the Easement Area;

(b) to construct, place, lay, deepen, widen, inspect, clean, maintain, change, add to, remove, repair, replace, relay, renew, use and manage the Relevant Works on, or inspect or survey, the Easement Area at all times and from time to time;

(c) to run and pass electric current, electric transmissions, electronic signals, electronic transmissions and other substances through the Easement Area (including the Relevant Works);

(d) in order to exercise the rights in clauses 3 (a) to (c), the right to:

(i) enter the Easement Area, remain on it, and pass and repass on it, with or without vehicles, machinery, plant, equipment, tools and materials;

Title Reference: 50738891 and 50746769

(ii) place on the Easement Area the machinery, plant, equipment, tools and materials required to exercise those rights and leave them there;

(iii) dig into, sink shafts in, and erect scaffolding on and open and break up the Easement Area;

(iv) remove and dispose of spoil created by the exercise of those rights;

(v) construct and maintain on the Easement Area those access tracks, gates and ancillary works that the Grantee reasonably considers necessary;

(vi) clear vegetation from the Easement Area by any method and burn it off;

(vii) cross any part of the Grantor's Land that the Grantee considers convenient or necessary to go from the Easement Area to the public road that is nearest to the Easement Area and back again;

(viii) remove fences or gates on the Grantor's Land;

(ix) do anything else on the Easement Area that the Grantee considers reasonably necessary to exercise those rights; and

4. Grantor's obligations

(a) The Grantor must:

(i) allow the Relevant Works to remain on the Easement Area;

(ii) keep the Easement Area in good order and repair and suitable for exercising the Grantee's Rights;

(iii) pay all rates, taxes and imposts in the nature of a tax payable in connection with the Easement Area or the Grantor's ownership of it, on time;

(iv) not, unless it has the Grantee's written consent:

A. erect any structure or other thing on the Easement Area;

B. remove from or stockpile on the Easement Area soil, sand, gravel or any other substance or material;

C. install concrete, bitumen or other pavement or driveways on the Easement Area or gardens or landscaping involving concrete, brick or other permanent materials or otherwise build over the Relevant Works;

D. alter the ground level, or alter or disturb the existing grades of the Easement Area or change its topography;

E. inundate the Easement Area with water;

F. plant any tree or other vegetation or crop on the Easement Area;

G. light a fire on the Easement Area, or allow a fire to escape onto the Easement Area from the Grantor's Land (that is not part of the Easement Area);

H. construct any road or other earthwork on the Easement Area; or

I. do or cause or permit anything (including granting rights to another person) in connection with the Easement Area that could obstruct or

interfere with the Relevant Works or their proper and effective use or the proper exercise of the Grantee's Rights; and

(v) notify the Grantee within 14 days if the Grantor receives or becomes aware of any application for, or grant of, a mining or petroleum tenement under the Mineral Resources Act 1989, Petroleum Act 1923, Petroleum and Gas (Production and Safety) Act 2004 or any other law in respect of the Easement Area.

(b) If the Grantor does not comply with any of its obligations under this easement (whether a positive or negative obligation) the Grantee may remedy the Grantor's breach and recover the cost of doing so from the Grantor as a debt owing to the Grantee.

(c) The Grantor must comply with its obligations under a law relating to the Easement Area and the Relevant Works, including the Water Supply (Safety and Reliability) Act 2008 and the South-East Queensland Water (Distribution and Retail Restructuring) Act 2009.

5. Property in and expenses of Relevant Works

(a) The Relevant Works are the Grantee's property and do not become the Grantor's property.

(b) The Grantee is responsible for and must pay all expenses in connection with the Relevant Works.

6. Exercise of Grantee's Rights

(a) In exercising the Grantee's rights, the Grantee must, at its own cost:

(i) ensure all work is done in a proper and workmanlike manner;

(ii) comply with all relevant laws;

(iii) cause as little inconvenience or obstruction as practicable to the Grantor and any occupier of the Grantor's Land;

(iv) cause as little damage as practicable to the Grantor's Land, including the Easement Area, and any Improvements;

(v) if damaged by the Grantee, restore the Grantor's Land as nearly as practicable to its former condition; and

(vi) make good any collateral damage.

(b) Without limiting clause 6(a), the Grantee must:

(i) reinstate all fences and gates damaged by it in the exercise of any of the Grantee's Rights; or

(ii) in lieu of reinstating any such fence, install a gate the quality of materials and workmanship of which, except with the Grantor's consent, must be not less than the quality and materials of workmanship of the existing fence.

(c) Section 85B(2) of the Land Title Act 1994 and section 366(2) of the Land Act 1994 are excluded from this easement.

(d) This easement does not affect any rights or powers the Grantee may have under a statute, including the Water Supply (Safety and Reliability) Act 2008 and the South-East Queensland Water (Distribution and Retail Restructuring) Act 2009. The Grantee may exercise its rights and powers under a statute in respect of the Easement Area and its Relevant Works in lieu of, or without regard to, its rights and powers under this easement.

Title Reference: 50738891 and 50746769

7. Waiver

(a) Failure to exercise or enforce, or a delay in exercising or enforcing, or the partial exercise or enforcement of, a right, power or remedy provided by law or under this easement by a party does not preclude, or operate as a waiver of, the exercise or enforcement, or further exercise or enforcement, of that or any other right, power or remedy provided by law or under this easement.

(b) A waiver or consent given by a party under this easement is only effective and binding on that party if it is given or confirmed in writing by that party.

(c) No waiver of a breach of a term of this easement operates as a waiver of another breach of that term or of a breach of any other term of this easement.

8. Costs

(a) Unless stated otherwise in this easement, each party must pay its own costs and expenses in connection with negotiating, preparing, executing, registering and stamping, and performing its obligations under this easement.

(b) In respect of this easement, the Grantor must pay:

(i) the costs and expenses of and incidental to preparing any survey required to register it;

(ii) any duty payable on it; and

(iii) the fees for registering it.

9. Registration

So that this easement can be registered, the Grantor must promptly:

(a) produce the relevant instrument of title (if any) to the Grantor's Land to the Registrar of Titles or other appropriate officer; and

(b) obtain and produce to the Registrar of Titles or other appropriate officer any consent required from any person having any interest in that party's land.

10. Burden

(a) The burden of this easement passes with the Easement Area.

(b) Each promise made in this easement by the Grantor binds the Grantor's successors in title and is for the benefit of the Grantee and its assignees.

(c) Subject to clause 10(e), from the date the Grantor ceases to be the owner of the Easement Area, the Grantor is released from all obligations under this easement

(d) Despite clause 10(c), the Grantor is not released and remains liable for breaches of obligations that occurred before the date the Grantor ceases to be the owner of the Easement Area.

(e) The Grantor, at its own cost, must, before it sells or otherwise disposes of the Easement Area, obtain from any buyer or disponee of the Easement Area a covenant, in favour of the Grantee, by which the buyer or disponee agrees to comply with the terms (whether positive or negative) of this easement.

(f) Clause 10(c) does not apply unless clause 10(e) is complied with.

Title Reference: 50738891 and 50746769

11. Governing law

The laws of Queensland govern this easement.

12. Severance

If at any time a provision of this easement is or becomes illegal, invalid or unenforceable in any respect, that will not affect or impair the legality, validity or enforceability of any other provision of this easement.

13. Goods and Services Tax

(a) For the purpose of this clause unless the context otherwise requires:

(i) **GST Legislation** means A New Tax System (Goods and Services Tax) Act 1999 (Cth) and any related tax imposition Act (whether imposing tax as a duty of customs excise or otherwise) and includes any legislation which is enacted to validate recapture or recoup the tax imposed by any of such Acts;

(ii) **Applicable GST** has the meaning ascribed to it in clause 13(b);

(iii) **GST** means any tax imposed by or through the GST Legislation on a supply (without regard to any input tax credit);

(iv) **Recipient** means the party treated by the GST Legislation as the recipient of a supply from the Supplier;

(v) **Representative** means a representative member of a GST group to which the relevant Supplier belongs;

(vi) **Supply** means any supply (within the meaning which it bears in the GST Legislation) by the Supplier under this easement;

(vii) **Supplier** means any party to this easement treated by the GST Legislation as making a taxable supply under or in connection with this easement;

(viii) where any other term is used in this clause which is defined in the GST legislation it will have the meaning which it bears in the GST Legislation.

(b) In the case of a Supply which is a taxable supply:

(i) the consideration payable or otherwise provided (apart from under this clause) to the Supplier (under the other provisions of this easement) will be increased by an amount equal to the Applicable GST;

(ii) the Applicable GST will be the GST payable on the Supply;

(iii) the Applicable GST will be added to the consideration payable or otherwise provided (apart from under this clause) for the Supply under the other provisions of this easement so as to form an additional part of the consideration for the Supply.

(c) The Recipient will pay on demand to the Supplier an amount equal to any increment in consideration which is payable under this clause in respect of any Supply, and such amount will be a debt due and owing by the Recipient to the Supplier which is recoverable without setting off any refund or counter claim.

(d) The Supplier will provide the Recipient with tax invoices and/or adjustment notes in relation to the Supply (but will not be obliged or requested to create such invoices for amounts in excess of amounts received from the Recipient) and do all things reasonably necessary to assist the

Title Reference: 50738891 and 50746769

Recipient to enable it to claim and obtain any input tax credit available to the Recipient in respect of the Supply.

(e) Where the consideration for a Supply consists (in whole or in part) of the recovery by the Supplier of all or a proportion of the Supplier's costs, the amount recoverable will be reduced by the amount (or the corresponding proportion) of the input tax credits available to the Supplier in respect of such costs and then increased by any Applicable GST under clause 13(b).

