SCENIC RIM
REGIONAL COUNCIL

Attachments

Under Separate Cover

Ordinary Meeting

Wednesday, 10 December 2025

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From: "Marie Scott" <marie.s@scenicrim.qld.gov.au>
Sent: Fri, 9 May 2025 07:57:49 +1000
To: "srrc@connect.t1cloud.com" <srrc@connect.t1cloud.com>
Subject: FW: 2504-45459 SRA application correspondence
Attachments: TIA - Application decision - s62A (PA) - complete approval.pdf, Attachment 5 - Documents referenced in conditions.pdf, Attachment 4 - Representations about a referral agency response.pdf, 2504-45459 SRA - Amended response - with conditions.pdf

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#QAP ALL STAFF DEFAULT
#NOREG
#SILENT

From: No Reply <mydas-notifications-test@qld.gov.au>
Sent: Thursday, 8 May 2025 4:35 PM
To: Scenic Rim Regional Council Mail <mail@scenicrim.qld.gov.au>
Cc: charlton.best@dsdilgp.qld.gov.au; poppyellissouthwell@gmail.com
Subject: 2504-45459 SRA application correspondence

Please find attached a notice regarding application 2504-45459 SRA.

If you require any further information in relation to the application, please contact the State Assessment and Referral Agency on the details provided in the notice.

This is a system-generated message. Do not respond to this email.
RA29-N

Queensland Government

Email Id: RFLG-0525-0023-6278

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Our ref TMR25-045514
Your ref
Enquiries Brandon Inglis

Queensland Government

22 April 2025

Department of
Transport and Main Roads

Decision Notice – Permitted Road Access Location
(s62(1) *Transport Infrastructure Act 1994*)

This is not an authorisation to commence work on a state-controlled road[1]

Development application reference number MCU25/021 & RAL25/010, lodged with Scenic Rim Regional Council involves constructing or changing a vehicular access between Lot 4RP54315, the land the subject of the application, and Telemon Street (a state-controlled road).

In accordance with section 62A(2) of the *Transport Infrastructure Act 1994* (TIA), this development application is also taken to be an application for a decision under section 62(1) of TIA.

Applicant Details

Name and address	Christopher Bonner Davis 363 Biddaddaba Creek Road Biddaddaba QLD 4275

Application Details

Address of Property	16 Telemon Street, Beaudesert QLD 4285
Real Property Description	4RP54315
Aspect/s of Development	Development Permit for Material change of use for Dual occupancy Development Permit for Reconfiguring a Lot - Subdivision (1 lot into 2 lots)

Decision (given under section 67 of TIA)
It has been decided to approve the application, subject to the following conditions:

No.	Conditions of Approval	Condition Timing
1	(a) The road access location, is to be located generally in accordance with Contour and detail survey of Lot 4 on RP54315, prepared by Queensland Surveying Solutions, dated 27 November 2024, reference 4501-001 and Issue C, as amended in red.	(a) At all times. (b): Prior to submitting the Plan of Survey to the local

[1] Please refer to the further approvals required under the heading 'Further approvals'

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No.	Conditions of Approval	Condition Timing
	(b) The road access works must be designed and constructed in accordance with: i. Institute of Public Works Engineering Australasia Standard Drawings RSD-100 and RSD101, Type 5, revision A; and ii. Department of Transport and Main Roads' Road Planning and Design Manual 2nd Edition; and iii. Manual of Uniform and Traffic Control Devices.	government for approval.
2	Direct access is prohibited between Mount Lindesay Highway (Telemon Street) and Lot 4 on RP54315 at any other location other than the Permitted Road Access Location described in Condition 1.	At all times.
3	(a) The existing vehicular property access located between Lot 4 on RP54315 and Mount Lindesay Highway (Telemon Street) must be permanently closed and removed. (b) The kerb and channelling and footpath between the pavement edge and the property boundary must be reinstated match the adjacent, in accordance with Scenic Rim Regional Council and Department of Transport and Main Roads standards at no cost to the Department of Transport and Main Roads'.	(a) & (b): Prior to submitting the Plan of Survey to the local government for approval.

Reasons for the decision

The reasons for this decision are as follows:

a) Vehicular access must not compromise safety of the users of the state-controlled road network.
b) The safety of users of the state-controlled road network is the primary consideration for all works in a state-controlled road corridor.
c) The number of access points to the state-controlled road will be minimised to ensure the through traffic carrying function of the road is maintained.

Please refer to **Attachment A** for the findings on material questions of fact and the evidence or other material on which those findings were based.

Information about the Decision required to be given under section 67(2) of TIA

1. There is no guarantee of the continuation of road access arrangements, as this depends on future traffic safety and efficiency circumstances.

2. In accordance with section 70 of the TIA, the applicant for the planning application is bound by this decision. A copy of section 70 is attached as **Attachment B**, as required, for information.

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Further information about the decision

1. In accordance with section 67(7) of TIA, this decision notice:
    a) starts to have effect when the development approval has effect; and
    b) stops having effect if the development approval lapses or is cancelled; and
    c) replaces any earlier decision made under section 62(1) in relation to the land.

2. In accordance with section 485 of the TIA and section 31 of the *Transport Planning and Coordination Act 1994* (TPCA), a person whose interests are affected by this decision may apply for a review of this decision only within 28 days after notice of the decision was given under the TIA. A copy of the review provisions under TIA and TPCA are attached in **Attachment C** for information.

3. In accordance with section 485B of the TIA and section 35 of TPCA a person may appeal against a reviewed decision. The person must have applied to have the decision reviewed before an appeal about the decision can be lodged in the Planning and Environment Court. A copy of the Appeal Provisions under TIA and TPCA is attached in **Attachment C** for information.

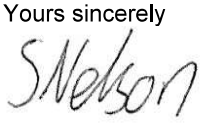
Further approvals

The Department of Transport and Main Roads also provides the following information in relation to this approval:

1. Road Access Works Approval Required – Written approval is required from the department to carry out road works that are road access works (including driveways) on a state-controlled road in accordance with section 33 of the TIA. This approval must be obtained prior to commencing any works on the state-controlled road. The approval process may require the approval of engineering designs of the proposed works, certified by a Registered Professional Engineer of Queensland (RPEQ). Please contact the department to make an application.

If further information about this approval or any other related query is required, the Corridor and Land Management team should be contacted by email at scr.calm@tmr.qld.gov.au.

Yours sincerely



Scott Nelson
A/Senior Town Planner

Attachments: Attachment A – Decision evidence and findings
Attachment B - Section 70 of TIA
Attachment C - Appeal Provisions
Attachment D - Permitted Road Access Location Plan

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Attachment A

Decision Evidence and Findings

Findings on material questions of fact:

a) The objective of the *Transport Infrastructure Act 1994* (TIA) requires the establishment of a road regime that is safe and efficient.
b) Section 62 of the *Transport Infrastructure Act 1994* provides for the Chief Executive of the Department of Transport and Main Roads (the department) to make decisions about permitted road access locations between particular land and a state-controlled road.
c) The development application (Council references: MCU25/021 & RAL25/010) seeks a Development Permit for Material change of use for Dual occupancy and Reconfiguring a Lot - Subdivision (1 lot into 2 lots) at 16 Telemon Street, Beaudesert. The subject site is formally described as Lot 4 on RP54315.
d) There is no opportunity to gain access via a local road.
e) The application proposes a single shared access to Telemon Street (a State-controlled road) for the two dwellings.
f) The proposed access location in the development application is shown on Contour and detail survey of Lot 4 on RP54315, prepared by Queensland Surveying Solutions, dated 27 November 2024, reference 4501-001 and Issue C, as amended in red.
g) The proposed new access to Telemon Street is conditioned to be designed and constructed in accordance with Institute of Public Works Engineering Australasia Standard Drawings RSD-100 and RSD101, Type 5 (for a duplex), and revision A.
h) The existing vehicular access to Telemon Street (a State-controlled Road) from Lot 4 on RP54315 is proposed and conditioned to be removed.
i) The application material has sufficiently demonstrated that the proposed access arrangement, can be effectively implemented without significant impacts to the safety and efficiency of the State-controlled road network with the conditioned access location and standards.

Evidence or other material on which findings were based:

Title of Evidence / Material	**Prepared by**	**Date**	**Reference no.**	**Version/Issue**
Transport Infrastructure Act 1994	Queensland Government	Current	N/A	N/A
Planning Act 2016	Queensland Government	Current	N/A	N/A
Road Planning and Design Manual	Department of Transport and Main Roads	July 2024	N/A	2nd edition

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Vehicular access to state-controlled roads policy	Department of Transport and Main Roads	January 2023	N/A	N/A
Contour and detail survey of Lot 4 on RP54315	Queensland Surveying Solutions	27 November 2024	4501-001	Revision C
Planning Report	Christopher Davis & Poppy Ellis-Southwell	14 February 2024	-	-

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Attachment B

Section 70 of TIA

Transport Infrastructure Act 1994
Chapter 6 Road transport infrastructure
Part 5 Management of State-controlled roads

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70 Offences about road access locations and road access works, relating to decisions under s 62(1)

(1) This section applies to a person who has been given notice under section 67 or 68 of a decision under section 62(1) about access between a State-controlled road and adjacent land.

(2) A person to whom this section applies must not—

(a) obtain access between the land and the State-controlled road other than at a location at which access is permitted under the decision; or

(b) obtain access using road access works to which the decision applies, if the works do not comply with the decision and the noncompliance was within the person's control; or

(c) obtain any other access between the land and the road contrary to the decision; or

(d) use a road access location or road access works contrary to the decision; or

(e) contravene a condition stated in the decision; or

(f) permit another person to do a thing mentioned in paragraphs (a) to (e); or

(g) fail to remove road access works in accordance with the decision.

Maximum penalty—200 penalty units.

(3) However, subsection (2)(g) does not apply to a person who is bound by the decision because of section 68.

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Attachment C

Appeal Provisions

Transport Infrastructure Act 1994
Chapter 16 General provisions

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485 Internal review of decisions

(1) A person whose interests are affected by a decision described in schedule 3 (the ***original decision***) may ask the chief executive to review the decision.

(2) The person is entitled to receive a statement of reasons for the original decision whether or not the provision under which the decision is made requires that the person be given a statement of reasons for the decision.

(3) The *Transport Planning and Coordination Act 1994*, part 5, division 2—

(a) applies to the review; and

(b) provides—

(i) for the procedure for applying for the review and the way it is to be carried out; and

(ii) that the person may apply to QCAT to have the original decision stayed.

485B Appeals against decisions

(1) This section applies in relation to an original decision if a court (the appeal court) is stated in schedule 3 for the decision.

(2) If the reviewed decision is not the decision sought by the applicant for the review, the applicant may appeal against the reviewed decision to the appeal court.

(3) The Transport Planning and Coordination Act 1994, part 5, division 3—

(a) applies to the appeal; and

(b) provides—

(i) for the procedure for the appeal and the way it is to be disposed of; and

(ii) that the person may apply to the appeal court to have the original decision stayed.

(4) Subsection (5) applies if—

(a) a person appeals to the Planning and Environment Court against a decision under section 62(1) on a planning application that is taken, under section 62A(2), to also be an application for a decision under section 62(1); and

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(b) a person appeals to the Planning and Environment Court against a decision under the Planning Act on the planning application.

(5) The court may order—

(a) the appeals to be heard together or 1 immediately after the other; or

(b) 1 appeal to be stayed until the other is decided.

(6) Subsection (5) applies even if all or any of the parties to the appeals are not the same.

(7) In this section—

original decision means a decision described in schedule 3.

reviewed decision means the chief executive's decision on a review under section 485.

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31 Applying for review

(1) A person may apply for a review of an original decision only within 28 days after notice of the original decision was given to the person under the transport Act.

(2) However, if—

(a) the notice did not state the reasons for the original decision; and

(b) the person asked for a statement of the reasons within the 28 days mentioned in subsection (1)

the person may apply within 28 days after the person is given the statement of the reasons.

(3) In addition, the chief executive may extend the period for applying.

(4) An application must be written and state in detail the grounds on which the person wants the original decision to be reviewed.

32 Stay of operation of original decision

(1) If a person applies for review of an original decision, the person may immediately apply for a stay of the decision to the relevant entity.

(2) The relevant entity may stay the original decision to secure the effectiveness of the review and any later appeal to or review by the relevant entity.

(3) In setting the time for hearing the application, the relevant entity must allow at least 3 business days between the day the application is filed with it and the hearing day.

(4) The chief executive is a party to the application.

(5) The person must serve a copy of the application showing the time and place of the hearing and any document filed in the relevant entity with it on the chief executive at least 2 business days before the hearing.

(6) The stay—

(a) may be given on conditions the relevant entity considers appropriate; and

(b) operates for the period specified by the relevant entity; and

(c) may be revoked or amended by the relevant entity.

(7) The period of a stay under this section must not extend past the time when the chief executive reviews the original decision and any later period the relevant entity allows the applicant to enable the applicant to appeal against the decision or apply for a review of the decision as provided under the QCAT Act.

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(8) The making of an application does not affect the original decision, or the carrying out of the original decision, unless it is stayed.

(9) In this section—

relevant entity means—

(a) if the reviewed decision may be reviewed by QCAT—QCAT; or

(b) if the reviewed decision may be appealed to the appeal court—the appeal court.

35 Time for making appeals

(1) A person may appeal against a reviewed decision only within—

(a) if a decision notice is given to the person—28 days after the notice was given to the person; or

(b) if the chief executive is taken to have confirmed the decision under section 34(5)—56 days after the application was made.

(2) However, if—

(a) the decision notice did not state the reasons for the decision; and

(b) the person asked for a statement of the reasons within the 28 days mentioned in subsection (1)(a);

the person may apply within 28 days after the person is given a statement of the reasons.

(3) Also, the appeal court may extend the period for appealing.

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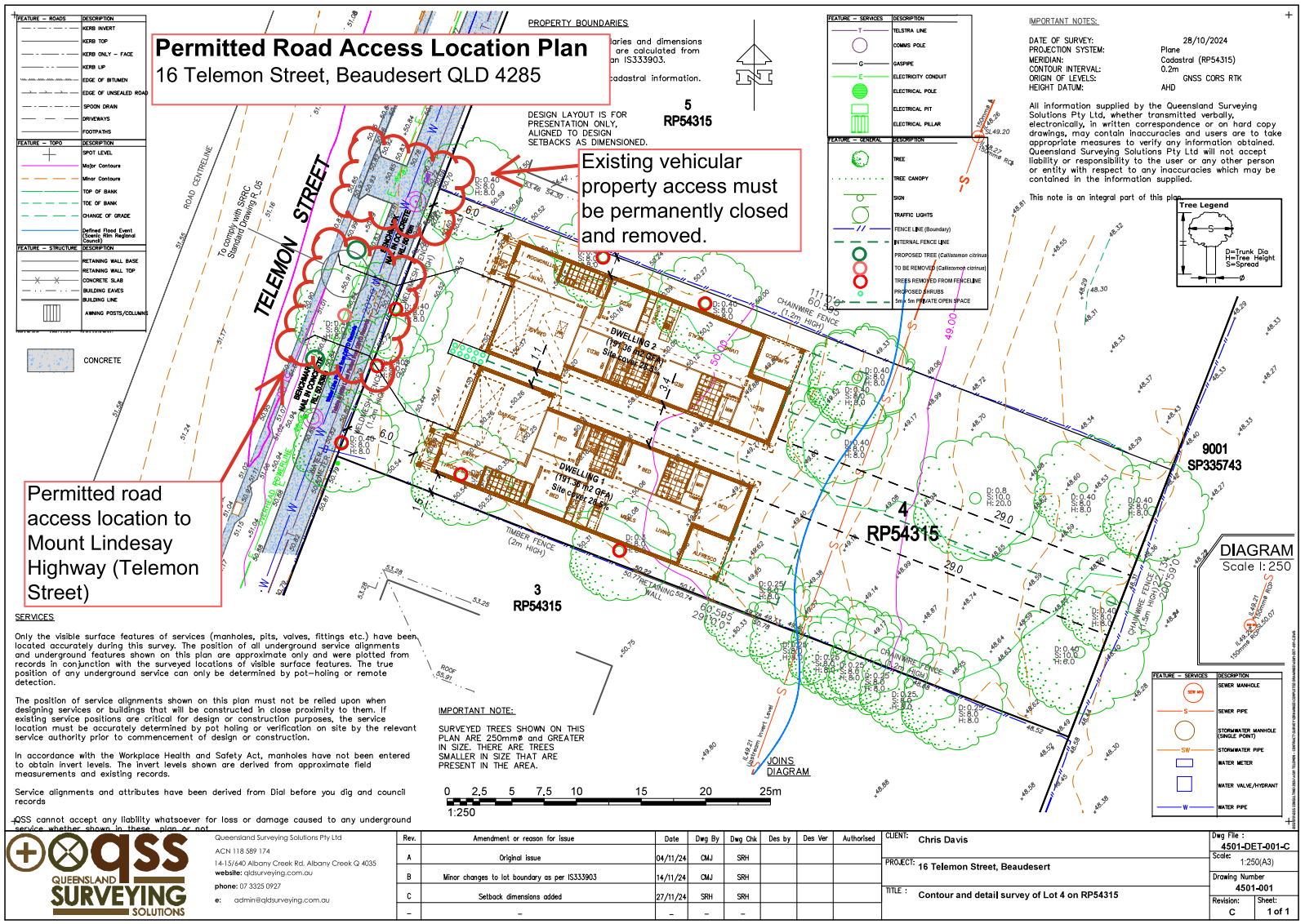

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ALLOWABLE NUMBER AND WIDTH OF RESIDENTIAL VEHICLE CROSSINGS

	TYPE	DESCRIPTION	ALLOWABLE No. OF CROSSINGS	MAX W1 (INCLUDES 500MM TAPER, BOTH SIDES)	W2 (VARIES)	W3 (MAX WIDTH AT PROPERTY BOUNDARY)	SPECIAL CONDITIONS APPLICABLE (ALL VEHICLE CROSSINGS ARE SUBJECT TO RELEVANT COUNCIL APPROVAL)
SINGLE HOUSE	1	SINGLE GARAGE	1	4.0M	3.0M	3.0M	
	2	DOUBLE GARAGE OR MORE	1	4.0M	3.0M	5.0M	
	3	DOUBLE GARAGE OR MORE	2	4.0M	3.0M	5.0M	1. MIN 40.0M FRONTAGE; 2. MIN 12.0M BETWEEN TWO CROSSINGS.
	4	DOUBLE GARAGE OR CARPORT ON PROPERTY BOUNDARY	1	5.0M	4.0M	6.0M	SUBJECT TO CARPORT/GARAGE APPROVAL.
DUPLEX	5	DUPLEX WITH FRONTAGE 20.0M OR LESS	1	5.0M	4.0M	6.0M	
	6	DUPLEX WITH FRONTAGE GREATER THAN 20.0M	2	5.0M	4.0M	5.0M	MIN 7.0M BETWEEN TWO CROSSINGS.

LEGEND

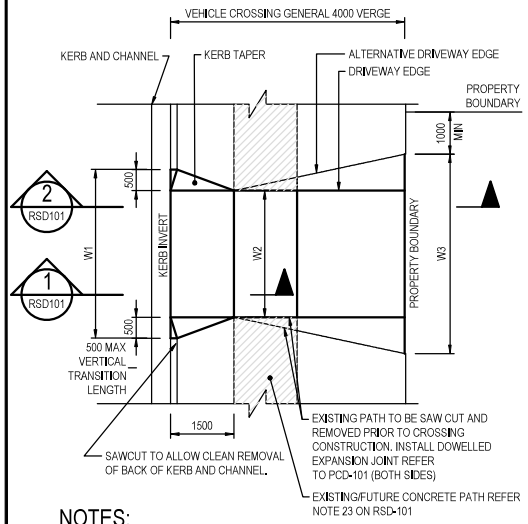
(VEHICLE CROSSING PROHIBITED LOCATIONS)

NKL — NOMINAL KERB LINE (FACE OF KERB)

TP — TANGENT POINT ON NKL

PROHIBITED LOCATIONS SHOWN IN A HEAVY LINE, BASED ON AS 2890.1

X — THE POINTS MARKED 'X' ARE EITHER AT THE MEDIAN ON A DIVIDED ROAD, OR AT THE INTERSECTION OF THE MAIN ROAD CENTRELINE AND THE PROLONGATION OF THE SIDE ROAD NKL LINE ON AN UNDIVIDED ROAD.

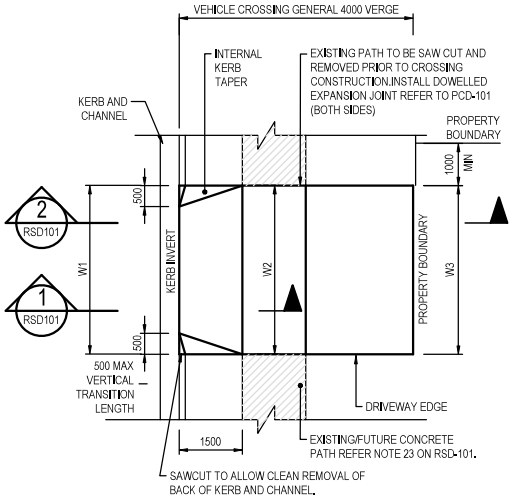


NOTES:

1. SERVICES & ROAD FURNITURE WILL NOT BE MOVED FOR VEHICLE CROSSINGS IN PROHIBITED LOCATIONS.
2. THIS DRAWING TO BE READ IN CONJUNCTION WITH RSD-101.
3. W1 MAY NOT BE LESS THAN 4.0M AT ANY POINT, INCLUSIVE OF 500MM TAPERS.
4. W3 MAY NOT BE LESS THAN W2.
5. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE.

SETOUT REQUIREMENTS

NOT TO SCALE.

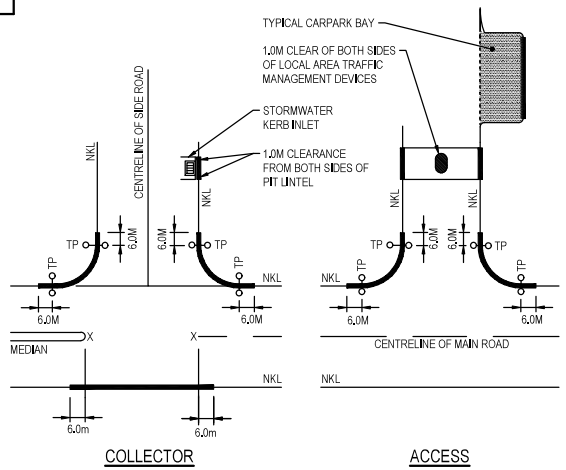


NOTES:

1. W3 MAY NOT BE LESS THAN W2.
2. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE.

ALTERNATIVE SETOUT (INTERNAL TAPERS)

NOT TO SCALE.



VEHICLE CROSSING PROHIBITED LOCATIONS

NOT TO SCALE.

The fitness for purpose of these drawings for a specific project shall be deterMined and certified by a Registered Professional Engineer of Queensland (RPEQ). The user is responsible for ensuring the relevant council has adopted the drawing prior to its use.

VEHICLE CROSSINGS	QUEENSLAND NORTHERN TERRITORY IPWEA INSTITUTE OF PUBLIC WORKS ENGINEERING AUSTRALASIA	
RESIDENTIAL DRIVEWAYS SHEET 1 OF 2	SIZE A3	DRAWING No. RSD-100
	NOT TO SCALE	REV DATE: 07/23 REV. A

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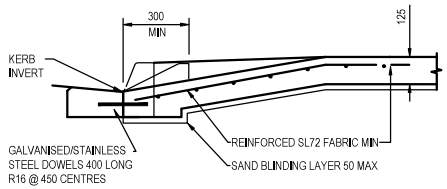
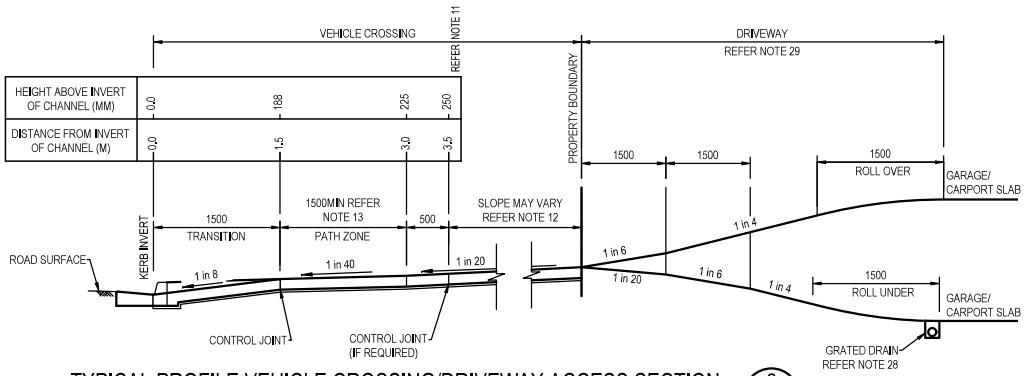


BREAKOUT TYPE SECTION 1 RSD100



TYPICAL PROFILE VEHICLE CROSSING/DRIVEWAY ACCESS SECTION 2 RSD100

NOTES:

1. ALL APPROPRIATE PERMITS MUST BE OBTAINED FROM RELEVANT COUNCIL, SPECIFYING CROSSING TYPE, CONSTRUCTION MATERIALS, LOCATION, LEVELS, SURFACE FINISHES AND DIMENSIONS, PRIOR TO ANY EXCAVATION.
2. ALTERNATIVE MATERIALS FOR CONSTRUCTION, OTHER THAN REINFORCED CONCRETE, REFER TO RELEVANT COUNCIL FOR APPROVAL.
3. CROSSING TO BE CONSTRUCTED SQUARE TO THE STREET ALIGNMENT, WHOLLY CONTAINED WITHIN THE SITE FRONTAGE FROM INVERT OF CHANNEL TO PROPERTY BOUNDARY.
4. ONE ACCESS TO BE CONSTRUCTED PER ALLOTMENT UNLESS OTHERWISE APPROVED BY RELEVANT COUNCIL.
5. TO REDUCE IMPACT ON AVAILABLE STREET PARKING, CONSIDERATION IS TO BE GIVEN TO VISITOR'S AND NEIGHBOURING PROPERTY'S PARKING NEEDS WHEN SELECTING A CROSSING LOCATION.
6. CROSSING TO BE LOCATED CLEAR OF EXISTING GULLY PITS. WHERE THIS CANNOT BE ACHIEVED, THE GULLY PIT AND PIPEWORK MAY BE RELOCATED AT THE PROPERTY OWNER'S EXPENSE, SUBJECT TO APPROVAL OF THE RELEVANT COUNCIL.
7. CROSSING TO BE LOCATED CLEAR OF ALL SERVICE AUTHORITY'S FITTINGS, MANHOLES AND PITS. SUBJECT TO RELEVANT COUNCIL APPROVAL, WHERE THIS CANNOT BE ACHIEVED, EXISTING SERVICE PITS ARE TO BE CONTAINED WITHIN THE AREA OF NEW DRIVEWAY, PIT SURFACE TO MATCH APPROVED DRIVEWAY FINISHED LEVELS.
8. KERB ADAPTORS AND ASSOCIATED ROOFWATER DRAINAGE TO BE LOCATED CLEAR OF CROSSINGS.
9. COUNCIL WILL NOT RELOCATE TRAFFIC ISLANDS OR PROVIDE BREAKS IN TRAFFIC ISLANDS TO ALLOW DRIVEWAY ACCESS.
10. FOR WATER SENSITIVE URBAN DESIGN VERGES, THE CROSSING IS SUBJECT TO RELEVANT COUNCIL DESIGN AND APPROVAL.
11. CROSSING MUST ACHIEVE A HIGH POINT OF 250MM ABOVE INVERT OF KERB TO ENSURE STORMWATER IS CONTAINED WITHIN THE ROAD RESERVE AS PER REQUIREMENT OF Q.U.D.M. (QUEENSLAND URBAN DRAINAGE MANUAL). THIS CONSTRAINT MAY BE VARIED UPON THE APPROVAL OF THE RELEVANT COUNCIL.
12. UNDER SPECIAL CIRCUMSTANCES COUNCIL MAY APPROVE A RISING GRADE OF 1:6 MAX OR FALLING GRADE OF 1:20 MIN LONGITUDINAL GRADES ALONG PROPERTY BOUNDARY MUST ALLOW FOR FREE DRAINAGE AND PEDESTRIAN SAFETY.
13. PATH ZONE WIDTH MAY VARY TO MATCH EXISTING CONCRETE PATHWAYS AND VERGE PROFILES. EARTHWORKS ADJOINING CONCRETE MUST BE WELL COMPACTED.
14. EARTHWORKS CUT AND FILL BATTERS FROM EDGE OF CROSSING TO NATURAL SURFACE TO BE MAXIMUM GRADE AT 1 IN 10 AND FULLY TURFED PRIOR TO COUNCIL INSPECTION.
15. EXISTING PATH TO BE LONGITUDINALLY TRANSITIONED TO NEW CROSSING AT A MAXIMUM GRADE OF 1 IN 10.
16. PLAIN CONCRETE SURFACES TO BE HEAVY BROOM FINISHED.
17. DECORATIVE SURFACES ARE SUBJECT TO RELEVANT COUNCIL APPROVAL, WHERE APPROVED, TO HAVE A 5MM MAX DEPTH VARIATION IN THE FINISHED SURFACE PROFILE.
18. EXPANSION JOINTS TO BE 10MM THICK FULL DEPTH CLOSED CELL CROSS LINKED POLYETHYLENE FOAM (85 - 150 KG/M), OR 8.5MM THICK BITUMEN IMPREGNATED COMPRESSED GRANULATED CORKBOARD, INSTALLATION TO MANUFACTURERS' INSTRUCTIONS. SEAL SURFACE OF JOINT WITH A SUITABLE POLYURETHANE SEALANT.
19. CONCRETE SURFACE TOLERANCE TO BE, +5MM - 0MM OVER 3 METRE SECTIONS.
20. CONCRETE TO BE MINIMUM GRADE N32 IN ACCORDANCE WITH AS 1379, AS 3600 , AS4671, AS4586, AS 4663.
21. CONCRETE CONSTRUCTION TO COMPLY WITH THE REQUIREMENTS OF AS 3600, CONCRETE CODE.
22. REINFORCEMENT FABRIC TO AS 4671 STEEL REINFORCING MATERIALS, 50 TOP AND EDGE COVER, LAP FABRIC 250.
23. CONTROL JOINTS ARE TO BE SEALED WITH A LOW MODULUS SELF PRIMING SEALANT TO THE MANUFACTURERS SPECIFICATION. REFER PCD-101.
24. FORMWORK AND REINFORCEMENT SHALL BE IN PLACE AND INSPECTED AND APPROVED BY THE RELEVANT COUNCIL PRIOR TO PLACEMENT OF CONCRETE.
25. MAINTENANCE OF THE CROSSINGS ARE THE RESPONSIBILITY OF THE PROPERTY OWNER.
26. DRAWING TO BE READ IN CONJUNCTION WITH RSD-100.
27. CROSS FALL OF EXISTING PAVEMENT ADJACENT TO THE CROSSING TO BE CHECKED. IF CROSS FALL EXCEEDS 3%, RELEVANT COUNCIL WILL DECIDE IF CROSSING NEEDS TO BE RE-DESIGNED TO ENSURE SATISFACTORY CLEARANCE FOR VEHICLES.
28. CONSTRUCT GRATED DRAIN TO PREVENT WATER ENTERING GARAGE/CARPORT SLAB.
29. DRIVEWAYS TO BE CONSTRUCTED IN ACCORDANCE WITH QUEENSLAND DEVELOPMENT CODE NMP 1,1 - DRIVEWAYS (HOWEVER, DRAWINGS RSD-100 AND RSD-101 TAKE PRECEDENCE IN THE EXTENT OF ANY INCONSISTENCY).
30. ALL SURFACES WILL MEET EITHER AS/NZS 4586 - SLIP RESISTANCE CLASSIFICATION OF NEW PEDESTRIAN SURFACE MATERIALS OR, AS/NZS 4663 - SLIP RESISTANCE MEASUREMENT OF EXISTING PEDESTRIAN SURFACES AS APPROPRIATE.
31. AVOID EXISTING SERVICES INCLUDING WATER METERS AND ELECTRICITY PILLARS.
32. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE.

The fitness for purpose of these drawings for a specific project shall be determined and certified by a Registered Professional Engineer of Queensland (RPEQ).
The user is responsible for ensuring the relevant council has adopted the drawing prior to its use.

VEHICLE CROSSINGS	QUEENSLAND NORTHERN TERRITORY IPWEA INSTITUTE OF PUBLIC WORKS ENGINEERING AUSTRALASIA	
RESIDENTIAL DRIVEWAYS SHEET 2 OF 2	SIZE A3 / NOT TO SCALE	DRAWING No. RSD-101
	REV DATE: 07/23	REV. A

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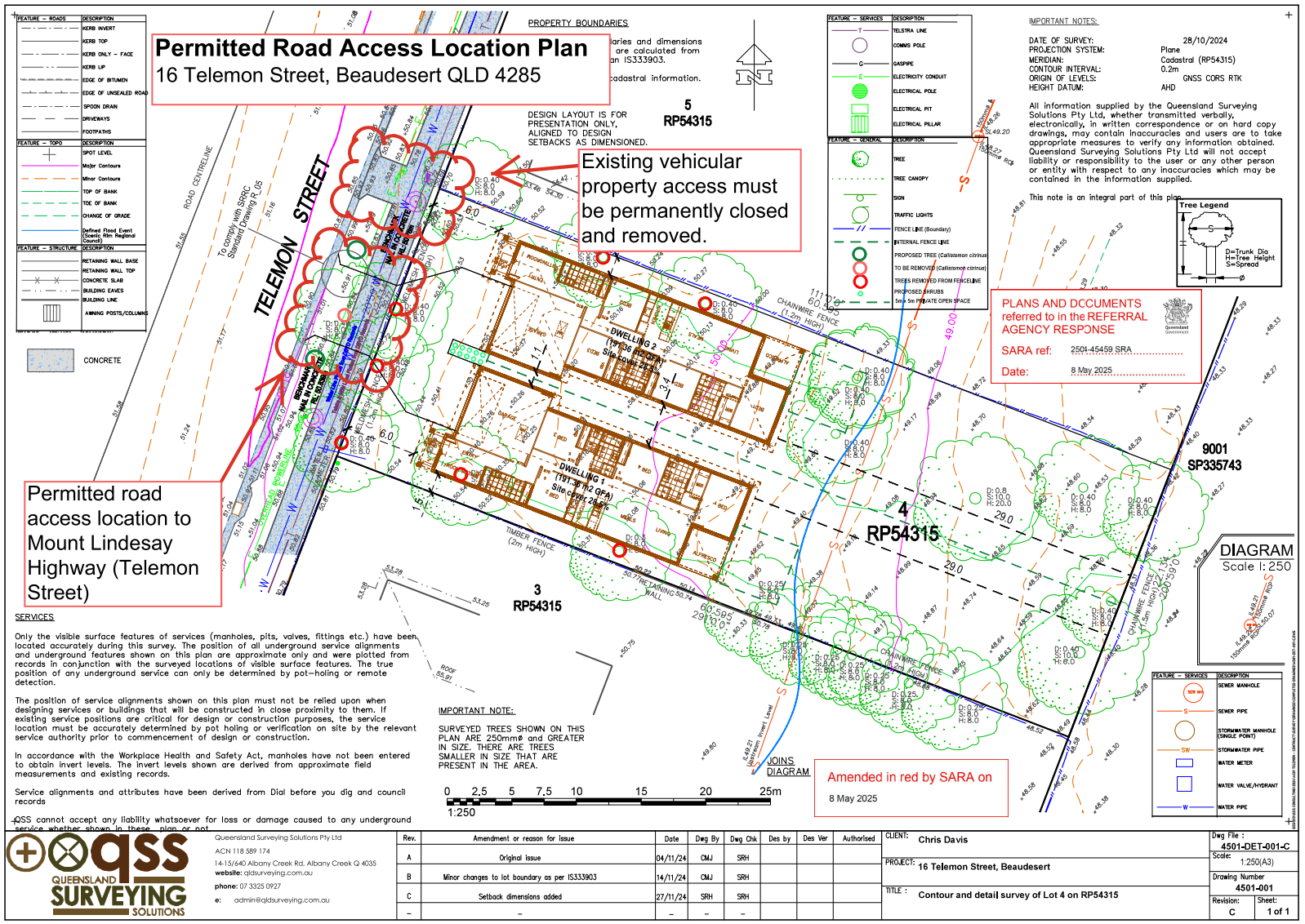

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ALLOWABLE NUMBER AND WIDTH OF RESIDENTIAL VEHICLE CROSSINGS

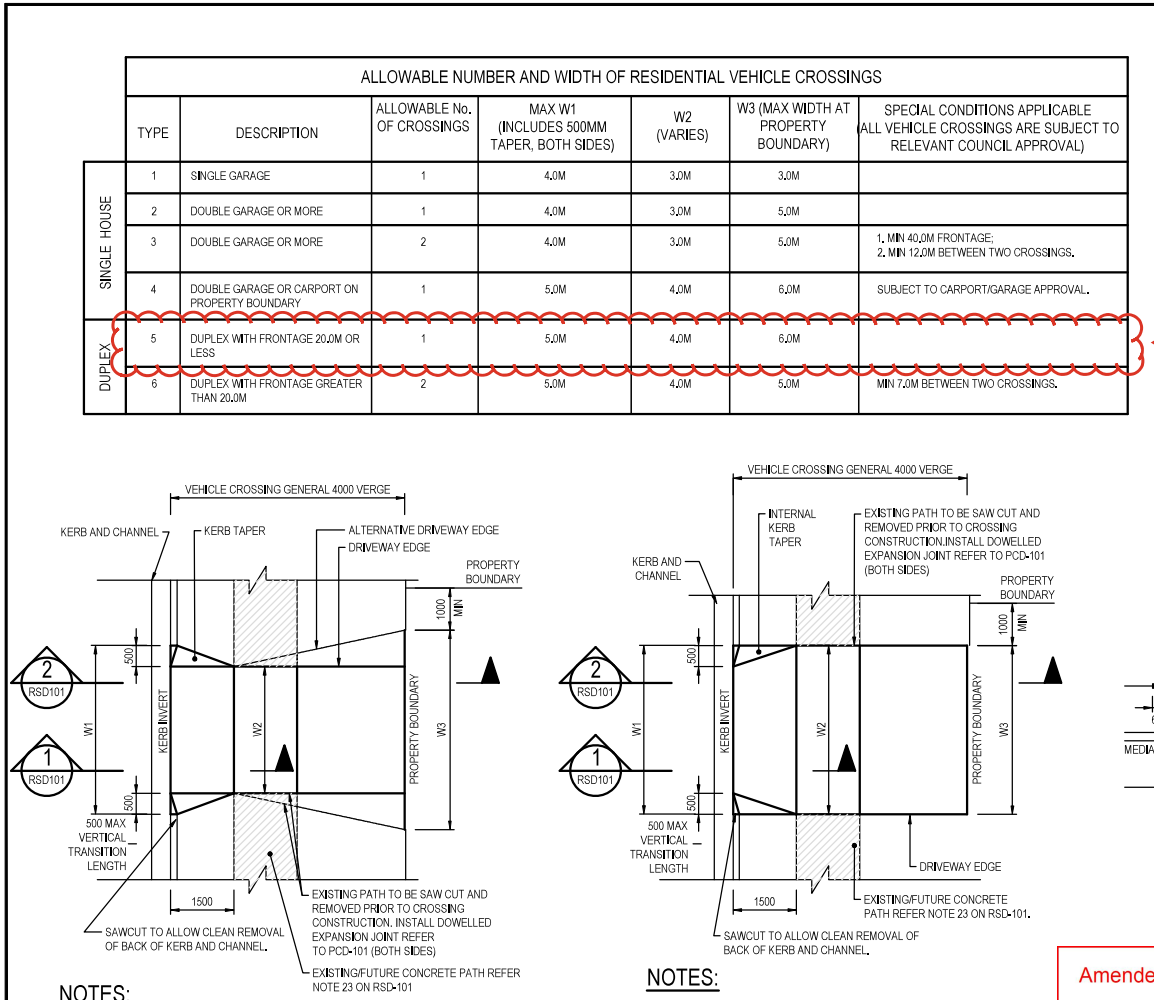
	TYPE	DESCRIPTION	ALLOWABLE No. OF CROSSINGS	MAX W1 (INCLUDES 500MM TAPER, BOTH SIDES)	W2 (VARIES)	W3 (MAX WIDTH AT PROPERTY BOUNDARY)	SPECIAL CONDITIONS APPLICABLE (ALL VEHICLE CROSSINGS ARE SUBJECT TO RELEVANT COUNCIL APPROVAL)
SINGLE HOUSE	1	SINGLE GARAGE	1	4.0M	3.0M	3.0M	
	2	DOUBLE GARAGE OR MORE	1	4.0M	3.0M	5.0M	
	3	DOUBLE GARAGE OR MORE	2	4.0M	3.0M	5.0M	1. MIN 40.0M FRONTAGE; 2. MIN 12.0M BETWEEN TWO CROSSINGS.
	4	DOUBLE GARAGE OR CARPORT ON PROPERTY BOUNDARY	1	5.0M	4.0M	6.0M	SUBJECT TO CARPORT/GARAGE APPROVAL.
DUPLEX	5	DUPLEX WITH FRONTAGE 20.0M OR LESS	1	5.0M	4.0M	6.0M	
	6	DUPLEX WITH FRONTAGE GREATER THAN 20.0M	2	5.0M	4.0M	5.0M	MIN 7.0M BETWEEN TWO CROSSINGS.