(f) In the event that liability for payment of GST in respect of a Supply under this easement is imposed upon a Representative of a Supplier this clause will nonetheless apply and the Adjustments will be calculated in all respects as if the Supplier was liable for the GST imposed on such Supply and entitled to input tax credits properly allocated to the making of that Supply.

14. Where the Easement Area is trust land under the Land Act 1994

Where the Easement Area is included in trust land under the Land Act 1994 this clause 14 will also apply:

(a) If the trust land is a reserve, in clause 1.1 the definition of "Grantor" is replaced by the following:

Grantor means the person shown as "Grantor" in Item 1 of the Form 9 and, where the context permits, any trustee of the Easement Area.

(b) In this clause 14:

Minister means the Minister administering the Land Act 1994;

(c) Despite anything else, the Grantee may not cut or remove any timber or trees from the Easement Area without first giving reasonable notice to the Grantor and obtaining all necessary approvals at law. Such notice will not be required under this clause if there is an actual or potential danger to persons or property or if there is any interference or jeopardy to the supply of the Relevant Works.

(d) Release and Indemnity

(i) The Grantee indemnifies and agrees to keep indemnified the Minister, the State of Queensland and the Grantor (the **Indemnified Parties**) against all actions, suits, proceedings, claims, demands, costs, losses, damages and expenses (**Claim**) arising out of or in any way connected to or resulting from the granting of this easement to the Grantee or which is connected to or resulting from the Grantee's use and occupation of the Easement Area (all of which are referred to as "the indemnified acts or omissions") save to the extent that the Claim arises as a result of any negligent act or omission of the Indemnified Parties, however, any negligent act or omission of one of the Indemnified Parties does not negate the indemnity to any of the other Indemnified Parties.

(ii) The Grantee hereby releases and discharges the Indemnified Parties from any Claim relating to the indemnified acts or omissions which may be made against the Indemnified Parties, save to the extent that the Claim arises as a result of any negligent act or omission of the Indemnified Parties, however, any negligent act or omission of one of the Indemnified Parties does not negate the release and discharge in favour of any of the other Indemnified Parties.

(iii) To remove doubt, the Grantee specifically agrees that the indemnity provided by the Grantee in this clause 14(d) extends to any Claim (as defined by this clause 14) arising from the use of any other area of the trust land by the Grantee.

(e) Public Liability Insurance

Title Reference: 50738891 and 50746769

(i) The Grantee must effect a public liability insurance policy with an insurer authorised under the Insurance Act 1973 (Commonwealth) or, in any other case, to the satisfaction of the Minister, naming the Grantee as the insured covering legal liability for any loss of or damage to any property and for the injury (including death) to any person arising out of anything done or omitted on or about the Easement Area and against all claims, demands, proceedings, costs, charges and expenses whatsoever in respect thereof subject to the terms and conditions of the insurance policy.

Such policy must:

A. be for an amount of not less than twenty million dollars ($20,000,000.00) in respect of all claims arising out of a single event or such higher amounts as the Minister may reasonably require; and

B. be effected on a "claims occurring" basis so that any claim made by the Grantee under the policy after the expiration of the period of policy cover but relating to an event occurring during the currency of the policy will be covered by the policy subject to the claim meeting the policy's other terms and conditions; and

C. be maintained at all times during the currency of this easement, and upon receipt of any Notice of Cancellation, the Grantee must immediately effect another public liability insurance policy in accordance with the terms and conditions of this easement.

(ii) The Grantee must forward a certificate of currency to the Grantor within 10 business days of the commencement of each respective renewal period.

(iii) The Grantee must, as soon as practicable, inform the Minister and the Grantor, in writing, of the occurrence of any event that the Grantee considers is likely to give rise to a claim under the policy of insurance effected and must ensure that the Minister and the Grantor are kept fully informed of subsequent actions and developments concerning the claim.

(iv) To remove doubt, the requirements of this clause 14(e) apply to any other area of the Grantor's Land used by the Grantee.

No. G201334

Memorandum of encumbrances, liens and interests

STAMP DUTIES OFFICE
023466 19 AUG.80
BRISBANE

TRANSFER OF EASEMENT
(Drainage)

BRICKWORKS LIMITED

Grantor

BRISBANE CITY COUNCIL

Grantee

Particulars entered in the Register Book, Volume 4615 Folio 209 the day of 19 , at 9 DEC 1980 9.35 a.m.

Registrar of Titles

601995183

G201334 EAS IN GROSS

RECEIVED
REGR. OF TITLES
OCT 30 9 26 AM '80

P.P. O'Brien,
City Solicitor,
Brisbane Administration Centre,
69 Ann Street,
Brisbane. Q.

L.A.
202/24/WE210/105

CC 85

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The COMMON SEAL of BRICKWORKS LIMITED was hereto affixed by authority of the Board in the presence of:

SECRETARY

DIRECTOR

The Seal of BRISBANE CITY COUNCIL was hereunto affixed this 30th day of July 1980, by me, Antony Thomas Cameron Philbrick, I being the proper officer to affix such Seal, in the presence of:

A Justice of the Peace.

Deputy Town Clerk

Correct for the purpose of registration

City Solicitor
Solicitor for Brisbane City Council

1-50

19 AUG 80 58716 ... REGIST ...

STAMP DUTIES OFFICE BRISBANE QLD

Queensland

TRANSFER OF EASEMENT
(Drainage)

BRICKWORKS LIMITED (hereinafter called "the Grantor") being the registered proprietor of an estate in fee simple subject however to such encumbrances liens and interests as are notified by memorandum endorsed hereon in all that piece or parcel of land situate in the County of Stanley, Parish of Tingalpa, City of Brisbane, and described in the First Schedule hereunder:-

FIRST SCHEDULE

Certificate of Title			Description	Area
No.	Vol.	Fol.		
Part	4615	209	Subdivision 7 of Portion 324 on Registered Plan 65898	19 acres 0 roods 19 perches

in consideration of the sum of Twentyfive dollars ($25.00) paid to it by BRISBANE CITY COUNCIL (hereinafter called "the Grantee") the receipt of which sum is hereby acknowledged DO HEREBY GRANT AND TRANSFER to the Grantee, its successors and assigns the full and free right and liberty at all times and from time to time to have, lay, construct and thereafter forever to use and maintain on, over, through or under that part of the aforesaid piece of land situate in the County, Parish and City aforesaid, and described in the Second Schedule hereunder:-

SECOND SCHEDULE

Certificate of Title			Description	Area
No.	Vol.	Fol.		
Part	4615	209	Easement B in Subdivision 7 of Portion 324 on Registered Plan No. 65898 on Registered Plan No. 165986	1287 sq. metres

SERVIENT

(which land is hereinafter referred to as "the said land") drains, pipes, conduits and channels including open cut drains and channels, rain water conduits and pipes and covered and uncovered drains for the passage or conveyance of rain water and waste or foul liquids and all manholes, manhole chambers, inlets, equipment and fittings in connection therewith or for the accommodation of any adjoining or neighbouring property or properties or otherwise in the execution of its and their drainage powers and for the purposes aforesaid and for the purpose of obtaining free and uninterrupted access to the drains, pipes, conduits and channels, manholes, manhole chambers, inlets, equipment and fittings from the surface of the said land and for the purposes of changing the size and number of, operating, inspecting, patrolling, altering, removing, replacing, reconstructing and/or repairing the drains, pipes, conduits and channels, manholes, manhole chambers, inlets, equipment and fittings full, free and uninterrupted right and liberty at all times by day and by night and from time to time to enter upon and to go, pass and repass over, along and under the said land or any part or parts thereof with or without surveyors, engineers, servants, agents, licensees, contractors, subcontractors, workmen and others authorised by the Grantee and with or without horses, carts, drays, motor cars, lorries, waggons, trucks, ~~trollies, cranes, earth-~~

STAMP DUTIES OFFICE
023466 19 AUG 80
BRISBANE

moving equipment and other vehicles and things, laden or unladen, and to dig into, sink shafts in, erect scaffolding upon and to open and break up the soil of the said land or any part or parts thereof as well the subsurface as the surface thereof and to bring and place in and upon the said land or any part or parts thereof and remove such materials, machinery, equipment, tools and other articles and to do such other incidental works and things in the premises as the Grantee and its successors shall in its and their discretion think fit, doing as little damage as may be but being responsible or held liable only for such damage or inconvenience to the owners or occupiers for the time being of any part or parts of the land described in the First Schedule or any subdivisions or subdivision thereof as may be caused or suffered by reason only of the neglect or default of the Grantee and its successors and its and their contractors, agents, servants and employees AND IT IS HEREBY MUTUALLY COVENANTED AND AGREED by and between the Grantor and the Grantee that for all or any of the purposes aforesaid the Grantee, its surveyors, engineers, servants, agents, licensees, contractors, subcontractors, workmen and others authorised by it with or without horses, carts, drays, motor cars, lorries, waggons, trucks, trollies, cranes, earthmoving equipment and other vehicles and things, laden or unladen, shall have the right

(a) of ingress, egress and regress to and from the said land over the land of the Grantor adjoining or adjacent to the said land to permit access to the nearest surveyed road or to such other point on the land of the Grantor as the Grantee shall consider convenient or necessary to enable the Grantee, its surveyors, engineers, servants, agents, licensees, contractors, subcontractors, workmen and others authorised by it with or without horses, carts, drays, motor cars, lorries, waggons, trucks, trollies, cranes, earthmoving equipment and other vehicles and things, laden or unladen, to obtain access to and from the said land,

(b) to use such lands of the Grantor immediately adjacent to either side of the said land as may reasonably be required by the Grantee in connection with all or any of the purposes aforesaid,

AND IT IS HEREBY FURTHER AGREED AND DECLARED that the expression "the Grantor" shall where the context so admits or requires include Brickworks Limited and the transferees and assigns of the Grantor and the registered proprietor or proprietors, owner or owners (and their respective successors, executors, administrators and assigns as the case may be) and the occupier or occupiers for the time being of the said land and the expression "the Grantee" shall where the context so admits or requires include Brisbane City Council and the successors, transferees and assigns of the Grantee.