Road access in accordance with condition 1(b) of the changed referral agency response

LEGEND

(VEHICLE CROSSING PROHIBITED LOCATIONS)

- NKL — NOMINAL KERB LINE (FACE OF KERB)
- TP — TANGENT POINT ON NKL
- PROHIBITED LOCATIONS SHOWN IN A HEAVY LINE, BASED ON AS 2890.1
- X — THE POINTS MARKED 'X' ARE EITHER AT THE MEDIAN ON A DIVIDED ROAD, OR AT THE INTERSECTION OF THE MAIN ROAD CENTRELINE AND THE PROLONGATION OF THE SIDE ROAD NKL LINE ON AN UNDIVIDED ROAD.



NOTES:

1. SERVICES & ROAD FURNITURE WILL NOT BE MOVED FOR VEHICLE CROSSINGS IN PROHIBITED LOCATIONS.
2. THIS DRAWING TO BE READ IN CONJUNCTION WITH RSD-101.
3. W1 MAY NOT BE LESS THAN 4.0M AT ANY POINT, INCLUSIVE OF 500MM TAPERS.
4. W3 MAY NOT BE LESS THAN W2.
5. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE.

SETOUT REQUIREMENTS

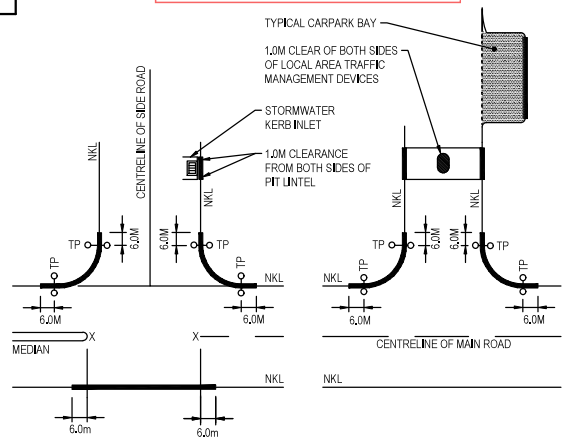
NOT TO SCALE.

NOTES:

1. W3 MAY NOT BE LESS THAN W2.
2. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE.

ALTERNATIVE SETOUT (INTERNAL TAPERS)

NOT TO SCALE.



VEHICLE CROSSING PROHIBITED LOCATIONS

NOT TO SCALE.

Amended in red by SARA on

8 May 2025

PLANS AND DOCUMENTS referred to in the REFERRAL AGENCY RESPONSE

SARA ref: 2504-45459 SRA

Date: 8 May 2025

VEHICLE CROSSINGS	QUEENSLAND NORTHERN TERRITORY IPWEA INSTITUTE OF PUBLIC WORKS ENGINEERING AUSTRALASIA	
RESIDENTIAL DRIVEWAYS SHEET 1 OF 2	SIZE A3	DRAWING No. RSD-100
	NOT TO SCALE	REV DATE: 07/23 REV. A

The fitness for purpose of these drawings for a specific project shall be deterMined and certified by a Registered Professional Engineer of Queensland (RPEQ). The user is responsible for ensuring the relevant council has adopted the drawing prior to its use.

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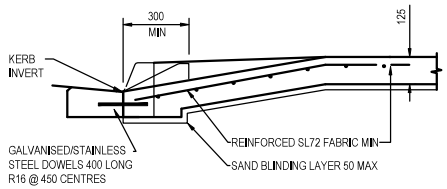
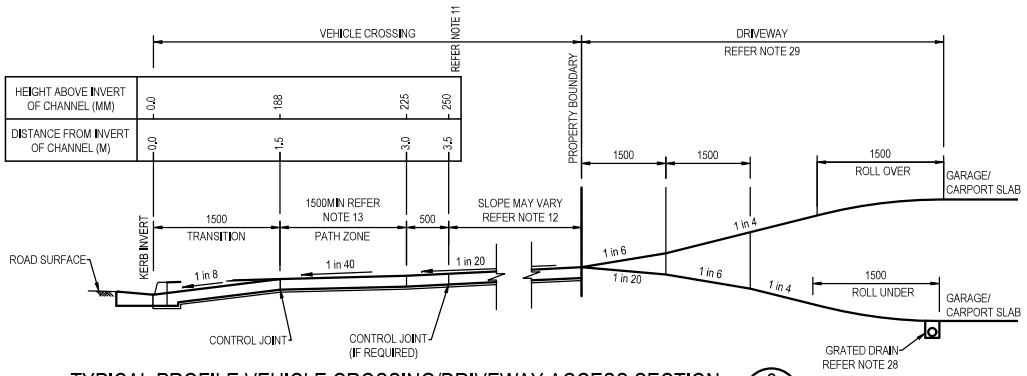
Queensland Government

SARA ref: 2504-45459 SRA

Date: 8 May 2025



BREAKOUT TYPE SECTION 1 RSD100



TYPICAL PROFILE VEHICLE CROSSING/DRIVEWAY ACCESS SECTION 2 RSD100

NOTES:

1. ALL APPROPRIATE PERMITS MUST BE OBTAINED FROM RELEVANT COUNCIL, SPECIFYING CROSSING TYPE, CONSTRUCTION MATERIALS, LOCATION, LEVELS, SURFACE FINISHES AND DIMENSIONS, PRIOR TO ANY EXCAVATION.
2. ALTERNATIVE MATERIALS FOR CONSTRUCTION, OTHER THAN REINFORCED CONCRETE, REFER TO RELEVANT COUNCIL FOR APPROVAL.
3. CROSSING TO BE CONSTRUCTED SQUARE TO THE STREET ALIGNMENT, WHOLLY CONTAINED WITHIN THE SITE FRONTAGE FROM INVERT OF CHANNEL TO PROPERTY BOUNDARY.
4. ONE ACCESS TO BE CONSTRUCTED PER ALLOTMENT UNLESS OTHERWISE APPROVED BY RELEVANT COUNCIL.
5. TO REDUCE IMPACT ON AVAILABLE STREET PARKING, CONSIDERATION IS TO BE GIVEN TO VISITOR'S AND NEIGHBOURING PROPERTY'S PARKING NEEDS WHEN SELECTING A CROSSING LOCATION.
6. CROSSING TO BE LOCATED CLEAR OF EXISTING GULLY PITS. WHERE THIS CANNOT BE ACHIEVED, THE GULLY PIT AND PIPEWORK MAY BE RELOCATED AT THE PROPERTY OWNER'S EXPENSE, SUBJECT TO APPROVAL OF THE RELEVANT COUNCIL.
7. CROSSING TO BE LOCATED CLEAR OF ALL SERVICE AUTHORITY'S FITTINGS, MANHOLES AND PITS. SUBJECT TO RELEVANT COUNCIL APPROVAL, WHERE THIS CANNOT BE ACHIEVED, EXISTING SERVICE PITS ARE TO BE CONTAINED WITHIN THE AREA OF NEW DRIVEWAY, PIT SURFACE TO MATCH APPROVED DRIVEWAY FINISHED LEVELS.
8. KERB ADAPTORS AND ASSOCIATED ROOFWATER DRAINAGE TO BE LOCATED CLEAR OF CROSSINGS.
9. COUNCIL WILL NOT RELOCATE TRAFFIC ISLANDS OR PROVIDE BREAKS IN TRAFFIC ISLANDS TO ALLOW DRIVEWAY ACCESS.
10. FOR WATER SENSITIVE URBAN DESIGN VERGES, THE CROSSING IS SUBJECT TO RELEVANT COUNCIL DESIGN AND APPROVAL.
11. CROSSING MUST ACHIEVE A HIGH POINT OF 250MM ABOVE INVERT OF KERB TO ENSURE STORMWATER IS CONTAINED WITHIN THE ROAD RESERVE AS PER REQUIREMENT OF Q.U.D.M. (QUEENSLAND URBAN DRAINAGE MANUAL). THIS CONSTRAINT MAY BE VARIED UPON THE APPROVAL OF THE RELEVANT COUNCIL.
12. UNDER SPECIAL CIRCUMSTANCES COUNCIL MAY APPROVE A RISING GRADE OF 1:6 MAX OR FALLING GRADE OF 1:20 MIN LONGITUDINAL GRADES ALONG PROPERTY BOUNDARY MUST ALLOW FOR FREE DRAINAGE AND PEDESTRIAN SAFETY.
13. PATH ZONE WIDTH MAY VARY TO MATCH EXISTING CONCRETE PATHWAYS AND VERGE PROFILES. EARTHWORKS ADJOINING CONCRETE MUST BE WELL COMPACTED.
14. EARTHWORKS CUT AND FILL BATTERS FROM EDGE OF CROSSING TO NATURAL SURFACE TO BE MAXIMUM GRADE AT 1 IN 10 AND FULLY TURFED PRIOR TO COUNCIL INSPECTION.
15. EXISTING PATH TO BE LONGITUDINALLY TRANSITIONED TO NEW CROSSING AT A MAXIMUM GRADE OF 1 IN 10.
16. PLAIN CONCRETE SURFACES TO BE HEAVY BROOM FINISHED.
17. DECORATIVE SURFACES ARE SUBJECT TO RELEVANT COUNCIL APPROVAL, WHERE APPROVED, TO HAVE A 5MM MAX DEPTH VARIATION IN THE FINISHED SURFACE PROFILE.
18. EXPANSION JOINTS TO BE 10MM THICK FULL DEPTH CLOSED CELL CROSS LINKED POLYETHYLENE FOAM (85 - 150 KG/M), OR 8.5MM THICK BITUMEN IMPREGNATED COMPRESSED GRANULATED CORKBOARD, INSTALLATION TO MANUFACTURERS' INSTRUCTIONS. SEAL SURFACE OF JOINT WITH A SUITABLE POLYURETHANE SEALANT.
19. CONCRETE SURFACE TOLERANCE TO BE, +5MM - 0MM OVER 3 METRE SECTIONS.
20. CONCRETE TO BE MINIMUM GRADE N32 IN ACCORDANCE WITH AS 1379, AS 3600 , AS4671, AS4586, AS 4663.
21. CONCRETE CONSTRUCTION TO COMPLY WITH THE REQUIREMENTS OF AS 3600, CONCRETE CODE.
22. REINFORCEMENT FABRIC TO AS 4671 STEEL REINFORCING MATERIALS, 50 TOP AND EDGE COVER, LAP FABRIC 250.
23. CONTROL JOINTS ARE TO BE SEALED WITH A LOW MODULUS SELF PRIMING SEALANT TO THE MANUFACTURERS SPECIFICATION. REFER PCD-101.
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The fitness for purpose of these drawings for a specific project shall be determined and certified by a Registered Professional Engineer of Queensland (RPEQ). The user is responsible for ensuring the relevant council has adopted the drawing prior to its use.

VEHICLE CROSSINGS	QUEENSLAND NORTHERN TERRITORY IPWEA INSTITUTE OF PUBLIC WORKS ENGINEERING AUSTRALASIA	
RESIDENTIAL DRIVEWAYS SHEET 2 OF 2	SIZE A3 / DRAWING No. RSD-101	
	NOT TO SCALE / REV DATE: 07/23	A REV.

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Development Assessment Rules—Representations about a referral agency response

The following provisions are those set out in sections 28 and 30 of the Development Assessment Rules[1] regarding **representations about a referral agency response**

Part 6: Changes to the application and referral agency responses

28 Concurrence agency changes its response or gives a late response

28.1. Despite part 2, a concurrence agency may, after its referral agency assessment period and any further period agreed ends, change its referral agency response or give a late referral agency response before the application is decided, subject to section 28.2 and 28.3.

28.2. A concurrence agency may change its referral agency response at any time before the application is decided if—

(a) the change is in response to a change which the assessment manager is satisfied is a change under section 26.1; or

(b) the Minister has given the concurrence agency a direction under section 99 of the Act; or

(c) the applicant has given written agreement to the change to the referral agency response.[2]

28.3. A concurrence agency may give a late referral agency response before the application is decided, if the applicant has given written agreement to the late referral agency response.

28.4. If a concurrence agency proposes to change its referral agency response under section 28.2(a), the concurrence agency must—

(a) give notice of its intention to change its referral agency response to the assessment manager and a copy to the applicant within 5 days of receiving notice of the change under section 25.1; and

(b) the concurrence agency has 10 days from the day of giving notice under paragraph (a), or a further period agreed between the applicant and the concurrence agency, to give an amended referral agency response to the assessment manager and a copy to the applicant.

[1] Pursuant to Section 68 of the *Planning Act 2016*

[2] In the instance an applicant has made representations to the concurrence agency under section 30, and the concurrence agency agrees to make the change included in the representations, section 28.2(c) is taken to have been satisfied.

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Part 7: Miscellaneous

30 Representations about a referral agency response

30.1. An applicant may make representations to a concurrence agency at any time before the application is decided, about changing a matter in the referral agency response.[3]

[3] An applicant may elect, under section 32, to stop the assessment manager's decision period in which to take this action. If a concurrence agency wishes to amend their response in relation to representations made under this section, they must do so in accordance with section 28.

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RA6-N

Queensland Government

SARA reference: 2504-45459 SRA
Council reference: MCU25/021 & RAL25/010
Applicant reference: -

8 May 2025

Chief Executive Officer
Scenic Rim Regional Council
PO Box 25
Beaudesert QLD 4285
mail@scenicrim.qld.gov.au

Attention: Sean Beck

Dear Sir/Madam

Changed SARA referral agency response – 16 Telemon Street, Beaudesert

(Referral agency response given under section 56 of the *Planning Act 2016*)

On 5 May 2025 the State Assessment and Referral Agency (SARA) received representations from the applicant requesting SARA to change its referral agency response. SARA has considered the representations and now provides this changed referral agency response which replaces the response dated 28 April 2025.

Response

Outcome:	Changed referral agency response – with conditions
Date of response:	8 May 2025
Conditions:	The conditions in **Attachment 1** must be attached to any development approval
Advice:	Advice to the applicant is in **Attachment 2**
Reasons:	The reasons for the referral agency response are in **Attachment 3**

Development details

Description:	Development permit	Material change of use for Dual occupancy and Reconfiguring a lot (one into two lots)
SARA role:	Referral agency	
SARA triggers:	Schedule 10, Part 9, Division 4, Subdivision 2, Table 1, Item 1	

Far North Queensland regional office
Ground Floor, Cnr Grafton and Hartley Street, Cairns
PO Box 2358, Cairns QLD 4870

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	(Planning Regulation 2017) – Reconfiguring a lot near a State transport corridor Schedule 10, Part 9, Division 4, Subdivision 2, Table 4, Item 1 (Planning Regulation 2017) – Material change of use of premises near a state transport corridor
SARA reference:	2504-42459 SRA
Assessment manager:	Scenic Rim Regional Council
Street address:	16 Telemon Street, Beaudesert
Real property description:	Lot 4 on RP54315
Applicant name:	Christopher Bonner Davis and Poppy Jade Ellis-Southwell
Applicant contact details:	363 Biddaddaba Creek Road BIDDADDABA QLD 4275 poppyellissouthwell@gmail.com
State-controlled road access permit:	This referral included an application for a road access location, under section 62A(2) of *Transport Infrastructure Act 1994*. Below are the details of the decision: • Approved • Reference: TMR25-045514 • Date: 22 April 2025 If you are seeking further information on the road access permit, please contact the Department of Transport and Main Roads at Far.North.Queensland.IDAS@tmr.qld.gov.au.
Human Rights Act 2019 considerations:	A consideration of the 23 fundamental human rights protected under the *Human Rights Act 2019* has been undertaken as part of this decision. It has been determined that this decision does not limit human rights.

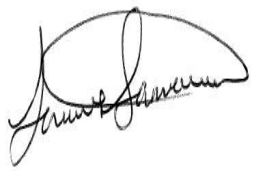
Representations

An applicant may make representations to a concurrence agency, at any time before the application is decided, about changing a matter in the referral agency response (s.30 Development Assessment Rules). Copies of the relevant provisions are in **Attachment 4**.

A copy of this response has been sent to the applicant for their information.

For further information please contact Charlton Best, A/Principal Planning Officer, on 07 4037 3200 or via email CairnsSARA@dsdilgp.qld.gov.au who will be pleased to assist.

Yours sincerely



Javier Samanes
A/ Manager (Planning)

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2504-42459 SRA

cc Christopher Bonner Davis and Poppy Jade Ellis-Southwell, poppyellissouthwell@gmail.com

enc Attachment 1 - Referral agency conditions
Attachment 2 - Advice to the applicant
Attachment 3 - Reasons for referral agency response
Attachment 4 - Representations about a referral agency response provisions
Attachment 5 - Documents referenced in conditions

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2504-42459 SRA

Attachment 1—Referral agency conditions

(Under section 56(1)(b)(i) of the *Planning Act 2016* the following conditions must be attached to any development approval relating to this application) (Copies of the documents referenced below are found at Attachment 5)

No.	Conditions	Condition timing
Schedule 10, Part 9, Division 4, Subdivision 2, Table 1 and Schedule 10, Part 9, Division 4, Subdivision 2, Table 4 – Reconfiguring a lot and Material change of use near a State transport corridor – The chief executive administering the *Planning Act 2016* nominates the Director-General of the Department of Transport and Main Roads to be the enforcement authority for the development to which this development approval relates for the administration and enforcement of any matter relating to the following conditions:		
1.	(a) The permitted road access location is to be located generally in accordance with plan titled 'contour and detail survey of Lot 4 on RP54315', prepared by Queensland Surveying Solutions, dated 27/11/24, drawing number 4501-001, revision C, as amended in red by SARA. (b) The road access works must be designed and constructed in accordance with: i. Institute of Public Works Engineering Australasia Standard Drawings for Residential Driveways, Drawing No. RSD-100 – Sheet 1 of 2, Type 5 - Duplex, revision A, dated 07/23, as amended in red by SARA and Drawing No. RSD101 – Sheet 2 of 2, revision A, dated 07/23; and ii. Department of Transport and Main Roads' Road Planning and Design Manual 2nd Edition; and iii. Manual of Uniform and Traffic Control Devices.	(a) At all times. (b) Prior to submitting the Plan of Survey to the local government for approval.
2.	Direct access is prohibited between Mount Lindesay Highway (Telemon Street) and proposed new lots 1 & 2 at any other location other than the permitted road access location described in condition 1(a).	At all times.
3.	(a) The existing vehicular property access located between existing Lot 4 on RP54315 and Mount Lindesay Highway (Telemon Street) must be permanently closed and removed. (b) The kerb and channelling and footpath between the pavement edge and the property boundary must be reinstated to match the adjacent, in accordance with Scenic Rim Regional Council and Department of Transport and Main Roads standards at no cost to the Department of Transport and Main Roads'.	(a) & (b) Prior to submitting the Plan of Survey to the local government for approval.

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2504-42459 SRA

Attachment 2—Advice to the applicant

General advice	
1.	Terms and phrases used in this document are defined in the *Planning Act 2016*, its regulation or the State Development Assessment Provisions (SDAP) (version 3.2). If a word remains undefined it has its ordinary meaning.
2.	**Road Access Works** Road Access Works Permit Required – This approval does not constitute a decision under section 33 of the *Transport Infrastructure Act 1994* (TIA). Under section 33 of the TIA, written approval is required from the Department of Transport and Main Roads (DTMR) to carry out road works, including road access works, on a State-controlled road or interfere with a State-controlled road or its operation. No works are to commence within the State-controlled road reserve until approval of the plan/s showing the proposed works is issued by the DTMR accordingly with section 33 of the TIA. Further information regarding works in State-controlled roads, including application forms, is available at: http://www.tmr.qld.gov.au/Community-and-environment/Planning-and-development/other-matters-requiring-approval.aspx The approval process may require the approval of engineering designs of the proposed works, certified by a Registered Professional Engineer of Queensland (RPEQ). The approval may be subject to conditions related to the works construction process. Please contact the department (South Coast Region) at scr.calm@tmr.qld.gov.au or on (07) 5563 6600 to make an application for works in the State-controlled road reserve (WSCRR).
3.	**Transport Noise Corridors** Mandatory Part (MP) 4.4 of the Queensland Development Code (QDC) applies to building work for the construction or renovation of a residential building in a designated transport noise corridor. MP4.4 seeks to ensure that the habitable rooms of residential buildings located in a transport noise corridor are designed and constructed to reduce transport noise. Transport noise corridor means land designated under Chapter 8B of the *Building Act 1975* as a transport noise corridor. A free online search tool can be used to find out whether a property is located in a designated transport noise corridor. This tool is available at: https://www.business.qld.gov.au/industries/building-property-development/building-construction/laws-codes-standards/queensland-development-code/transport-noise-corridor-search This tool allows searches on a registered lot number and/or property address to determine whether and how the QDC applies to the land.
4.	**Road Corridor Permit (RCP) and Traffic Control Permit (TCP):** Under section 50(2) of the TIA, an application for a Road Corridor Permit is required for any ancillary works and encroachments on the State-controlled road under Schedule 1 of the Transport Infrastructure (State-controlled road) Regulation 2006. A decision of approval may include conditions or restrictions. Under section 33 of the TIA, an application for a Traffic Controlled Permit is required for the lawful permission to commence and occupy traffic control in parts of a State-controlled road corridor (that is the engagement of a Traffic Management Company to perform any required lane closures and traffic control upon the roads).

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	The development application materials demonstrate that the proposal is likely to include ancillary works and encroachments over the Mount Lindesay Highway (State-controlled road). Ancillary works and encroachments include but are not limited to roadside advertising signs or other advertising devices, paths, vegetation clearing, landscaping and planting, and any works that present a potential hazard to road users, including demolition activities and excavation activities. Further information regarding ancillary works and encroachments is available at: http://www.tmr.qld.gov.au/Community-and-environment/Planning-and-development/other-matters-requiring-approval.aspx Please contact the department (South Coast Region) on (07) 5563 6600 or at southcoast@tmr.qld.gov.au to make an application for a Road Corridor Permit (RCP) and a Traffic Control Permit (TCP). RCP TMR Website link: https://www.tmr.qld.gov.au/Community-and-environment/Planning-and-development/other-matters-requiring-approval/Road-Corridor-Permit TCP TMR Website link: https://www.tmr.qld.gov.au/business-industry/technical-standards-publications/traffic-control-permit
5.	**Third Party Infrastructure / Public Utility and Plant (PUP)** Please be advised the installation of any third party infrastructure within state-controlled roads and state transport corridor do not form part of the *Planning Act 2016* process. Such proposals are dealt with under the TIA and cannot occur without the written approval of the DTMR. You are advised such applications are assessed on a case-by-case basis to ensure that the design, function and safety of the state-controlled road is not adversely impacted or compromised. For further information about this matter and to avoid any unnecessary delays, please contact the Corridor and Land Management team within the DTMR Nerang Office either by phone on 07 5563 6600 or by email to scr.calm@tmr.qld.gov.au. Additional information regarding the installation of public utility or plant and third party infrastructure can be obtained from DTMR's Technical Note 163 and Technical Publications for Roadsides – road corridors and utilities available at: https://www.tmr.qld.gov.au/business-industry/Technical-standards-publications/Roadsides-road-corridors-and-utilities

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Attachment 3—Reasons for changed referral agency response

(Given under section 56(7) of the *Planning Act 2016*)

The reasons for the SARA's decision are:

- The proposed development is unlikely to compromise the safety, function, and efficiency of the Mount Lindesay Highway, a state-controlled road.
- The proposed development will not impact on the ability or cost to plan, construct, maintain or operate state transport corridors.
- The proposed development is unlikely to result in a notable flooding impact upon the nearby state-controlled road corridor.
- Required connections to council services, essential utilities and infrastructure for the proposed development can be obtained without impacting on the state-controlled road.
- The proposed development is unlikely to compromise the residential amenity from significant adverse impacts of environmental emissions generated by road transport infrastructure or vehicles using state-controlled roads.
- SARA has carried out an assessment of the development application against State code 1: Development in a state-controlled road environment and has found that with conditions, the proposed development complies with relevant performance outcomes.

Material used in the assessment of the application:

- The development application material and submitted plans
- *Planning Act 2016*
- Planning Regulation 2017
- The State Development Assessment Provisions (version 3.2)
- The Development Assessment Rules
- SARA DA Mapping system
- *Human Rights Act 2019*

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Attachment 4—Representations about a referral agency response provisions

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Attachment 5—Documents referenced in conditions

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Development Application
Negotiated Decision Notice
***Sustainable Planning Act 2009* s 363**

File Reference: MCBd14/061
Contact Person: Narendra Singh
Contact Number: 07 5540 5435

30 June 2015

Urban Planning Services Pty Ltd
PO Box 2091
SURFERS PARADISE QLD 4217

Development Application No:	**MCBd14/061**
Application Type:	**A Request for a Negotiated Decision Notice pursuant to section 361 of the *Sustainable Planning Act 2009* to negotiate 4 conditions of the stated approval for MCBd14/061-Shopping Centre (Business Use)**
Planning Scheme:	***Beaudesert Shire Planning Scheme 2007***
Location:	**1-33 Tamborine Mountain Road TAMBORINE**
Registered Plan Description:	**Lot 1 SP 268147**

Dear Sir/Madam

I wish to advise that on 30 June 2015, a decision was made to issue a negotiated decision notice. This Negotiated Decision Notice replaces the decision notice previously issued and dated 24 February 2015.

1. **Nature of the changes**

   - Condition 2 - Amended Car Park Plan;
   - Condition 21 - Stormwater Drainage; and
   - Condition 23 - Stormwater Quality Management Plan

   The Applicant is advised that nothing in the above correspondence / notice alleviates the need to comply with the balance of the Decision Notice dated 24 February 2015. The above development application was approved in full with conditions.

Director's Recommendation

1. That Council resolve to partly amend the development conditions in respect to the following property:

RPD:	Lot 1 on SP268147
Address of property:	1-33 Tamborine Mountain Road TAMBORINE
Site area:	3.224Ha
Proposal:	A Request for a Negotiated Decision Notice pursuant to section 361 of the *Sustainable Planning Act 2009* to Negotiate 4 conditions of the Development Approval for MCBd14/061.

2. Conditions of Approval:

Approved Plans

1) USE IN ACCORDANCE WITH THE APPLICATION - Material Change of Use - Development being undertaken generally in accordance with the Approval Plans as stated within this condition and Conditions 2 and 3, and accompanying documentation, except insofar as it is modified by the conditions of this approval. Any minor changes may be requested by the Applicant in accordance with of the Sustainable Planning Act 2009 without the need for a further Development Application for a Material Change of Use. The Approved Plans are limited to the following drawings:

Plan/Drawing	Plan/Dwg No.	Date	Prepared by
Local Context Plan 3.1	Sheet 5 of 24 - Issue B	October 2014	Bda architecture
Existing Site Analysis - 3.2	Sheet 6 of 24 - Issue B	October 2014	Bda architecture
Site Survey - 3.3	Sheet 7 of 24 - Issue B	October 2014	Bda architecture
Master Plan - 4.1	Sheet 8 of 24 - Issue B	October 2014	Bda architecture
Site Plan - 4.2	Sheet 9 of 24 - Issue B	October 2014	Bda architecture
Access and Movement - 4.3	Sheet 10 of 24 - Issue B	October 2014	Bda architecture
Site Setback Plan - 4.4	Sheet 11 of 24 - Issue B	October 2014	Bda architecture
Car Park Plan - Area A - 4.5	Sheet 12 of 24 - Issue B	October 2014	Bda architecture
Car Park Plan - Area B - 4.6	Sheet 13 of 24 - Issue B	October 2014	Bda architecture
Car Park Plan - Area C - 4.7	Sheet 14 of 24 - Issue B	October 2014	Bda architecture
Retail Tenancy Floor - Plan 4.8	Sheet 15 of 24 - Issue B	October 2014	Bda architecture
Café Tenancy Plan and Elevations - 4.9	Sheet 16 of 24 - Issue B	October 2014	Bda architecture
Pylon Signage - 4.10	Sheet 17 of 24 - Issue B	October 2014	Bda architecture
Elevations 1 - 4.12	Sheet 19 of 24 - Issue B	October 2014	Bda architecture
Elevations 2 - 4.13	Sheet 20 of 24 - Issue B	October 2014	Bda architecture
Elevations 3 - 4.14	Sheet 21 of 24 - Issue B	October 2014	Bda architecture
Elevations 4 - 4.15	Sheet 22 of 24 - Issue B	October 2014	Bda architecture
Street Section - 4.16	Sheet 23 of 24 - Issue B	October 2014	Bda architecture
Entry Section - 4.17	Sheet 24 of 24 - Issue B	October 2014	Bda architecture

General

2) **CAR PARK LAYOUT** - The use of the DTMR road reserve for vehicle parking is not permitted, unless written consent from the land owner is obtained. The Applicant is to ensure that the number of vehicle parking spaces is consistent with Condition 17. This may require amendments to Site Plan - 4.2, Car Park - Detailed Layout plans (Car Park Plan - Area A 4.5, Area B - 4.6 and Area C - 4.7 prepared by BDA architecture, dated October 2014) should consent to use the DTMR road reserve car parking area not be obtained.

This amended plan (if required) must be lodged and approved by the Director of Regional Services or equivalent, acting reasonably, prior to seeking any further approvals.

3) **AMENDED PYLON SIGNAGE** - The Applicant is to submit an amended Pylon Signage Plan - 4.10, prepared by Bda architecture, dated October 2014, that incorporates a Pylon signage with the maximum sign face area does not exceed 20m^2 in total.

This amended plan must be lodged and approved by the Manager Planning, or equivalent, acting reasonably, prior to seeking any further approvals.

4) **DEFINITION COMPLIANCE AND EXCLUSIONS** - The approved use/s and associated ancillary activities shall at all times comply with the definition/s of a Shopping Centre uses of Schedule 1 – Dictionary, Part 1 – Defined Uses respectively, of the Beaudesert Shire Planning Scheme 2007.

5) **BUILDING ENCROACHMENTS** - The applicant must ensure that all buildings and structures, as defined under the Building Codes of Australia, are fully contained within the boundaries of the subject site.

6) **COMMENCEMENT OF USE** - Prior to the use commencing, the Applicant shall advise Council's Planning Department in writing, of the proposed commencement date.

7) **WORKS** - applicant's expense - All works, services, facilities and/or public utility alterations required by this approval or stated condition/s, whether carried out by the Council or otherwise, shall be at the Applicant's expense unless otherwise specified.

8) **PREVIOUS APPROVAL** - This approval will override the Previous Approval 020-030-001839.

9) **OPERATING HOURS** – The use so approved shall operate in accordance with standard commercial and retail trading hours of operation.

10) **SITE MAINTENANCE** - The site shall be maintained in a clean and orderly state at all times.

11) **RELEASE OF CONTAMINANTS** - Contaminants must not be released to the environment where the release will or may cause environmental harm.

12) **FENCING** – Safety fencing is provided between the driveway and the water detention basin areas and any other areas where appropriate at a level to ensure that no danger or threat occurs to public.

13) **LANDSCAPING –** In accordance with the approved Master Plan showing the concept landscaping. The land shall be landscaped with suitable trees hedgerow plantings and shrubs together with grass or other ground cover in accordance with the provisions of Planning Scheme Policy No.6 of Council's Beaudesert Shire Planning Scheme 2007. Such trees and shrubs shall be native Australian varieties particularly those indigenous to the locality, where possible, and be maintained in a sturdy and healthy condition with dead or diseased trees replaced as soon as practicable. Landscaping of the site is to occur prior to the commencement of use.

14) **UPGRADING OF LEACH ROAD** - Upgrading works are required for the full road width of the full frontage of the development and any extent beyond the frontage so as to meld with the existing road and kerb and channel. These works are to be designed and constructed in accordance with all parts of the Austroads "Guide to Road Design" and Scenic Rim Regional Council Standards. The design and construction of the road works shall include road widening to allow for two (2) 3.5m lanes, 2.9m manoeuvring areas, 5.4m car parking and barrier kerb and channel on the development side of Leach Road, parallel parking on the opposite side of Leach Road including kerb and channel to meld with the existing roadway (for the length of the frontage of the development), footpath works on both sides of Leach Road for the full frontage of the development, pavement works, drainage works in accordance with the Queensland Urban Drainage Manual (QUDM), line-marking and all necessary traffic signage in accordance with the Manual of Uniform Traffic Control Devices (MUTCD) as and where required. The works required by this condition are to be completed prior to the commencement of the approved use.

Detailed design will be submitted as part of an "Application for Constructing or Interfering with a Road or its Operation".

15) **ACCESS TO COUNCIL ROAD -** Two new two-way accesses are to be constructed on the Western side of the development (Leach Road side) in accordance with Council standards. The works required by this condition are to be completed prior to the commencement of the use. The access provisions shall be maintained in good condition for the lifetime of the proposed use.

Detailed design will be submitted as part of an "Application for Constructing or Interfering with a Road or its Operation"

16) **CAR PARKING** – concrete / flexible pavement with asphalt - All parking areas, driveways, circulation aisles and manoeuvring areas are to be designed and constructed in accordance with AS 2890.1 - 2004 and AS 2890.2 – 2002 and Council's Design & Construction Manual. If conflict exists between the standards, advice is to be sort from Council before proceeding. All pavements will be designed to suit the proposed vehicle loadings with the individual pavements constructed as either a rigid pavement (reinforced concrete) or alternatively as a flexible pavement (unbound granular pavement with a primer seal and asphalt wearing course seal), from the property boundary to the satisfaction of the Director of Infrastructure Services or equivalent, acting reasonably. The car parking provisions must be available prior to the commencement of the use and must be maintained in good condition for the lifetime of the proposed use. The internal car parking layout is to be generally in accordance with the approved drawings.

The completed works will be certified by a Registered Professional Engineer of Queensland (RPEQ) as having been constructed in accordance with good engineering practice to a standard reasonable for commercial purposes.

17) **CAR PARKING NUMBERS** - The developer is to provide a minimum of one hundred and sixteen (116) car parking spaces including three (3) spaces for people with disabilities. Additionally, one (1) space for Small Rigid Vehicle (SRV) is to be provided. One (1) space for Heavy Rigid vehicle (HRV) will also be provided to cater for the proposed development. The minimum provided spaces are to comply with the rate provided in the Car Parking and Servicing Code of the Beaudesert Shire Planning Scheme 2007.