Words importing the singular number include the plural number and vice versa and words importing any gender include the other genders and words importing only persons include corporations and/or associations and/or bodies and vice versa in each respective case.

IN WITNESS WHEREOF the parties hereto have executed these presents as hereinafter set forth.

The Common Seal of BRICKWORKS LIMITED was hereunto affixed this 22ND day of SEPTEMBER 1980 by authority of a resolution of the Board of Directors in the presence of a director and the secretary and in the presence of:

DIRECTOR

SECRETARY

A Justice of the Peace

QUEENSLAND TITLES REGISTRY

EASEMENT

FORM 9 Version 4
Page 1 of 1

719259843

$187.00
13/02/2019 16:27

BE 601

Duty Imprint

Client No: 1050409 Duties Act 2001
Transaction No: SLT-046-3L4
Duty Paid $0.00 ☐ Exempt
UTI $.....
Date: 23/1/19 Signed: .....

the Department's website.

1. Grantor
AUSTRAL BRICKS (QLD) PTY LTD A.B.N. 62 125 934 858

Lodger (Name, address, E-mail & phone number) **Lodger Code**
ATBL level 11, Suite A,
127 Creek street, Brisbane
4000 3211 9581

2. Description of Easement/Lot on Plan
Servient Tenement (burdened land)
EASEMENT E IN LOT 8 ON SP283241
ON SP288130

#Dominant Tenement (benefited land)

Title Reference
51038103

not applicable if easement in gross
NOT APPLICABLE

3. Interest being burdened
FEE SIMPLE

#4. Interest being benefited
NOT APPLICABLE
not applicable if easement in gross

5. Grantee Given names | Surname/Company name and number (include tenancy if more than one)
CENTRAL SEQ DISTRIBUTOR-RETAILER AUTHORITY ABN 86 673 835 011

6. Consideration
$1.00

7. Purpose of easement
SEWERAGE

8. Grant/Execution

The Grantor for the above consideration grants to the Grantee the easement over the servient tenement for the purpose stated in item 7 and the Grantor and Grantee covenant with each other in terms of:- document no. 718657873

Witnessing officer must be aware of his/her obligations under section 162 of the Land Title Act 1994

Susan Leppinus ..... signature
SUSAN LEPPINUS ..... full name
SOLICITOR ..... qualification
Witnessing Officer

AUSTRAL BRICKS (QLD) PTY LTD ACN 125 934 858
14/11/2018
Execution Date

GRANT DOUGLAS
ROBERT BAKEWELL
.....
Grantor's Signature
DIRECTORS

(Witnessing officer must be in accordance with Schedule 1 of Land Title Act 1994 eg Legal Practitioner, JP, C Dec)

..... signature
Diane Coffin ..... full name
Solicitor ..... qualification
Witnessing Officer

(Witnessing officer must be in accordance with Schedule 1 of Land Title Act 1994 eg Legal Practitioner, JP, C Dec)

30/10/2018
Execution Date

.....
SARAH EDWARDS, SENIOR LEGAL COUNSEL
Grantee's Signature

Executed by CENTRAL SEQ DISTRIBUTOR-RETAILER AUTHORITY by its delegate under *section 53 of the South-East Queensland Water (Distribution and Retail Restructuring) Act 2009*

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QUEENSLAND TITLES REGISTRY
Land Title Act 1994, Land Act 1994 and Water Act 2000

SCHEDULE

Title Reference [51038103]

Statement about alteration or minor correction to Land Registry Form

Form being altered or corrected: Form 9 - Easement

Name of authorised person or solicitor:

Jack Vidler

Name of authorised person's firm or employer (legal practice, commercial lender or settlement agency):

Massons (legal practice)

Item/s being altered or corrected:

Item 8 - Grantor execution

Details of alteration or minor correction:

Minor correction being the hand insertion of the Grantor's company name and ACN

Party represented (where signed by solicitor):

Grantor being Austral Bricks (QLD) Pty Ltd ACN 125 934 858

.....
Authorised person's or Solicitor's Signature

Name of authorised person or solicitor:

Name of authorised person's firm or employer (legal practice, commercial lender or settlement agency):

Item/s being altered or corrected:

Details of alteration or minor correction:

Party represented (where signed by solicitor):

.....
Authorised person's or Solicitor's Signature

QUEENSLAND LAND REGISTRY
Land Title Act 1994, Land Act 1994 and Water Act 2000

GENERAL REQUEST

Duty Imprint (9)

FORM 14 Version 4
Page 1 of 1

713141696

NO FEE
26/03/2010 11:04

BE 210

Client No.: 1050399 *Duties Act 2001*
Transaction No.: 501-470-470
Duty Paid $.....NIL..... ☑ Exempt
UTI $.....NIL.....
Date: 25/3/10 Signed: [signature]

1. Nature of request
REQUEST TO REGISTER A RESUMPTION OF EASEMENT

Lodger (Name, address & phone number)
THE COORDINATOR-GENERAL
PO Box 15009
CITY EAST QLD 4002
Attn: Ms Sarah Faulks
Phone: (07) 3405 8555
Acquisition@dip.qld.gov.au

Lodger Code
163A

2. Lot on Plan Description	County	Parish	Title Reference
EASEMENTS D & H IN LOT 2 ON SP213447 on SP229878	STANLEY	TINGALPA	50746768

3. Registered Proprietor/State Lessee
Austral Brick Company Proprietary Limited A.C.N. 000 005 550

4. Interest
FEE SIMPLE

5. Applicant
THE COORDINATOR-GENERAL
PO Box 15009, City East QLD 4002, Attn: Land Acquisition Branch

6. Request
I hereby request that: in accordance with the Gazette Resumption Notice dated 4 September 2009 and Amending Gazette Resumption Notice dated 5 March 2010 deposited herewith, you register a resumption of easement for an infrastructure corridor over the easement described in Item 2.

7. Execution by applicant

Colin Leslie Bunker
Department of Infrastructure and Planning
As delegate of The Coordinator-General under s 11 of the *State Development and Public Works Organisation Act 1971*

23/3/10 [signature]
Execution Date **Applicant's ~~or Solicitor's~~ Signature**

Note: A Solicitor is required to print full name if signing on behalf of the Applicant

WCRW 30791

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GAZ 36 Proof 35 NSD 1-6#

~~*State Development and Public Works Organisation Act 1971*~~
~~*Acquisition of Land Act 1967*~~

~~**REVOCATION OF TAKING OF LAND NOTICE**~~

~~**Short title**~~

~~1. This notice may be cited as the *Revocation of Taking of Land Notice (No.1) 2009.*~~

~~**Easements revoked**~~

~~2. The Easements described in Schedule 1 taken by The Coordinator-General pursuant to the *State Development and Public Works Organisation Act 1971* for the purpose of works to be undertaken for the Western Corridor Recycled Water Scheme, and which vested in The Coordinator-General on and from the date of publication of the Taking of Land Notice (No 9) on 23 May 2008 are now revoked.~~

~~**SCHEDULE 1**~~
~~**Easements Revoked**~~

~~An area of about 2 181 square metres being part of Lot 47 on Registered Plan 207848 contained in Title Reference 17046123 and shown on Plan WCRWS30780 dated 16 November 2007 held in the office of The Coordinator-General.~~

~~An area of about 2 062 square metres being part of Lot 48 on Registered Plan 207848 contained in Title Reference 17046125 and shown on Plan WCRWS30770 dated 16 November 2007 held in the office of The Coordinator-General.~~

~~An area of about 5 381 square metres being part of Lot 51 on Survey Plan 163681 contained in Title Reference 50489550 and shown on Plan WCRWS30760 dated 16 November 2007 held in the office of The Coordinator-General.~~

~~**ENDNOTES**~~

~~1. Made by the Governor in Council on 3 September 2009~~
~~2. Published in the Gazette on 4 September 2009~~
~~3. Not required to be laid before the Legislative Assembly.~~
~~4. The administering agency is the Department of Infrastructure and Planning.~~

State Development and Public Works Organisation Act 1971
Acquisition of Land Act 1967

TAKING OF LAND NOTICE (No. 11) 2009

Short title

3. This notice may be cited as the *Taking of Land Notice (No.11) 2009.*

Easements taken

4. The Easements described in Schedule 1 are taken by The Coordinator-General pursuant to the *State Development and Public Works Organisation Act 1971* for the purpose of works to be undertaken for the Western Corridor Recycled Water Scheme, and vest in The Coordinator-General on and from 4 September 2009.

Rights and obligations

5. That the rights and obligations conferred and imposed by the Easements in Schedule 1 includes the matters set out in Schedule 2.

SCHEDULE 1
Easement Taken

~~An area of about 4 395 square metres being part of Lot 51 on Survey Plan 163681 in Title Reference 50489550 and shown on Plan Property Reference 30760, 30770, 30780, 30790 and 30800 dated 30 July 2008 held in the office of The Coordinator-General.~~

~~An area of about 1 236 square metres being part of Lot 48 on Registered Plan 207848 in Title Reference 17046125 and shown on Plan Property Reference 30760, 30770, 30780, 30790 and 30800 dated 30 July 2008 held in the office of The Coordinator-General.~~

~~An area of about 1 298 square metres being part of Lot 47 on Registered Plan 207848 in Title Reference 17046123 and shown on Plan Property Reference 30760, 30770, 30780, 30790 and 30800 dated 30 July 2008 held in the office of The Coordinator-General.~~

An area of about 10 697 square metres being part of Lot 2 on Survey Plan 213447 in Title Reference 50746768 and shown on Plan Property Reference 30760, 30770, 30780, 30790 and 30800 dated 30

July 2008 held in the office of The Coordinator-General.

~~An area of about 3 130 square metres being part of Lot 1 on Survey Plan 213452 in Title Reference 50738890 and shown on Plan WCRWS30800 dated 17 October 2008 held in the office of The Coordinator-General.~~

(SCHEDULE ENDS).

SCHEDULE 2
State Development and Public Works Organisation Act 1971
Rights and Obligations Under Easement

1 INTERPRETATION

1.1 In this Schedule:

"**Burdened Land**" means the land over which the Easement is taken.

"**Coordinator-General**" means The Coordinator-General, the corporation solely constituted under the *State Development and Public Works Organisation Act 1971* and where the context permits, the servants, agents, contractors, subcontractors and licensees of the Coordinator-General and other persons authorised by the Coordinator-General to exercise the Coordinator-General's rights under the Easement, and, where applicable, means the assignee or transferee of the Coordinator-General.

"**Easement**" means the easement taken by the Coordinator-General over the Burdened Land including but not limited to the terms and conditions contained in this Schedule.

"**Easement Area**" means that portion of the Burdened Land over which the Easement is obtained.

"**Infrastructure**" means infrastructure of any kind required for and/or incidental to the Project and without limitation includes infrastructure relating to the transportation, movement, transmission or flow of anything, including, for example, goods, material, substances, matter, particles with or without charge, light, energy, information and anything generated or produced.

"**Landowner**" means the person who is a registered owner of the Burdened Land from time to time.

"**Project**" means the Western Corridor Recycled Water Scheme as referred to in the *Water Regulation 2002*.

1.2 If the Landowner or the party having the benefit of the Easement consists of two or more persons at any time:

(a) a reference in the Easement to that party is to be read as a reference to each of those persons individually, and each combination of them jointly; and

(b) those persons are bound and benefited by the Easement both individually and in each combination of them jointly.

1.3 A reference in the Easement to a person includes a reference to a body corporate (including a local government) and every other kind of legal person.

1.4 The Easement is intended to burden that part of the land in accordance with the *State Development and Public Works Organisation Act 1971* and the process set out in section 6(2) of the *Acquisition of Land Act 1967*. The Coordinator-General is a public utility provider under the *Land Title Act 1994* and the *Land Act 1994*. The Easement may be registered as a public utility easement.

2 RIGHTS AND OBLIGATIONS OF COORDINATOR-GENERAL

2.1 The Coordinator-General may:

(a) install, repair, maintain, remove, replace, clean, clear, add to and alter any Infrastructure on, in or through the Easement Area from time to time;

(b) inspect or survey the Easement Area, or any Infrastructure on it, from time to time;

(c) undertake mowing, slashing and vegetation (including without limitation timber, trees and crops) control or removal in relation to the Easement Area from time to time;

(d) break open the soil of the Easement Area (both on the surface and subsurface) for the purpose of doing or getting ready to do any of the other things that the Coordinator-General can do under the Easement;

(e) enter, exit and traverse by whatever means, and remain on (for so long as is necessary) the Easement Area for the purpose of doing or getting ready to do any of the things the Coordinator-General can do under the Easement;

(f) pull down or break open any fencing on the Easement Area in order to enter or exit it (but only after, except in the case of an emergency, giving reasonable prior notice to the Landowner if any livestock are contained within the fenced area);

(g) take anything onto the Easement Area and use and operate what has been taken onto the Easement Area; and

(h) do on the Easement Area anything which in the Coordinator-General's opinion is necessary or convenient for, or incidental to, exercising the Coordinator-General's rights under the Easement, including, as examples but without limitation:

(1) temporary stockpiling Infrastructure or items required for or relating to the installation, repair, maintenance, removal, replacement, cleaning, clearing, addition or alteration of Infrastructure;

(2) temporary stockpiling soil dug up on or from under the Easement Area; and

(3) temporarily restricting access to the Easement Area or parts of it, by whatever means the Coordinator-General thinks fit including temporarily fencing off the Easement Area or parts of it, and doing other things to provide for the security of Infrastructure or persons or livestock, items referred to in subparagraph (1) or soil referred to in subparagraph (2).

2.2 The Coordinator-General shall have the right to authorise, permit or license other parties to use the Easement Area for all or any of the purposes as the Coordinator-General may do so under the Easement, and otherwise to exercise the same rights and powers as the Coordinator-General under the Easement subject to all the conditions and restrictions upon such rights as are set out in the Easement.

2.3 In exercising rights and powers under the Easement, the Coordinator-General and/or persons authorised, permitted or licensed from time to time by the Coordinator-General to use the Easement Area for the purposes of the Easement must:

(a) ensure that any work done on the Easement Area is done in a proper workman like manner in accordance with relevant standards, specifications, good construction practice, accepted industry standards, including local government planning schemes and policies, and any development approval(s);

(b) cause as little inconvenience as is reasonably practicable to the Landowner;

(c) restore the Easement Area as nearly as is reasonably practicable to its former condition if the Easement Area is damaged or changed by the work done on the Easement Area, including restoring any infrastructure or improvement located on or passing through or under the Easement Area; and

(d) comply with all applicable laws regarding occupational, health and safety in the undertaking of any work done on the Easement Area.

2.4 If the Landowner breaches the Easement, the Coordinator-General may do anything that is reasonably necessary to correct the breach (such as removing a structure erected on the Easement Area in breach of the Easement). Any action in rectifying such breach shall be taken without the Coordinator-General incurring any liability to the Landowner.

3 RIGHTS AND OBLIGATIONS OF LANDOWNER

3.1 The Landowner:

(a) must not erect or permit to be erected any new improvement,

building, structure, pipeline, services, road, fence, driveway or paving on or through the Easement Area without the prior written consent of the Coordinator-General;

(b) must not change (other than to maintain), any existing improvement, building, structure, pipeline, services, road, fence, driveway or paving on or through the Easement Area (other than the Infrastructure);

(c) must not alter the ground level of the Easement Area or change its topography or do anything to cause inundation of the Easement Area by water without the prior written consent of the Coordinator-General;

(d) must not plant trees on the Easement Area without the prior written consent of the Coordinator-General;

(e) must not crop, dig or plough the Easement Area or cause the lighting of fires on the Easement Area without the prior written consent of the Coordinator-General;

(f) must exercise reasonable care to ensure that any Infrastructure on the Easement Area is not damaged;

(g) must not interfere with, damage or place at risk any Infrastructure on the Easement Area from time to time or interfere with anything that the Coordinator-General is storing or has placed on the Easement Area from time to time (including plant and equipment, stockpiles of soil dug up from or from under the Easement Area or any other stockpiles) without the prior written consent of the Coordinator-General;

(h) must not cause a nuisance that adversely affects the Coordinator-General's rights and powers under the Easement or any Infrastructure on the Easement Area from time to time, but if any nuisance is caused, then promptly abate such nuisance;

(i) must use the Landowner's reasonable endeavours to prevent anyone else doing any of the things that the Landowner is required not to do under the Easement and not allow or authorise anyone else to do any of those things;

(j) must not interfere with or obstruct the Coordinator-General in the exercise or enjoyment of its rights and powers under the Easement; and

(k) must not grant any rights to any person in relation to the Easement Area to the extent the granting of those other rights could or will conflict or interfere with the Infrastructure or the exercise of any of the Coordinator-General's rights and powers under the Easement.

4 OTHER MATTERS

4.1 Ownership of Infrastructure

All Infrastructure and other things brought onto or installed on, in or through the Easement Area from time to time by the Coordinator-General will, as between the Landowner and the Coordinator-General, notwithstanding any affixation to the Easement Area, remain the property of the Coordinator-General (unless otherwise assigned).

4.2 Fences

If the Coordinator-General pulls down or breaks open any fencing under the Easement:

(a) the Coordinator-General may either repair the fencing it has pulled down or broken open or install a gate in place of that fencing to at least a standard reasonably equivalent to that of the fencing before it was pulled down or broken open;

(b) the owner of the fencing that was pulled down or broken open will become the owner of the repaired fencing or gate; and

(c) that owner must maintain the repaired fencing or gate.

4.3 Stamping and registering of Easement

The Coordinator-General must stamp (if required) and register the Easement and pay all duty and registration fees on the Easement.

4.5 Mining or petroleum tenement

The Landowner is to use its reasonable endeavours to give the Coordinator-General

a copy of any notification received by the Landowner in respect of any application for a mining or petroleum tenement under the *Mineral Resources Act 1989*, the *Petroleum Act 1923*, the *Petroleum and Gas (Production and Safety) Act 2004* or any similar or replacement legislation, in respect of land which includes all or any part of the Easement Area, within 7 days after the Landowner receives such notification.

4.6 **Further assurances**

The Landowner will use its reasonable endeavours to execute every deed, instrument, assurance or other document and do all such things as may be necessary to secure the rights of the Coordinator-General conferred by the Easement as the Coordinator-General may reasonably require, including (without limitation) obtaining the consent of any person necessary and producing the title document for the Easement Area and executing all documents necessary to give effect to any proposed assignment, transfer, encumbrance or other dealing by the Coordinator-General in respect of the Easement Area.

5 NOTICE

5.1 **General**

Any notice, demand, certification, process or other communication given in relation to the Easement must be in writing in English and may be signed by an authorised officer or agent of the party giving the notice.

5.2 **How to give a communication**

A communication may be given by being:

(a) personally delivered;

(b) left at the party's current address for notices;

(c) sent to the party's current address for notices by pre-paid ordinary mail or, if the address is outside Australia, by pre-paid airmail; or

(d) sent by fax to the party's current fax number for notices.