18) **CAR PARKING ON-SITE** - All vehicles under the control of the party(ies) charged with the overall responsibility for the operation of the facility and any ancillary staff will be parked wholly within the curtilage of the site. All vehicle movements to and from the site, inclusive of service vehicles, are to be conducted in forward gear. The requirements of this condition are to be adhered to for the lifetime of the approved use.

19) **VEHICLE LOADING / UNLOADING** - All loading and unloading of vehicles associated with the approved uses, including the pick-up and/or delivery of goods and materials, will be conducted at all times from within the curtilage of the site. The requirements of this condition are to be adhered to for the lifetime of the approved use.

20) **ADVERSE DRAINAGE IMPACT - GENERAL** - No ponding, concentration or redirection of stormwater shall occur onto adjoining land not forming part of the land the subject of the approved development.

21) STORMWATER DRAINAGE - The Developer is to make provision for the discharge of stormwater drainage flows to a legal point of discharge. The Developer shall provide all necessary stormwater drainage; such drainage works shall be designed and constructed in accordance with the Queensland Urban Drainage Manual (QUDM) and demonstrate "no worsening" downstream of the site in accordance with Council's Design and Construction Manual. The stormwater system is to manage stormwater runoff to avoid any increase in peak flow impacts to downstream properties.

Plans for stormwater conveyance and treatment systems to cater for the whole of the development site are to be prepared to the satisfaction of the Council's Director Infrastructure Services or equivalent, acting reasonably. The developer is to demonstrate that no worsening of peak flows for a 1% AEP storm event. This is to be addressed and submitted prior to the commencement of works associated with the proposal.

The completed works are to be certified by a Registered Professional Engineer of Queensland (RPEQ) as having been constructed in accordance with good engineering practice. The works required by this condition are to be completed prior to the commencement of the use.

22) STORM WATER TREATMENT FACILITIES - *The Developer is to design and construct any mitigation works and the treatment facilities required for the development in accordance with Site Based Stormwater Management Plan prepared by Sedgman Yeats dated 11/09/2014 rev. 02.*

23) DELETED

24) SEDIMENT AND EROSION CONTROL MANAGEMENT PLAN (SECMP) - Prior to the commencement of any works on the site, the Applicant is to submit to Council, a properly prepared comprehensive Erosion and Sediment Control Program to the satisfaction of the Director of Infrastructure Services or equivalent, acting reasonably . The report is to comply with "Soil Erosion and Sediment Control: Engineering Guidelines for Queensland Construction Sites, Institute of Engineers, Australia 1996".

25) ADEQUATE WATER SUPPLY – The Applicant is to make provision for the establishment of an adequate water supply system capable of servicing the development. Details on the proposed method of providing an adequate water supply are to be submitted as part of a Development Application for Plumbing and Drainage Works. The requirements of this condition are to be completed prior to the commencement of the approved use.

26) WASTEWATER DISPOSAL - GENERAL - The Applicant is to make provision for the design and construction of an adequate wastewater disposal system capable of servicing the proposed development so as to adequately provide for the treatment and disposal of wastewater on-site.

The wastewater disposal system is to conform with the provisions of the Department of Infrastructure and Planning "Queensland Development Code", the "Queensland Plumbing and Wastewater (QPW) Code" and AS1547-2000. Details on the proposed method of treatment and

disposal of wastewater are to be submitted as part of a Development Application for Plumbing and Drainage Works and/or Environmentally Relevant Authority (ERA 63) if the equivalent persons exceeds 21. The works required by this condition are to be completed prior to the commencement of the approved use.

27) EARTHWORKS OPERATIONS (CAR PARKING AREAS, ACCESS DRIVEWAY AND ALLOTMENT FILLING) – All earthworks associated with the car-parking areas, access driveway(s) and the building works will be undertaken in accordance with Council's Design and Construction Manual.

28) ELECTRICITY - The Applicant is to make provision of a suitable electricity supply from the State electricity grid through the State authorised supplier (Energex) to the shopping centre or production of evidence of satisfactory arrangements for such supply having been made.

The works required by this condition are to be completed prior to the commencement of the approved use.

29) CAR-PARK LIGHTING & SECURITY GENERAL - The developer shall be responsible for the provision and ongoing maintenance of adequate lighting to the open area car-parking facilities and all pedestrian links to the requirements of the relevant Australian Standards within AS1158 – Lighting for Roads and Public Spaces and AS4282 – Control of the Obtrusive Effects of Outdoor Lighting. The lighting to the aforementioned areas will be maintained in good condition for the lifetime of the proposed use.

The works required by this condition are to be completed prior to the commencement of the approved use. The lighting to the aforementioned areas will be maintained in good condition for the lifetime of the proposed use.

30) AIR CONTAMINANTS - A noxious or offensive odour must not be emitted beyond the boundaries of the premises. No particulate matter or visible contaminant, including dust, smoke, fumes and aerosols likely to cause environmental harm is to emanate beyond the boundaries of the premises.

31) LIGHT EMISSIONS - Light sources at the premises must be positioned and shielded to ensure light spillage outside the boundaries of the premises is in accordance with Australian Standard AS.4282 – Control of the Obtrusive effects of outdoor light.

32) NOISE DISTURBANCE - The activity must be carried out by such practicable means necessary to prevent or minimise the emission of noise likely to cause environmental nuisance at any noise sensitive or commercial place.

33) NOISE EMISSION LIMITS - If a complaint (other than a frivolous or vexatious complaint) is made to the administering authority, the emission of noise from the premises must not exceed the levels prescribed by Table 1 (below).

Table 1

Time Period	At dwelling or other Noise sensitive place	At commercial premises
Daytime (7:00am-10:00pm)	Background +5dB(A)	Background +10dB(A)
Night time (10:00pm-7:00am)	Background +3dB(A) Background=LA_{90}	Background +8dB(A) Background=LA_{90}

The compliance levels are measured as the average of the maximum A-weighted sound levels adjusted for noise character measured over a 15-minute time interval. These provisions apply except where specific emission limits are provided in the *Environmental Protection Act 1994*.

34) EROSION & SEDIMENT CONTROL - Appropriate erosion and sediment control measures must be installed and maintained as required to prevent or minimise the release of sand, silt or mud from the premises to any stormwater drainage system or any natural waterway.

35) RELEASES TO WATER - Releases to water must not cause any visible oil slick or other visible evidence of oil or grease, nor contain visible, grease, scum, litter or floating oil.

36) WASTE - Waste is not to be stockpiled so as to cause environmental nuisance or attract flies.

37) WASTE STORAGE - All waste produced at the site must be stored in appropriate containers/receptacles of a sufficient number to receive all waste generated at the site. Waste containers/receptacles must be maintained in full working order and lids are to remain closed at all times except when receiving or disposing of waste.

38) WASTE REMOVAL - All wastes must be removed to an approved disposal facility by a transporter holding all necessary government approvals. Waste must be removed at a frequency and in a manner that prevents nuisance from the waste at neighbouring premises.

39) PESTS & VERMIN - Organic substances likely to provide a food source for vermin must be stored in a sealed and airtight storage container to exclude access by pests or vermin.

40) POTABLE WATER - All water provided for personal hygiene, human consumption and to food preparation facilities is of a potable standard and meets the requirements of the National Health and Medical Research Council (NHMRC) Australian Drinking Water Quality Guidelines.

3. Approval Conditions (Referral Agency):

The State Assessment and Referral Agency (Concurrence) Response dated 12 December 2014.

4. That the Applicant be further advised of the following:

a) **DEVELOPMENT APPROVAL CONDITIONS ATTACH TO LAND** - Development Approvals which include conditions and any modifications attach to the land and are binding on the owner/s, the owner's successors in title and any occupier of the land pursuant to Section 3.5.28 of the Integrated Planning Act 1997.

b) **VEGETATION MANAGEMENT ACT 1999 AND THE CULTURAL HERITAGE ACT 2003** - This approval in no way restrict or inhibit the provisions of neither the Vegetation Management Act 1999 nor the Aboriginal Cultural Heritage Act 2003. The Applicant(s) will need to satisfy himself/herself/themselves that in undertaking the proposed development works that his/her/their actions will not contravene the provisions of the aforementioned Acts.

c) **WHEN DEVELOPMENT APPROVAL TAKES EFFECT** - Pursuant to Sustainable Planning Act 2009, this Development Approval takes effect:

(i) from the date the Decision Notice/Negotiated Decision Notice (as the case may be) is given to the Applicant, if there are no Submitters and the Applicant does not appeal the decision to the Court; or

(ii) from the end of the Submitter's appeal period if there is a Submitter and the Applicant does not appeal the decision to the Court; or

(iii) subject to the decision of the Court when the appeal is finally decided if an appeal is made to the Court by any party; as the case may be. Development may start when a Development Permit takes effect (subject to any conditions specifying commencement).

d) **APPROVAL LAPSES AT COMPLETION OF RELEVANT PERIOD** - This Development Approval will lapse if the Material Change of Use does not happen before the end of the relevant period. The relevant period is four (4) years from the date the approval takes effect. The relevant period may be extended at the discretion of Council under Section 341 of the Sustainable Planning Act 2009. Before the Development Approval lapses, a written request to extend the relevant period may be made to Council under Section 383 of the Sustainable Planning Act 2009. Please note that Council will not automatically remind Applicants/Occupiers when the relevant period is about to lapse.

e) **FOOD LICENSING -** If food is prepared and served at the premises, the food preparation facilities may require to be licensed and approved by Council in accordance with the *Food Act 2006*. Further information and the relevant application forms can be obtained by calling Council's Health & Environment area on 07 5540 5444.

f) **ADVERTISING SIGNS –** Advertising signs may require an approval in accordance with Council's Local Laws. Further information and the relevant application forms can be obtained by contacting Council's Health & Environment area on 07 5540 5444.

These conditions are clearly identified to indicate whether the assessment manager or a concurrence agency imposed them.

2. Approval under s.331

This application has not been deemed to be approved under section 331 of the *Sustainable Planning Act 2009* (SPA).

3. Details of the approval

The following approvals are given

	Sustainable Planning Regulation 2009, schedule 3 reference	**Development Permit**	**Preliminary Approval**
Making a **material change of use** assessable under the planning scheme, a temporary local planning instrument, a master plan or a preliminary approval to which section 242 applies		☒	☐

4. Other necessary development permits and/or compliance permits Listed below are other development permits and/or compliance permits that are necessary to allow the development to be carried out:

a) A Building Works approval is required for all building works associated with the proposed development, prior to undertaking and building work on the subject property.

b) A Plumbing and Drainage approval is required for all / any plumbing and drainage works associated with the proposed development, prior to undertaking any plumbing and drainage works on the subject property.

c) Constructing or Interfering with a Road or its Operation Approval and a Property Access Location Approval, from Council Infrastructure Services Directorate is required prior to lodgement of a Building or Plumbing Application.

d) An Environmental Authority for an Environmentally Relevant Activity 63 - Sewage Plant is required to be obtained from the relevant authority from the Department of Environment and Heritage Protection should sewage treatment works on site have a total daily peak design capacity of at least 21 equivalent persons (>4,000 litres per day).

5. Referral agencies

The referral agencies for this application are

Name of referral agency	**Address**
Department of State Development, Infrastructure & Planning	ipswichSARA@dsdip.qld.gov.au

6. Appeal rights

Appeals by applicants

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

- the refusal, or refusal in part of the development application
- any condition of a development approval, another matter stated in a development approval and the identification or inclusion of a code under section 242 of the SPA
- the decision to give a preliminary approval when a development permit was applied for
- the length of a period mentioned in section 341
- a deemed refusal of the development application.

The timeframes for starting an appeal in the Planning and Environment Court are set out in section 461(2) of the SPA.

Applicants may also have a right to appeal to the Building and Development Dispute Resolution Committee. For more details, see the SPA, chapter 7, part 2.

Appeals by submitters

A submitter for a development application may appeal to the Planning and Environment Court against:

- the part of the approval relating to the Assessment Manager's decision about any part of the application requiring impact assessment
- the part of the approval relating to the Assessment Manager's decision under section 327.

Details about submitter appeal rights for the Planning and Environment Court are set out in sections 462, 463 and 464 of the SPA.

Submitters may also have a right to appeal to the Building and Development Dispute Resolution Committee. For more details, see the SPA, chapter 7, part 2.

Attachment 2 is an extract from the SPA which details the applicant's appeal rights and the appeal rights of any submitters regarding this decision.

If you wish to discuss this matter further, please contact me on the above telephone number.

Yours faithfully

Signed by Scott Turner and sent via registered post 2 July 2015.

Scott Turner
MANAGER PLANNING

cc: Dept of State Development, Infrastructure & Planning
ipswichSARA@dsdip.qld.gov.au

Part 2 – Concurrence agency conditions

Queensland Government

Department of
State Development, Infrastructure and Planning

Our reference: SDA-0714-012919
Your reference: MCBd14/061

12 December 2014

The Chief Executive Officer
Scenic Rim Regional Council
PO Box 25
BEAUDESERT QLD 4285
mail@scenicrim.qld.gov.au

Attn: Narendra Singh

Dear Narendra,

Concurrence agency response—with conditions
1-33 Tamborine Mountain Road, Tamborine
(Given under section 285 of the *Sustainable Planning Act 2009*)

The referral agency material for the development application described below was received by the Department of State Development, Infrastructure and Planning under section 272 of the *Sustainable Planning Act 2009* on 1 August 2014.

Applicant details

Applicant name:	Beaudesert Project Pty Ltd ATF Beaudesert Project Unit Trust C/- Urban Planning Strategies Pty Ltd
Applicant contact details:	PO Box 2091 SURFERS PARADISE QLD 4217 sara@urbanps.com.au

Site details

Street address:	1-33 Tamborine Mountain Road, Tamborine, QLD, 4207
Lot on plan:	Lot 1 SP268147
Local government area:	Scenic Rim Regional Council

Page1

SEQ West Region
Level 4,117 Brisbane Street
PO Box 129
Ipswich QLD 4305

SDA-0714-012919

Application details

Proposed development: Development Permit for Material Change of Use for a Shopping Centre (Business Use)

Aspects of development and type of approval being sought

Nature of Development	Approval Type	Brief Proposal of Description	Level of Assessment
Material Change of Use	Development permit	Tamborine Village Shopping Centre	Impact Assessment

Referral triggers

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

Referral trigger Schedule 7, Table 3, Item 1—State-controlled roads

Conditions

Under section 287(1)(a) of the *Sustainable Planning Act 2009*, the conditions set out in Attachment 1 must be attached to any development approval.

Reasons for decision to impose conditions

Under section 289(1) of the *Sustainable Planning Act 2009*, the department must set out the reasons for the decision to impose conditions. These reasons are set out in Attachment 2.

Further advice

Under section 287(6) of the *Sustainable Planning Act 2009*, the department offers advice about the application to the assessment manager—see Attachment 3.

Approved plans and specifications

The department requires that the following plans and specifications set out below and in Attachment 4 must be attached to any development approval.

Drawing/Report Title	Prepared by	Date	Reference no.	Version/Issue
Aspect of development: Material Change of Use for a Shopping Centre (Business Use)				
Site Plan (as amended in red 11 December 2014)	BDA Architecture	October 2014	360000	B
Preliminary Concept Design – Leach Road/Beaudesert-Beenleigh Road Intersection	Bitzios Consulting	17 November 2014	P1588 – Sheet 1	B

A copy of this response has been sent to the applicant for their information.

SDA-0714-012919

For further information, please contact Danae Johnston, Planner, on (07) 3432 2420, or email IpswichSARA@dsdip.qld.gov.au who will be pleased to assist.

Yours sincerely

Nathan Rule
Manager - Planning

cc: Beaudesert Project Pty Ltd ATF Beaudesert Project Unit Trust c/- UPS, sara@urbanps.com.au
Department of Transport and Main Roads, South.Coast.IDAS@tmr.qld.gov.au

enc: Attachment 1—Conditions to be imposed
Attachment 2—Reasons for decision to impose conditions
Attachment 3—Further advice
Attachment 4—Approved Plans and Specifications

SDA-0714-012919

Our reference: SDA-0714-012919
Your reference: MCBd14/061

Attachment 1—Conditions to be imposed

No.	Conditions	Condition timing
Development Permit for Material Change of Use Shopping Centre (Business Use)		
State-controlled road—Pursuant to section 255D of the *Sustainable Planning Act 2009*, the chief executive administering the Act nominates the Director-General of the Department of Transport and Main Roads to be the assessing authority for the development to which this development approval relates for the administration and enforcement of any matter relating to the following condition(s):		
1.	The development must be carried out generally in accordance with the following plans as amended in red: • *Site Plan (as amended in red 11 December 2014),* prepared by BDA Architecture, dated October 2014, Reference No. 360000, Issue B; • *Preliminary Concept Design – Leach Road/Beaudesert-Beenleigh Road Intersection,* prepared by Bitzios Consulting, dated 17 November 2014, Reference Number P1588, Sheet 1, Version B.	At all times
2.	(a) Development must be carried out generally in accordance with the Site Based Stormwater Management Plan, prepared by Sedgman Yeats, dated 3 October 2014, Reference No. C0482, Revision 2. (b) Any works on the land must not: (i) create any new discharge points for stormwater runoff onto the state-controlled road; (ii) interfere with and/or cause damage to the existing stormwater drainage on the state-controlled road; (iii) surcharge any existing culvert or drain on the state-controlled road; (iv) reduce the quality of stormwater discharge onto the state-controlled road. (c) RPEQ certification must be provided to the Department of Transport and Main Roads, confirming that the development has been designed and constructed in accordance with parts (a) and (b) of this condition.	(a) and (b) At all times (c) Prior to commencement of use
3.	Road works comprising a Channelised Right Turn (CHR) and Auxiliary Left Turn Treatment (AULs), for which approval under section 33 of the *Transport Infrastructure Act 1994* must be obtained, must be provided generally in accordance with *Preliminary Concept Design – Leach Road/ Beaudesert-Beenleigh Road Intersection,* prepared by Bitzios Consulting, 17 November 2014, Reference Number P1588, Sheet 1, Version B. The road works must be designed and constructed in accordance with the Road Planning and Design Manual (2nd Edition).	Prior to the commencement of use

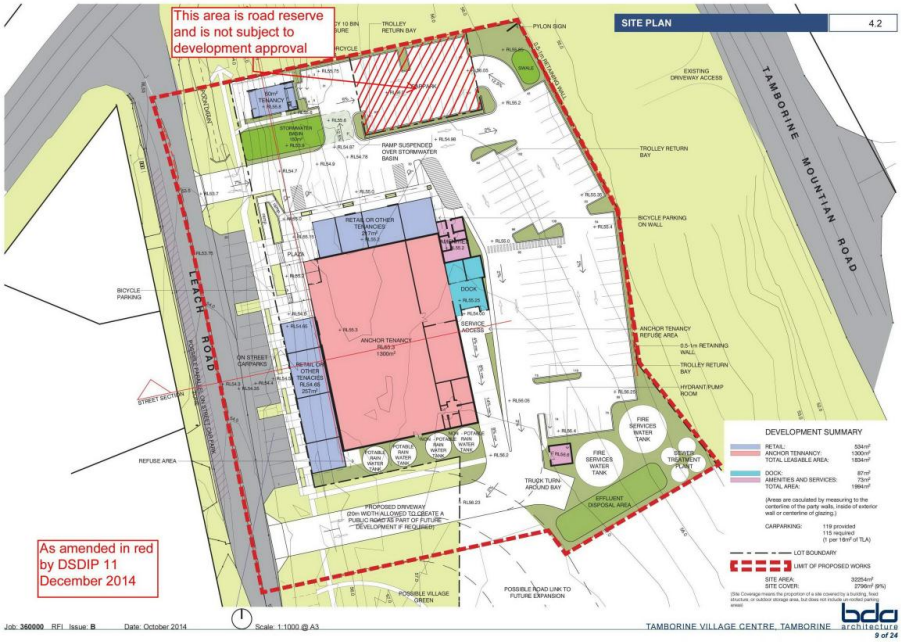
SDA-0714-012919

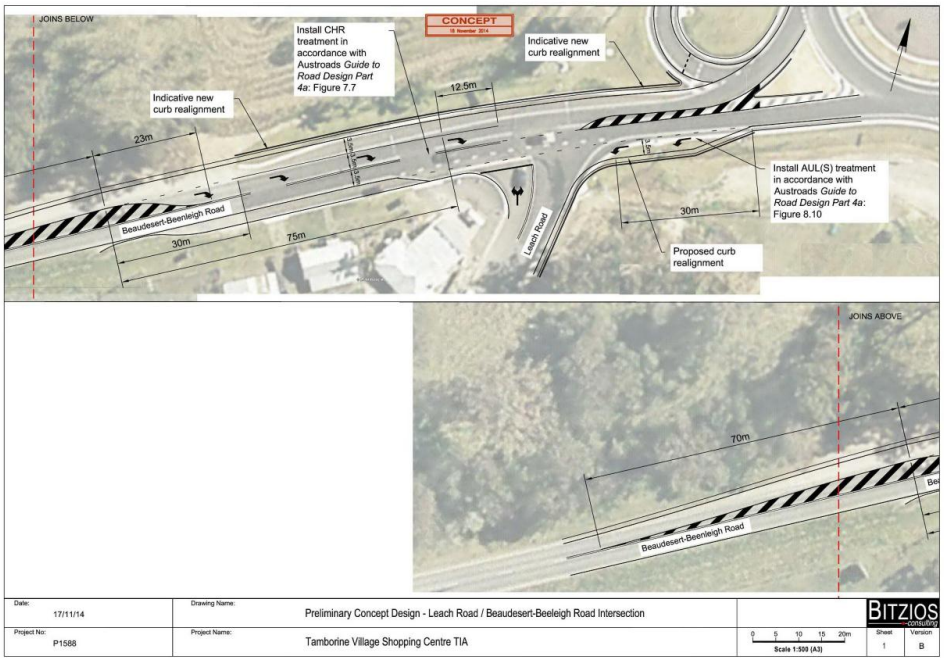
Our reference: SDA-0714-012919
Your reference: MCBd14/061

Attachment 2—Reasons for decision to impose conditions

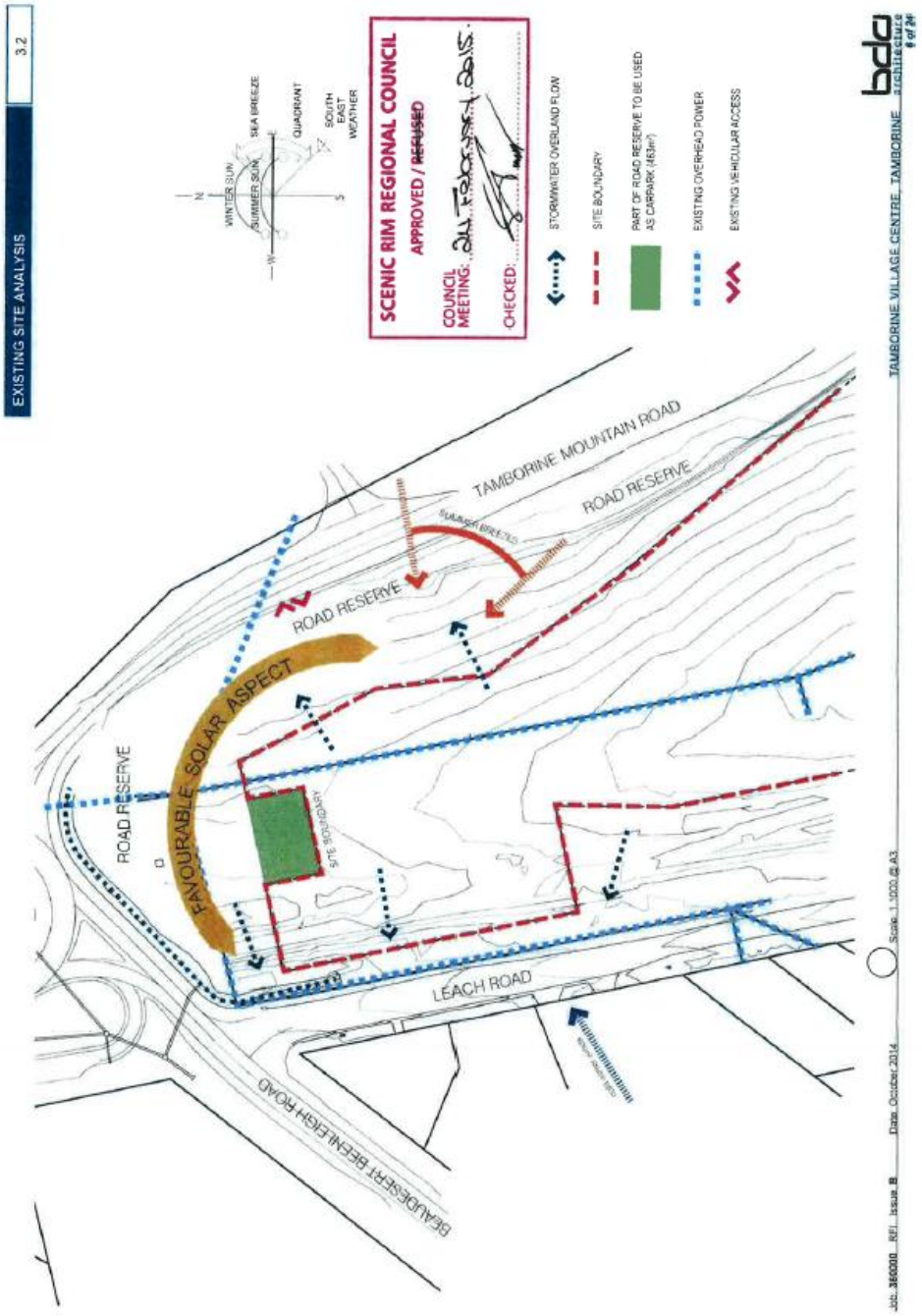
The reasons for this decision are:

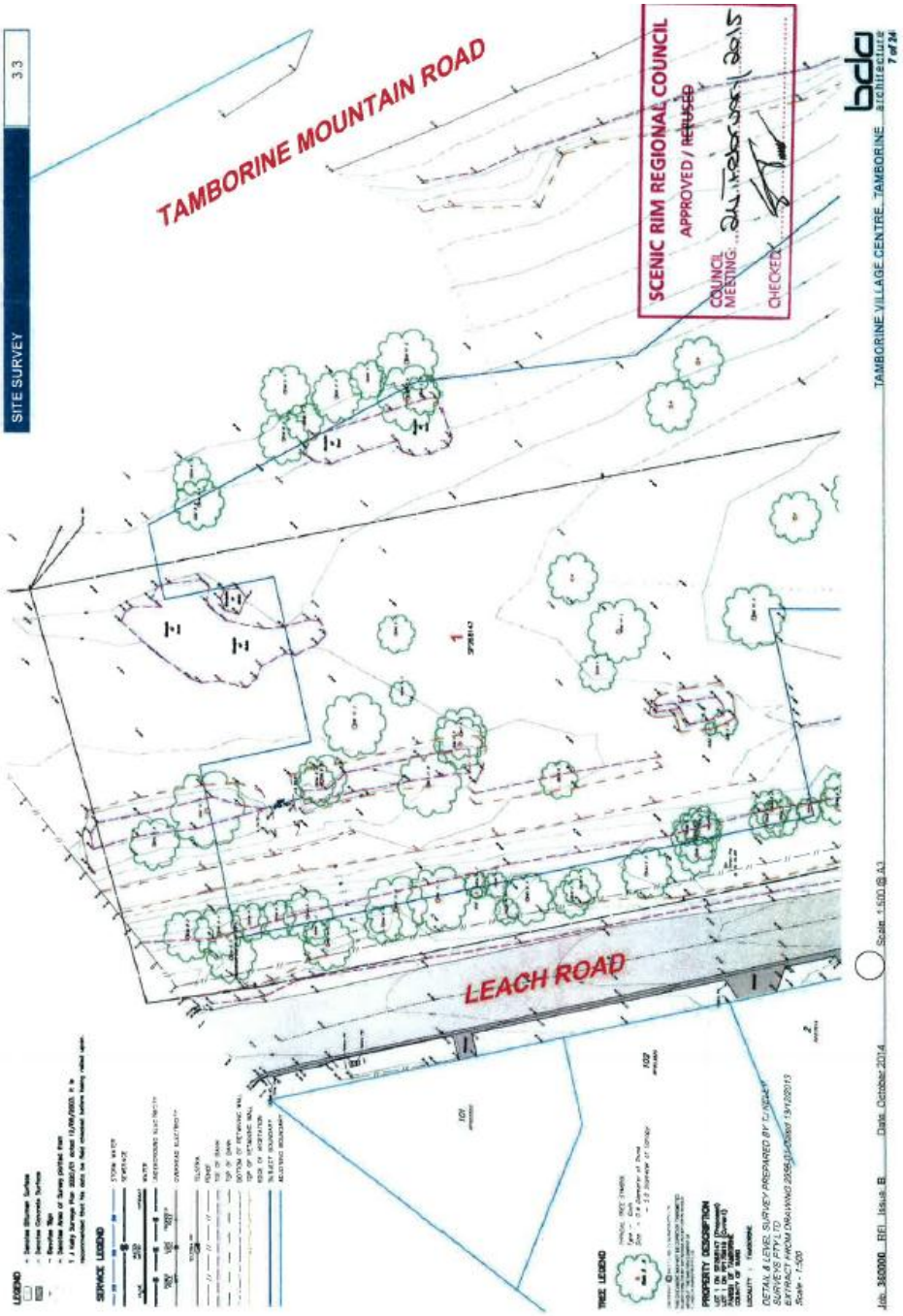
- To ensure the development is carried out generally in accordance with the plans of development submitted with the application.
- To ensure that the impacts of stormwater events associated with development are minimised and managed to avoid creating any adverse impacts on the state transport corridor.
- To ensure the design of any road access maintains the safety and efficiency of the state-controlled road.

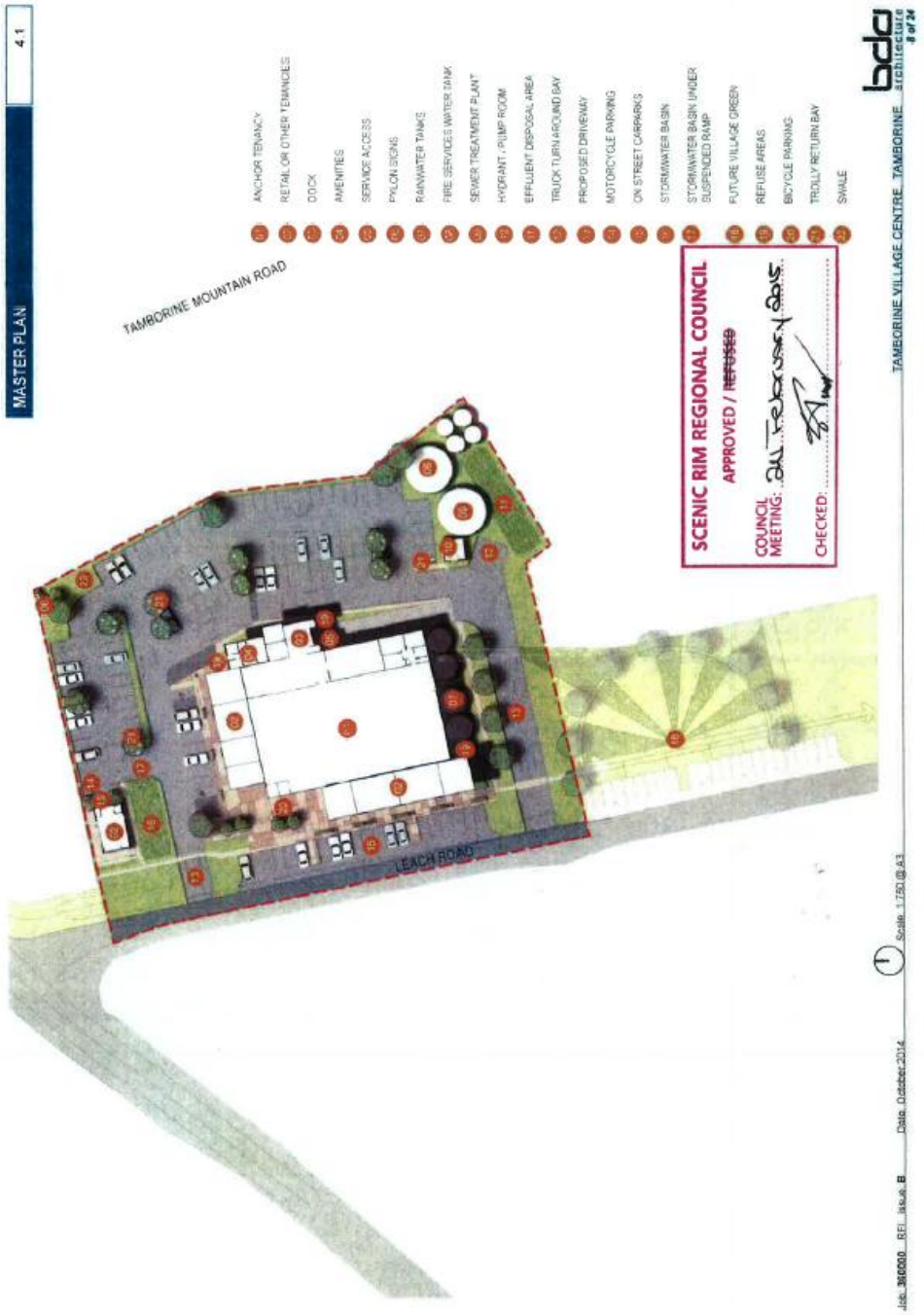

This area is road reserve and is not subject to development approval
As amended in red by DSDIP 11 December 2014
SITE PLAN
4.2
TAMBORINE MOUNTAIN ROAD
LEACH ROAD
DEVELOPMENT SUMMARY
TAMBORINE VILLAGE CENTRE, TAMBORINE
bda architecture
9 of 24

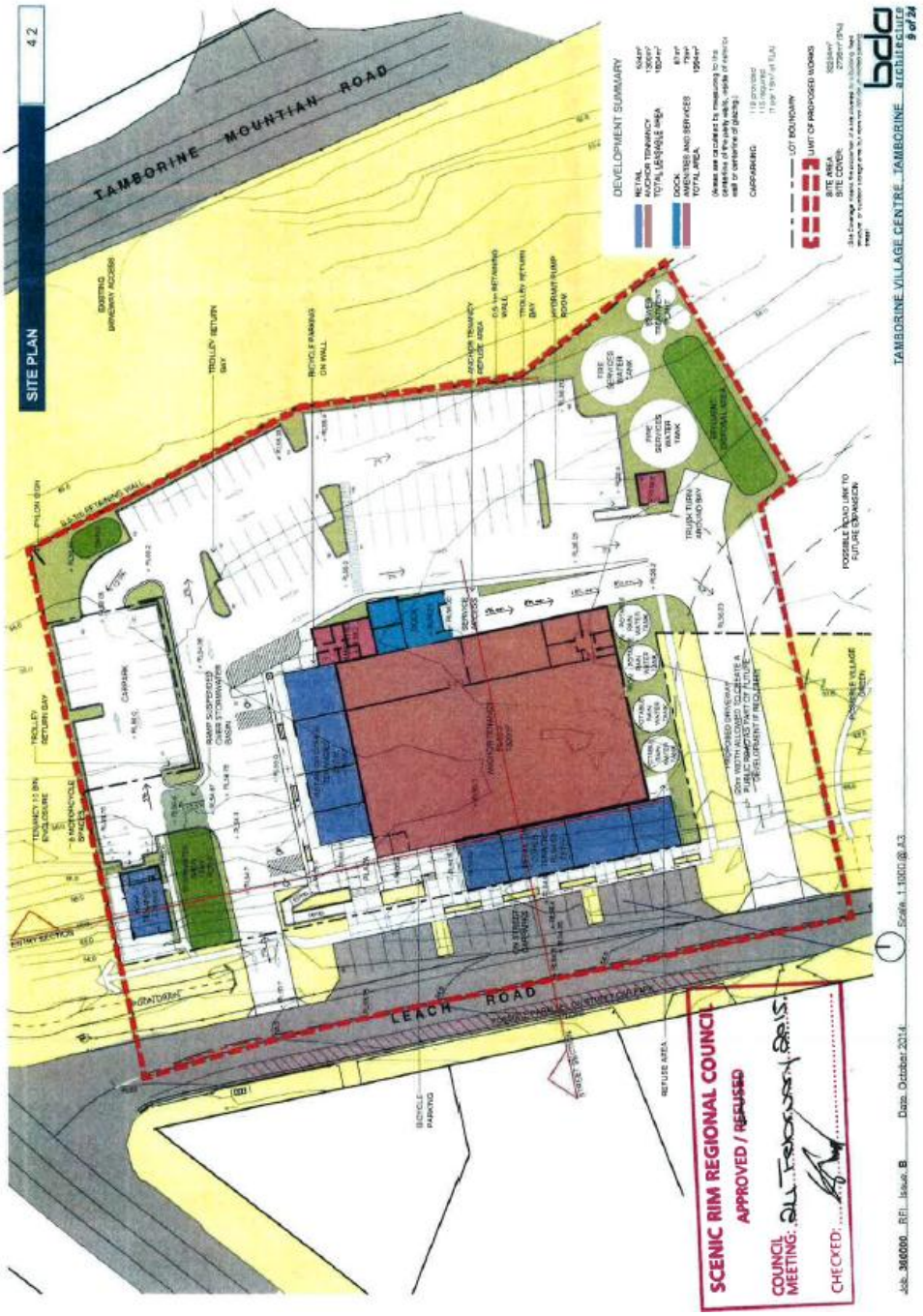

CONCEPT
JOINS BELOW
Install CHR treatment in accordance with Austroads Guide to Road Design Part 4a: Figure 7.7
Indicative new curb realignment
Indicative new curb realignment
12.5m
23m
Beaudesert-Beenleigh Road
30m
75m
Leach Road
Install AUL(S) treatment in accordance with Austroads Guide to Road Design Part 4a: Figure 8.10
30m
Proposed curb realignment
JOINS ABOVE
70m
Beaudesert-Beenleigh Road
Date: 17/11/14
Drawing Name: Preliminary Concept Design - Leach Road / Beaudesert-Beeleigh Road Intersection
BITZIOS consulting
Project No: P1588
Project Name: Tamborine Village Shopping Centre TIA
Scale 1:500 (A3)
Sheet 1
Version B