5.3 **Particulars for delivery of notices**

The address and facsimile number of the Coordinator-General and Landowner is that specified below or that which a party specifies by written notice to the other party from time to time:

The Coordinator-General:
Address: The Coordinator-General
PO Box 15009
Brisbane City East Qld 4002

Fax: (07) 3224 2978

Attention: Executive Director, Land Acquisition, Department of Infrastructure and Planning

Landowner:
The address and facsimile notified to the Coordinator-General and in the absence of such notice, the address shall be the land of which the Burdened Land forms part.

6 COORDINATOR-GENERAL'S CONSENT

(a) Subject to clause 6(b), the Coordinator-General may conditionally or unconditionally give or withhold any consent to be given under the Easement and is not obliged to give reasons for doing so.

(b) The Coordinator-General will not unreasonably refuse or withhold its consent to the Landowner erecting any new improvement, building, structure, pipeline, services, road, fence, driveway or paving on or through the Easement Area.

(c) It will be reasonable for the Coordinator-General to refuse or withhold its consent if the actions of the Landowner are, in the Coordinator-General's opinion, likely to jeopardise the safety, security or operation of, or interfere with the Infrastructure or restrict the Coordinator-General's access or other rights under the Easement along or across the Easement Area.

7 SEVERABILITY

(a) Subject to clause 7(b), if a provision of the Easement is illegal or unenforceable in any relevant jurisdiction, it may be severed for the purposes of that jurisdiction without affecting the enforceability of the other provisions of the Easement.

(b) Clause 7(a) does not apply if severing the provision materially alters the scope and nature of the Easement or the relative commercial

or financial positions of the parties, or would be contrary to public policy.

INDEMNITY FOR LANDOWNER

The Coordinator-General indemnifies the Landowner including any successors in title to the Burdened Land, against all actions, suits, proceedings, demands, claims, losses, damages, costs and expenses, excluding any indirect or consequential loss ("Claims") arising from:

(a) any breach by the Coordinator-General of the terms of the Easement; and

(b) any act or omission of the Coordinator-General in the exercise of its rights under the Easement;

except to the extent that any Claims are:

(c) caused; or

(d) contributed to (but only to the extent of that contribution),

by the act or omission of the Landowner or its employees, officers, agents or contractors.

(SCHEDULE ENDS)

ENDNOTES

5. Made by the Governor in Council on 3 September 2009.
6. Published in the Gazette on 4 September 2009.
7. Not required to be laid before the Legislative Assembly.
8. The administering agency is the Department of Infrastructure and Planning.

State Development and Public Works Organisation Act 1971
Acquisition of Land Act 1967

AMENDING TAKING OF LAND NOTICE (No.1) 2010

Short title

1. This notice may be cited as the *Amending Taking of Land Notice (No.1) 2010.*

Amendment of Land to be taken [s.11(1) of the *Acquisition of Land Act 1967*]

2. Schedule 1 to the Taking of Land Notice (No.22) 2008 dated 3 October 2008 and published in the Gazette No. 40 at page 680 relating to the taking of land and easements by The Coordinator-General pursuant to the *State Development and Public Works Organisation Act 1971* for the purpose of works to be undertaken for Western Corridor Recycled Water Scheme, is amended as described in the Schedule 1.

3. Schedule 1 to the Taking of Land Notice (No.25) 2008 dated 7 November 2008 and published in the Gazette No. 70 at page 1305 relating to the taking of land and easements by The Coordinator-General pursuant to the *State Development and Public Works Organisation Act 1971* for the purpose of works to be undertaken for Western Corridor Recycled Water Scheme, is amended as described in the Schedule 2.

4. Schedule 2 to the Taking of Land Notice (No.28) 2008 dated 5 December 2008 and published in the Queensland Government Gazette No. 95 at page 1804 relating to the taking of easements by The Coordinator-General pursuant to the *State Development and Public Works Organisation Act 1971* for the purpose of works to be undertaken for the Western Corridor Recycled Water Scheme, is amended as described in Schedule 3.

5. Schedule 1 to the Taking of Land Notice (No.11) 2009 dated 4 September 2009 and published in the Gazette No. 6 at page 69 relating to the taking of land and easements by The Coordinator-General pursuant to the *State Development and Public Works Organisation Act 1971* for the purpose of works to be undertaken for Western Corridor Recycled Water Scheme, is amended as described in the Schedule 4.

~~SCHEDULE 1~~

~~Amend Schedule 1 to the Taking of Land Notice (No.22) 2008 dated 3 October 2008 as follows:~~

~~Omit:~~ ~~"An area of about 5 550 square metres being part of Lot 3 on Registered Plan 7764 in Title Reference 13004049 and shown on Plan WCRWS50210 dated 9 November 2007 held in the office of the Coordinator-General."~~

~~Insert:~~ ~~"Easement A in Lot 3 on RP7764 on SP229891 (being a Plan to be registered in the Queensland Land Registry) County of Cavendish Parish of Biarra being part of the land contained in Title Reference 13004049."~~

~~(SCHEDULE ENDS)~~

~~SCHEDULE 2~~

~~Amend Schedule 1 to the Taking of Land Notice (No. 25) 2008 dated 7 November 2008 as follows:~~

~~Omit:~~ ~~"An area of about 4 071 square metres being part of Lot 3 on Registered Plan 56024 in Title Reference 12074022 and shown on Plan WCRWS50220 dated 3 November 2007 and held in the office of the Coordinator-General."~~

~~Insert:~~ ~~"Easement B in Lot 3 on RP56024 on SP229891 (being a Plan to be registered in the Queensland Land Registry) County of Cavendish Parish of Biarra being part of the land contained in Title Reference 12074022."~~

~~(SCHEDULE ENDS)~~

SCHEDULE 3

Amend Schedule 2 to the Taking of Land Notice (No. 28) 2008 dated 5 December 2008 as follows:

~~Omit:~~ ~~"An area of about 7 square metres being part of Lot 466 on Crown Plan SL2445 in Title Reference 12882215 and shown on Plan WCRWS30068 dated 8 April 2008 held in the office of the Coordinator-General."~~

~~Insert:~~ ~~"Easement A in Lot 466 on SL2445 on SP227013 (being a Plan to be registered in the Queensland Land Registry) County of Stanley Parish of Toombul being part of the land contained in Title Reference 12882215."~~

~~Omit:~~ ~~"An area of about 805 square metres being part of Lot 1 on Crown Plan SL2446 in Title Reference 12882214 and shown on Plan WCRWS30071 dated 8 April 2008 held in the office of the Coordinator-General.~~

~~Insert: "Easement C in Lot 1 on SL2446 on SP227013 (being a Plan to be registered in the Queensland Land Registry) County of Stanley Parish of Toombul being part of the land contained in Title Reference 12882214."~~

~~Omit: "An area of about 1 230 square metres being part of Lot 2 on Crown Plan SL2446 in Title Reference 12882214 and shown on Plan WCRWS30075 dated 8 April 2008 held in the office of the Coordinator-General."~~

~~Insert: "Easement D in Lot 2 on SL2446 on SP227013 (being a Plan to be registered in the Queensland Land Registry) County of Stanley Parish of Toombul being part of the land contained in Title Reference 12882214."~~

~~(SCHEDULE ENDS)~~

SCHEDULE 4

Amend Schedule 1 to the Taking of Land Notice (No. 11) 2009 dated 4 September 2009 as follows:

~~Omit: "An area of about 4 395 square metres being part of Lot 51 on Survey Plan 163681 in Title Reference 50489550 and shown on Plan Property Reference 30760, 30770, 30780, 30790 and 30800 dated 30 July 2008 held in the office of The Coordinator-General."~~

~~Insert: "Easement G in Lot 51 on SP163681 on SP229879 (being a Plan to be registered in the Queensland Land Registry) County of Stanley Parish of Tingalpa being part of the land contained in Title Reference 50489550."~~

~~Omit: "An area of about 1 236 square metres being part of Lot 48 on Registered Plan 207848 in Title Reference 17046125 and shown on Plan Property Reference 30760, 30770, 30780, 30790 and 30800 dated 30 July 2008 held in the office of The Coordinator-General."~~

~~Insert: "Easement F in Lot 48 on RP207848 on SP229879 (being a Plan to be registered in the Queensland Land Registry) County of Stanley Parish of Tingalpa being part of the land contained in Title Reference 17046125."~~

~~Omit: "An area of about 1 298 square metres being part of Lot 47 on Registered Plan 207848 in Title Reference 17046123 and shown on Plan Property Reference 30760, 30770, 30780, 30790 and 30800 dated 30 July 2008 held in the office of The Coordinator-General."~~

~~Insert: "Easement E in Lot 47 on RP207848 on SP229879 (being a Plan to be registered in the Queensland Land Registry) County of Stanley Parish of Tingalpa being part of the land contained in Title Reference 17046123."~~

Omit: "An area of about 10 697 square metres being part of Lot 2 on Survey Plan 213447 in Title Reference 50746768 and shown on Plan Property Reference 30760, 30770, 30780 30790 and 30800 dated 30 July 2008 held in the office of The Coordinator-General."

Insert: "Easements D & H in Lot 2 on SP213447 on SP229878 (being a Plan to be registered in the Queensland Land Registry) County of Stanley Parish of Tingalpa being part of the land contained in Title Reference 50746768."

~~Omit: "An area of about 3 130 square metres being part of Lot 1 on Survey Plan 213452 in Title Reference 50738890 and shown on Plan WCRWS30800 dated 17 October 2008 held in the office of The Coordinator-General."~~

~~Insert: "Easement A in Lot 1 on SP213452 on SP229876 (being a Plan to be registered in the Queensland Land Registry) County of Stanley Parish of Tingalpa being part of the land contained in Title Reference 50738890."~~

~~(SCHEDULE ENDS)~~

ENDNOTES

1. Published in the Gazette on 5 March 2010.
2. Not required to be laid before the Legislative Assembly.
3. The administering agency is the Department of Infrastructure and Planning.

By authority of the Real Property Regulations 1988 — Form

K114235V

$72.00

[redacted]

30 NOV 1989
11:38 AM

5500 EASEMENT

Consent of Caveator given 8.

EASEMENT IN GROSS
(Insert type of dealing)

I/CODE –

ENTERED IN THE REGISTER BOOK

VOLUME 7115

FOLIO 42

AT 2.36 AM/PM

22 MAY 1990

REGISTRAR OF TITLES

4/ Plan noted.

Real Property Regulations 1988 — BACKING SHEET

CORRESPONDENCE NUMBER .....

REQUISITIONS /

601995185

K114235V EAS IN GROSS

BELOW THIS LINE TO BE COMPLETED BY LODGER

LODGER CODE

LODGED BY: CROWN SOLICITOR (STATE)
CONVEYANCING BRANCH
BOX 1601 GPO
BRISBANE Q. 4001
DX 40121 BRISBANE UPTOWN

66

ADDRESS: .....

CERTIFICATES OF TITLE, DEEDS OF GRANT, DECLARATIONS ETC. LODGED WITH THIS DOCUMENT (TO BE COMPLETED BY LODGING PARTIES)

1. ..... LODGED BY Austral Brick Co
2. .....
3. Deed

BELOW THIS LINE FOR DELIVERY NOTATIONS

RECEIPT NOTATIONS — OFFICE USE

ITEMS RECEIVED 1 deed.

FIRM NAME: .....

PER: .....

AUTHORITY: .....

DATE: 4.12.90

ITEMS DELIVERED BY POST

.....

.....

FORWARDED TO LODGER OF THIS DOCUMENT ON.....

IMAGED FROM MICROFILM

F 213 (Amd. 5/86)

© The State of Queensland (Natural Resources, Mines and Energy) 2019

140/U13A/187

Form 35

Queensland

Real Property Act 1861-1985

Real Property Regulations 1985

GENERAL CONSENT

Item

(Instrument to which this consent is to be bound)

(1) Type of instrument: Easement in Gross

Dealing number: OR Names of parties: K114235Y

Date of instrument: 26 June 89

(2) Title Reference: Vol: 7115 Fol: 42

(full name of party consenting) (3) I, (John J. Stankiewicz) PACIFIC WASTE MANAGEMENT PTY. LTD.

(status) being the: Caveator

Caveat No. K72485N

(type and dealing number of instrument on which authority to consent is based) (nature of consent) under .....

hereby consent to the registration of the instrument specified in Item (1) above.

(4) Signed this 12 day of April 19 90

PACIFIC WASTE MANAGEMENT PTY. LIMITED THE Common Seal OF

Party consenting

(signature of witness) .....

(qualification) Justice of the Peace

(full name to be printed) John Geoffrey SHAW.

This form can be used for mortgagees consent to a Building Units/Group Title Plan.

Jackson & O'Sullivan Pty Ltd, Brisbane

By Authority—Licence 2/85

By authority - Licence No. 3/85

Form 11
Queensland
Real Property Act 1861 - 1985
Real Property Regulations 1988

EASEMENT IN GROSS

Item		
GRANTOR *(full name)*	(1)	THE AUSTRAL BRICK COMPANY PROPRIETARY LIMITED
ESTATE OR INTEREST BEING BURDENED	(2)	FEE SIMPLE
HOW ESTATE OR INTEREST BEING BURDENED IS HELD *(if more than one grantor)*	(3)	#03/08/89 R/R130#112 BRIS STAMP DUTIES OFFICER #2411596 31 $0.00
GRANTEE *(full name)*	(4)	QUEENSLAND ELECTRICITY COMMISSION

DESCRIPTION OF SERVIENT TENEMENT *(burdened land)* (5)

*Delete if inapplicable

Volume	Folio	County	Parish	Description
*PART OF 7115	42	Stanley	Tingalpa	Easement B in Lot 44 on R.P. 207847 on R.P. 207905

MORTGAGES, ENCUMBRANCES, ETC.	(6)	NIL
CONSIDERATION	(7)	ONE DOLLAR
SHORT GENERAL DESCRIPTION OF PURPOSE OF EASEMENT	(8)	ELECTRICAL WORKS PURPOSES

#Delete inapplicable words *(if any)* *(Schedule should be completed in FORM 33 and document securely bound)*

(9) THE GRANTOR FOR THE ABOVE CONSIDERATION HEREBY GRANTS TO THE GRANTEE THE EASEMENT HEREIN DESCRIBED AND THE GRANTOR AND THE GRANTEE HEREBY COVENANT WITH EACH OTHER IN TERMS OF THE #SCHEDULE HERETO AND# MEMORANDUM No. ....H922452. FILED IN THE OFFICE OF THE REGISTRAR OF TITLES.

(10) SIGNED THIS 26th DAY OF JUNE 1989.

EXECUTION

(11) BY GRANTOR *(signature)* .....

THE AUSTRAL BRICK COMPANY PROPRIETARY LIMITED Common Seal

X .....Director

X .....Secretary

who certify that they are the proper officers to affix the seal

WITNESS

(12) IN MY PRESENCE *(signature)* ..... A Justice of the Peace / Solicitor

(Full name to be printed) MARGARET O'LEARY

GRANTEE MUST ACCEPT PERSONALLY

(13) ACCEPTED BY GRANTEE AND CERTIFIED CORRECT FOR THE PURPOSE OF REGISTRATION BY – GRANTEE *(signature)*

QUEENSLAND ELECTRICITY COMMISSION) By Its Attorney BERNARD RAYMOND) HOUGH under Power of Attorney No.) J928020F)

QUEENSLAND ELECTRICITY COMMISSION By Its Attorney:

.....

OR

his/her SOLICITOR *(signature)* .....

(full name of Solicitor to be printed) .....

NOTE: If the servient tenement is subject to a bill of mortgage/encumbrance, lease etc., then the consent of the mortgagee/encumbrancee/lessee etc. should be completed in FORM 35 and securely bound into this document.

F246 (Amd. 5/87)

Queensland Titles Office

DISTRICT OFFICES:

BRISBANE 4001	TOWNSVILLE 4810	ROCKHAMPTON 4700
203 Adelaide St. P.O. Box 1449 Ph: (07) 227 8241	418 Flinders St., P.O. Box 687 Ph: (077) 221420	Bolsover St. P.O. Box 923 Ph: (079) 27 8633

AUTHORITY TO DELIVER

I/We THE AUSTRAL BRICK COMPANY PTY LTD
(full name of Proprietor/s)

request that you will forward or deliver
to SEPTIMUS JOHN HINES
EDWARD ST BRISBANE
the instrument of Title and/or relative document at per margin or registration or for correction if required.

* ADDRESS REQUIRED FOR DELIVERY BY POST.

DESCRIPTION
Lot No. ..... on Plan No. .....
County .....
Parish .....

TITLE REFERENCE
Volume 7115
Folio 142

DOCUMENT
No. K114235V

WITNESS: IN MY PRESENCE
(Signature) J.P.
A Justice of the Peace

APPLICANT/S
(Signature) .....
SECRETARY

THE AUSTRAL BRICK COMPANY PROPRIETARY LIMITED
Common Seal

NOTE: AUTHORITY MUST BE SIGNED IN THE PRESENCE OF A JUSTICE OF THE PEACE

QUEENSLAND LAND REGISTRY
Land Title Act 1994, Land Act 1994 and Water Act 2000

GENERAL REQUEST

FORM 14 Version 4

Duty Imprint

713503982

NO FEE
07/10/2010 09:12

BE 600

Client No.: 1050399 Duties Act 2001
Transaction No.: 502-362-692
Duty Paid $ NIL ☑ Exempt
UTI $ NIL
Date: 6/10/10 Signed:

1. Nature of request

Request to Register a Resumption of Easement

Lodger (Name, address & phone number)
THE COORDINATOR-GENERAL
PO Box 15009
CITY EAST QLD 4002
Attn: Ms Jacqui Vock
Phone: (07) 3405 8576
Acquisition@dip.qld.gov.au

Lodger Code
163A

2. Lot on Plan Description

Lot on Plan Description	County	Parish	Title Reference
Easement C in Lot 201 on Survey Plan 213447 on Survey Plan 229877	Stanley	Tingalpa	50746769

3. Registered Proprietor/State Lessee

Brisbane City Council

4. Interest

Fee Simple

5. Applicant

The Coordinator-General
PO Box 15009, City East QLD 4002, Attn: Land Acquisition and Management Branch

6. Request

I hereby request that: in accordance with the Gazette Resumption Notice dated 23 October 2009 and Amending Gazette Resumption Notice dated 17 September 2010 deposited herewith, you register a resumption of easement for an infrastructure corridor over the easement described in Item 2.

7. Execution by applicant

Colin Leslie Bunker
Department of Infrastructure and Planning
As delegate of The Coordinator-General under s 11 of the *State Development and Public Works Organisation Act 1971*

6/10/10 — Colin Bunker
Execution Date — **Applicant's ~~or Solicitor's~~ Signature**

Note: A Solicitor is required to print full name if signing on behalf of the Applicant

WCRW30792

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State Development and Public Works Organisation Act 1971
Acquisition of Land Act 1967

TAKING OF LAND NOTICE (No. 12) 2009

Short title

1. This notice may be cited as the *Taking of Land Notice (No.12) 2009.*

Easements taken

2. The Easement described in Schedule 1 is taken by The Coordinator-General pursuant to the *State Development and Public Works Organisation Act 1971* for the purpose of works to be undertaken for the Western Corridor Recycled Water Scheme, and vests in The Coordinator-General on and from 23 October 2009.

Rights and obligations

3. That the rights and obligations conferred and imposed by the Easement in Schedule 1 includes the matters set out in Schedule 2.

SCHEDULE 1
Easement Taken

An area of about 5 853 square metres being part of Lot 201 on Survey Plan 213447 in Title Reference 50746769 and shown on Plan Property Reference 30792 dated 3 March 2009 held in the office of The Coordinator-General.