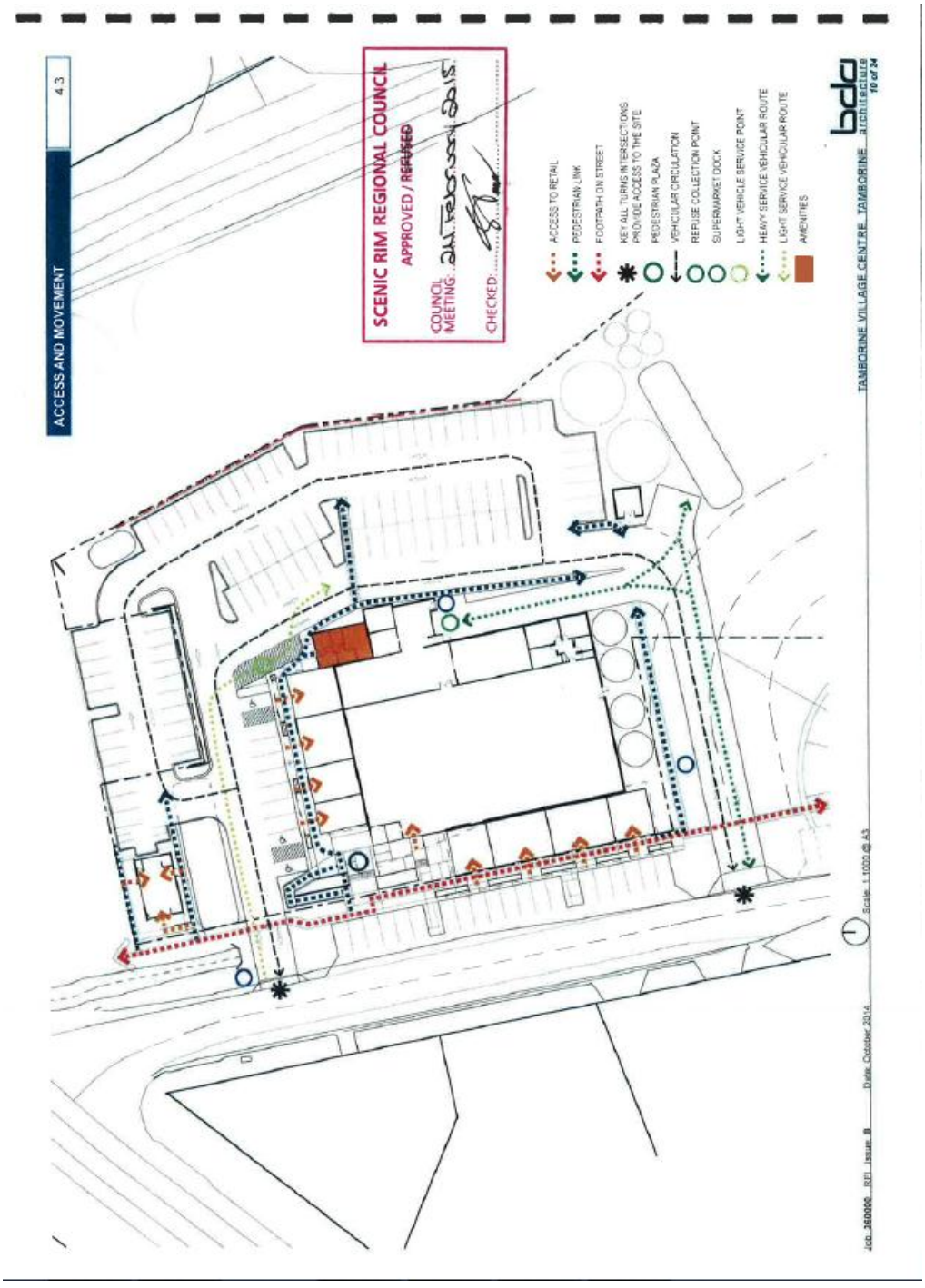
LOCAL CONTEXT PLAN
31
MIDDLE PARK
THE BEARDED DRAGON BOUTIQUE HOTEL
TAMBORINE MOUNTAIN ROAD
SUBJECT SITE
ONAL COUNCIL
REFUSED
BEAUDESERT-BEENLEIGH ROAD
PROPOSED DEVELOPMENT AREA
AUSTRALIA POST - TAMBORINE LPO
COSY CORNER GENERAL STORE
LEACH ROAD
bda
TAMBORINE VILLAGE CENTRE, TAMBORINE
Job: 360000 RFI Issue: B Date: October 2014

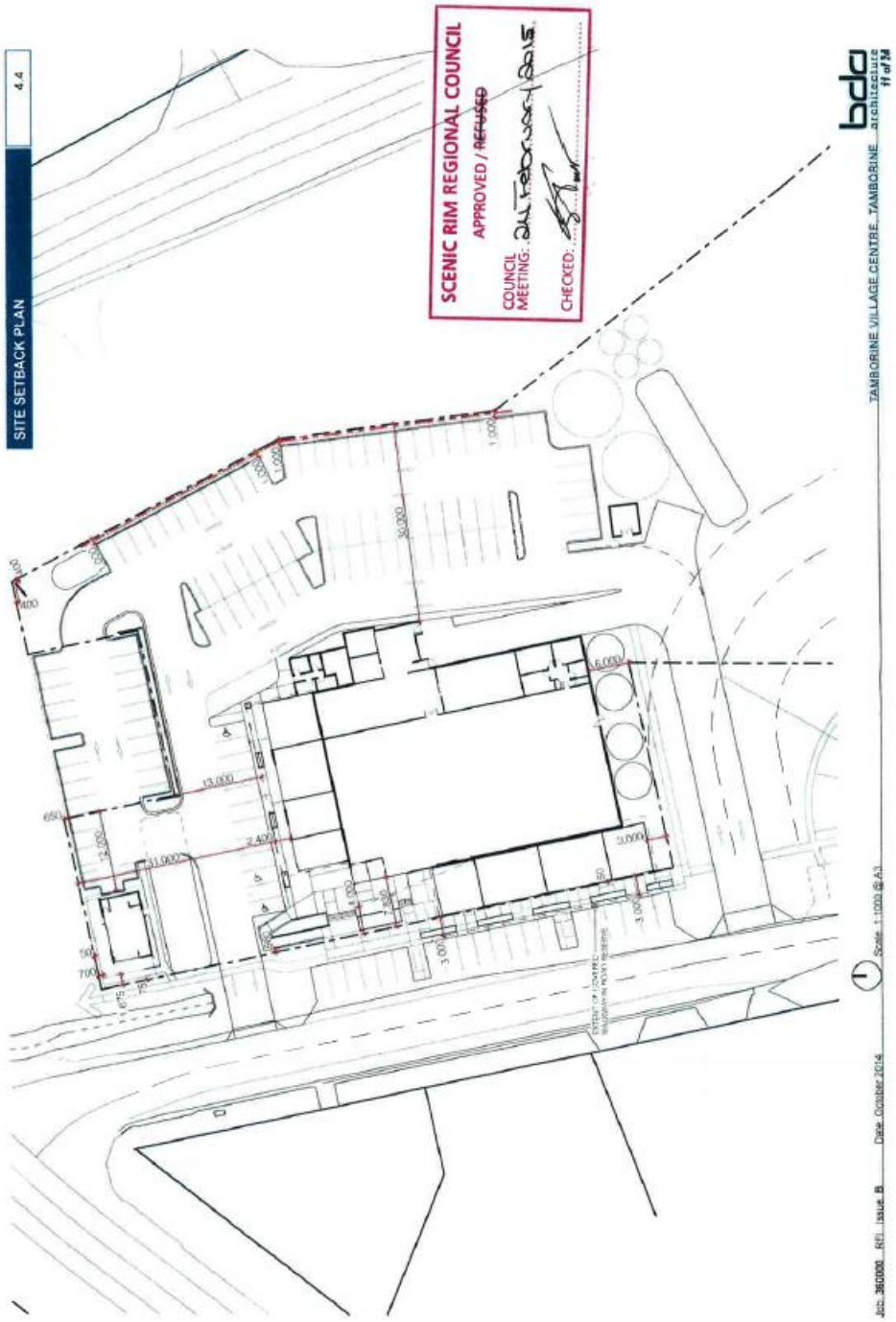

3.2
EXISTING SITE ANALYSIS
SCENIC RIM REGIONAL COUNCIL
APPROVED / REFUSED
COUNCIL MEETING:
CHECKED:
WINTER SUN
SUMMER SUN
SEA BREEZE
QUADRANT
SOUTH EAST WEATHER
STORMWATER OVERLAND FLOW
SITE BOUNDARY
PART OF ROAD RESERVE TO BE USED AS CARPARK (463m²)
EXISTING OVERHEAD POWER
EXISTING VEHICULAR ACCESS
TAMBORINE MOUNTAIN ROAD
ROAD RESERVE
ROAD RESERVE
FAVOURABLE SOLAR ASPECT
LEACH ROAD
BEAUDESERT BEENLEIGH ROAD
TAMBORINE VILLAGE CENTRE - TAMBORINE
bda


TAMBORINE MOUNTAIN ROAD
LEACH ROAD
SCENIC RIM REGIONAL COUNCIL
APPROVED / REFUSED
COUNCIL MEETING
CHECKED
SITE SURVEY
3.3
bda
TAMBORINE VILLAGE CENTRE - TAMBORINE
Scale: 1:500 @ A1
Date: October 2014
DETAIL & LEVEL SURVEY PREPARED BY CADSURV SURVEYS PTY LTD
EXTRACT FROM DRAWING 2058-D-Sheet 13/12/2013
Scale - 1:500


MASTER PLAN
4.1
TAMBORINE MOUNTAIN ROAD
LEACH ROAD
ANCHOR TENANCY
RETAIL OR OTHER TENANCIES
DOCK
AMENITIES
SERVICE ACCESS
PYLON SIGNS
RAINWATER TANKS
FIRE SERVICES WATER TANK
SEWER TREATMENT PLANT
HYDRANT - PUMP ROOM
EFFLUENT DISPOSAL AREA
TRUCK TURN AROUND BAY
PROPOSED DRIVEWAY
MOTORCYCLE PARKING
ON STREET CARPARKS
STORMWATER BASIN
STORMWATER BASIN UNDER SUSPENDED RAMP
FUTURE VILLAGE GREEN
REFUSE AREAS
BICYCLE PARKING
TROLLY RETURN BAY
SWALE
SCENIC RIM REGIONAL COUNCIL
APPROVED / REFUSED
COUNCIL MEETING:
CHECKED:
bda architecture
TAMBORINE VILLAGE CENTRE, TAMBORINE
Scale 1:750 @ A3
Date October 2014


SITE PLAN
TAMBORINE MOUNTIAN ROAD
LEACH ROAD
TAMBORINE VILLAGE CENTRE TAMBORINE
DEVELOPMENT SUMMARY
SCENIC RIM REGIONAL COUNCIL
APPROVED / REFUSED
COUNCIL MEETING:
CHECKED:


ACCESS AND MOVEMENT
4.3
SCENIC RIM REGIONAL COUNCIL
APPROVED / REFUSED
COUNCIL MEETING
CHECKED
ACCESS TO RETAIL
PEDESTRIAN LINK
FOOTPATH ON STREET
KEY ALL TURNS INTERSECTIONS PROVIDE ACCESS TO THE SITE
PEDESTRIAN PLAZA
VEHICULAR CIRCULATION
REFUSE COLLECTION POINT
SUPERMARKET DOCK
LIGHT VEHICLE SERVICE POINT
HEAVY SERVICE VEHICULAR ROUTE
LIGHT SERVICE VEHICULAR ROUTE
AMENITIES
bdg
TAMBORINE VILLAGE CENTRE TAMBORINE architecture
10 of 24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APPROVED / REFUSED
COUNCIL MEETING:
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4.4
SITE SETBACK PLAN
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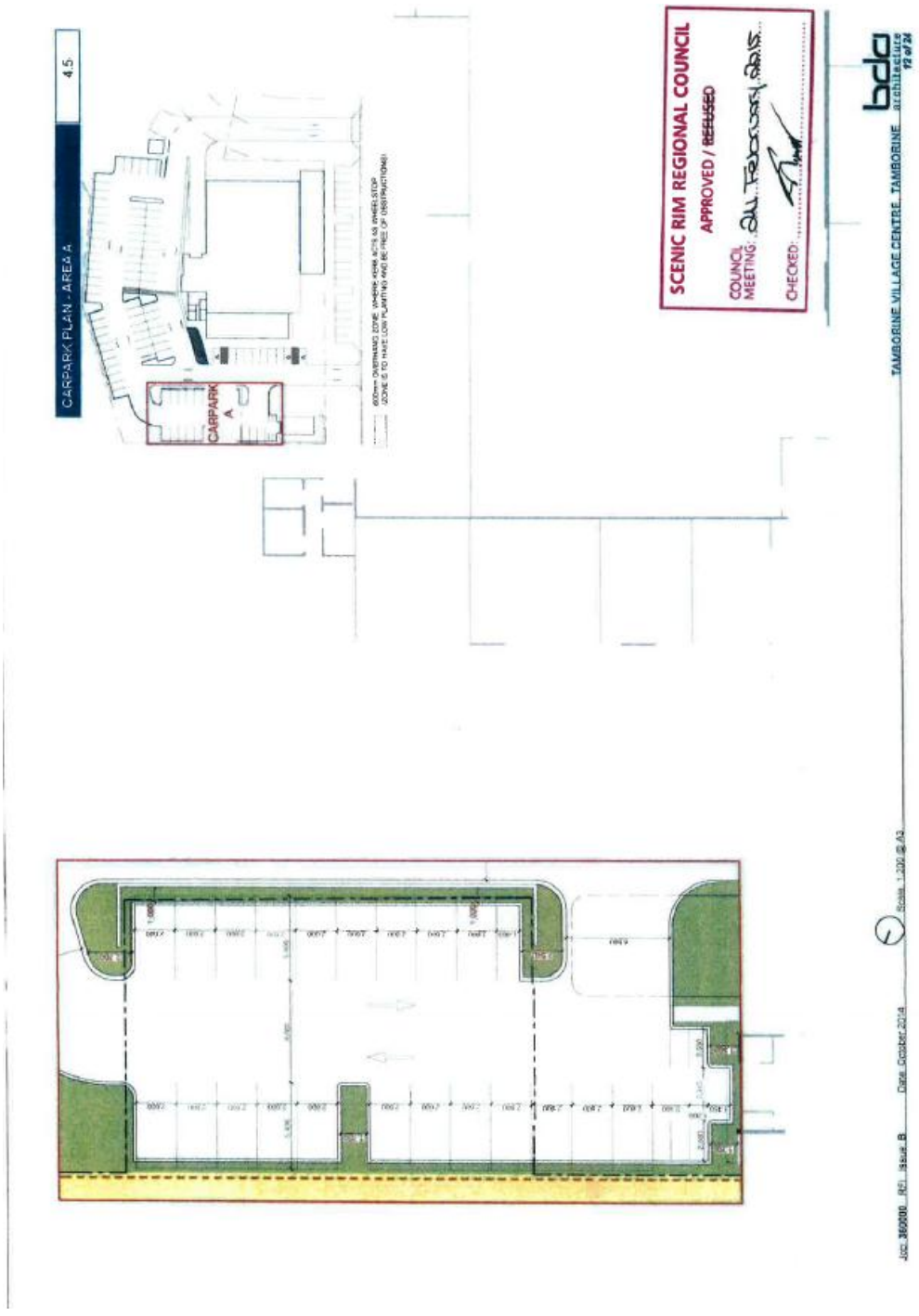
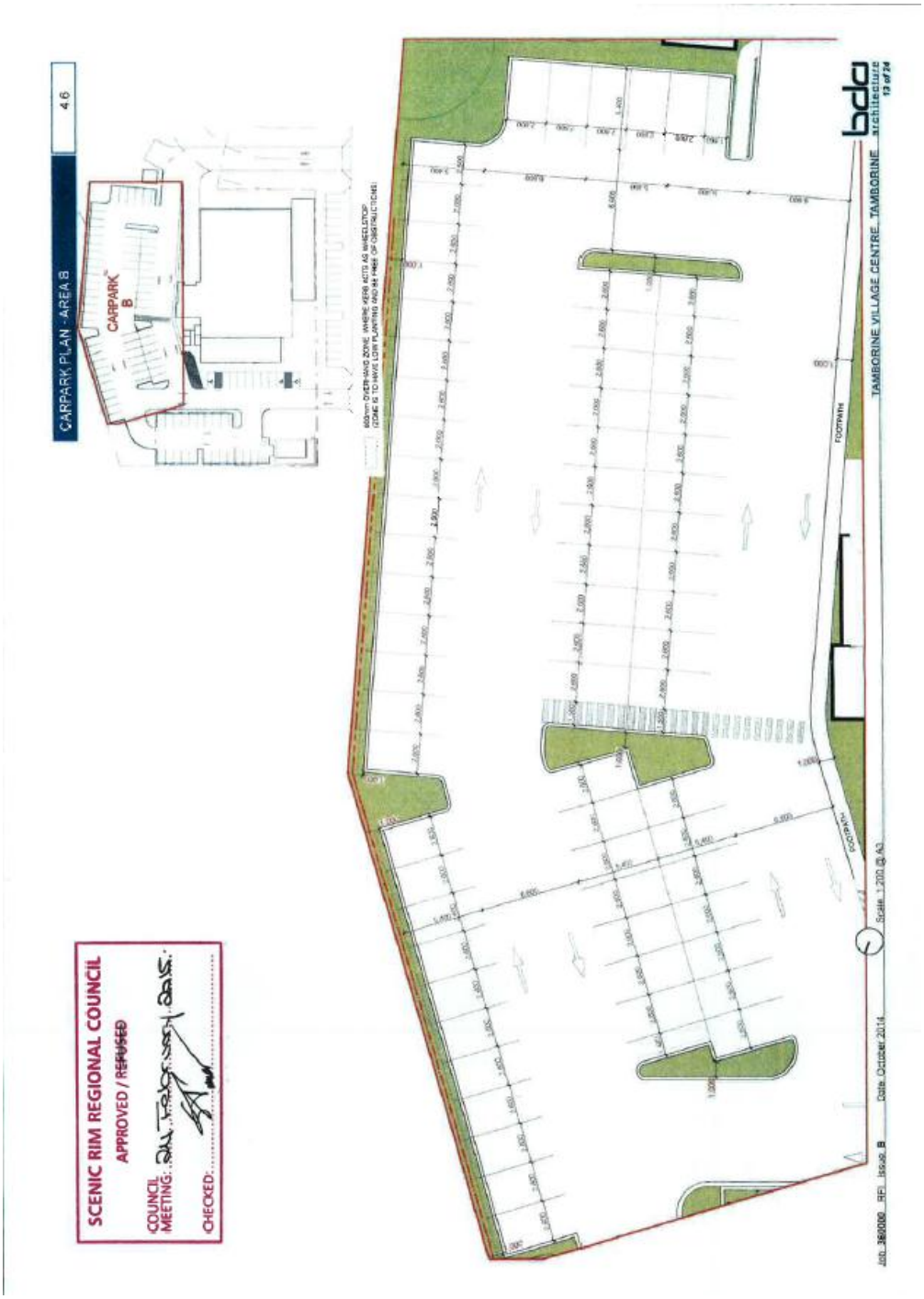
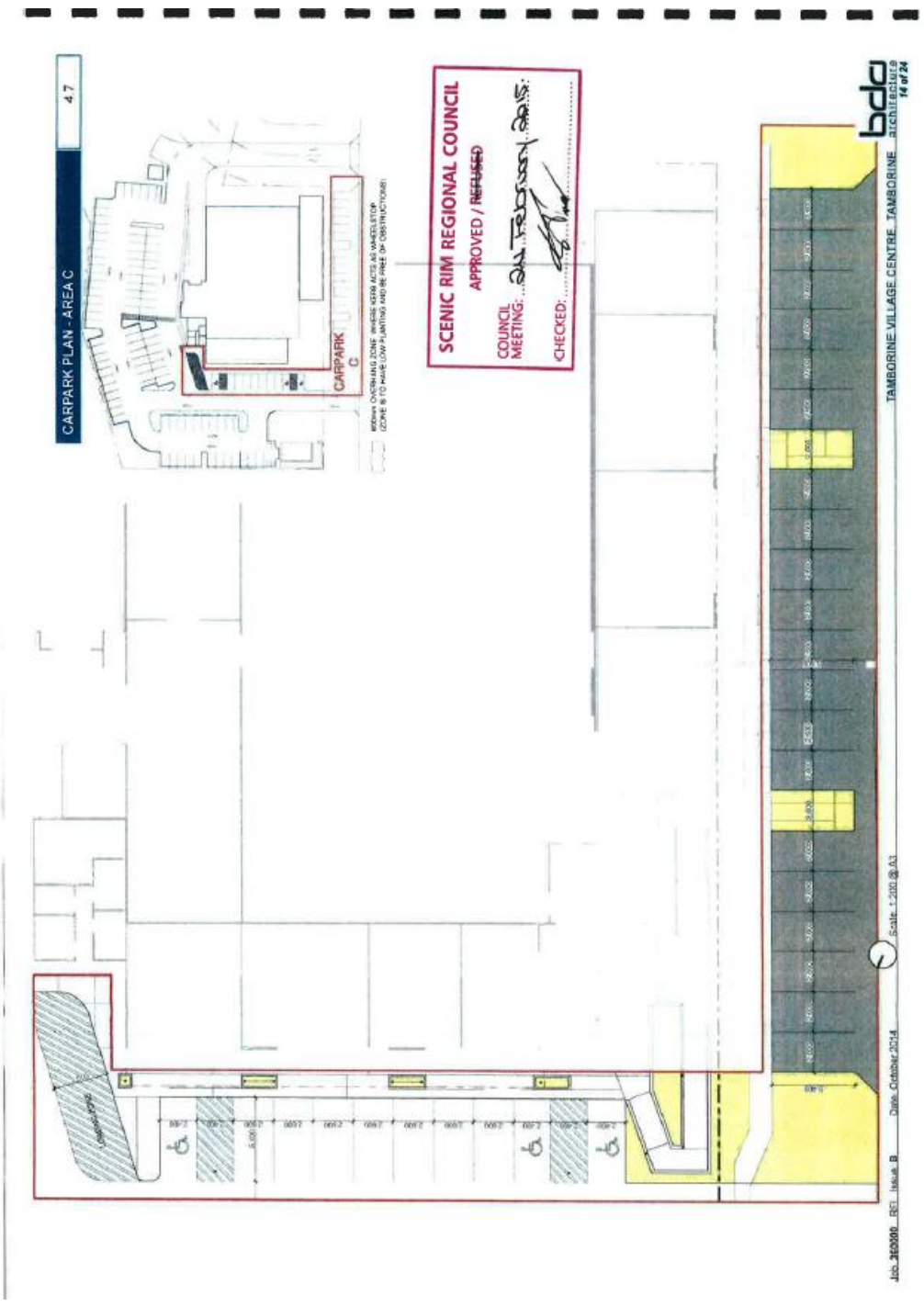
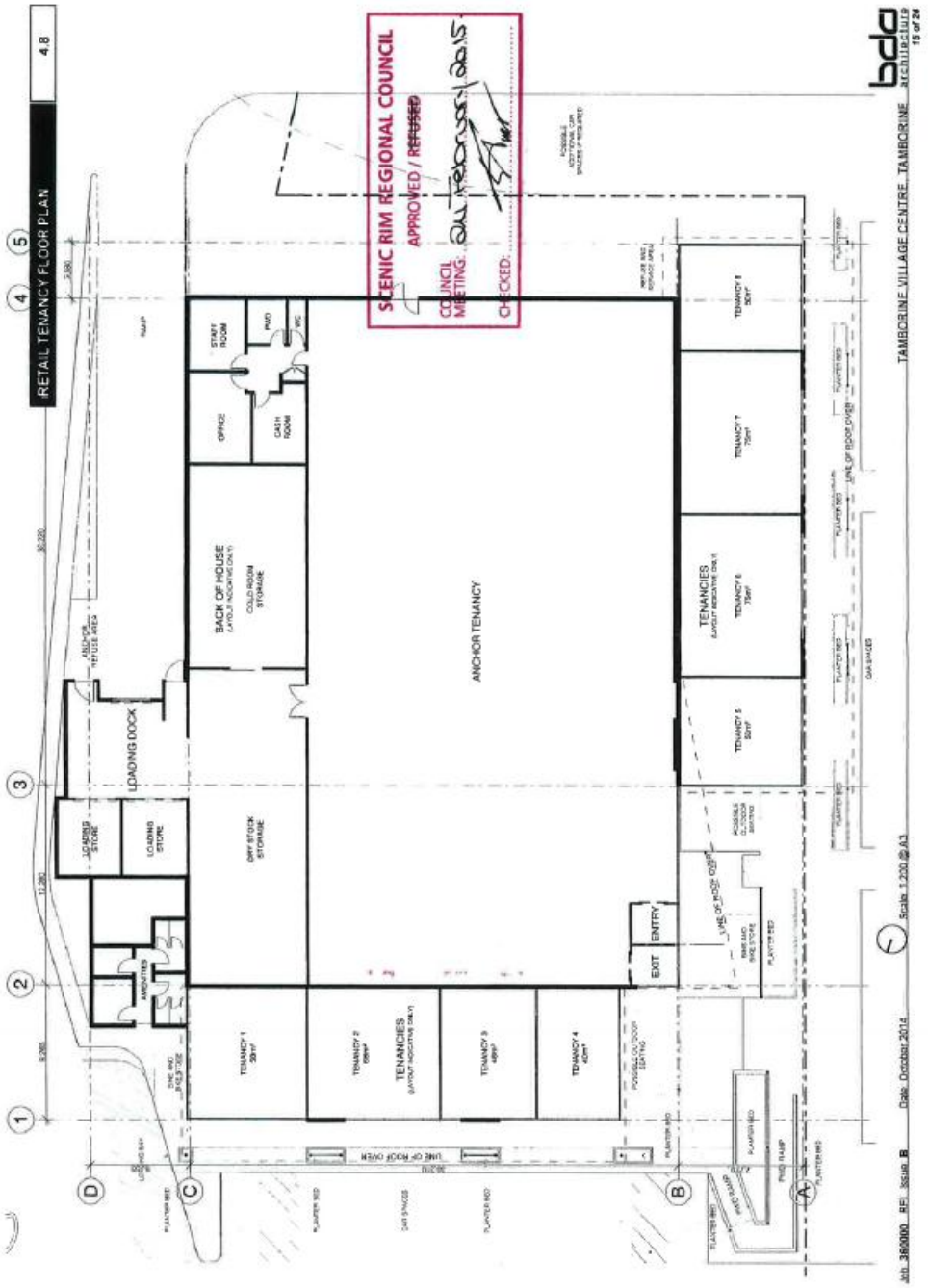
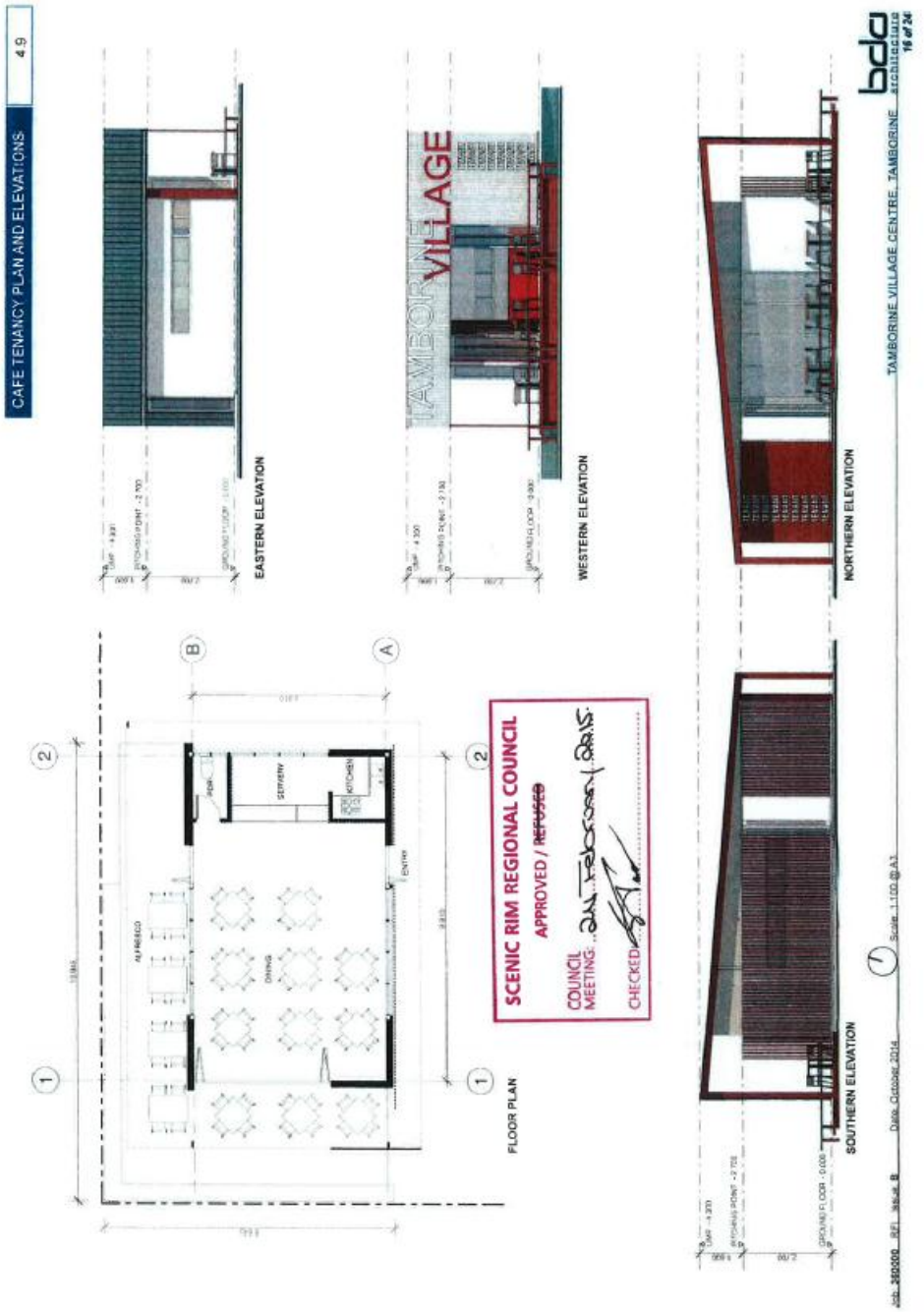
TAMBORINE VILLAGE CENTRE, TAMBORINE
Scale 1:1000 @ A3
Date October 2014

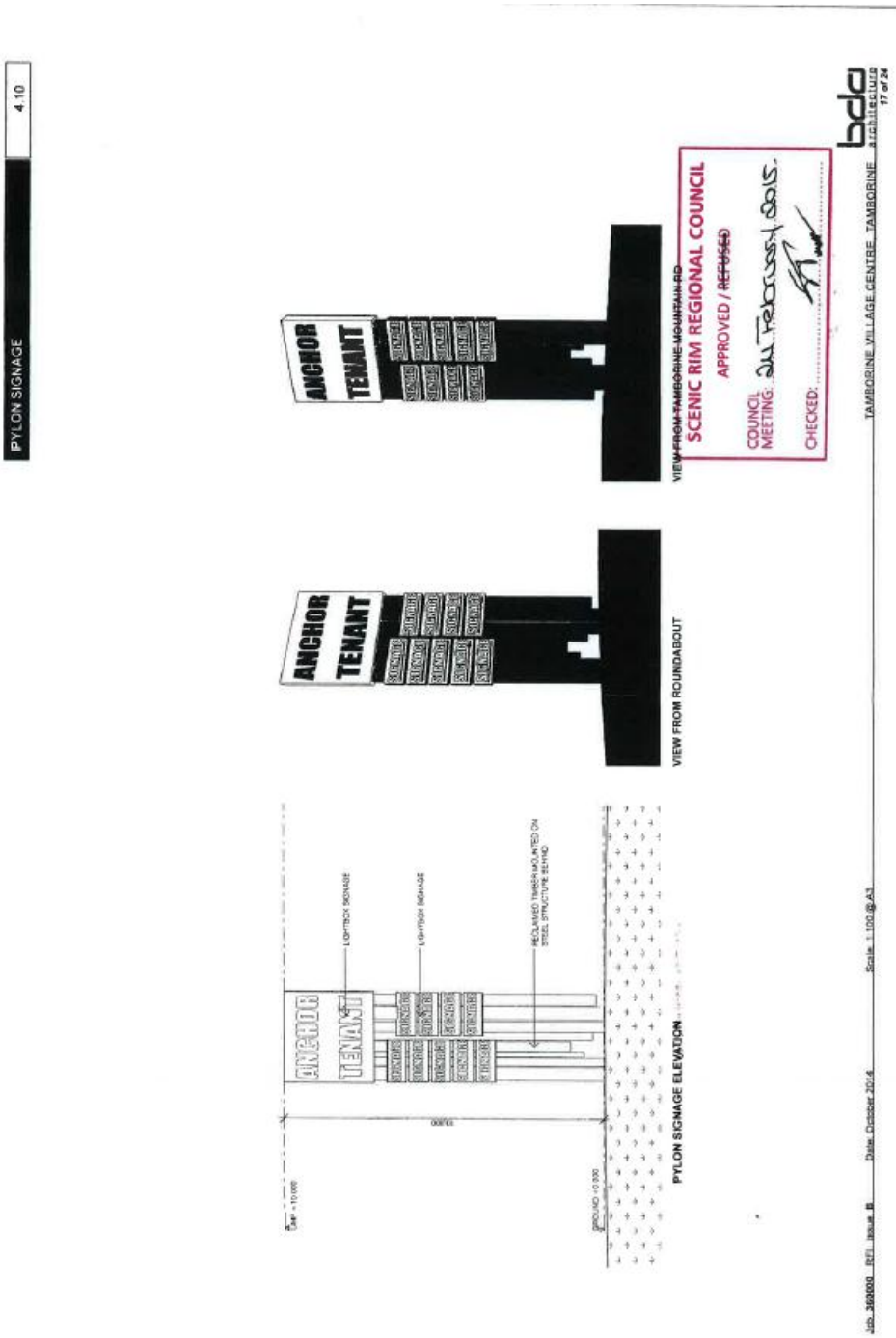

CARPARK PLAN - AREA A
4.5
CARPARK A
SCENIC RIM REGIONAL COUNCIL
APPROVED / REFUSED
COUNCIL MEETING:
CHECKED:
bda
architecture
TAMBORINE VILLAGE CENTRE - TAMBORINE
Scale 1:200 @ A3
Date: October 2014

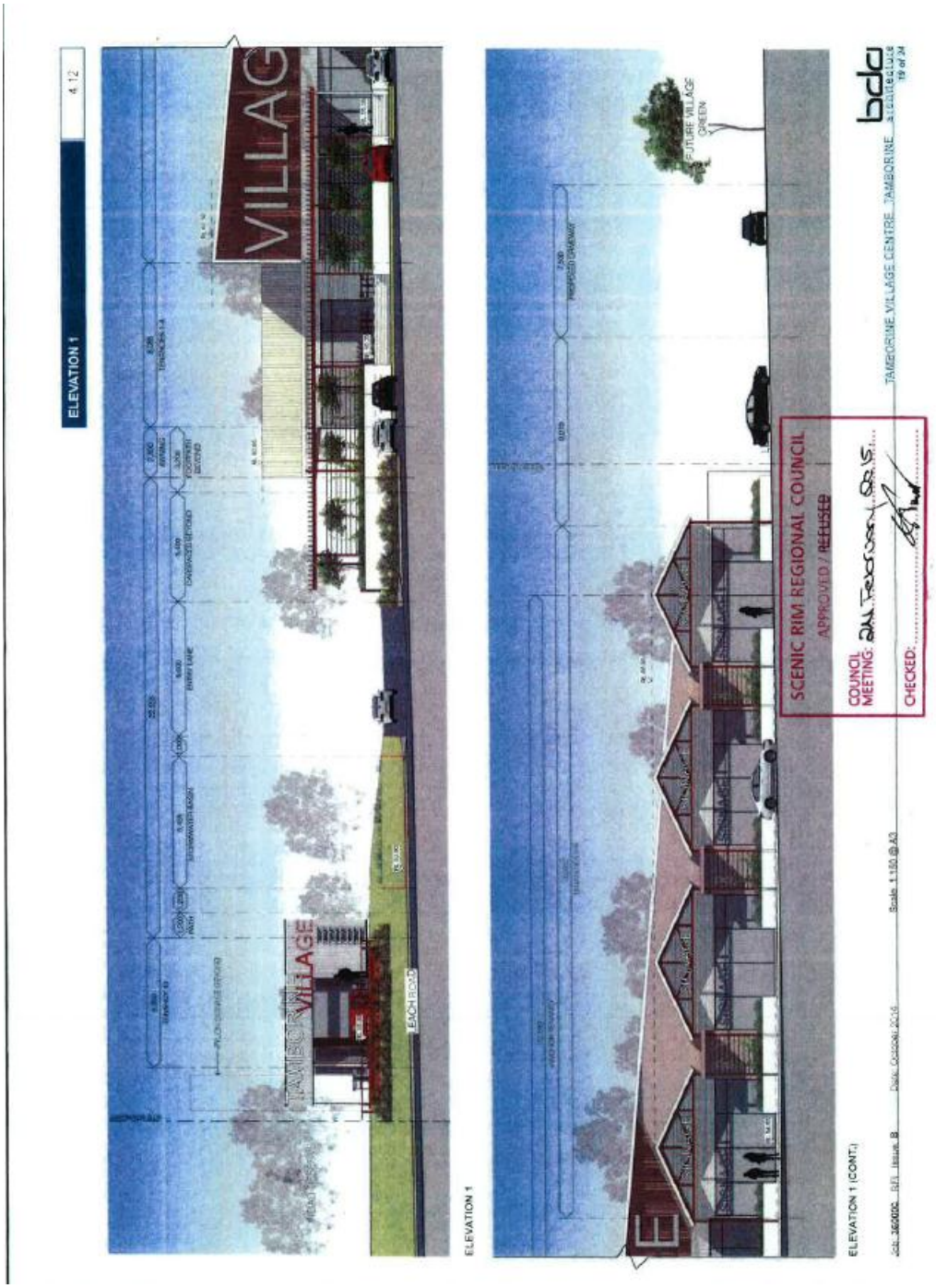

CARPARK PLAN - AREA B
46
CARPARK B
TAMBORINE VILLAGE CENTRE - TAMBORINE
bda architecture
SCENIC RIM REGIONAL COUNCIL
APPROVED / REFUSED
COUNCIL MEETING:
CHECKED:


CARPARK PLAN - AREA C
47
CARPARK C
SCENIC RIM REGIONAL COUNCIL
APPROVED / REFUSED
COUNCIL MEETING:
CHECKED:
bda
TAMBORINE VILLAGE CENTRE - TAMBORINE
14 of 24


SCENIC RIM REGIONAL COUNCIL
APPROVED / REFUSED
COUNCIL MEETING
CHECKED:
RETAIL TENANCY FLOOR PLAN
4.8
TAMBORINE VILLAGE CENTRE, TAMBORINE
bda
ANCHOR TENANCY
BACK OF HOUSE
LOADING DOCK
TENANCIES
ENTRY
EXIT
Scale 1:200 @ A3
Date: October 2014


CAFE TENANCY PLAN AND ELEVATIONS
4.9
EASTERN ELEVATION
WESTERN ELEVATION
NORTHERN ELEVATION
SOUTHERN ELEVATION
FLOOR PLAN
TAMBORINE VILLAGE
SCENIC RIM REGIONAL COUNCIL
APPROVED / REFUSED
COUNCIL MEETING
CHECKED
bda
TAMBORINE VILLAGE CENTRE - TAMBORINE


PYLON SIGNAGE
4.10
ANCHOR TENANT
VIEW FROM TAMBORINE MOUNTAIN RD
VIEW FROM ROUNDABOUT
PYLON SIGNAGE ELEVATION
SCENIC RIM REGIONAL COUNCIL
APPROVED / REFUSED
COUNCIL MEETING:
CHECKED:
bda
TAMBORINE VILLAGE CENTRE, TAMBORINE
17 of 24


ELEVATION 1
4.12
VILLAG
TAMBORINE VILLAGE
ELEVATION 1
FUTURE VILLAGE GREEN
SCENIC RIM REGIONAL COUNCIL
APPROVED / REFUSED
COUNCIL MEETING:
CHECKED:
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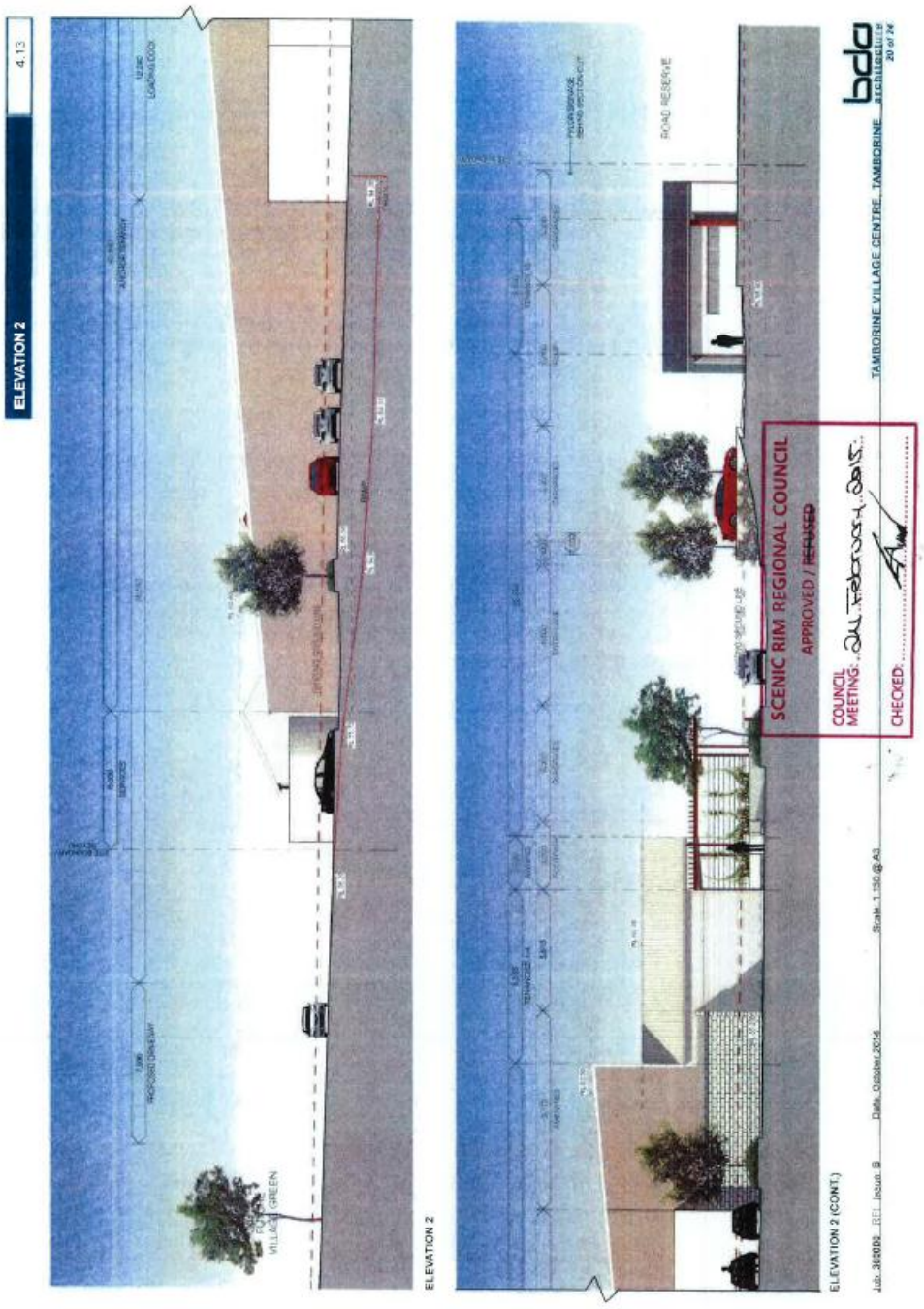
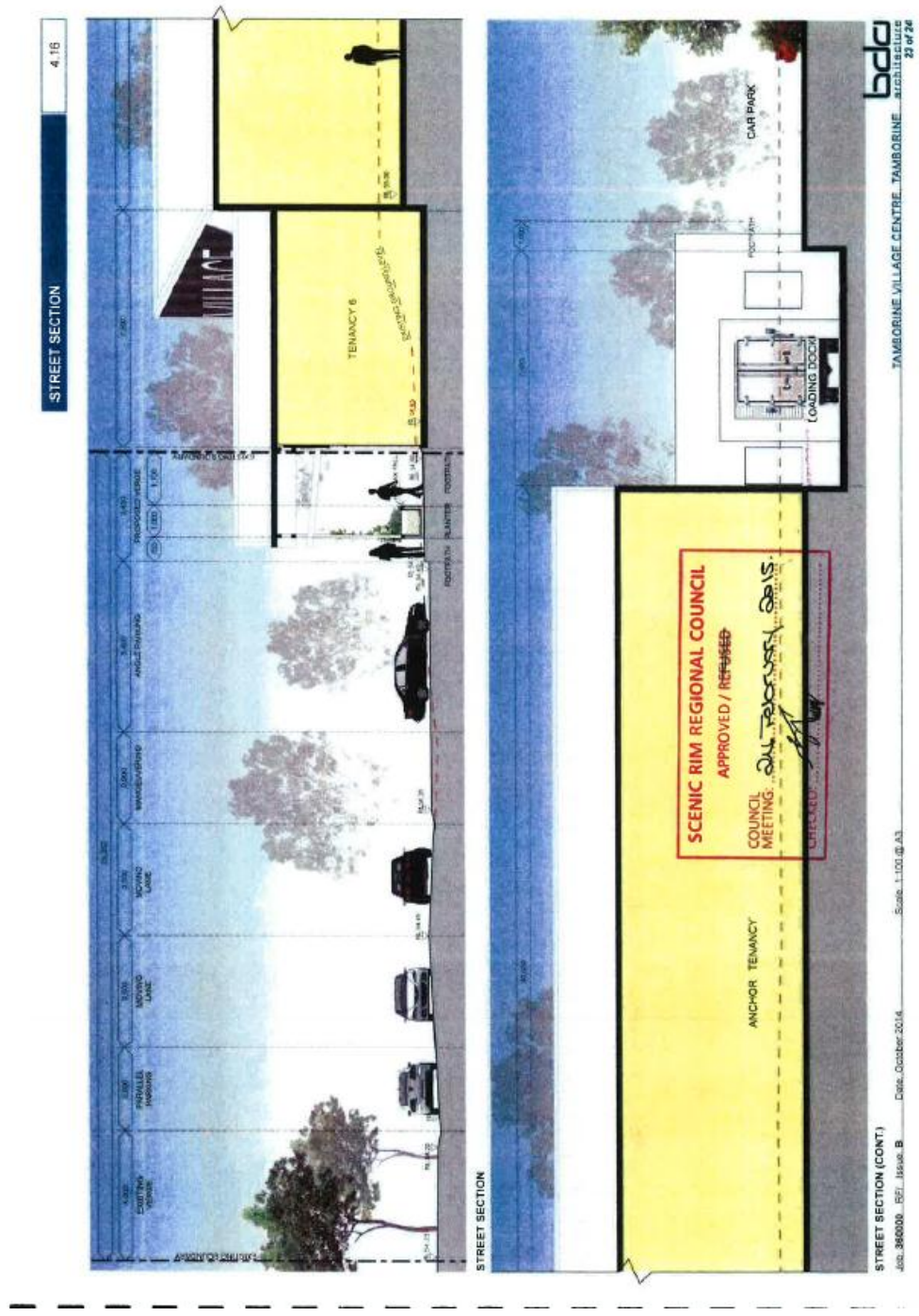
TAMBORINE VILLAGE CENTRE - TAMBORINE
ELEVATION 1 (CONT.)


ELEVATION 2
4.13
ELEVATION 2
ROAD RESERVE
bda
TAMBORINE VILLAGE CENTRE, TAMBORINE
SCENIC RIM REGIONAL COUNCIL
APPROVED / REFUSED
COUNCIL MEETING
CHECKED
ELEVATION 2 (CONT.)

ELEVATION 3
SCENIC RIM REGIONAL COUNCIL
APPROVED / REFUSED
COUNCIL MEETING
CHECKED
TAMBORINE
ROAD RESERVE
LEACH ROAD
ELEVATION 3
ELEVATION 3 (CONT.)
bda

ELEVATION 4
4.15
PROPOSED ENTRY / EXIT DRIVEWAY
LEACH ROAD
ELEVATION 4
SCENIC RIM REGIONAL COUNCIL
APPROVED / REFUSED
COUNCIL MEETING
ELEVATION 4 (CONT.)
TAMBORINE VILLAGE CENTRE TAMBORINE
bda architecture
22 of 24


STREET SECTION
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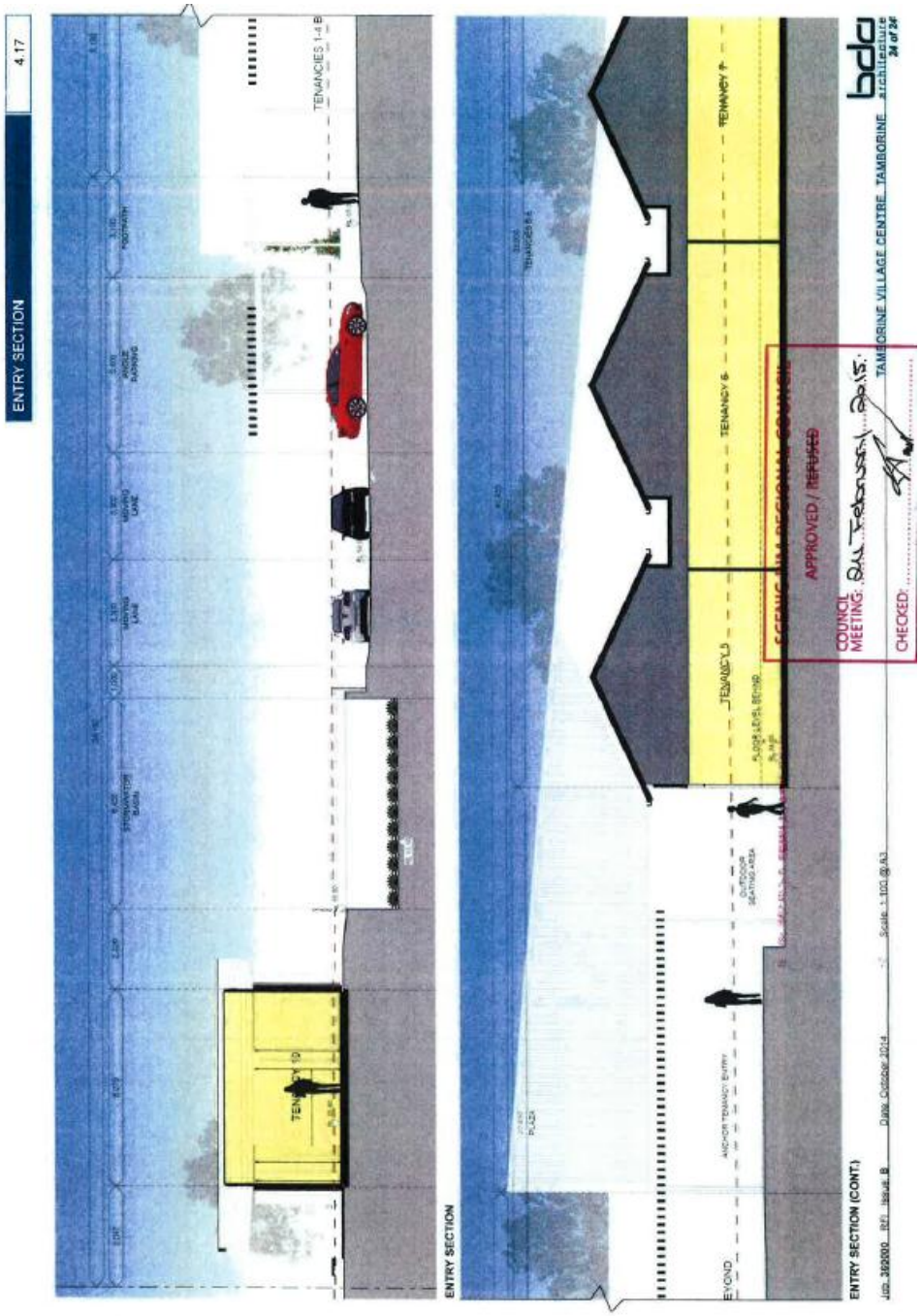
TENANCY 6
CAR PARK
LOADING DOCK
ANCHOR TENANCY
SCENIC RIM REGIONAL COUNCIL
APPROVED / REFUSED
COUNCIL MEETING
STREET SECTION
STREET SECTION (CONT.)
TAMBORINE VILLAGE CENTRE TAMBORINE
bda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ENTRY SECTION
TENANCIES 1-4
TENANCY 5
TENANCY 6
TENANCY 9
ENTRY SECTION
ENTRY SECTION (CONT.)
APPROVED / REFUSED
COUNCIL MEETING:
CHECKED:
TAMBORINE VILLAGE CENTRE - TAMBORINE
bda

CRGACOUSTICS

Postal PO Box 441 Mermaid Beach Qld 4218
Telephone 07 5527 7333
Email jay@crg.net.au
CRG Acoustics Pty Ltd
ACN 151 847 255 ABN 11 708 556 182

Proposed Hotel Additions and Carpark Extension
18 to 28 Kidston Street and
7 Appel Street, Canungra
(Lot 1 on RP213710 and Lot 20 on RP32081)

ENVIRONMENTAL NOISE IMPACT ASSESSMENT

Prepared For:

Cedarmill Pty Ltd
c/- Storey Urban

20 August 2024
crgref: 24073 report

Document Set ID: 12781346
Version: 1, Version Date: 06/09/2024

1.0 INTRODUCTION

This report is in response to a request by Storey Urban on behalf of Cedarmill Pty Ltd for an environmental noise assessment of proposed additions / extensions to the Canungra Hotel in Canungra.

In undertaking the assessment, unattended noise measurements were undertaken and through modelling, predictions of future road noise immissions and onsite commercial activity noise emissions were produced. Based upon the predicted noise levels, recommendations regarding acoustic treatment at the site have been provided.

2.0 SITE & DEVELOPMENT DESCRIPTION

The proposal relates to 18 to 28 Kidston Street and 7 Appel Street (Lot 1 on RP213710 and Lot 20 on RP32081) and is located at the corner of Appel and Kidston Streets, Canungra. The site is bounded by Kidston Street to the northwest and southwest, Appel Street to the northeast, and residential properties to the southeast. The subject site is zoned *"Major Centre Zone"* and *"Minor Tourism Zone"*. For site location refer to Appendix A.

The proposal additions and extensions to the hotel include:

- Ground floor extensions to the hotel providing additional storage and bottle shop floor area.
- First floor level extension providing an additional 16 hotel rooms.
- Formalised carpark over Lot 20 on RP32081 (7 Appel Street).

As the proposal is constructing a noise sensitive use (new hotel rooms) in proximity to the State Government controlled Kidston Street, the development is required to be assessed under the State Development Assessment Provisions (SDAP) Queensland State Code 1: *"Development in a State-controlled Road Environment"* Version 3.0 (effective 4th February 2022).

Under the Queensland Government's SPP Interactive Mapping System, the development is located within a voluntary Transport Noise Corridor (refer to Attachment A in Appendix A); hence building shell treatments have been recommended for all new hotel rooms (Class 3 building) in accordance with the Queensland Development Code *"Mandatory Part 4.4 – buildings in transport noise corridor"*. This assessment provides specific Noise Categories for all new hotel rooms which is an alternate solution to applying the blanket Noise Category Classification as detailed in the Development Code MP 4.4. This revised Noise Categories apply to the Building Application stage.

Onsite activity noise associated with the proposed extensions and additions have been assessed to ensure an acceptable noise amenity can be achieved at the surrounding noise sensitive receivers. The nearest offsite noise sensitive receivers to the development include:

R1: Existing dwellings to the northeast across Appel Street.
R2: Existing dwelling to the southeast at 11 Appel Street.
R3: Existing dwelling to the south at 34 to 36 Kidston Street.
R4: Existing dwelling to the southwest at 32 Kidston Street.

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Version: 1, Version Date: 06/09/2024

3.0 AMBIENT NOISE SURVEY

3.1 Instrumentation

The following equipment was used to record ambient noise levels at the subject site locale:

- Rion NC 73 Calibrator;
- Larson Davis 721 Soundexpert Environmental Noise Loggers.

All instrumentation used in this assessment hold current calibration certificate from a certified NATA calibration laboratory.

3.2 Unattended Kidston Street Traffic Noise Measurement Methodology

A logger was located towards the southern (front) yard of 32 Kidston Street. The microphone was in a free-field location approximately 1.4m above ground and 41m from the nearest lane of Kidston Street. Refer to Appendix A for the logger location.

The logger was set to record noise statistics in one hour blocks continually between Friday 12/07/2024 and Friday 19/07/2024.

Road traffic noise levels were conducted generally in accordance with Australian Standard AS2702 - 1984 "*Acoustics - Methods for the measurement of road traffic noise*". The operation of the sound level logging equipment was field calibrated before and after the measurement session with no significant drift from the reference signal recorded.

Daily weather observations were obtained from the Bureau of Meteorology's website at the Canungra weather station. Weather conditions during the noise monitoring period were fine, a temperature range between -0.7 to 23°C and a relative humidity between 37 and 100%.

Table 1 below presents the measured road traffic noise levels at the logger position. Graphical presentation of the measured noise levels from the logger are presented in the Appendix C.

Traffic Noise	Time Period	Measured Levels dB(A)			
		15/07	16/07	17/07	Average
$L_{10\ 18hr}$	6am to Midnight	49	52	52	51
$L_{10\ 12hr}$	6am to 6pm	53	56	55	54
$L_{eq\ 1hr}$ Daytime	6am to Midnight	58	58	57	57
$L_{eq\ 1hr}$ Night time	Midnight to 6am	47	46	50	48
$L_{90\ 18hr}$	6am to Midnight	41	43	43	42
$L_{90\ 8hr}$	10pm to 6am	28	29	34	30

Table 1: Measured ambient road traffic noise levels at the Kidston Street logger location.

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Version: 1, Version Date: 06/09/2024

3.3 Unattended Background Measurement Methodology and Results

A logger was located towards the northern (rear) yard of 32 Kidston Street. The microphone was in a free-field location approximately 1.4m above ground. Refer to Figure 2 in Appendix A for the logger location.

The logger was set to record noise statistics in 15-minute blocks continually between Friday 12/07/2024 and Friday 19/07/2024.

All measurements were conducted generally in accordance with Australian Standard AS 1055 *"Acoustics-Description and measurement of environmental noise"*. The operation of the sound level logging equipment was field calibrated before and after the measurement session with no significant drift from the reference signal recorded.

Daily weather observations were obtained from the Bureau of Meteorology's website at the Canungra weather station. Weather conditions during the noise monitoring period were fine, a temperature range between -0.7 to 23°C and a relative humidity between 37 and 100%.

Table 2 below presents the Rating Background noise levels (RBLs) calculated from the logger. The RBL for each period was calculated in accordance with the methodology detailed in the QLD EPA guideline "*Planning for noise control*". Graphical presentation of the measured noise levels is presented in the Appendix C.

Background Noise Descriptor	Time Period	Measured Level dB(A)
L_{90} RBL Daytime	7am to 6pm	41
L_{90} RBL Evening	6pm to 10pm	34
L_{90} RBL Night-time	10pm to 7am	25

Table 2: Rating Background noise levels calculated from measured background noise levels.

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4.0 NOISE CRITERIA

4.1 Road Traffic Noise

For Kidston Street, the State Development Assessment Provisions (SDAP) Queensland State Code 1 *"Development in a state-controlled road environment"*, Table 1.5: *"Environmental emissions"* sets the following in relation to road traffic noise.

Above ground floor level requirements (accommodation activity) adjacent to a state-controlled road or type 1 multi-modal corridor	
PO42 Balconies, podiums, and roof decks include: 1. a continuous **solid gap-free structure** or balustrade (excluding gaps required for drainage purposes to comply with the Building Code of Australia); 2. highly acoustically absorbent material treatment for the total area of the soffit above balconies, podiums, and roof decks.	No acceptable outcome is provided.
PO43 Habitable rooms (excluding a **relevant residential building** or **relocated building**) are designed and constructed using materials to achieve the maximum internal acoustic level in reference table 3 (item 3.1).	No acceptable outcome is provided.

Reference tables

Table 3: Maximum internal acoustic levels

Applicable use	Acoustic levels
3.1: Habitable rooms in **an accommodation activity** (excluding uses addressed in QDC MP4.4)	≤35 dB(A) L_{eq} (1 hour) (maximum hour over 24 hours)
3.2: Indoor education areas and **indoor play areas** in a **childcare centre** or **education establishment**	
3.3: Sleeping rooms in a **childcare centre**	
3.4: Patient care areas in a **hospital**	

It is noted that all hotel room balconies are at aboveground floor levels; therefore, PO42 applies.

In relation to PO43, hotel rooms are a Class 3 building and are deemed relevant residential buildings; therefore, the Queensland Development Code (QDC) Mandatory Part (MP) 4.4 *"Buildings in a Transport Noise Corridor"* applies; and the criterion cited in Table 1 (Item 1.1) and Table 3 (Item 3.1) of State Code 1 do not apply.

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4.2 Onsite Activity Noise

Performance PO1 of Scenic Rim Regional Council's *"General Development Provisions Code"* states the following with respect to noise emissions:

Table 9.3.7.3.1— Criteria for Assessable Development Only

<table>
<tr><th>Performance Outcomes</th><th colspan="3">Acceptable Outcomes</th></tr>
<tr><td colspan="4">Acoustic Amenity and Noise</td></tr>
<tr><td rowspan="6">PO1
Development is located, designed, constructed and operated to ensure that noise emissions do not cause environmental harm or environmental nuisance to sensitive receivers.

Note - this performance outcome also applies to noise emissions generated by sensitive land uses, from sources such as communal areas, service areas, plant and equipment.</td><td colspan="3">AO1
1. Development involves activities that are inaudible from an adjacent sensitive receiver or would not cause noise related environmental harm or environmental nuisance sensitive receiver; or
2. The emission of noise from the premises must not exceed the following levels:</td></tr>
<tr><td>Time Period</td><td>At A Sensitive Land Use</td><td>At Commercial Premises</td></tr>
<tr><td>7:00am-10:00pm</td><td>Background +5dB(A)</td><td>Background +10dB(A)</td></tr>
<tr><td>10:00pm-7:00am (sleeping areas)</td><td>35dB(A)</td><td>Background +8dB(A)</td></tr>
<tr><td>10:00pm-7:00am (living areas)</td><td>40dB(A)</td><td>Background +8dB(A)</td></tr>
<tr><td>10:00pm-7:00am (unless otherwise specified)</td><td>Background +3dB(A)</td><td>Background +8dB(A)</td></tr>
<tr><td colspan="3">Note -
1. Levels are measured as the adjusted maximum sound pressure level as defined in the Noise Measurement Manual (Environmental Protection Agency, 2000).
2. Noise generated from vehicle movements on the site, including noise from entering or exiting the vehicle, shall not be considered when assessing the Acceptable Outcome AO1.
3. Background=LA90
or;

3. Development achieves the Acoustic Quality Objectives for Sensitive Receptors listed within the Environmental Protection (Noise) Policy 2008.
Note - where the adjacent sensitive land use is not listed in the Environmental Protection (Noise) Policy 2008, the development will achieve the noise levels specified in AO1 (2)</td></tr>
<tr><td>PO2
Air conditioning units, refrigeration units and any other form of mechanical ventilation or extraction systems do not adversely impact on the acoustic amenity of surrounding sensitive receivers.</td><td colspan="3">AO2
Roof-top mounted plant and equipment is located away from surrounding sensitive land uses and is acoustically shielded to maintain the background noise levels (L90) at the nearest sensitive receiver.</td></tr>
</table>

Given Acceptable Outcome AO1 (3) of Performance Outcome PO1 has been applied to vehicle movements (i.e. the assess the proposed carpark extension), the *"Acoustic Quality Objectives"* criterion from the Environmental Protection (Noise) Policy 2019 (which superseded the Environmental Protection (Noise) Policy 2008) has been adopted to assess onsite activity noise from the proposed new onsite uses (i.e. carpark extension). In relation to AO2 of PO2, the *"Background Creep"* criterion of the EPP Noise 2019 has been adopted. Both the *"Acoustic Quality Objectives" and "Background Creep"* criterion are detailed over page.

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Section 6 of the Environmental Protection (Noise) Policy 2019 provides the following framework for environmental values to be enhanced or protected:

6 Environmental values

The environmental values to be enhanced or protected under this policy are—

(a) the qualities of the acoustic environment that are conducive to protecting the health and biodiversity of ecosystems; and

(b) the qualities of the acoustic environment that are conducive to human health and wellbeing, including by ensuring a suitable acoustic environment for individuals to do any of the following—

(i) sleep;

(ii) study or learn;

(iii) be involved in recreation, including relaxation and conversation; and

(c) the qualities of the acoustic environment that are conducive to protecting the amenity of the community.

Section 9 of the Environmental Protection (Noise) Policy 2019 provides the following framework for management intent for noise:

9 Management intent for noise

(1) This section states the management intent for an activity involving noise that affects, or may affect, an environmental value to be enhanced or protected under this policy.

Note—

See section 35 of the *Environmental Protection Regulation 2019*.

(2) To the extent it is reasonable to do so, noise must be dealt with in a way that ensures—

(a) the noise does not have any adverse effect, or potential adverse effect, on an environmental value under this policy; and

(b) background creep in an area or place is prevented or minimised.

(3) Despite subsection (2)(b), if the acoustic quality objectives for an area or place are not being achieved or maintained, the noise experienced in the area or place must, to the extent it is reasonable to do so, be dealt with in a way that progressively improves the acoustic environment of the area or place.

(4) In this section—

background creep, for noise in an area or place, means a gradual increase in the total amount of background noise in the area or place as measured under the document called the 'Noise measurement manual' published on the department's website.

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Schedule 1 of the Environmental Protection (Noise) Policy 2019 provides the following specific *"Acoustic Quality Objectives"* to ensure that the above is achieved at the nearest noise sensitive receivers:

Column 1	**Column 2**	**Column 3**			**Column 4**
Sensitive receptor	**Time of day**	**Acoustic quality objectives (measured at the receptor) *dB(A)***			**Environmental value**
		$L_{Aeq,adj,1hr}$	$L_{A10,adj,1hr}$	$L_{A1,adj,1hr}$	
residence (for outdoors)	daytime and evening	50	55	65	health and wellbeing
residence (for indoors)	daytime and evening	35	40	45	health and wellbeing
	night-time	30	35	40	health and wellbeing, in relation to the ability to sleep

Table 3: Criterion from Schedule 1 of the Environmental Protection (Noise) Policy 2019.

It is noted that the EPP Noise 2019 provides no numeric criteria for control of background creep. For this reason, we have applied the previous criteria applied under the EPP Noise 2008, as follows. Based upon the measured RBL levels presented in Section 3.3, the *"Background Creep"* criterion (as previously defined under the Environmental Protection (Noise) Policy 2008) equates to the following levels at the nearest offsite receivers:

Time Varying Noise Source	**Noise Limit, SPL dB(A) L_{eq}**
Day 7am to 6pm	46 (RBL L_{90} 41 + 5 dB)
Evening 6pm to 10pm	39 (RBL L_{90} 34 + 5 dB)
Night-time 10pm to 6am	30 (RBL L_{90} 25 + 5 dB)
Continuous Noise Source	**Noise Limit, SPL dB(A) L_{90}**
Day 7am to 6pm	41 (RBL L_{90} 41 + 0 dB)
Evening 6pm to 10pm	34 (RBL L_{90} 34 + 0 dB)
Night-time 10pm to 6am	25 (RBL L_{90} 25 + 0 dB)

Table 4: Noise limit criterion for *"Background Creep"*.

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5.0 PREDICTED NOISE IMPACTS

5.1 Predicted Road Traffic Noise Impacts

5.1.1 Traffic Volumes

The existing year 2022 traffic volumes for the Kidston Street, including percentage of heavy vehicles, was obtained from the Department of Transport and Main Roads. The predicted volumes for years 2024 and 2035 assume a 3.68% compound growth per annum, which is the calculated 10-year traffic growth obtained from TMR. For modelling purposes, the 18 hour traffic volumes are assumed to be equal to 95% of the 24 hour traffic volumes.

Gazettal Direction

2019 Traffic Volume:	654 vehicles per 24 hour, 14.98% heavy vehicles
Predicted 2024 Traffic Volume:	703 vehicles per 24 hour, 14.98% heavy vehicles
Predicted 2035 Traffic Volume:	1.046 vehicles per 24 hour, 14.98% heavy vehicles

Against Gazettal Direction

2019 Traffic Volume:	658 vehicles per 24 hour, 8.81% heavy vehicles
Predicted 2024 Traffic Volume:	707 vehicles per 24 hour, 8.81% heavy vehicles
Predicted 2035 Traffic Volume:	1,053 vehicles per 24 hour, 8.81% heavy vehicles

5.1.2 Noise Model Parameters

Road traffic noise predictions were conducted using PEN3D, a CoRTN based model acceptable under the Environmental Protection (Noise) Policy. The following parameters were used in developing the PEN3D model for the development site:

- 2.5 dB façade correction.
- 50 km/hr posted speed limit (60 km/hr to the west of the site, at the Lamington National Park Road start).
- 7mm spray seal asphalt surface (+ 2 dB surface correction).
- CoRTN calibration factors for Queensland Conditions - NAASRA Working Group (Saunders, Samuels, Leach and Hall 1983) adjustments for Australian conditions of minus (-) 0.7 dB for free-field locations and minus (-) 1.7 dB for façade locations.
- CoRTN soft ground cover has been used in the model for grassed / landscaped areas and CoRTN hard ground surface for roads and concrete pavements.
- Ground levels of the surrounding land obtained from ELVIS website (Elevation and Depth – Foundation Spatial Data) as a LiDAR file and converted to a 0.1m contour interval 3D dxf file.
- Receiver heights taken at 1.5m above finished floor level, which is assumed to be 98.5m RL at ground floor and 102.0m RL at First Floor.
- $L_{eq\ 1hr}$ levels based on the differences from the measured $L_{10\ 18hr}$ levels presented in Table 2.

5.1.3 Modelled Road Traffic Noise Levels –Existing Year 2024 Situation

To verify the road traffic noise prediction model, the existing $L_{A10,18hr}$ traffic noise level was calculated for the logger location and compared to the measured noise level. The calculated existing $L_{A10,18hr}$ noise level, approximately 41m from the nearest lane of Kidston Street is 51.9 dB(A). Compared with the measured $L_{A10,18hr}$ level of 51.0 dB(A), the model is within the allowable 2 dB(A) deviation from measured levels. For PEN3D point calculation sheets refer to Appendix C.

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5.1.4 Modelled Road Traffic Noise Levels – Ultimate Year 2035 Situation

Based upon year 2035 traffic volumes, the PEN3D model predicts the following road traffic noise levels as detailed in the Table 5 at the proposed new hotel rooms and balconies.

BUILDING FAÇADES: FAÇADE CORRECTED NOISE IMPACT LEVELS				
Floor Level	**Hotel Room**	**Façade**	**Predicted Year 2035 $L_{10\ 18hr}$ dB(A)**	**Predicted Year 2035 $L_{eq\ 1hr}$ Day dB(A)**
First Floor	12	South	46	52
	13	North	51	57
	14	West	51	57
	15	West	61	67
		North	65	71
	16	North	65	71
		East	61	67
	17	East	59	65
	18	West	47	53
	19	West	48	54
	20	West	49	55
	21	West	50	56
	22	South	45	51
		East	47	53
	23	East	38	44
	24	East	39	45
	25	East	39	45
	26	East	53	59
	27	East	48	54
OUTDOOR PRIVATE OPEN SPACE BALCONIES: FREE-FIELD NOISE IMPACT LEVELS				
Floor Level	**Hotel Room**	**Façade**	**Predicted Year 2035 $L_{10\ 18hr}$ dB(A)**	**Predicted Year 2035 $L_{eq\ 1hr}$ Day dB(A)**
First Floor	22	East	49	N/A
	23	East	49	N/A
	24	East	50	N/A
	25	East	51	N/A
	26	East	54	N/A
	27	East	55	N/A
External Criterion			**57**	

Table 5: Predicted road traffic noise impacts.