(SCHEDULE ENDS).

SCHEDULE 2
State Development and Public Works Organisation Act 1971
Rights and Obligations Under Easement

1 INTERPRETATION

1.1 In this Schedule:

"**Burdened Land**" means the land over which the Easement is taken.

"**Coordinator-General**" means The Coordinator-General, the corporation solely constituted under the *State Development and Public Works Organisation Act 1971* and where the context permits, the servants, agents, contractors, subcontractors and licensees of the Coordinator-General and other persons authorised by the Coordinator-General to exercise the Coordinator-General's rights under the Easement, and, where applicable, means the assignee or transferee of the Coordinator-General.

"**Easement**" means the easement taken by the Coordinator-General over the Burdened Land including but not limited to the terms and conditions contained in this Schedule.

"**Easement Area**" means that portion of the Burdened Land over which the Easement is obtained.

"**Infrastructure**" means infrastructure of any kind required for and/or incidental to the Project and without limitation includes infrastructure relating to the transportation, movement, transmission or flow of anything, including, for example, goods, material, substances, matter, particles with or without charge, light, energy, information and anything generated or produced.

"**Landowner**" means the person who is a registered owner of the Burdened Land from time to time.

"**Project**" means the Western Corridor Recycled Water Scheme as referred to in the *Water Regulation 2002.*

1.2 If the Landowner or the party having the benefit of the Easement consists of two or more persons at any time:

(a) a reference in the Easement to that party is to be read as a reference to each of those persons individually, and each combination of them jointly; and

(b) those persons are bound and benefited by the Easement both individually and in each combination of them jointly.

1.3 A reference in the Easement to a person includes a reference to a body corporate (including a local government) and every other kind of legal person.

1.4 The Easement is intended to burden that part of the land in accordance with the *State Development and Public Works Organisation Act 1971* and the process set out in section 6(2) of the *Acquisition of Land Act 1967.* The Coordinator-General is a public utility provider under the *Land Title Act 1994* and the *Land Act 1994.* The Easement may be registered as a public utility easement.

2 RIGHTS AND OBLIGATIONS OF COORDINATOR-GENERAL

2.1 The Coordinator-General may:

(a) install, repair, maintain, remove, replace, clean, clear, add to and alter any Infrastructure on, in or through the Easement Area from time to time;

(b) inspect or survey the Easement Area, or any Infrastructure on it, from time to time;

(c) undertake mowing, slashing and vegetation (including without limitation timber, trees and crops) control or removal in relation to the Easement Area from time to time;

(d) break open the soil of the Easement Area (both on the surface and subsurface) for the purpose of doing or getting ready to do any of the other things that the Coordinator-General can do under the Easement;

(e) enter, exit and traverse by whatever means, and remain on (for so long as is necessary) the Easement Area for the purpose of doing or getting ready to do any of the things the Coordinator-General can do under the Easement;

(f) pull down or break open any fencing on the Easement Area in order to enter or exit it (but only after, except in the case of an emergency, giving reasonable prior notice to the Landowner if any livestock are contained within the fenced area);

(g) take anything onto the Easement Area and use and operate what has been taken onto the Easement Area; and

(h) do on the Easement Area anything which in the Coordinator-General's opinion is necessary or convenient for, or incidental to, exercising the Coordinator-General's rights under the Easement, including, as examples but without limitation:

(1) temporary stockpiling Infrastructure or items required for or relating to the installation, repair, maintenance, removal, replacement, cleaning, clearing, addition or alteration of Infrastructure;

(2) temporary stockpiling soil dug up on or from under the Easement Area; and

(3) temporarily restricting access to the Easement Area or parts of it, by whatever means the Coordinator-General thinks fit including temporarily fencing off the Easement Area or parts of it, and doing other things to provide for the security of Infrastructure or persons or livestock, items referred to in subparagraph (1) or soil referred to in subparagraph (2).

2.2 The Coordinator-General shall have the right to authorise, permit or license other parties to use the Easement Area for all or any of the purposes as the Coordinator-General may do so under the Easement, and otherwise to exercise the same rights and powers as the Coordinator-General under the Easement subject to all the conditions and restrictions upon such rights as are set out in the Easement.

2.3 In exercising rights and powers under the Easement, the Coordinator-General and/or persons authorised, permitted or licensed from time to time by the Coordinator-General to use the Easement Area for the purposes of the Easement must:

(a) ensure that any work done on the Easement Area is done in a proper workman like manner in accordance with relevant standards, specifications, good construction practice, accepted industry standards, including local government planning schemes and policies, and any development approval(s);

(b) cause as little inconvenience as is reasonably practicable to the Landowner;

(c) restore the Easement Area as nearly as is reasonably practicable to its former condition if the Easement Area is damaged or changed by the work done on the Easement Area, including restoring any infrastructure or improvement located on or passing through or under the Easement Area; and

(d) comply with all applicable laws regarding occupational, health and safety in the undertaking of any work done on the Easement Area.

2.4 If the Landowner breaches the Easement, the Coordinator-General may do anything that is reasonably necessary to correct the breach (such as removing a structure erected on the Easement Area in breach of the Easement). Any action in rectifying such breach shall be taken without the Coordinator-General incurring any liability to the Landowner.

3 RIGHTS AND OBLIGATIONS OF LANDOWNER

3.1 The Landowner:

(a) must not erect or permit to be erected any new improvement, building, structure, pipeline, services, road, fence, driveway or paving on or through the Easement Area without the prior written consent of the Coordinator-General;

(b) must not change (other than to maintain), any existing improvement, building, structure, pipeline, services, road, fence, driveway or paving on or through the Easement Area (other than the Infrastructure);

(c) must not alter the ground level of the Easement Area or change its topography or do anything to cause inundation of the Easement Area by water without the prior written consent of the Coordinator-General;

(d) must not plant trees on the Easement Area without the prior written consent of the Coordinator-General;

(e) must not crop, dig or plough the Easement Area or cause the lighting of fires on the Easement Area without the prior written consent of the Coordinator-General;

(f) must exercise reasonable care to ensure that any Infrastructure on the Easement Area is not damaged;

(g) must not interfere with, damage or place at risk any Infrastructure on the Easement Area from time to time or interfere with anything that the Coordinator-General is storing or has placed on the Easement Area from time to time (including plant and equipment, stockpiles of soil dug up from or from under the Easement Area or any other stockpiles) without the prior written consent of the Coordinator-General;

(h) must not cause a nuisance that adversely affects the Coordinator-General's rights and powers under the Easement or any Infrastructure on the Easement Area from time to time, but if any nuisance is caused, then promptly abate such nuisance;

(i) must use the Landowner's reasonable endeavours to prevent anyone else doing any of the things that the Landowner is required not to do under the Easement and not allow or authorise anyone else to do any of those things;

(j) must not interfere with or obstruct the Coordinator-General in the exercise or enjoyment of its rights and powers under the Easement; and

(k) must not grant any rights to any person in relation to the Easement Area to the extent the granting of those other rights could or will conflict or interfere with the Infrastructure or the exercise of any of the Coordinator-General's rights and powers under the Easement.

4 OTHER MATTERS

4.1 **Ownership of Infrastructure**

All Infrastructure and other things brought onto or installed on, in or through the Easement Area from time to time by the Coordinator-General will, as between the Landowner and the Coordinator-General, notwithstanding any affixation to the Easement Area, remain the property of the Coordinator-General (unless otherwise assigned).

4.2 **Fences**

If the Coordinator-General pulls down or breaks open any fencing under the Easement:

(a) the Coordinator-General may either repair the fencing it has pulled down or broken open or install a gate in place of that fencing to at least a standard reasonably equivalent to that of the fencing before it was pulled down or broken open;

(b) the owner of the fencing that was pulled down or broken open will become the owner of the repaired fencing or gate; and

(c) that owner must maintain the repaired fencing or gate.

4.3 **Stamping and registering of Easement**

The Coordinator-General must stamp (if required) and register the Easement and pay all duty and registration fees on the Easement.

4.5 **Mining or petroleum tenement**

The Landowner is to use its reasonable endeavours to give the Coordinator-General a copy of any notification received by the Landowner in respect of any application for a mining or petroleum tenement under the *Mineral Resources Act 1989*, the *Petroleum Act 1923*, the *Petroleum and Gas (Production and Safety) Act 2004* or any similar or replacement legislation, in respect of land which includes all or any part of the Easement Area, within 7 days after the Landowner receives such notification.

4.6 **Further assurances**

The Landowner will use its reasonable endeavours to execute every deed, instrument, assurance or other document and do all such things as may be necessary to secure the rights of the Coordinator-General conferred by the Easement as the Coordinator-General may reasonably require, including (without limitation) obtaining the consent of any person necessary and producing the title document for the Easement Area and executing all documents necessary to give effect to any proposed assignment, transfer, encumbrance or other dealing by the Coordinator-General in respect of the Easement Area.

5 NOTICE

5.1 **General**

Any notice, demand, certification, process or other communication given in relation to the Easement must be in writing in English and may be signed by an authorised officer or agent of the party giving the notice.

5.2 **How to give a communication**

A communication may be given by being:

(a) personally delivered;

(b) left at the party's current address for notices;

(c) sent to the party's current address for notices by pre-paid ordinary mail or, if the address is outside Australia, by pre-paid airmail; or

(d) sent by fax to the party's current fax number for notices.

5.3 **Particulars for delivery of notices**

The address and facsimile number of the Coordinator-General and Landowner is that specified below or that which a party specifies by written notice to the other party from time to time:

The Coordinator-General:

Address: The Coordinator-General
PO Box 15009
Brisbane City East Qld 4002

Fax: (07) 3224 2978

Attention: Executive Director, Land Acquisition, Department of Infrastructure and Planning

Landowner:

The address and facsimile notified to the Coordinator-General and in the absence of such notice, the address shall be the land of which the Burdened Land forms part.