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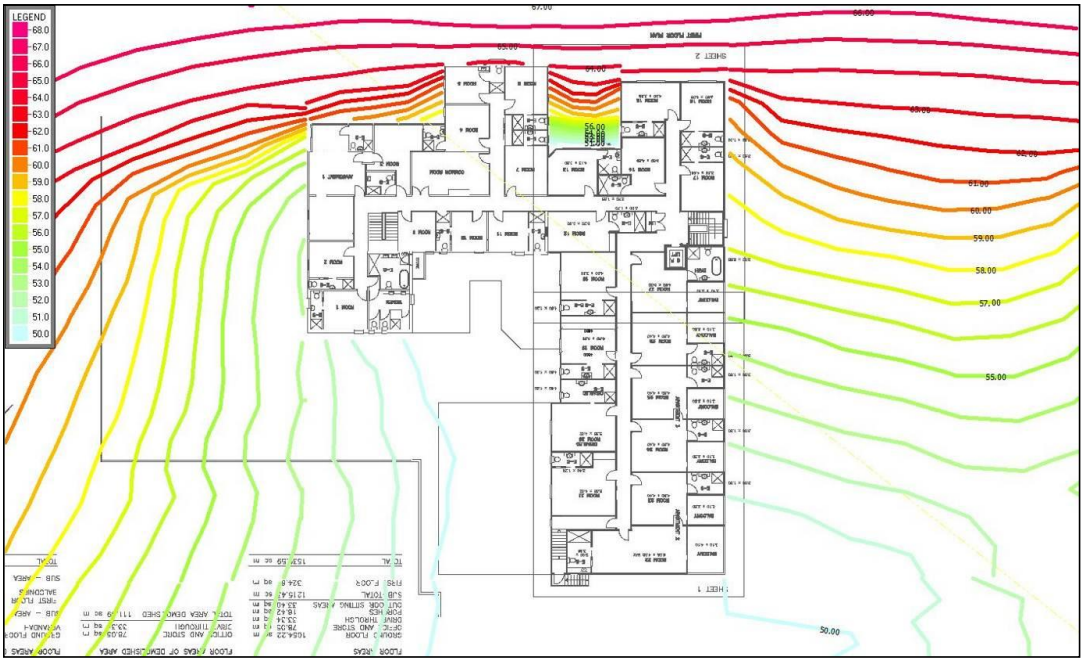
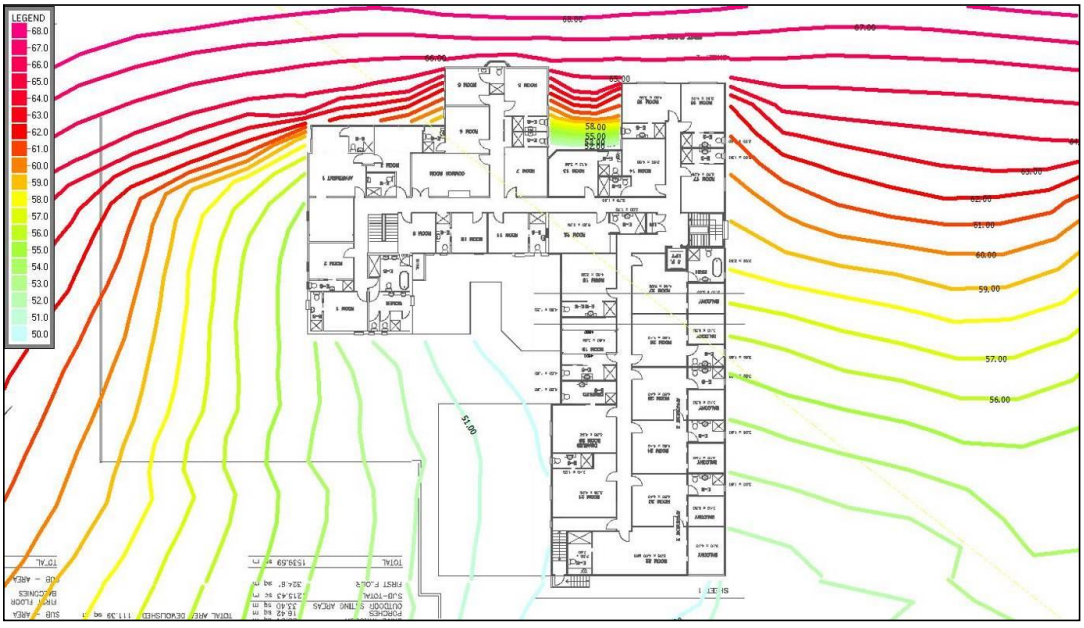
Figure 5.1: Predicted Year 2035 $L_{10\ 18hr}$ noise contours.

First Floor: Free-field road traffic noise impacts.



First Floor: Façade corrected road traffic noise impacts.



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5.2 Predicted Onsite Activity Noise Impacts

Below is an estimate of the number of cars in the carpark during peak periods as advised by the client from a recent count:

	12pm	7pm	10pm
Friday	20 cars	45 cars	25 cars
Saturday	40 cars	45 cars	25 cars

All noise source levels used in the assessment have been collected from similar assessments. All *"Acoustic Quality Objective"* noise levels have been corrected for impulsiveness or tonality as per Australian Standard AS 1055 *"Acoustics-Description and measurement of environmental noise*".

The following noise source levels would typically occur as part of the proposed hotel extensions and have been assessed within this report.

Activity/Noise Source	Distance To Source	Event Duration Noise Level, SPL dB(A)		
		L_{eq}	L_{10}	L_{01}
Car door closures	1m	80*	83*	85*
Car bypass	1m	68	70	73
People talking outside in carpark	1m	58	60	62
Subdued patrons at outdoor verandah / entry to bottle shop	1m	67	72	75
Gaming machines inside pokies room with patrons	1m	75**	78**	82**
Truck movements	1m	87	89	90
Truck airbrakes	1m	95*	100*	103*
Forklift movements	4m	71	74	75
Waste collection	1m	97*	102*	107*

* Denotes + 5 dB correction for impulsiveness in accordance with AS1055. ** Denotes + 5 dB correction for tonality in accordance with AS1055.

Table 6: Typical noise source levels associated with the proposed hotel extensions.

For the L_{Aeq} levels we have presented both the adjusted 15 minute duration and also the adjusted one hour duration. For assessment of the *"Background Creep"* criterion we have adopted the $L_{Aeq\ 15\ minute}$ duration levels.

With regards to the $L_{A10\ 1hr}$ and $L_{A01\ 1hr}$ levels, in many cases, particularly during the night-time period, noise events such as car door closures may not register as L_{A10} or L_{A01} levels if the events do not occur for 10% or 1% of the time period respectively. For example, a 1 second event would have to occur 360 times during a one hour period to register as an L_{A10}, and 36 times during a one hour period to register as an L_{A01} as these noise descriptors are statistically defined. If the events do not occur for the minimum number of iterations (or time period) we have presented the results as "N/A" in Table 7.

Based upon the location of the proposed onsite activities in relation to the nearest offsite noise sensitive receivers (building façades and inside rooms with windows open), we predict the following noise impact levels as presented in Table 7 (daytime and evening periods) and Table 8 (night-time period).

Combined impacts do not include waste collection and deliveries as deliveries and waste collection are generally of short duration and infrequent occurrence.

The predicted levels assume that the recommended treatments detailed in Section 6 are incorporated into the development. For offsite noise sensitive receiver locations refer to Figure 2 in Appendix A. For point source calculations refer to Appendix C.

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Daytime and Evening Periods

Noise Source	Predicted Noise Impact, SPL dB(A)					
	Nearest Façade			Inside Windows Open		
	$L_{eq\ 1hr}$	$L_{10\ 1hr}$	$L_{01\ 1hr}$	$L_{eq\ 1hr}$	$L_{10\ 1hr}$	$L_{01\ 1hr}$
R1: Existing dwellings to the northeast across Appel Street						
Near car door closures	36	N/A	59	28	N/A	52
Near car bypasses	35	44	47	28	37	40
Far car door closures	32	N/A	55	24	N/A	47
Far car bypasses	30	39	42	22	31	34
Combined CARPARK L_{eq}, and Maximum L_{10} and L_{01} impacts	**40**	**44**	**59**	**32**	**37**	**52**
People talking outside in near carpark	29	35	37	21	27	29
People talking outside in far carpark	24	30	32	17	23	25
Subdued patrons at outdoor verandah / entry to bottle shop	34	42	45	27	35	38
Gaming machines inside pokies room with patrons	34	37	41	26	29	33
Combined PATRONS L_{eq}, and Maximum L_{10} and L_{01} impacts	**38**	**42**	**45**	**30**	**35**	**38**
Truck movements to the site	39	N/A	N/A	31	N/A	N/A
Truck movements from the site	33	N/A	N/A	25	N/A	N/A
Truck airbrakes at the carpark	32	N/A	N/A	25	N/A	N/A
Forklift movements at the carpark	47	55	56	39	47	48
Waste collection	60	N/A	83	53	N/A	76
R2: Existing dwelling to the southeast at 11 Appel Street						
Near car door closures	30	N/A	53	22	N/A	45
Near car bypasses	28	37	40	21	30	33
Far car door closures	26	N/A	49	18	N/A	42
Far car bypasses	24	33	36	17	26	29
Combined CARPARK L_{eq}, and Maximum L_{10} and L_{01} impacts	**34**	**37**	**53**	**26**	**30**	**45**
People talking outside in near carpark	24	30	32	16	22	24
People talking outside in far carpark	25	31	33	18	24	26
Subdued patrons at outdoor verandah / entry to bottle shop	30	38	41	22	30	33
Gaming machines inside pokies room with patrons	31	34	38	23	26	30
Combined PATRONS L_{eq}, and Maximum L_{10} and L_{01} impacts	**34**	**38**	**41**	**27**	**30**	**33**
Truck movements to the site	39	N/A	N/A	32	N/A	N/A
Truck movements from the site	30	N/A	N/A	23	N/A	N/A
Truck airbrakes at the carpark	24	N/A	N/A	16	N/A	N/A
Forklift movements at the carpark	42	50	51	35	42	43
Waste collection	60	N/A	83	53	N/A	76
Applicable Criterion	**EPP Noise Acoustic Quality Objectives**					
7am to 10pm Residential Criterion	**50**	**55**	**65**	**35**	**40**	**45**

Table 7: Predicted onsite activity noise impacts at noise sensitive receivers.

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Daytime and Evening Periods

Noise Source	Predicted Noise Impact, SPL dB(A)					
	Nearest Façade			Inside Windows Open		
	$L_{eq\ 1hr}$	$L_{10\ 1hr}$	$L_{01\ 1hr}$	$L_{eq\ 1hr}$	$L_{10\ 1hr}$	$L_{01\ 1hr}$
R3: Existing dwelling to the south at 34 to 36 Kidston Street						
Near car door closures	25	N/A	48	17	N/A	40
Near car bypasses	23	32	35	16	25	28
Far car door closures	25	N/A	49	18	N/A	41
Far car bypasses	23	32	35	16	25	28
Combined CARPARK L_{eq}, and Maximum L_{10} and L_{01} impacts	**30**	**32**	**49**	**23**	**25**	**41**
People talking outside in near carpark	19	25	27	< 15	17	19
People talking outside in far carpark	20	26	28	< 15	19	21
Subdued patrons at outdoor verandah / entry to bottle shop	< 15	21	24	< 15	< 15	17
Gaming machines inside pokies room with patrons	< 15	17	21	< 15	< 15	< 15
Combined PATRONS L_{eq}, and Maximum L_{10} and L_{01} impacts	**23**	**26**	**28**	**16**	**19**	**21**
Truck movements to the site	32	N/A	N/A	24	N/A	N/A
Truck movements from the site	31	N/A	N/A	23	N/A	N/A
Truck airbrakes at the carpark	27	N/A	N/A	19	N/A	N/A
Forklift movements at the carpark	38	45	46	30	38	39
Waste collection	50	N/A	73	43	N/A	66
R4: Existing dwelling to the southwest at 32 Kidston Street						
Near car door closures	27	N/A	50	19	N/A	42
Near car bypasses	27	36	39	19	28	31
Far car door closures	28	N/A	52	21	N/A	44
Far car bypasses	26	35	38	18	27	30
Combined CARPARK L_{eq}, and Maximum L_{10} and L_{01} impacts	**33**	**36**	**52**	**26**	**28**	**44**
People talking outside in near carpark	22	28	30	< 15	20	22
People talking outside in far carpark	23	29	31	16	22	24
Subdued patrons at outdoor verandah / entry to bottle shop	18	26	29	< 15	18	21
Gaming machines inside pokies room with patrons	18	21	25	< 15	< 15	18
Combined PATRONS L_{eq}, and Maximum L_{10} and L_{01} impacts	**27**	**29**	**31**	**19**	**22**	**24**
Truck movements to the site	39	N/A	N/A	31	N/A	N/A
Truck movements from the site	34	N/A	N/A	27	N/A	N/A
Truck airbrakes at the carpark	26	N/A	N/A	18	N/A	N/A
Forklift movements at the carpark	45	52	53	37	45	46
Waste collection	52	N/A	75	44	N/A	67
Applicable Criterion	**EPP Noise Acoustic Quality Objectives**					
7am to 10pm Residential Criterion	**50**	**55**	**65**	**35**	**40**	**45**

Table 7 (Con't): Predicted onsite activity noise impacts at noise sensitive receivers.

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Night-time Period

Noise Source	Predicted Noise Impact, SPL dB(A)					
	Nearest Façade			Inside Windows OPEN		
	$L_{eq\ 1hr}$	$L_{10\ 1hr}$	$L_{01\ 1hr}$	$L_{eq\ 1hr}$	$L_{10\ 1hr}$	$L_{01\ 1hr}$
R1: Existing dwellings to the northeast across Appel Street						
Near car door closures	33	N/A	N/A	26	N/A	N/A
Near car bypasses	33	44	47	25	37	40
Far car door closures	29	N/A	N/A	22	N/A	N/A
Far car bypasses	27	39	42	19	31	34
Combined CARPARK L_{eq}, and Maximum L_{10} and L_{01} impacts	**37**	**44**	**47**	**30**	**37**	**40**
People talking outside in near carpark	29	35	37	21	27	29
People talking outside in far carpark	24	30	32	17	23	25
Subdued patrons at outdoor verandah / entry to bottle shop	34	42	45	27	35	38
Gaming machines inside pokies room with patrons	34	37	41	26	29	33
Combined PATRONS L_{eq}, and Maximum L_{10} and L_{01} impacts	**38**	**42**	**45**	**30**	**35**	**38**
R2: Existing dwelling to the southeast at 11 Appel Street						
Near car door closures	27	N/A	N/A	20	N/A	N/A
Near car bypasses	26	37	40	18	30	33
Far car door closures	23	N/A	N/A	16	N/A	N/A
Far car bypasses	22	33	36	< 15	26	29
Combined CARPARK L_{eq}, and Maximum L_{10} and L_{01} impacts	**31**	**37**	**40**	**23**	**30**	**33**
People talking outside in near carpark	24	30	32	16	22	24
People talking outside in far carpark	25	31	33	18	24	26
Subdued patrons at outdoor verandah / entry to bottle shop	30	38	41	22	30	33
Gaming machines inside pokies room with patrons	31	34	38	23	26	30
Combined PATRONS L_{eq}, and Maximum L_{10} and L_{01} impacts	**34**	**38**	**41**	**27**	**30**	**33**
R3: Existing dwelling to the south at 34 to 36 Kidston Street						
Near car door closures	22	N/A	N/A	15	N/A	N/A
Near car bypasses	21	32	35	< 15	25	28
Far car door closures	23	N/A	N/A	15	N/A	N/A
Far car bypasses	21	32	35	< 15	25	28
Combined CARPARK L_{eq}, and Maximum L_{10} and L_{01} impacts	**28**	**32**	**35**	**20**	**25**	**28**
People talking outside in near carpark	19	25	27	< 15	17	19
People talking outside in far carpark	20	26	28	< 15	19	21
Subdued patrons at outdoor verandah / entry to bottle shop	< 15	21	24	< 15	< 15	17
Gaming machines inside pokies room with patrons	< 15	17	21	< 15	< 15	< 15
Combined PATRONS L_{eq}, and Maximum L_{10} and L_{01} impacts	**23**	**26**	**28**	**16**	**19**	**21**
R4: Existing dwelling to the southwest at 32 Kidston Street						
Near car door closures	24	N/A	N/A	17	N/A	N/A
Near car bypasses	24	36	39	16	28	31
Far car door closures	26	N/A	N/A	18	N/A	N/A
Far car bypasses	23	35	38	16	27	30
Combined CARPARK L_{eq}, and Maximum L_{10} and L_{01} impacts	**30**	**36**	**39**	**23**	**28**	**31**
People talking outside in near carpark	22	28	30	< 15	20	22
People talking outside in far carpark	23	29	31	16	22	24
Subdued patrons at outdoor verandah / entry to bottle shop	18	26	29	< 15	18	21
Gaming machines inside pokies room with patrons	18	21	25	< 15	< 15	18
Combined PATRONS L_{eq}, and Maximum L_{10} and L_{01} impacts	**27**	**29**	**31**	**19**	**22**	**24**
Applicable Criterion	**EPP Noise Acoustic Quality Objectives**					
10pm to 7am Residential Criterion	**N/A**	**N/A**	**N/A**	**30**	**35**	**40**

Table 8 (Con't): Predicted onsite activity noise impacts at noise sensitive receivers.

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Continuous activity noise source levels have been compiled from similar previous investigations. All noise levels have been corrected for impulsiveness or tonality as per Australian Standard AS 1055 *"Acoustics-Description and measurement of environmental noise*".

It should be stressed that mechanical plant requirements for the proposed alterations and extensions are not yet known, for this reason; we have applied noise levels from other similar sites as follows:

- Rooftop air conditioner units each generating 57 dB(A) at 3m assumed along the northern façade of the proposed store.
- Rooftop refrigeration compressor units each generating 62 dB(A) at 3m assumed along the northern façade of the proposed store.

It is noted that the plant has been assumed along the northern façade of the proposed store as this location provides building screening to the offsite noise sensitive receivers.

Based upon the assumed locations of the new onsite mechanical plant in relation to the nearest offsite noise sensitive receivers (building façades and inside rooms with windows open), we predict the following noise impact levels as presented in Table 9.

The predicted levels assume that the recommended treatments detailed in Section 6 are incorporated into the development.

For offsite noise sensitive receiver locations refer to Figure 2 in Appendix A. For point source calculations refer to Appendix C.

Continuous Noise Source	**Predicted Noise Impact, SPL L_{eq} dB(A)**	
	Nearest Façade	**Inside Windows Open**
R1: Existing dwellings to the northeast across Appel Street		
Combined mechanical plant	21	< 15
R2: Existing dwelling to the southeast at 11 Appel Street		
Combined mechanical plant	20	< 15
R3: Existing dwelling to the south at 34 to 36 Kidston Street		
Combined mechanical plant	20	< 15
R4: Existing dwelling to the southwest at 32 Kidston Street		
Combined mechanical plant	25	18
7am to 10pm Residential Criterion **10pm to 7am Residential Criterion**	**41 / 34** **25**	**35** **30**

Table 9: Predicted onsite mechanical plant noise impacts at noise sensitive receivers.

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6.0 RECOMMENDED ACOUSTIC TREATMENTS

6.1 Road Traffic Acoustic Treatments

6.1.1 Recommended Acoustic Balcony Balustrades

To meet the requirements of PO42 of the State Development Assessment Provisions (SDAP) Queensland State Code 1 *"Development in a state-controlled road environment"*, hotel room balconies must have continuous solid gap-free balustrade for the full height and length (other than gaps required for drainage purposes to comply with the Building Code of Australia); and a highly acoustically absorbent material treatment (e.g. Megasorber FM 50mm, or fibreglass with a Noise Reduction Coefficient greater than 0.8, and faced with a perforated solid facing (e.g. FC sheet, plywood or sheetmetal) with minimum open face area of 12%) for the total area of the soffit above the balconies (PO42 Items 1 and 2). The balustrades should be constructed of a minimum of 6.38mm laminate glass, 9mm FC sheet, masonry, or a combination of the above.

6.1.2 Recommended Acoustic Building Shell Treatments

To meet PO43 of the State Development Assessment Provisions (SDAP) Queensland State Code 1 *"Development in a state-controlled road environment"*, habitable rooms of relevant residential building are required to meet the Queensland Development Code *"Mandatory Part 4.4 – buildings in transport noise corridor"*.

The QDC MP4.4 states the following with regards to acoustic treatments to mitigate road traffic noise:

"The external envelope of each habitable room in a relevant residential building must comply with the minimum R_W[1] for each building component specified in Schedule 1 to achieve a minimum transport noise reduction level for the relevant noise category by:

(a) using materials specified in Schedule 2 (of the Development Code)*;*

OR

(b) using materials with manufacturer's specifications[2] *that, in combination, achieve the minimum Rw value for the relevant building component and applicable noise category."*

The predicted Noise Categories for the noise affected hotel rooms of the proposed development are presented in Table 9 based upon the predicted impacts presented in Section 5.1.4.

The specific Noise Categories in Table 10 and the requirements of Schedule 1 of the Development Code (as detailed in Table 11 of this report) should be used in combination to determine the specific building shell treatments for the habitable rooms of the proposed development.

[1] R_w means the *"Weighted Sound Reduction Index"* as specified in ISO 140-3.

[2] Manufacturers' Specifications means specifications that have been measured in accordance with AS/NZS ISO 717.1 for a material or system and have been approved by a registered testing Authority.

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Under the meaning of *"Transport Noise Reduction"*, the Code states that *"the predicted levels of transport noise will be achieved only when doors, windows and other openings in the relevant parts of the building's external envelope are closed"*. It is noted that there are requirements under the Building Code of Australia for ventilation that may need to be reviewed if external openings are closed to exclude road noise intrusion. Habitable rooms with operable windows or sliding doors along façades that are predicted to have a Noise Category 0; could remain open for the purposes of fresh air ventilation to the relevant spaces.

Floor Level	Hotel Room	Façade	Predicted PEN3D MP4.4 Categories
First Floor	12	South	0
	13	North	0
	14	West	0
	15	West	1
		North	2
	16	North	2
		East	1
	17	East	1
	18	West	0
	19	West	0
	20	West	0
	21	West	0
	22	South	0
		East	0
	23	East	0
	24	East	0
	25	East	0
	26	East	0
	27	East	0

Table 10: Recommended Noise Categories to mitigate road traffic.

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Schedule 1

Noise category	Minimum *transport noise reduction* (*dB (A)*) required for *habitable rooms*	Component of building's *external envelope*	Minimum R_w required for each component
Category 4	40	Glazing	43
		External walls	52
		Roof	45
		Floors	51
		Entry doors	35
Category 3	35	Glazing	38 (where total area of glazing for a *habitable room* is greater than 1.8m²)
			35 (where total area of glazing for a *habitable room* is less than or equal to 1.8m²)
		External walls	47
		Roof	41
		Floors	45
		Entry doors	33
Category 2	30	Glazing	35 (where total area of glazing for a *habitable room* is greater than 1.8m²)
			32 (where total area of glazing for a *habitable room* is less than or equal to 1.8m²)
		External walls	41
		Roof	38
		Floors	45
		Entry doors	33
Category 1	25	Glazing	27 (where total area of glazing for a *habitable room* is greater than 1.8m²)
			24 (where total area of glazing for a *habitable room* is less than or equal to 1.8m²)
		External walls	35
		Roof	35
		Entry Doors	28
Category 0	No additional acoustic treatment required – standard building assessment provisions apply.		

Table 11: Relevant extract from Schedule 1 from the *"Mandatory Part 4.4 – buildings in transport noise corridor"*.

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6.2 Acoustic Treatments to Control Onsite and Offsite Activity Noise Emissions

We recommend that the following acoustic treatments be incorporated into the development to mitigate onsite activity noise:

- Construction of the acoustic barriers as detailed in Sketch 1 in Appendix A.
- The eastern entry door to the pokies room is to be kept closed when not in use and have an automatic closer installed.
- Carpark areas, driveways and ramps be finished with surface coatings which prevent tyre squeal (an uncoated rough concrete or bitumen surface is acceptable).
- Drainage grating over trafficable areas be well secured to prevent rattling.
- Mechanical plant be designed and installed to comply with the criterion presented in Section 4. As final plant selection has not been completed, an assessment of plant should be conducted during the design phase, and a Certificate provided to the Building Certifier confirming that installed plant achieves the noise limit criteria.
    - Based upon modelling, mechanical plant such air-conditioning condensers and refrigeration compressors may require acoustical screens / enclosures.
    - To minimise the acoustic attenuation requirements, onsite building screening should be utilised where possible (i.e. located along the northern façade of the proposed store).

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7.0 DISCUSSION

7.1 Road Traffic

In relation to PO42, hotel room balconies must have continuous solid gap-free balustrade for the full height and length (other than gaps required for drainage purposes to comply with the Building Code of Australia); and a highly acoustically absorbent material treatment for the total area of the soffit above the balconies (Items 1 and 2).

In relation to PO43, the proposed hotel rooms are deemed relevant residential buildings (Class 3 building); therefore, the Queensland Development Code (QDC) Mandatory Part (MP) 4.4 *"Buildings in a Transport Noise Corridor"* applies; and the criterion cited in Table 1 (Item 1.1) and Table 3 (Item 3.1) of State Code 1 do not apply. Based upon 10 year planning horizon road traffic volumes and through 3D traffic noise modelling, road traffic noise levels are predicted to impact the nearest and/or most exposed proposed hotel rooms at levels above the *"Transport Noise Corridor Category 0"* criterion of 57 dB(A) $L_{A10\ 18hr}$; hence specific Transport Noise Corridor Categories for the hotel rooms have been recommended in accordance with the Development Code Mandatory Part 4.4.

The hotel room Noise Categories detailed in Table 10 of this report and the R_w ratings specified in Schedule 1 of the MP4.4 Development Code should be used in combination to determine the specific building shell treatments for the proposed hotel rooms. **It is noted at the time of this report completion, the Transport Noise Corridor adjacent the subject site is *"Voluntary"*; however, this may change in the future; therefore, treatment requirements should be revised at the Building Application stage.**

Predicted Noise Categories for the nearest façades of hotel rooms 15 and 16 are above those presented in the Government mapping (refer to Figure 1 in Appendix A) as Government mapping only provides ground level receiver noise contours to year 2025, which is unrepresentative of the First Floor hotel rooms requiring assessment to a 10 year planning horizon to year 2035.

Under the meaning of *"Transport Noise Reduction"*, the Code states that *"the predicted levels of transport noise will be achieved only when doors, windows and other openings in the relevant parts of the building's external envelope are closed"*. It is noted that there are requirements under the Building Code of Australia for ventilation that may need to be reviewed. Habitable rooms with operable windows or sliding doors along façades that are predicted to have a Noise Category 0; could remain open for the purposes of fresh air ventilation to the relevant spaces.

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7.2 Onsite Activity Noise Impacts

Based upon the applied source levels and acoustic treatments, onsite activity noise emissions (including combined L_{eq} impacts) are predicted to impact the nearest offsite noise sensitive receivers within the relevant *"Acoustic Quality Objectives"* and *"Background Creep"* criterion except waste collection, delivery activities, and indoor car door closure L_{01} impacts at the northeast receivers across Appel Street.

In relation to the dwellings across Appel Street (receiver R1), we note that the existing hotel has an approved carpark at similar distance to the receivers; and given the proposed onsite driveway crossovers, acoustic barriers would not provide beneficial noise mitigation and have therefore not been recommend along the Appel Street frontage. Given the existing onsite uses, the proposed additions and extensions are not expected to cause annoyance. It if further noted that many of the residences across Appel Street are short term accommodation (i.e. The Rustic Cottage, Canungra Cottages and Wagon Wheel Holiday Villas), further lessening the likelihood of noise complaints.

In relation to deliveries and waste collection, the existing onsite carpark is also currently used for such activities (i.e. delivery of beer kegs with unloading undertaken using a forklift); therefore, the proposal is not introducing any new noise sources, just providing additions / extensions to better manage carparking, deliveries and waste collection. To minimise noise impacts from the additions / extensions we have recommended acoustic barriers to provide noise screening to the southeast (R2), south (R3) and southwest (R4) dwellings.

We have also provided an indication of potential noise impact levels of likely new or relocated mechanical plant; although the levels are merely a guide as no plant selections have yet been completed. For this reason, additional more detailed assessment/s should be conducted upon determination of plant. Such assessments should be undertaken prior to Building Approval; and be conditioned within the Development Approval. To minimise the acoustic attenuation requirements, onsite building screening should be utilised where possible (i.e. located along the northern façade of the proposed store).

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8.0 CONCLUSIONS

This report is in response to a request by Storey Urban on behalf of Cedarmill Pty Ltd for an environmental noise assessment of proposed additions / extensions to the Canungra Hotel in Canungra.

Based upon the assessed attached Development Plans, the proposed development can be shown to be within acceptable levels of the adopted noise criterion subject to the recommended treatments detailed in Section 6 being incorporated into the development.

Report Reviewed By:

JAY CARTER BSc
Director

Report Compiled by:

Matthew Lopez BEng
Consultant

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Version: 1, Version Date: 06/09/2024

APPENDIX A

Attachments, Subject Site and Measurement Locations, Noise Sensitive Receivers and Acoustic Treatment Sketches

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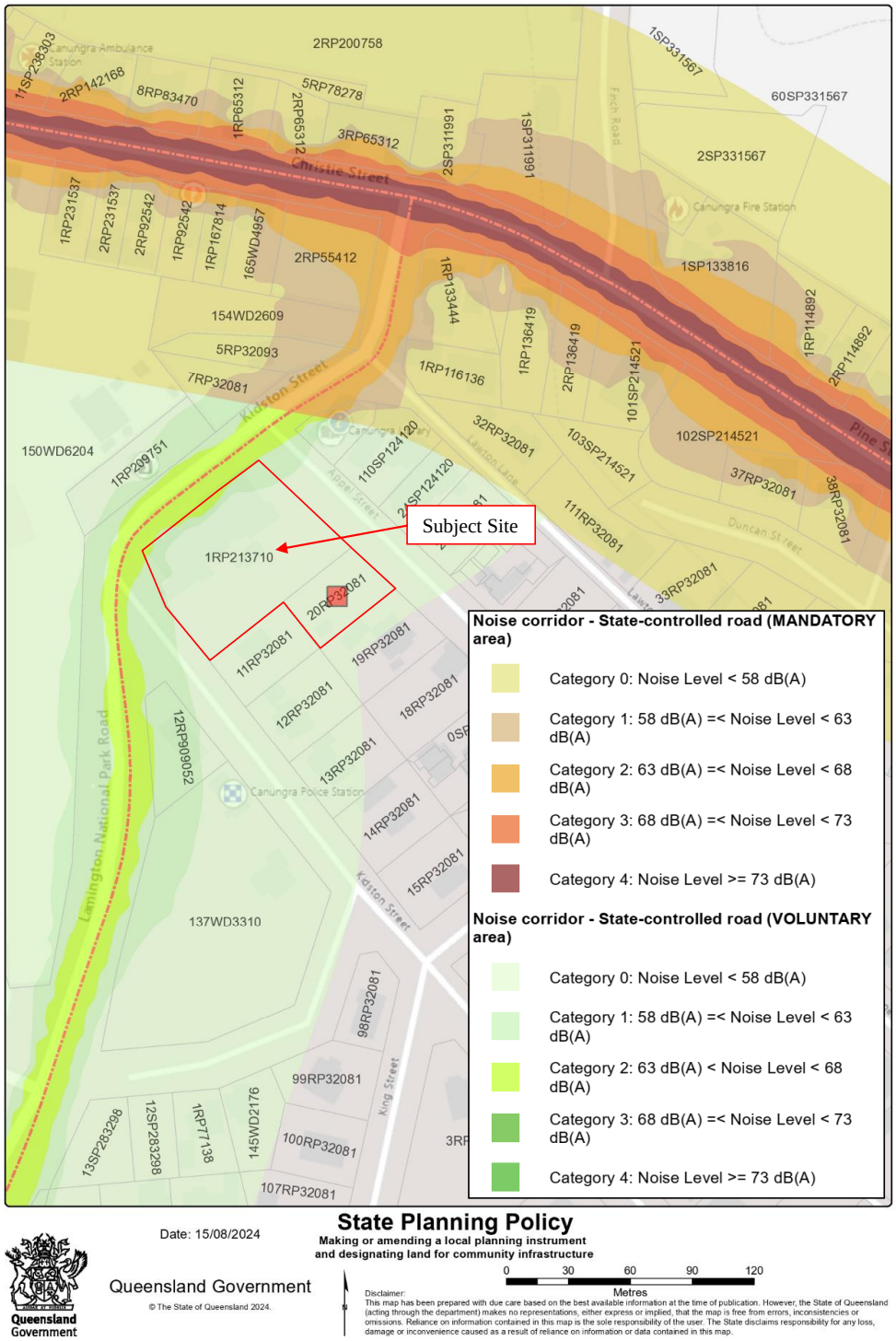
CRGACOUSTICS

Attachment A: Results from the Queensland Government's SPP Interactive Mapping System.



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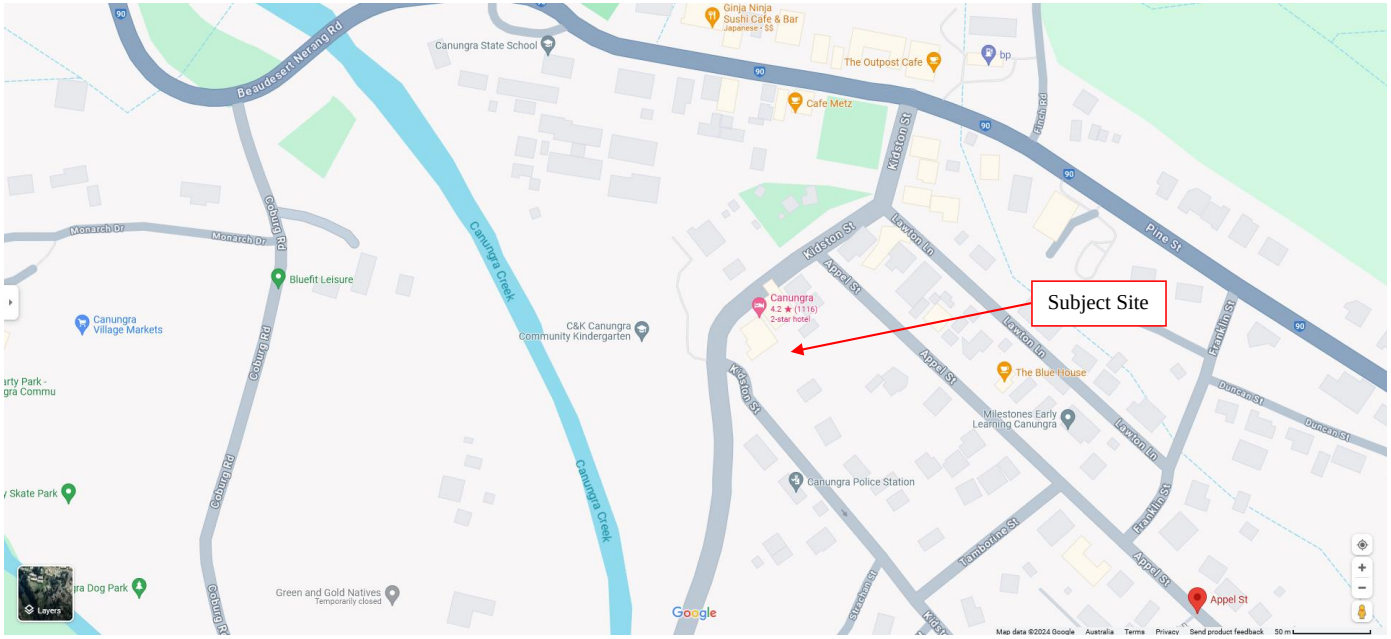
CRGACOUSTICS

Figure No. 1: Subject Site Location (Google Maps).



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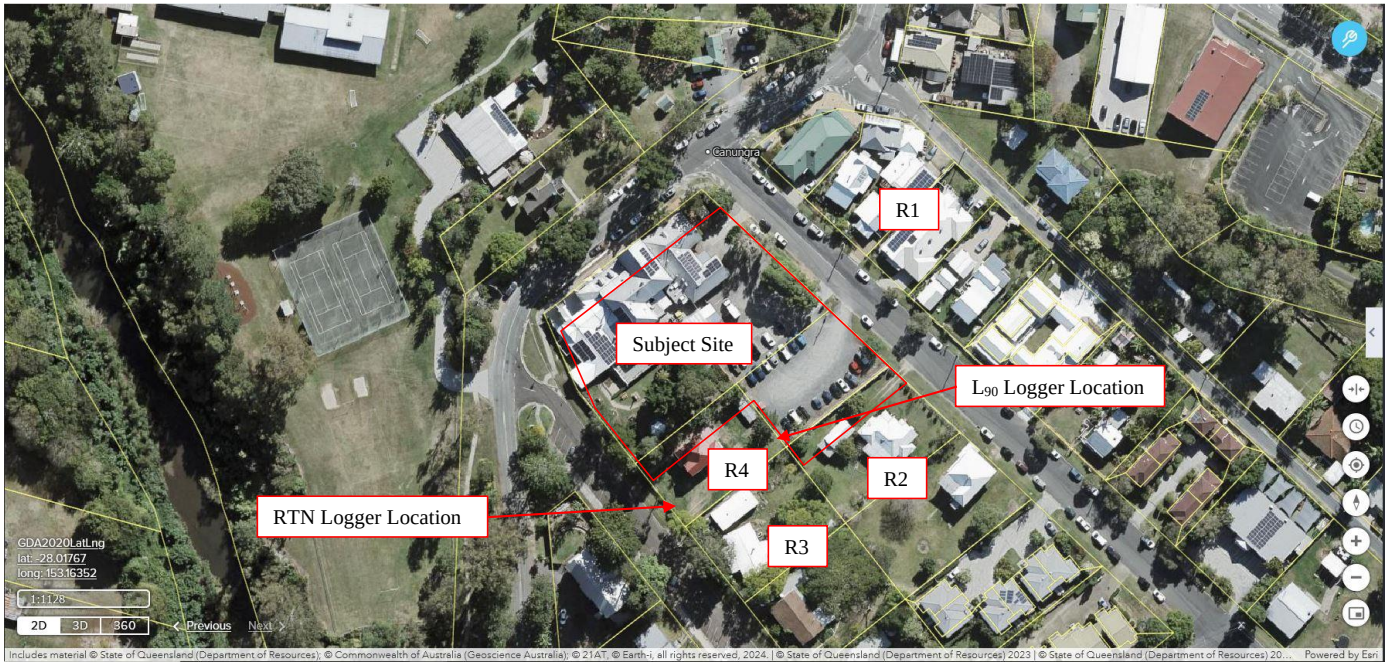
CRGACOUSTICS

Figure No. 2: Subject Site, Noise Monitoring Locations and Surrounding Receivers (QLD Globe).