6 COORDINATOR-GENERAL'S CONSENT

(a) Subject to clause 6(b), the Coordinator-General may conditionally or unconditionally give or withhold any consent to be given under the Easement and is not obliged to give reasons for doing so.

(b) The Coordinator-General will not unreasonably refuse or withhold its consent to the Landowner erecting any new improvement, building, structure, pipeline, services, road, fence, driveway or paving on or through the Easement Area.

(c) It will be reasonable for the Coordinator-General to refuse or withhold its consent if the actions of the Landowner are, in the Coordinator-General's opinion, likely to jeopardise the safety, security or operation of, or interfere with the Infrastructure or

restrict the Coordinator-General's access or other rights under the Easement along or across the Easement Area.

7 SEVERABILITY

(a) Subject to clause 7(b), if a provision of the Easement is illegal or unenforceable in any relevant jurisdiction, it may be severed for the purposes of that jurisdiction without affecting the enforceability of the other provisions of the Easement.

(b) Clause 7(a) does not apply if severing the provision materially alters the scope and nature of the Easement or the relative commercial or financial positions of the parties, or would be contrary to public policy.

8 INDEMNITY FOR LANDOWNER

The Coordinator-General indemnifies the Landowner including any successors in title to the Burdened Land, against all actions, suits, proceedings, demands, claims, losses, damages, costs and expenses, excluding any indirect or consequential loss ("Claims") arising from:

(a) any breach by the Coordinator-General of the terms of the Easement; and

(b) any act or omission of the Coordinator-General in the exercise of its rights under the Easement;

except to the extent that any Claims are:

(c) caused; or

(d) contributed to (but only to the extent of that contribution),

by the act or omission of the Landowner or its employees, officers, agents or contractors.

(SCHEDULE ENDS)

ENDNOTES

1. Made by the Governor in Council on 22 October 2009.
2. Published in the Gazette on 23 October 2009.
3. Not required to be laid before the Legislative Assembly.
4. The administering agency is the Department of Infrastructure and Planning.

~~*Government Owned Corporations Act 1993*~~

~~**Section 114**~~

~~We hereby give notice that the public sector policy entitled *Sport and Recreation Sponsorships Policy*, as amended from time to time, is to apply to SunWater Limited and, as far as practicable, to all of its subsidiaries.~~

~~ANDREW FRASER MP~~
~~Treasurer and Minister for Employment and Economic Development~~

~~STEPHEN ROBERTSON MP~~
~~Minister for Natural Resources, Mines and Energy and Minister for Trade~~

~~**DECLARATION OF POLICE ESTABLISHMENT**~~

~~I, Kathleen Rynders, Deputy Commissioner (Regional Operations) of the Queensland Police Service, pursuant to s.10.10 of the *Police Service Administration Act 1990*, and the powers delegated to me, hereby declare the following place to be a police establishment:~~

~~**Coomera District Police Complex, 11 De Barnett Street, Coomera from Saturday 24 October 2009.**~~

~~This declaration is made at Brisbane in the State of Queensland on the 16th day of October 2009.~~

~~KATHY RYNDERS~~
~~DEPUTY COMMISSIONER~~
~~(REGIONAL OPERATIONS)~~

~~*Government Owned Corporations Act 1993*~~

~~**Section 114**~~

~~**NOTICE**~~

~~We hereby give notice that the public sector policy entitled *Sport and Recreation Sponsorships Policy*, as amended from time to time, is to apply to CS Energy Limited and, as far as practicable, to all of its subsidiaries.~~

~~ANDREW FRASER MP~~
~~Treasurer and Minister for Employment and Economic Development~~

~~STEPHEN ROBERTSON MP~~
~~Minister for Natural Resources, Mines and Energy and Minister for Trade~~

~~*Government Owned Corporations Act 1993*~~

~~**Section 114**~~

~~**NOTICE**~~

~~We hereby give notice that the public sector policy entitled *Sport and Recreation Sponsorships Policy*, as amended from time to time, is to apply to ENERGEX Limited and, as far as practicable, to all of its subsidiaries.~~

~~ANDREW FRASER MP~~
~~Treasurer and Minister for Employment and Economic Development~~

~~STEPHEN ROBERTSON MP~~
~~Minister for Natural Resources, Mines and Energy and Minister for Trade~~

~~*Government Owned Corporations Act 1993*~~

~~**Section 114**~~

~~**NOTICE**~~

~~We hereby give notice that the public sector policy entitled *Sport and Recreation Sponsorships Policy*, as amended from time to time, is to apply to Ergon Energy Corporation Limited and, as far as practicable, to all of its subsidiaries.~~

~~ANDREW FRASER MP~~
~~Treasurer and Minister for Employment and Economic Development~~

~~STEPHEN ROBERTSON MP~~
~~Minister for Natural Resources, Mines and Energy and Minister for Trade~~

State Development and Public Works Organisation Act 1971

Acquisition of Land Act 1967

AMENDING TAKING OF LAND NOTICE (No. 11) 2010

Short title

1. This notice may be cited as the *Amending Taking of Land Notice (No. 11) 2010.*

Amendment of Land to be taken [s.11(1) of the *Acquisition of Land Act 1967*]

2. Schedule 1 to the Taking of Land Notice (No. 12) 2009 dated 23 October 2009 and published in the Gazette No. 57 at page 581 relating to the taking of land and easements by The Coordinator-General pursuant to the *State Development and Public Works Organisation Act 1971* for the purpose of works to be undertaken for Western Corridor Recycled Water Scheme, is amended as described in the Schedule 1.

~~3. Schedule 2 to the Taking of Land Notice (No. 15) 2008 dated 11 July 2008 and published in the Gazette No. 74 at page 1569 relating to the taking of land and easements by The Coordinator-General pursuant to the *State Development and Public Works Organisation Act 1971* for the purpose of works to be undertaken for Western Corridor Recycled Water Scheme, is amended as described in the Schedule 2.~~

~~4. Schedule 7 to the Amending Taking of Land Notice (No. 2) 2010 dated 19 March 2010 and published in the Gazette No. 74 at page 664 relating to the taking of land and easements by The Coordinator-General pursuant to the *State Development and Public Works Organisation Act 1971* for the purpose of works to be undertaken for Western Corridor Recycled Water Scheme, is amended as described in the Schedule 3.~~

~~5. Schedule 2 to the Amending Taking of Land Notice (No. 9) 2009 dated 23 October 2009 and published in the Gazette No. 57 at page 572 relating to the taking of land and easements by The Coordinator-General pursuant to the *State Development and Public Works Organisation Act 1971* for the purpose of works to be undertaken for Western Corridor Recycled Water Scheme, is amended as described in the Schedule 4.~~

SCHEDULE 1

Amend Schedule 1 to the Taking of Land Notice (No. 12) of 2009 dated 23 October 2009 as follows:

Omit: "An area of about 5 853 square metres being part of Lot 201 on Survey Plan 213447 contained in Title Reference 50746769 and shown on Plan WCRW30792 dated 3 March 2009 held in the office of the Coordinator-General."

Insert: "Easement C in Lot 201 on SP213447 on Survey Plan 229877 (being a Plan to be registered in the Queensland Land Registry) County of Stanley Parish of Tingalpa being part of the land contained in Title Reference 50746769."

(SCHEDULE ENDS)

~~SCHEDULE 2~~

~~Amend Schedule 2 to the Taking of Land Notice (No. 15) of 2008 dated 11 July 2008 as follows:~~

~~Omit: "An area of about 3 836 square metres being part of Lot 320 on Crown Plan SL149 contained in Title Reference 11871246 and shown on Plan WCRWS32000 dated 9 July 2007 held in the office of The Coordinator-General."~~

~~Insert: "Easement C in Lot 320 on SL149 on Survey Plan 228092 (being a Plan to be registered in the Queensland Land Registry) County of Stanley Parish of Goodna being part of the land contained in Title Reference 11871246."~~

~~(SCHEDULE ENDS)~~

~~SCHEDULE 3~~

~~Amend Schedule 7 to the Amending Taking of Land Notice (No. 2) of 2010 dated 19 March 2010 as follows:~~

~~Omit:~~ ~~"Easement G in Lot 5 on SP190957 on Survey Plan 230717 (being a Plan to be registered in the Queensland Land Registry) County of Stanley Parish of Bulimba being part of the land contained in Title Reference 50797124."~~

~~Insert:~~ ~~"Easement A in Lot 51 on SP225274 on Survey Plan 236508 (being a Plan to be registered in the Queensland Land Registry) County of Stanley Parish of Bulimba being part of the land contained in Title Reference 50801649."~~

~~(SCHEDULE ENDS)~~

~~SCHEDULE 4~~

~~Amend Schedule 2 to the Amending Taking of Land Notice (No. 9) of 2009 dated 23 October 2009 as follows:~~

~~Omit:~~ ~~"Easement Q in Lot 13 on SP222633 on Survey Plan 228077 (being a Plan to be registered in the Queensland Land Registry) County of Stanley Parish of Goodna being part of the land contained in Title Reference 50760003."~~

~~Insert:~~ ~~"Easement R in Lot 13 on SP227111 on Survey Plan 236542 (being a Plan to be registered in the Queensland Land Registry) County of Stanley Parish of Goodna being part of the land contained in Title Reference 50795920."~~

~~(SCHEDULE ENDS)~~

ENDNOTES

1. Published in the Gazette on 17 September 2010.
2. Not required to be laid before the Legislative Assembly.
3. The administering agency is the Department of Infrastructure and Planning.

Attachment 6

PRCP Schedule

Refer to excel file supplied.

Attachment C

PRCP Schedule

Refer to excel file supplied.