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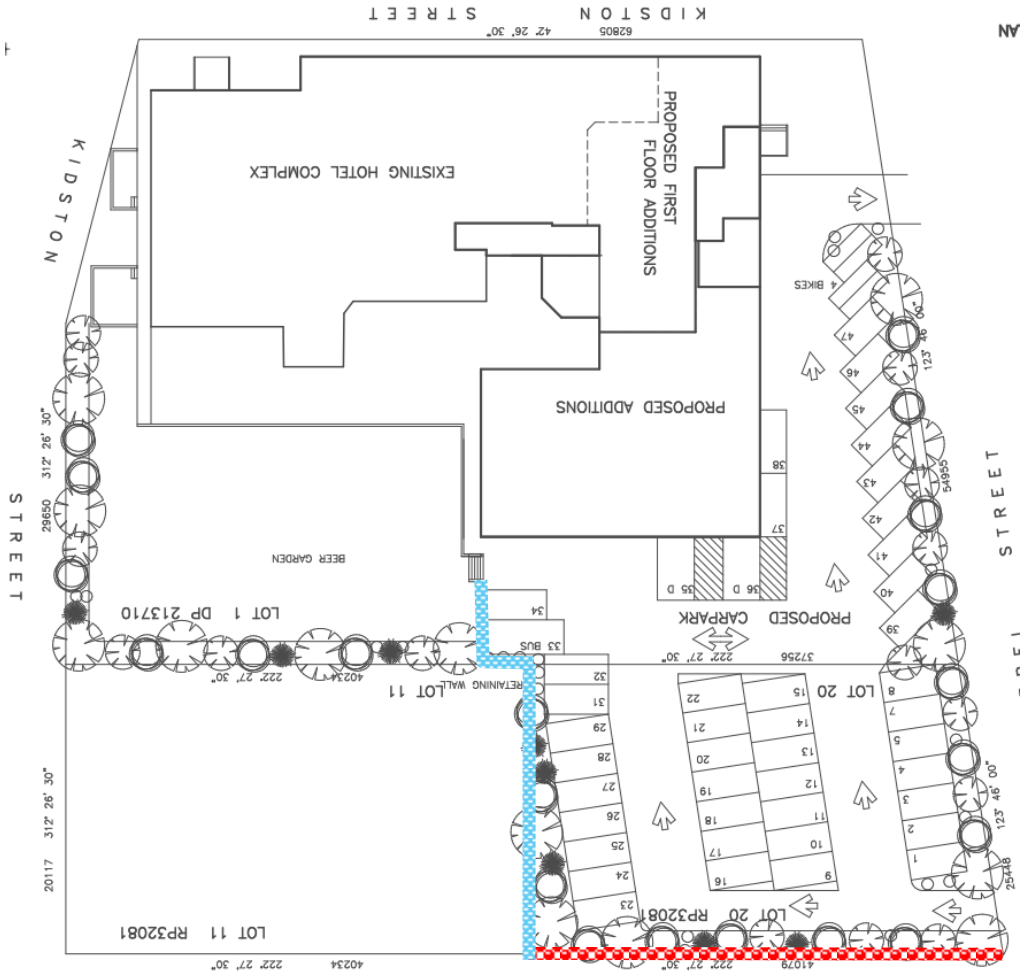
CRGACOUSTICS

Sketch No. 1: Site Layout and Recommended Acoustic Barrier and Wall Treatments (Not to Scale).



ACOUSTIC TREATMENT LEGEND

Recommended 2.4m high barrier constructed above the existing or finished carpark grade, whichever is higher.

Recommended 2.9m high barrier constructed above the existing or finished carpark grade, whichever is higher.

Barriers are to be free of gaps and holes, including no gaps between the ground and the base of the barrier. Typical materials include earth berms, 19mm lapped timber fence (40% overlap), 9mm FC sheet, toughened glass, Perspex, masonry, or a combination of the above (a minimum surface mass of 11kg/m^2 is required).

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APPENDIX B

Development Plans

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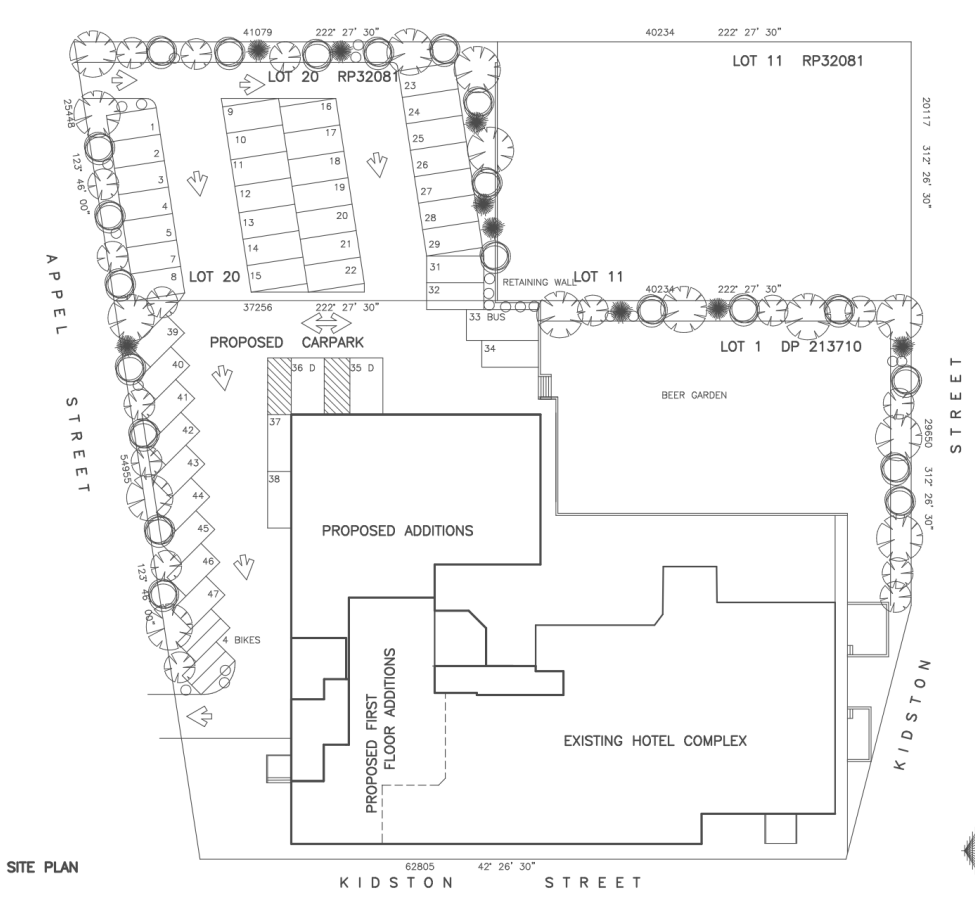

SITE PLAN

PROPOSED SITE PLAN
DOUBLE STOREY ADDITIONS

PROJECT:
PROPOSED ADDITIONS AND ALTERATIONS TO THE CANUNGRA HOTEL

TO BE ERECTED AT:
LOT 1, DP 213710,
CNR, APPEL AND KIDSON STREETS
CANUNGRA

CLIENT:
CEDARMILL PTY. LTD.

PLANNING PERMIT APPLICATION DRAWING
DATE: 07-02-24 SCALE: A3/1:300
DRWG No: COM-CED-1567 PAGE 6 OF 13
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Verify dimensions and levels before commencing

This office to be notified of any changes made in construction.

DESIGNER
RICHARD JONES QBCC 077972
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e-mail rjonesdesign@bigpond.com.au

FLOOR AREAS

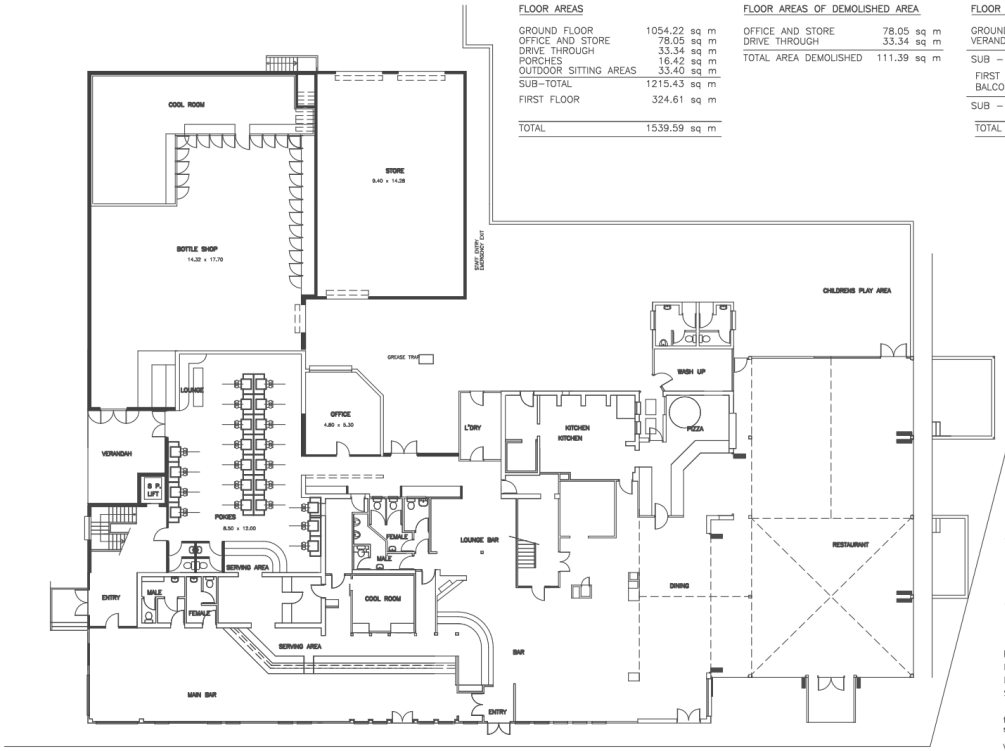
GROUND FLOOR	1054.22 sq m
OFFICE AND STORE	78.05 sq m
DRIVE THROUGH	33.34 sq m
PORCHES	16.42 sq m
OUTDOOR SITTING AREAS	33.40 sq m
SUB-TOTAL	1215.43 sq m
FIRST FLOOR	324.61 sq m
TOTAL	1539.59 sq m

FLOOR AREAS OF DEMOLISHED AREA

OFFICE AND STORE	78.05 sq m
DRIVE THROUGH	33.34 sq m
TOTAL AREA DEMOLISHED	111.39 sq m

FLOOR AREAS OF PROPOSED ADDITIONS

GROUND FLOOR	468.06 sq m
VERANDAH	26.00 sq m
SUB - AREA GF	494.06 sq m
FIRST FLOOR	482.21 sq m
BALCONIES	87.24 sq m
SUB - AREA FF	569.45 sq m
TOTAL	1063.51 sq m



PROPOSED GROUND FLOOR
OVERALL PLAN
DOUBLE STOREY ADDITIONS

PROJECT:
PROPOSED ADDITIONS AND ALTERATIONS TO THE CANUNGRA HOTEL

TO BE ERECTED AT:
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FLOOR AREAS	
GROUND FLOOR	1054.22 sq m
OFFICE AND STORE	78.05 sq m
DRIVE THROUGH	33.34 sq m
PORCHES	16.42 sq m
OUTDOOR SITTING AREAS	33.40 sq m
SUB-TOTAL	1215.43 sq m
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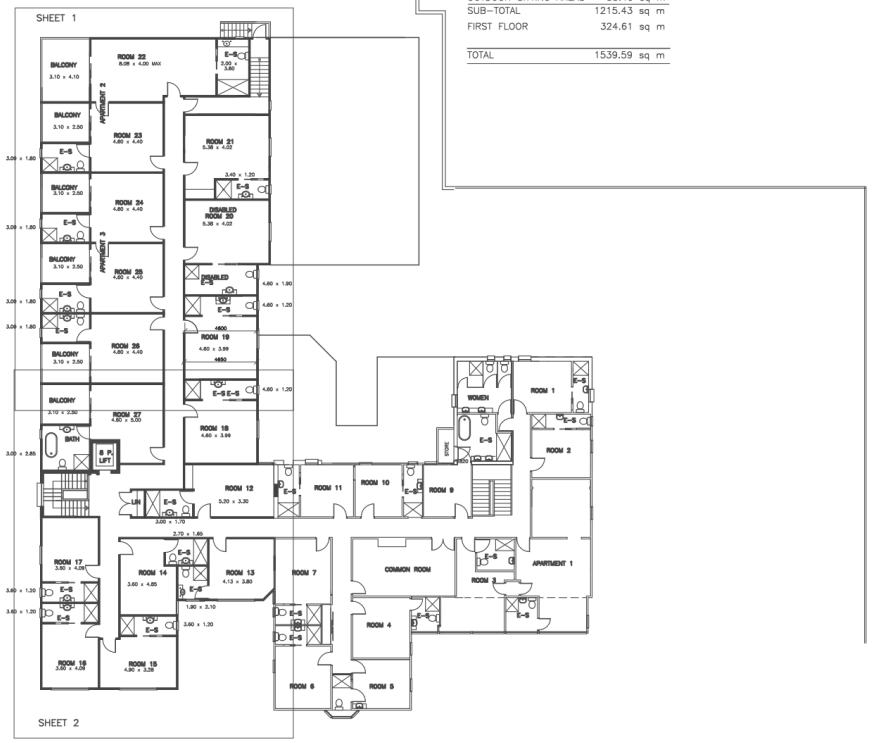
FLOOR AREAS OF DEMOLISHED AREA	
OFFICE AND STORE	78.05 sq m
DRIVE THROUGH	33.34 sq m
TOTAL AREA DEMOLISHED	111.39 sq m

FLOOR AREAS OF PROPOSED ADDITIONS	
GROUND FLOOR	468.06 sq m
VERANDAH	26.00 sq m
SUB – AREA GF	494.06 sq m
FIRST FLOOR	517.99 sq m
BALCONIES	51.46 sq m
SUB – AREA FF	569.45 sq m
TOTAL	1063.51 sq m



PROPOSED FIRST FLOOR OVERALL PLAN
DOUBLE STOREY ADDITIONS

PROJECT:
PROPOSED ADDITIONS AND ALTERATIONS TO THE CANUNGRA HOTEL

TO BE ERECTED AT:
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CANUNGRA

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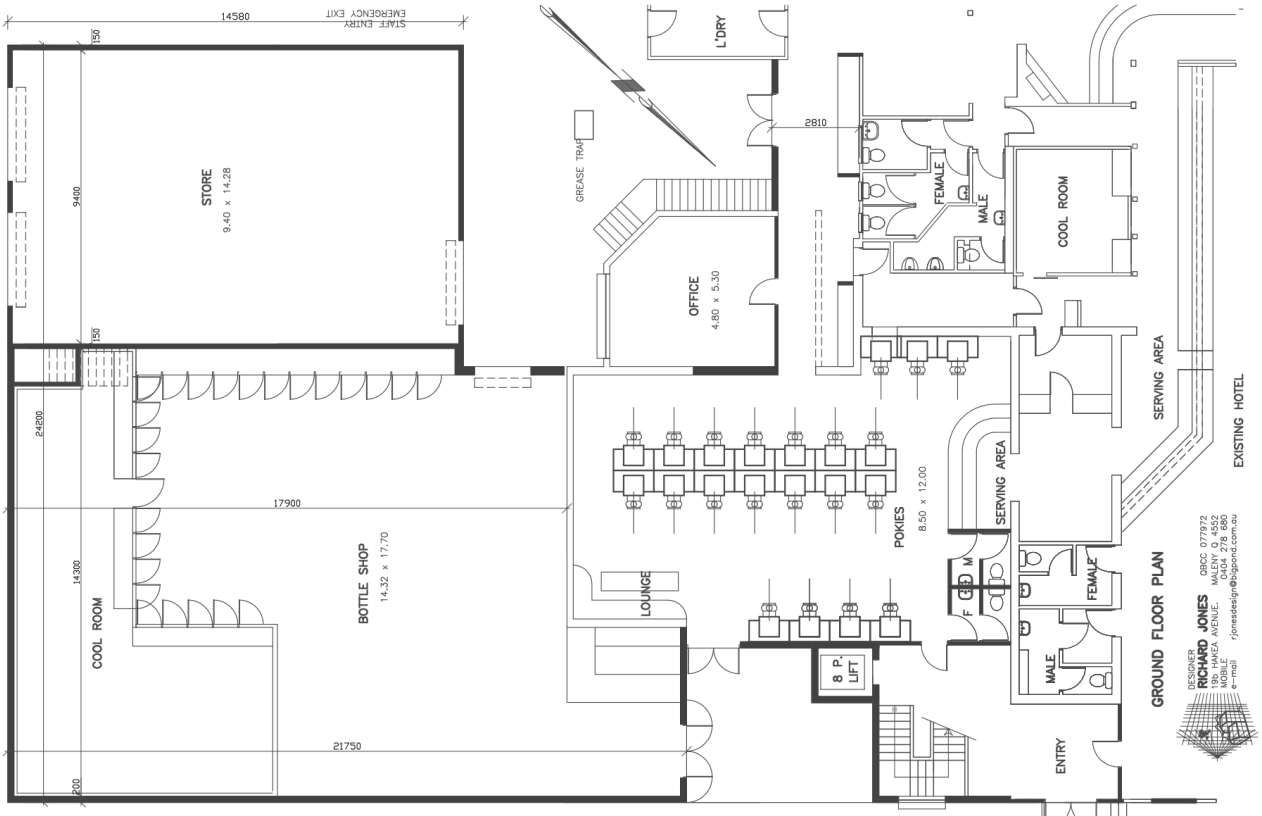

GROUND FLOOR PLAN

PROJECT:
PROPOSED ADDITIONS AND ALTERATIONS TO THE CANUNGRA HOTEL

TO BE ERECTED AT:
LOT 1, DP 213710,
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DOUBLE STOREY ADDITIONS

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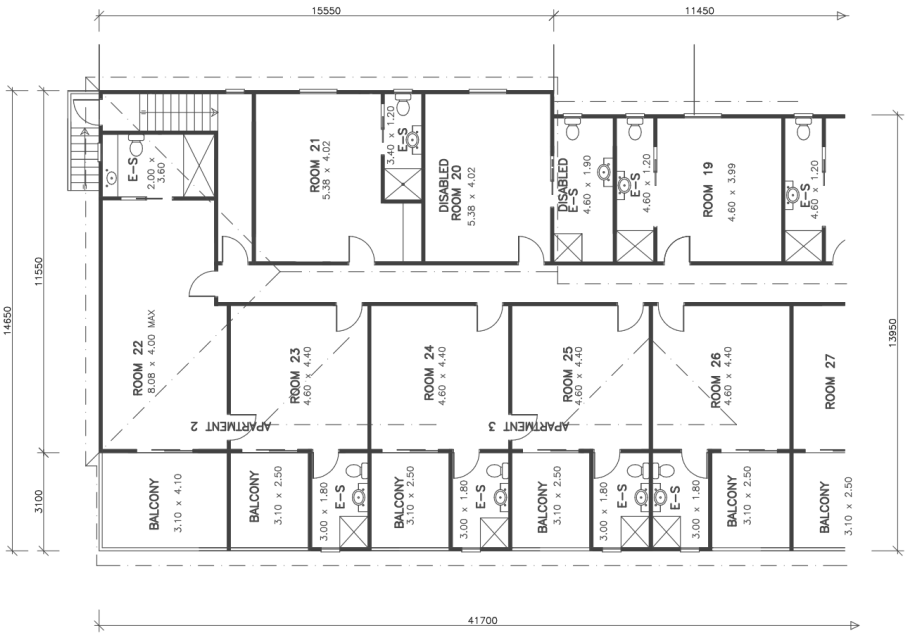

FIRST FLOOR PLAN

SEE SHEET 2

SHEET 1
DOUBLE STOREY ADDITION

PROJECT:
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TO BE ERECTED AT:
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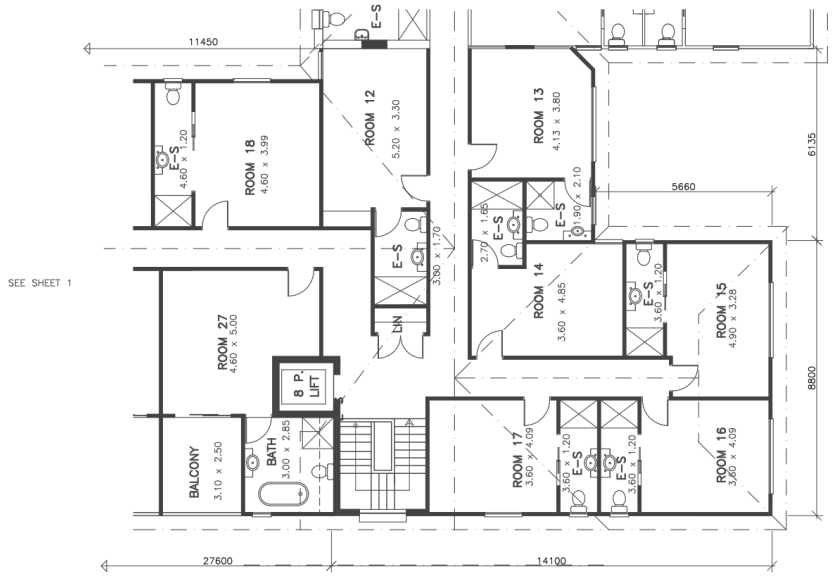

SEE SHEET 1

FIRST FLOOR PLAN

SHEET 2
DOUBLE STOREY ADDITION

PROJECT:
PROPOSED ADDITIONS AND ALTERATIONS TO THE CANUNGRA HOTEL

TO BE ERECTED AT:
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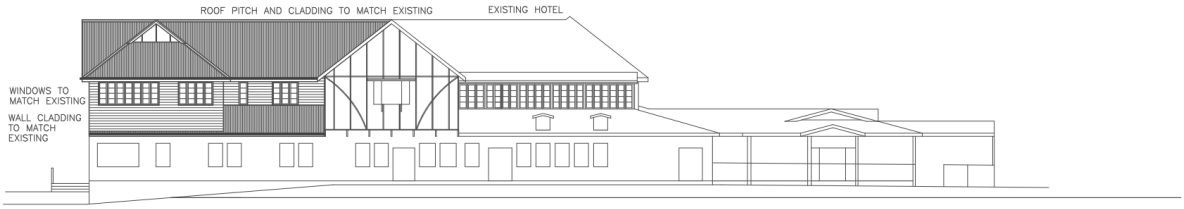
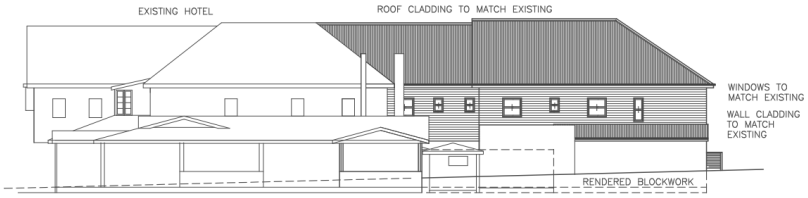


NORTH WEST ELEVATION (STREET ELEVATION)



SOUTH WEST ELEVATION

PROPOSED ELEVATIONS
DOUBLE STOREY ADDITIONS

PROJECT:
PROPOSED ADDITIONS AND ALTERATIONS TO THE CANUNGRA HOTEL

TO BE ERECTED AT:
LOT 1, DP 213710,
CNR, APPEL AND KIDSON STREETS
CANUNGRA

CLIENT:
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DATE: 07-12-24 SCALE: A3/1:200
DRWG No: COM-CED-1567 PAGE 12 OF 13
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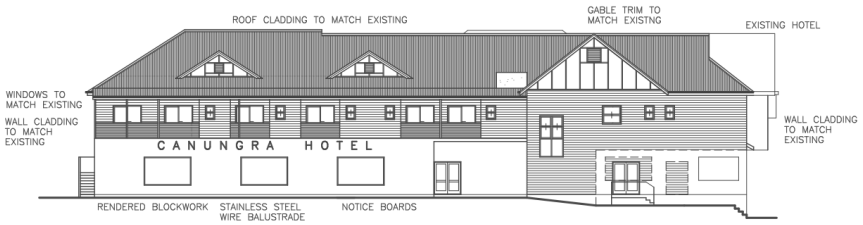
SOUTH EAST ELEVATION FROM BEER GARDEN



NORTH EAST ELEVATION (STREET ELEVATION)

PROPOSED ELEVATIONS
DOUBLE STOREY ADDITIONS

PROJECT:
PROPOSED ADDITIONS AND ALTERATIONS TO THE CANUNGRA HOTEL

TO BE ERECTED AT:
LOT 1, DP 213710,
CNR, APPEL AND KIDSON STREETS
CANUNGRA

CLIENT:
CEDARMILL PTY. LTD.

PLANNING PERMIT APPLICATION DRAWING
DATE: 07-02-24 SCALE: A3/1:200
DRWG No: COM-CED-1567 PAGE 13 OF 13
SIGNED

figured dimensions shall take preference over scaled drawings.

Verify dimensions and levels before commencing

This office to be notified of any changes made in construction.

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APPENDIX C

Measurement Results and Model Calculations / Predictions

Document Set ID: 12781346
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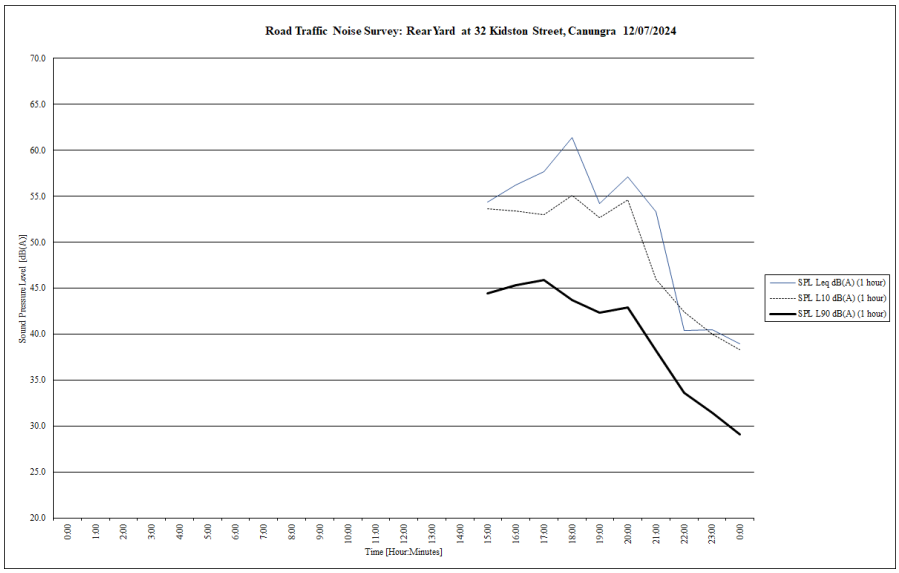

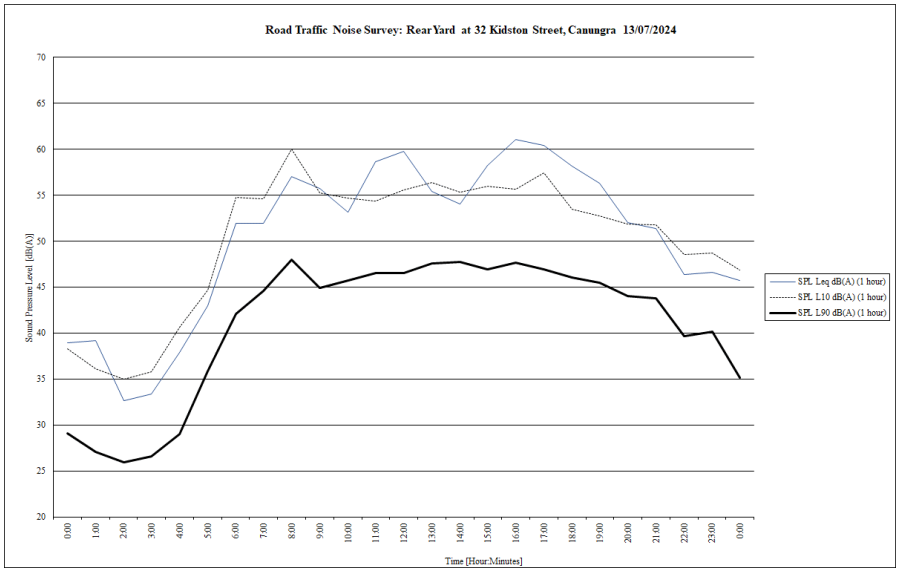

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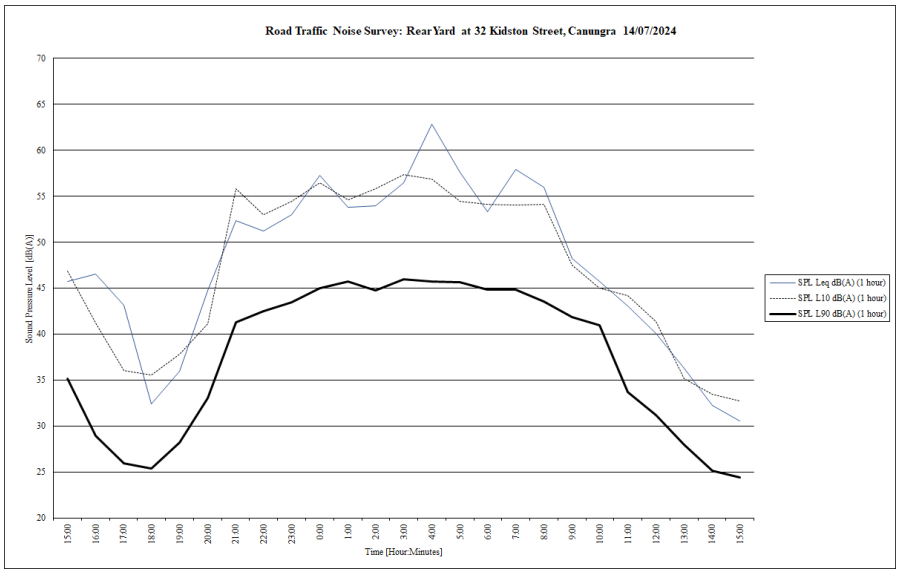

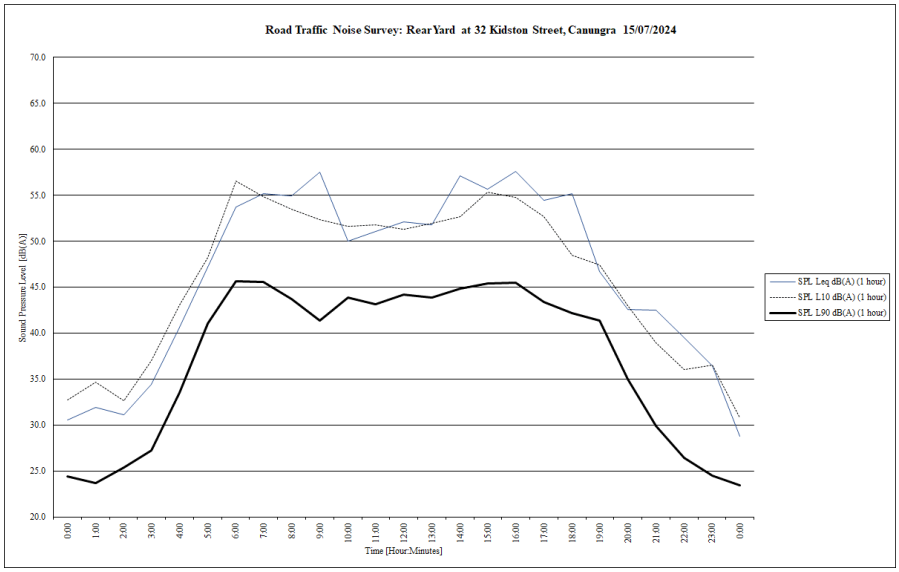

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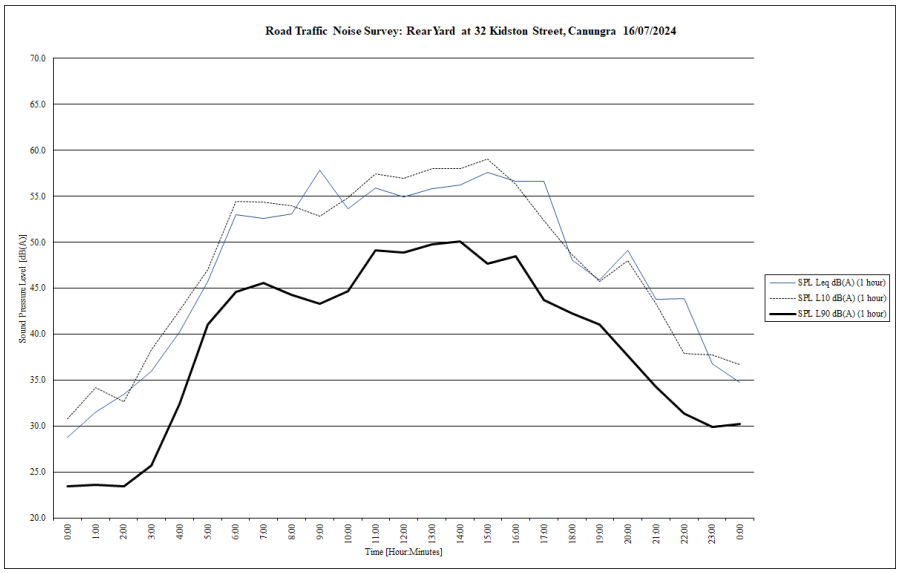

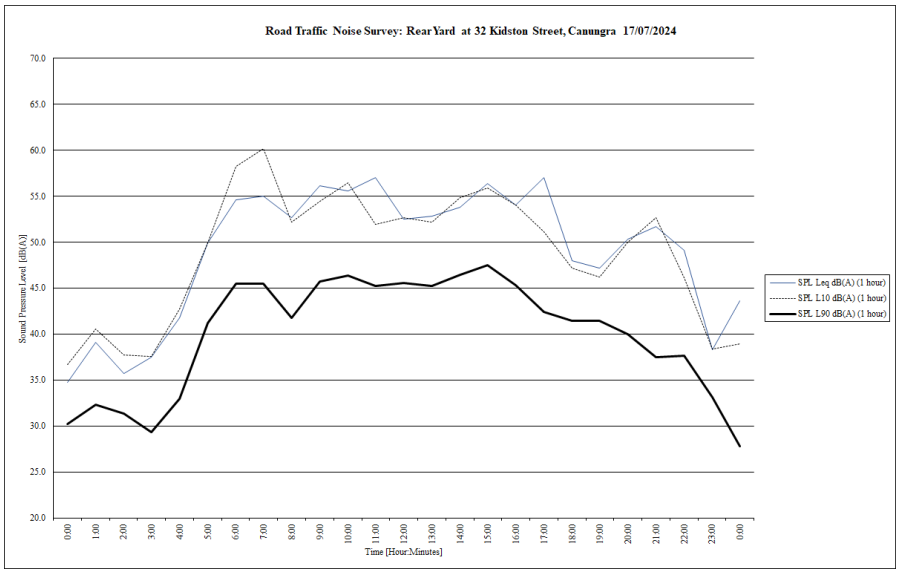

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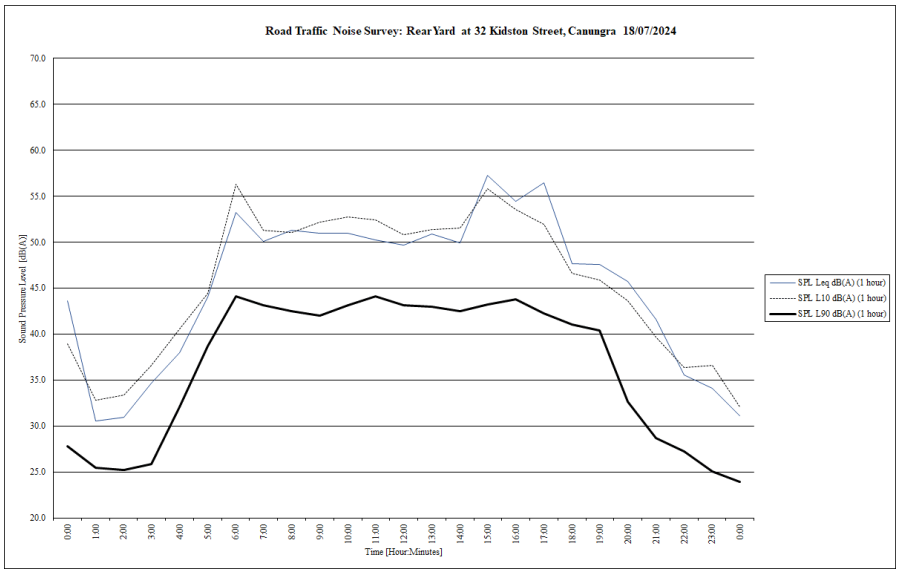

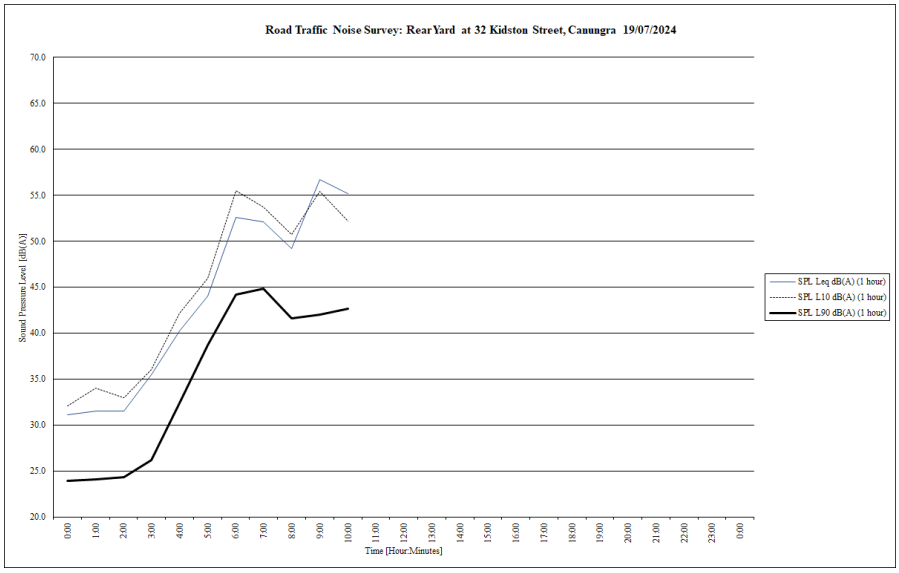

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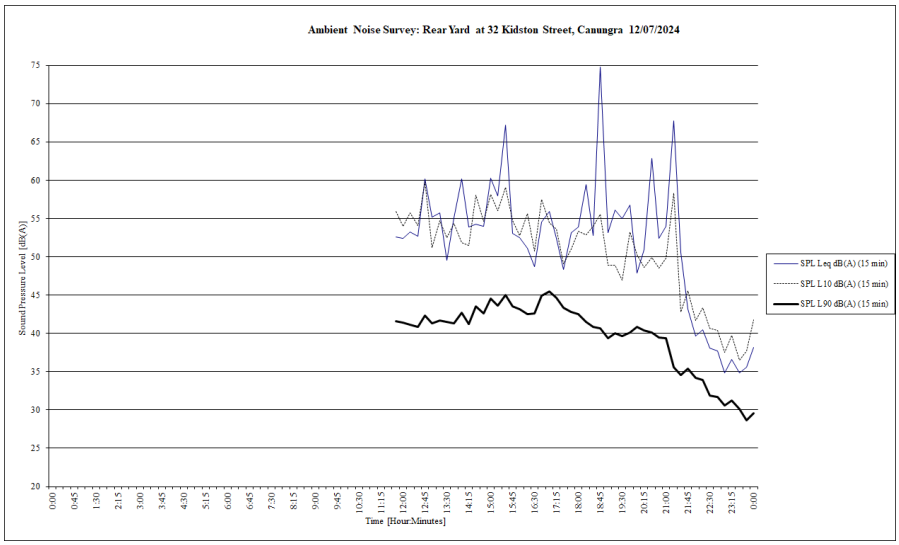
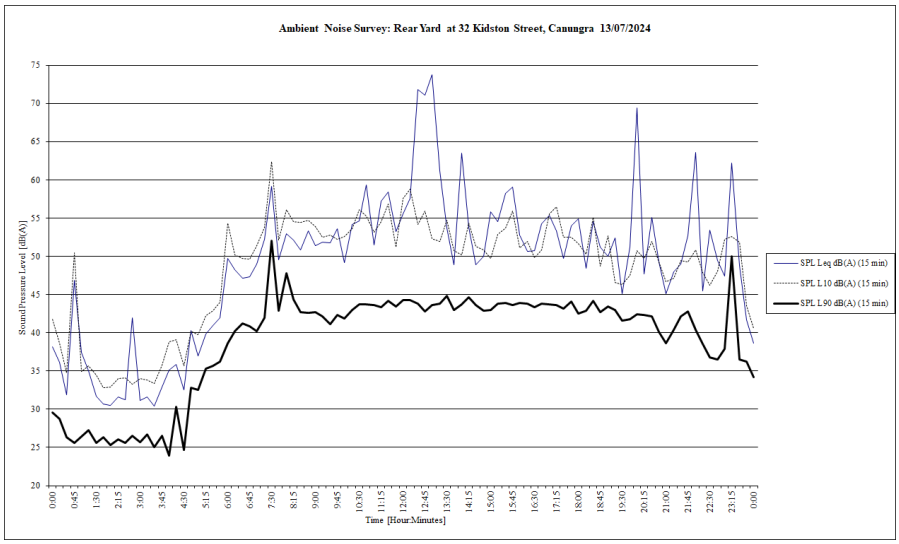
CRGACOUSTICS





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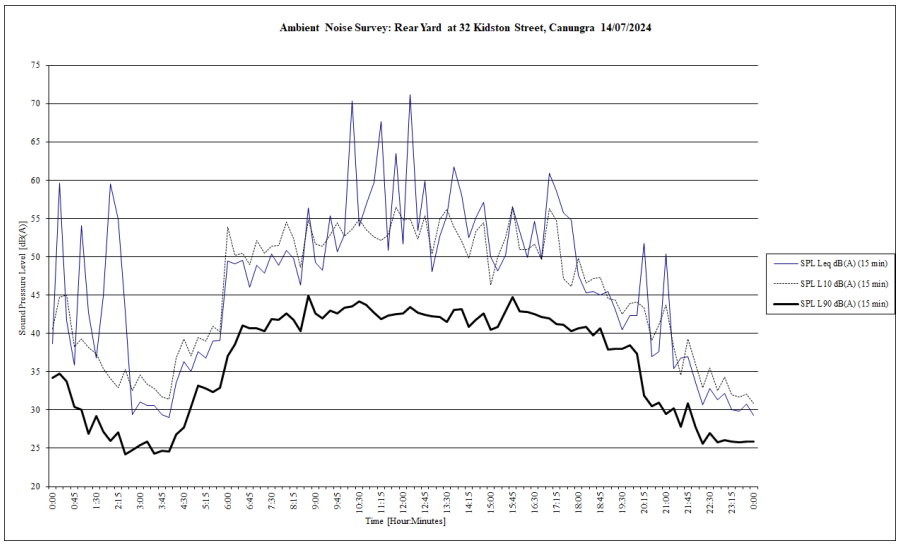

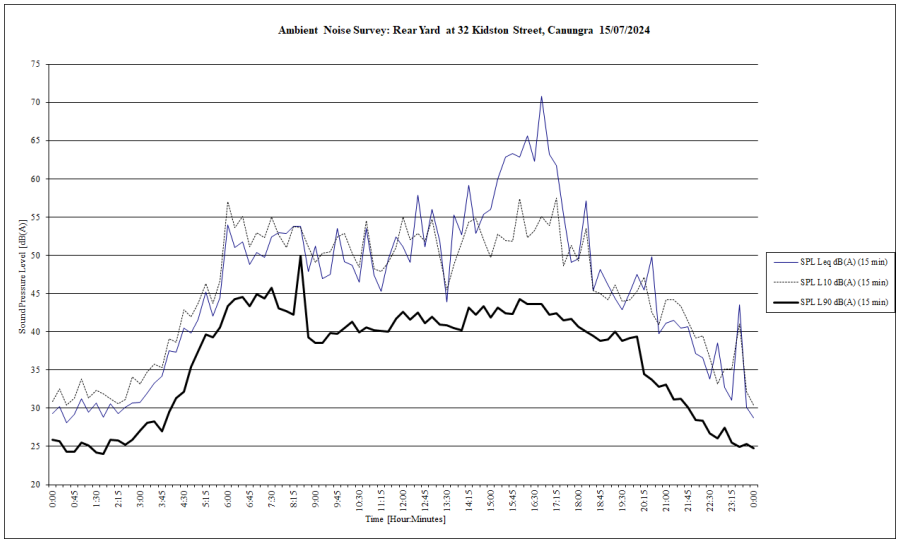

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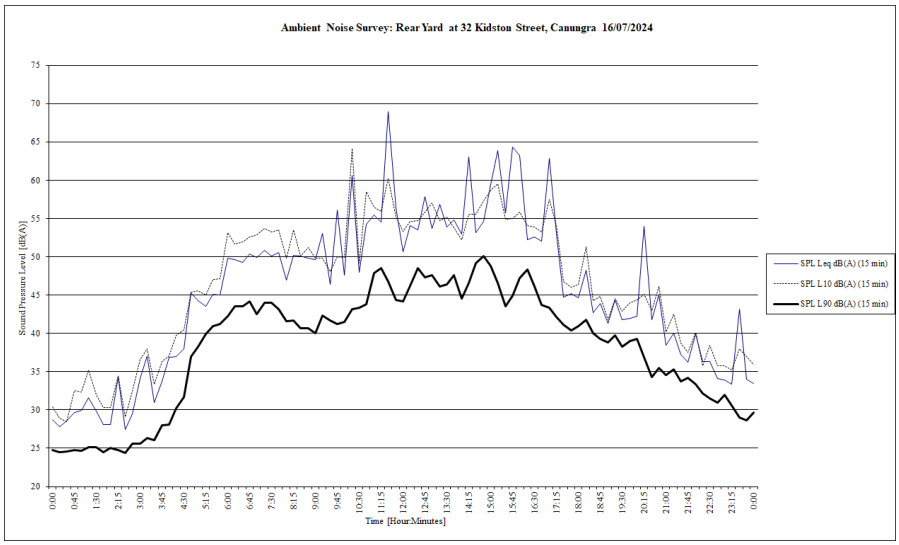

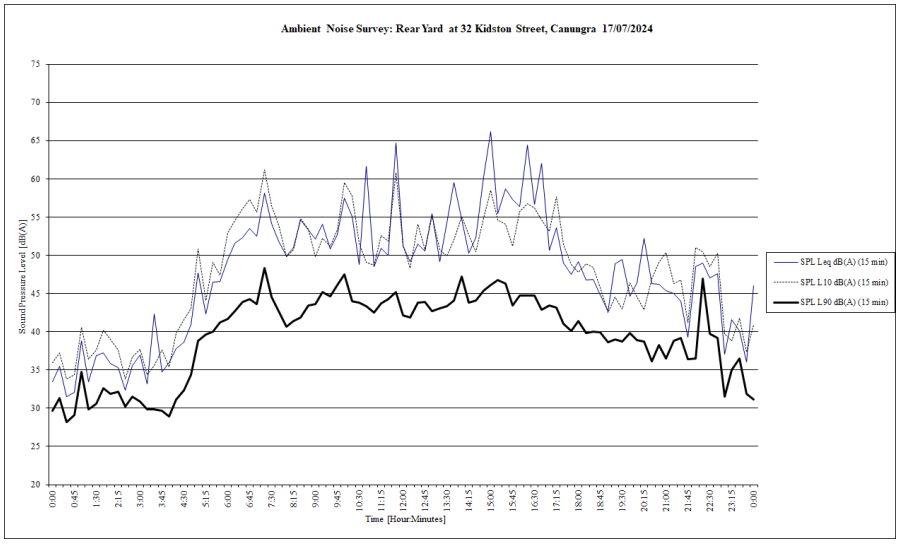

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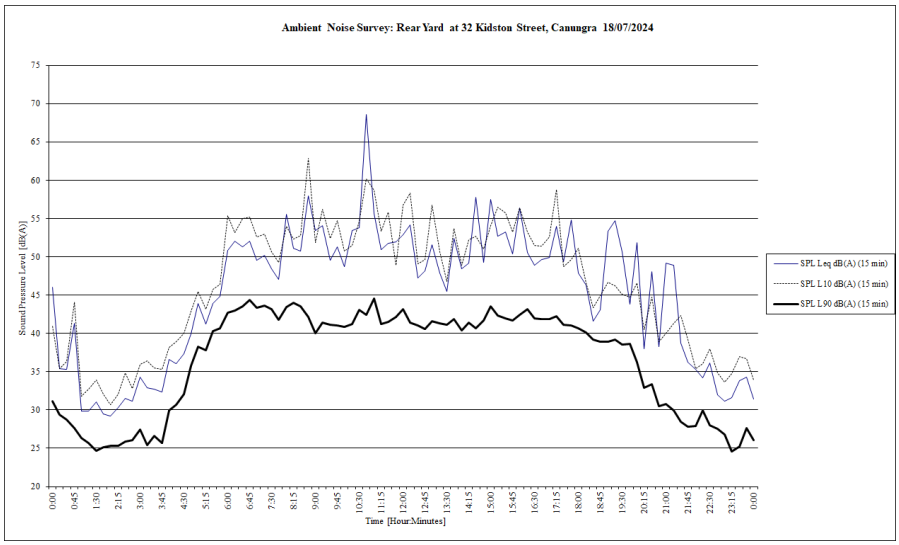

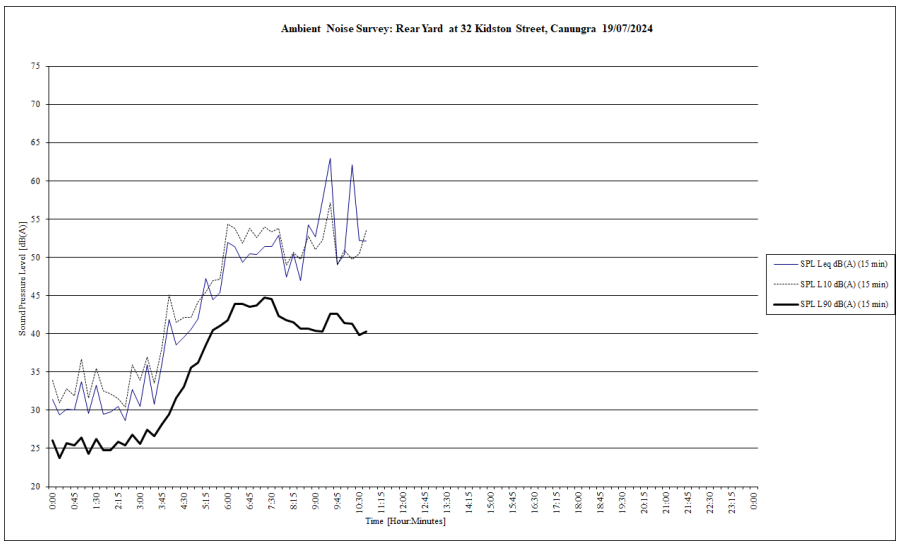

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ROAD TRAFFIC NOISE MODEL VERIFICATION POINT CALCULATIONS
Pen3D2000 V 1.10.0
Project Code:24073a
Project Description:Noise assessment of Canungra Hotel
File:None

Wednesday 14 Aug, 2024 at 12:58:06
CoRTN Calculations
All road segments included. Segmentation angle: 1degrees. Road elevations apply.

Receptor	X Posn (m)	Y Posn (m)	Height (m)	L10(18hour) (dB(A))
RTN monitor	516110.5	6900682.9	1.4	51.9 free-field

ROAD TRAFFIC NOISE MODEL ULTIMATE SCENARIO POINT CALCULATIONS
File:\\Crgking\2024\24073 Canungra Hotel Extensions\24073a_ULTIMATE.PEN
File Description:Data file covering area

Wednesday 14 Aug, 2024 at 15:03:47
CoRTN Calculations
All road segments included. Segmentation angle: 1degrees. Road elevations apply.

Receptor	X Posn (m)	Y Posn (m)	Height (m)	L10(18hour) (dB(A))
R12 S	516117.2	6900747.9	5	45.5
R13 N	516112.9	6900756.2	5	50.9
R14 W	516115.7	6900758.5	5	50.6
R15 W	516113.4	6900761.4	5	60.7
R15 N	516114.5	6900764.6	5	64.6
R16 N	516117.9	6900767.3	5	64.5
R16 E	516121	6900766.5	5	60.9
R17 E	516124.9	6900761.4	5	59
R18 W	516118.5	6900746.5	5	46.7
R19 W	516122	6900742	5	48.3
R20 W	516125.6	6900736	5	49.1
R21 W	516128.9	6900731.8	5	49.5
R22 S	516139.7	6900731	5	45
R22 E	516141.4	6900735.3	5	46.5
R23 E	516139.4	6900737.9	5	38
R24 E	516136.8	6900741.5	5	38.5
R25 E	516134	6900745	5	38.9
R26 E	516130.1	6900750	5	52.8
R27 E	516128.4	6900752.1	5	47.7
R22 BAL	516143.6	6900736.9	5	50.7
R23 BAL	516141.5	6900739.5	5	50.5
R24 BAL	516138.8	6900743.1	5	51.7
R25 BAL	516136	6900746.6	5	52.7
R26 BAL	516132.1	6900751.7	5	55.4
R27 BAL	516130.5	6900753.7	5	56

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CRGACOUSTICS

HOTEL ACTIVITY NOISE PREDICTION CALCULATIONS: ($L_{A10\ 1hr}$ and $L_{A01\ 1hr\ levels}$ are represented as N/A if the duration of events do not occur for 10% or 1% of the 1 hour period)

R1: Existing dwellings to the northeast across Appel Street

NEAR CAR DOOR CLOSURES	Acoustic Quality Objectives			
	LAeq	LA10	LA01	
Noise source level for single event	75	78	80	dB(A)
Duration of single event		1.5		Seconds
Number of events in the measurement period		36		Events
Total time duration of combined events		54.0		Seconds
	LAeq 1hr	LA10 1hr	LA01 1hr	
Noise source level for assessment time period	57	N/A	80	dB(A)
Tonality / Impulsiveness correction		5		dB
Minimum distance to receiver		26		m
Distance attenuation (-6 dB per doubling of distance)		-28		dB
Barrier screening		0		dB
Façade reflection		2.5		dB
Impact at nearest façade	**36**	**N/A**	**59**	**dB(A)**
Reduction through OPEN window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**28**	**N/A**	**52**	**dB(A)**

NEAR CAR BYPASSES	Acoustic Quality Objectives			
	LAeq	LA10	LA01	
Noise source level for single event	68	70	73	dB(A)
Duration of single event		20		Seconds
Number of events in the measurement period		36		Events
Total time duration of combined events		720.0		Seconds
	LAeq 1hr	LA10 1hr	LA01 1hr	
Noise source level for assessment time period	61	70	73	dB(A)
Tonality / Impulsiveness correction		0		dB
Minimum distance to receiver		26		m
Distance attenuation (-6 dB per doubling of distance)		-28		dB
Barrier screening		0		dB
Façade reflection		2.5		dB
Impact at nearest façade	**35**	**44**	**47**	**dB(A)**
Reduction through OPEN window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**28**	**37**	**40**	**dB(A)**

FAR CAR DOOR CLOSURES	Acoustic Quality Objectives			
	LAeq	LA10	LA01	
Noise source level for single event	75	78	80	dB(A)
Duration of single event		1.5		Seconds
Number of events in the measurement period		36		Events
Total time duration of combined events		54.0		Seconds
	LAeq 1hr	LA10 1hr	LA01 1hr	
Noise source level for assessment time period	57	N/A	80	dB(A)
Tonality / Impulsiveness correction		5		dB
Minimum distance to receiver		43		m
Distance attenuation (-6 dB per doubling of distance)		-33		dB
Barrier screening		0.0		dB
Façade reflection		2.5		dB
Impact at nearest façade	**32**	**N/A**	**55**	**dB(A)**
Reduction through OPEN window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**24**	**N/A**	**47**	**dB(A)**

FAR CAR BYPASSES	Acoustic Quality Objectives			
	LAeq	LA10	LA01	
Noise source level for single event	68	70	73	dB(A)
Duration of single event		20		Seconds
Number of events in the measurement period		36		Events
Total time duration of combined events		720.0		Seconds
	LAeq 1hr	LA10 1hr	LA01 1hr	
Noise source level for assessment time period	61	70	73	dB(A)
Tonality / Impulsiveness correction		0		dB
Minimum distance to receiver		50		m
Distance attenuation (-6 dB per doubling of distance)		-34		dB
Barrier screening		0		dB
Façade reflection		2.5		dB
Impact at nearest façade	**30**	**39**	**42**	**dB(A)**
Reduction through OPEN window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**22**	**31**	**34**	**dB(A)**

Combined / maximum impacts CARPARK				
Impact at nearest façade	**40**	**44**	**59**	**dB(A)**
Reduction through OPEN window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**32**	**37**	**52**	**dB(A)**

R2: Existing dwelling to the southeast at 11 Appel Street

NEAR CAR DOOR CLOSURES	Acoustic Quality Objectives			
	LAeq	LA10	LA01	
Noise source level for single event	75	78	80	dB(A)
Duration of single event		1.5		Seconds
Number of events in the measurement period		36		Events
Total time duration of combined events		54.0		Seconds
	LAeq 1hr	LA10 1hr	LA01 1hr	
Noise source level for assessment time period	57	N/A	80	dB(A)
Tonality / Impulsiveness correction		5		dB
Minimum distance to receiver		16.5		m
Distance attenuation (-6 dB per doubling of distance)		-24		dB
Onsite building screening		-10.2		dB
Façade reflection		2.5		dB
Impact at nearest façade	**30**	**N/A**	**53**	**dB(A)**
Reduction through OPEN window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**22**	**N/A**	**45**	**dB(A)**

NEAR CAR BYPASSES	Acoustic Quality Objectives			
	LAeq	LA10	LA01	
Noise source level for single event	68	70	73	dB(A)
Duration of single event		20		Seconds
Number of events in the measurement period		36		Events
Total time duration of combined events		720.0		Seconds
	LAeq 1hr	LA10 1hr	LA01 1hr	
Noise source level for assessment time period	61	70	73	dB(A)
Tonality / Impulsiveness correction		0		dB
Minimum distance to receiver		14		m
Distance attenuation (-6 dB per doubling of distance)		-23		dB
Onsite building screening		-12.5		dB
Façade reflection		2.5		dB
Impact at nearest façade	**28**	**37**	**40**	**dB(A)**
Reduction through OPEN window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**21**	**30**	**33**	**dB(A)**

FAR CAR DOOR CLOSURES	Acoustic Quality Objectives			
	LAeq	LA10	LA01	
Noise source level for single event	75	78	80	dB(A)
Duration of single event		1.5		Seconds
Number of events in the measurement period		36		Events
Total time duration of combined events		54.0		Seconds
	LAeq 1hr	LA10 1hr	LA01 1hr	
Noise source level for assessment time period	57	N/A	80	dB(A)
Tonality / Impulsiveness correction		5		dB
Minimum distance to receiver		36.5		m
Distance attenuation (-6 dB per doubling of distance)		-31		dB
Barrier screening		-7.2		dB
Façade reflection		2.5		dB
Impact at nearest façade	**26**	**N/A**	**49**	**dB(A)**
Reduction through OPEN window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**18**	**N/A**	**42**	**dB(A)**

FAR CAR BYPASSES	Acoustic Quality Objectives			
	LAeq	LA10	LA01	
Noise source level for single event	68	70	73	dB(A)
Duration of single event		20		Seconds
Number of events in the measurement period		36		Events
Total time duration of combined events		720.0		Seconds
	LAeq 1hr	LA10 1hr	LA01 1hr	
Noise source level for assessment time period	61	70	73	dB(A)
Tonality / Impulsiveness correction		0		dB
Minimum distance to receiver		37.5		m
Distance attenuation (-6 dB per doubling of distance)		-31		dB
Barrier screening		-7.6		dB
Façade reflection		2.5		dB
Impact at nearest façade	**24**	**33**	**36**	**dB(A)**
Reduction through OPEN window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**17**	**26**	**29**	**dB(A)**

Combined / maximum impacts CARPARK				
Impact at nearest façade	**34**	**37**	**53**	**dB(A)**
Reduction through OPEN window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**26**	**30**	**45**	**dB(A)**

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CRGACOUSTICS

HOTEL ACTIVITY NOISE PREDICTION CALCULATIONS: ($L_{A10\ 1hr}$ and $L_{A01\ 1hr\ levels}$ are represented as N/A if the duration of events do not occur for 10% or 1% of the 1 hour period)

R1: Existing dwellings to the northeast across Appel Street

NEAR PEOPLE TALKING IN CARPARK	Acoustic Quality Objectives			
	LAeq	LA10	LA01	
Noise source level for single event	58	60	62	dB(A)
Duration of single event		720		Seconds
Number of events in the measurement period		2		Events
Total time duration of combined events		1440.0		Seconds
	LAeq 1hr	LA10 1hr	LA01 1hr	
Noise source level for assessment time period	54	60	62	dB(A)
Tonality / Impulsiveness correction		0		dB
Minimum distance to receiver		25		m
Distance attenuation (-6 dB per doubling of distance)		-28		dB
Barrier screening		0.0		dB
Façade reflection		2.5		dB
Impact at nearest façade	**29**	**35**	**37**	**dB(A)**
Reduction through OPEN window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**21**	**27**	**29**	**dB(A)**

FAR PEOPLE TALKING IN CARPARK	Acoustic Quality Objectives			
	LAeq	LA10	LA01	
Noise source level for single event	58	60	62	dB(A)
Duration of single event		720		Seconds
Number of events in the measurement period		2		Events
Total time duration of combined events		1440.0		Seconds
	LAeq 1hr	LA10 1hr	LA01 1hr	
Noise source level for assessment time period	54	60	62	dB(A)
Tonality / Impulsiveness correction		0		dB
Minimum distance to receiver		41		m
Distance attenuation (-6 dB per doubling of distance)		-32		dB
Barrier screening		0.0		dB
Façade reflection		2.5		dB
Impact at nearest façade	**24**	**30**	**32**	**dB(A)**
Reduction through OPEN window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**17**	**23**	**25**	**dB(A)**

PATRONS AT VERANDAH / ENTRY	Acoustic Quality Objectives			
	LAeq	LA10	LA01	
Noise source level for single event	67	72	75	dB(A)
Duration of single event		900		Seconds
Number of events in the measurement period		2		Events
Total time duration of combined events		1800.0		Seconds
	LAeq 1hr	LA10 1hr	LA01 1hr	
Noise source level for assessment time period	64	72	75	dB(A)
Tonality / Impulsiveness correction		0		dB
Minimum distance to receiver		40		m
Distance attenuation (-6 dB per doubling of distance)		-32		dB
ABSORPTIVE CEILING TREATMENT		0		dB
Façade reflection		2.5		dB
Impact at nearest façade	**34**	**42**	**45**	**dB(A)**
Reduction through OPEN window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**27**	**35**	**38**	**dB(A)**

INDOOR POKIE MACHINES	Acoustic Quality Objectives			
	LAeq	LA10	LA01	
Noise source level for single event	70	73	77	dB(A)
Duration of single event		900		Seconds
Number of events in the measurement period		4		Events
Total time duration of combined events		3600.0		Seconds
	LAeq 1hr	LA10 1hr	LA01 1hr	
Noise source level for assessment time period	70	73	77	dB(A)
Tonality / Impulsiveness correction		5		dB
Minimum distance to receiver		49		m
Distance attenuation (-6 dB per doubling of distance)		-34		dB
Inside to outside attenuation with automatic closer		-10		dB
Façade reflection		2.5		dB
Impact at nearest façade	**34**	**37**	**41**	**dB(A)**
Reduction through OPEN window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**26**	**29**	**33**	**dB(A)**

Combined / maximum impacts PATRONS

Impact at nearest façade	**38**	**42**	**45**	**dB(A)**
Reduction through OPEN window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**30**	**35**	**38**	**dB(A)**

R2: Existing dwelling to the southeast at 11 Appel Street

NEAR PEOPLE TALKING IN CARPARK	Acoustic Quality Objectives			
	LAeq	LA10	LA01	
Noise source level for single event	58	60	62	dB(A)
Duration of single event		720		Seconds
Number of events in the measurement period		2		Events
Total time duration of combined events		1440.0		Seconds
	LAeq 1hr	LA10 1hr	LA01 1hr	
Noise source level for assessment time period	54	60	62	dB(A)
Tonality / Impulsiveness correction		0		dB
Minimum distance to receiver		16		m
Distance attenuation (-6 dB per doubling of distance)		-24		dB
Barrier screening		-8.8		dB
Façade reflection		2.5		dB
Impact at nearest façade	**24**	**30**	**32**	**dB(A)**
Reduction through OPEN window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**16**	**22**	**24**	**dB(A)**

FAR PEOPLE TALKING IN CARPARK	Acoustic Quality Objectives			
	LAeq	LA10	LA01	
Noise source level for single event	58	60	62	dB(A)
Duration of single event		720		Seconds
Number of events in the measurement period		2		Events
Total time duration of combined events		1440.0		Seconds
	LAeq 1hr	LA10 1hr	LA01 1hr	
Noise source level for assessment time period	54	60	62	dB(A)
Tonality / Impulsiveness correction		0		dB
Minimum distance to receiver		36		m
Distance attenuation (-6 dB per doubling of distance)		-31		dB
Barrier screening		0.0		dB
Façade reflection		2.5		dB
Impact at nearest façade	**25**	**31**	**33**	**dB(A)**
Reduction through OPEN window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**18**	**24**	**26**	**dB(A)**

PATRONS AT VERANDAH / ENTRY	Acoustic Quality Objectives			
	LAeq	LA10	LA01	
Noise source level for single event	67	72	75	dB(A)
Duration of single event		900		Seconds
Number of events in the measurement period		2		Events
Total time duration of combined events		1800.0		Seconds
	LAeq 1hr	LA10 1hr	LA01 1hr	
Noise source level for assessment time period	64	72	75	dB(A)
Tonality / Impulsiveness correction		0		dB
Minimum distance to receiver		69		m
Distance attenuation (-6 dB per doubling of distance)		-37		dB
ABSORPTIVE CEILING TREATMENT		0		dB
Façade reflection		2.5		dB
Impact at nearest façade	**30**	**38**	**41**	**dB(A)**
Reduction through OPEN window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**22**	**30**	**33**	**dB(A)**

INDOOR POKIE MACHINES	Acoustic Quality Objectives			
	LAeq	LA10	LA01	
Noise source level for single event	70	73	77	dB(A)
Duration of single event		900		Seconds
Number of events in the measurement period		4		Events
Total time duration of combined events		3600.0		Seconds
	LAeq 1hr	LA10 1hr	LA01 1hr	
Noise source level for assessment time period	70	73	77	dB(A)
Tonality / Impulsiveness correction		5		dB
Minimum distance to receiver		69		m
Distance attenuation (-6 dB per doubling of distance)		-37		dB
Inside to outside attenuation with automatic closer		-10		dB
Façade reflection		2.5		dB
Impact at nearest façade	**31**	**34**	**38**	**dB(A)**
Reduction through OPEN window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**23**	**26**	**30**	**dB(A)**

Combined / maximum impacts PATRONS

Impact at nearest façade	**34**	**38**	**41**	**dB(A)**
Reduction through OPEN window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**27**	**30**	**33**	**dB(A)**

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HOTEL ACTIVITY NOISE PREDICTION CALCULATIONS: ($L_{A10\ 1hr}$ and $L_{A01\ 1hr\ levels}$ are represented as N/A if the duration of events do not occur for 10% or 1% of the 1 hour period)

R1: Existing dwellings to the northeast across Appel Street

TRUCK MOVEMENT to site	Acoustic Quality Objectives			
	LAeq	LA10	LA01	
Noise source level for single event	87	89	90	dB(A)
Duration of single event		20		Seconds
Number of events in the measurement period		1		Events
Total time duration of combined events		20.0		Seconds
	LAeq 1hr	LA10 1hr	LA01 1hr	
Noise source level for assessment time period	64	N/A	N/A	dB(A)
Tonality / Impulsiveness correction		0		dB
Minimum distance to receiver	26.0	26.0		m
Distance attenuation (-6 dB per doubling of distance)	-28	-28		dB
Barrier screening	0.0	0.0		dB
Façade reflection		2.5		dB
Impact at nearest façade	**39**	**N/A**	**N/A**	**dB(A)**
Reduction through open window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**31**	**N/A**	**N/A**	**dB(A)**

TRUCK MOVEMENT from site	Acoustic Quality Objectives			
	LAeq	LA10	LA01	
Noise source level for single event	87	89	90	dB(A)
Duration of single event		20		Seconds
Number of events in the measurement period		1		Events
Total time duration of combined events		20.0		Seconds
	LAeq 1hr	LA10 1hr	LA01 1hr	
Noise source level for assessment time period	64	N/A	N/A	dB(A)
Tonality / Impulsiveness correction		0		dB
Minimum distance to receiver	50.0	50.0		m
Distance attenuation (-6 dB per doubling of distance)	-34	-34		dB
Acoustic barrier screening	0.0	0.0		dB
Façade reflection		2.5		dB
Impact at nearest façade	**33**	**N/A**	**N/A**	**dB(A)**
Reduction through open window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**25**	**N/A**	**N/A**	**dB(A)**

TRUCK AIRBRAKES	Acoustic Quality Objectives			
	LAeq	LA10	LA01	
Noise source level for single event	90	95	98	dB(A)
Duration of single event		1		Seconds
Number of events in the measurement period		1		Events
Total time duration of combined events		1.0		Seconds
	LAeq 1hr	LA10 1hr	LA01 1hr	
Noise source level for assessment time period	54	N/A	N/A	dB(A)
Tonality / Impulsiveness correction		5		dB
Minimum distance to receiver		30		m
Distance attenuation (-6 dB per doubling of distance)		-30		dB
Acoustic barrier screening		0.0		dB
Façade reflection		2.5		dB
Impact at nearest façade	**32**	**N/A**	**N/A**	**dB(A)**
Reduction through open window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**25**	**N/A**	**N/A**	**dB(A)**

FORKLIFT MOVEMENTS	Acoustic Quality Objectives			
	LAeq	LA10	LA01	
Noise source level for single event	71	74	75	dB(A)
Duration of single event		600		Seconds
Number of events in the measurement period		2		Events
Total time duration of combined events		1200.0		Seconds
	LAeq 1hr	LA10 1hr	LA01 1hr	
Noise source level for assessment time period	66	74	75	dB(A)
Tonality / Impulsiveness correction		0		dB
Minimum distance to receiver		50		m
Distance attenuation (-6 dB per doubling of distance)		-22		dB
Acoustic barrier screening		0.0		dB
Façade reflection		2.5		dB
Impact at nearest façade	**47**	**55**	**56**	**dB(A)**
Reduction through open window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**39**	**47**	**48**	**dB(A)**

WASTE COLLECTION INDUSTRIAL BIN	Acoustic Quality Objectives			
	LAeq	LA10	LA01	
Noise source level for single event	92	97	102	dB(A)
Duration of single event		180		Seconds
Number of events in the measurement period		1		Events
Total time duration of combined events		180.0		Seconds
	LAeq 1hr	LA10 1hr	LA01 1hr	
Noise source level for assessment time period	79	N/A	102	dB(A)
Tonality / Impulsiveness correction		5		dB
Minimum distance to receiver		20		m
Distance attenuation (-6 dB per doubling of distance)		-26		dB
Onsite building screening		0.0		dB
Façade reflection		2.5		dB
Impact at nearest façade	**60**	**N/A**	**83**	**dB(A)**
Reduction through open window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**53**	**N/A**	**76**	**dB(A)**

R2: Existing dwelling to the southeast at 11 Appel Street

TRUCK MOVEMENT to site	Acoustic Quality Objectives			
	LAeq	LA10	LA01	
Noise source level for single event	87	89	90	dB(A)
Duration of single event		20		Seconds
Number of events in the measurement period		1		Events
Total time duration of combined events		20.0		Seconds
	LAeq 1hr	LA10 1hr	LA01 1hr	
Noise source level for assessment time period	64	N/A	N/A	dB(A)
Tonality / Impulsiveness correction		0		dB
Minimum distance to receiver	14.0	14.0		m
Distance attenuation (-6 dB per doubling of distance)	-23	-23		dB
Barrier screening	-5.0	-5.0		dB
Façade reflection		2.5		dB
Impact at nearest façade	**39**	**N/A**	**N/A**	**dB(A)**
Reduction through open window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**32**	**N/A**	**N/A**	**dB(A)**

TRUCK MOVEMENT from site	Acoustic Quality Objectives			
	LAeq	LA10	LA01	
Noise source level for single event	87	89	90	dB(A)
Duration of single event		20		Seconds
Number of events in the measurement period		1		Events
Total time duration of combined events		20.0		Seconds
	LAeq 1hr	LA10 1hr	LA01 1hr	
Noise source level for assessment time period	64	N/A	N/A	dB(A)
Tonality / Impulsiveness correction		0		dB
Minimum distance to receiver	37.5	37.5		m
Distance attenuation (-6 dB per doubling of distance)	-31	-31		dB
Acoustic barrier screening	-5.0	-5.0		dB
Façade reflection		2.5		dB
Impact at nearest façade	**30**	**N/A**	**N/A**	**dB(A)**
Reduction through open window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**23**	**N/A**	**N/A**	**dB(A)**

TRUCK AIRBRAKES	Acoustic Quality Objectives			
	LAeq	LA10	LA01	
Noise source level for single event	90	95	98	dB(A)
Duration of single event		1		Seconds
Number of events in the measurement period		1		Events
Total time duration of combined events		1.0		Seconds
	LAeq 1hr	LA10 1hr	LA01 1hr	
Noise source level for assessment time period	54	N/A	N/A	dB(A)
Tonality / Impulsiveness correction		5		dB
Minimum distance to receiver		36.5		m
Distance attenuation (-6 dB per doubling of distance)		-31		dB
Acoustic barrier screening		-7.2		dB
Façade reflection		2.5		dB
Impact at nearest façade	**24**	**N/A**	**N/A**	**dB(A)**
Reduction through open window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**16**	**N/A**	**N/A**	**dB(A)**

FORKLIFT MOVEMENTS	Acoustic Quality Objectives			
	LAeq	LA10	LA01	
Noise source level for single event	71	74	75	dB(A)
Duration of single event		600		Seconds
Number of events in the measurement period		2		Events
Total time duration of combined events		1200.0		Seconds
	LAeq 1hr	LA10 1hr	LA01 1hr	
Noise source level for assessment time period	66	74	75	dB(A)
Tonality / Impulsiveness correction		0		dB
Minimum distance to receiver		37.5		m
Distance attenuation (-6 dB per doubling of distance)		-19		dB
Acoustic barrier screening		-7.2		dB
Façade reflection		2.5		dB
Impact at nearest façade	**42**	**50**	**51**	**dB(A)**
Reduction through open window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**35**	**42**	**43**	**dB(A)**

WASTE COLLECTION INDUSTRIAL BIN	Acoustic Quality Objectives			
	LAeq	LA10	LA01	
Noise source level for single event	92	97	102	dB(A)
Duration of single event		180		Seconds
Number of events in the measurement period		1		Events
Total time duration of combined events		180.0		Seconds
	LAeq 1hr	LA10 1hr	LA01 1hr	
Noise source level for assessment time period	79	N/A	102	dB(A)
Tonality / Impulsiveness correction		5		dB
Minimum distance to receiver		20		m
Distance attenuation (-6 dB per doubling of distance)		-26		dB
Onsite building screening		0.0		dB
Façade reflection		2.5		dB
Impact at nearest façade	**60**	**N/A**	**83**	**dB(A)**
Reduction through open window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**53**	**N/A**	**76**	**dB(A)**

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L ACTIVITY NOISE PREDICTION CALCULATIONS: ($L_{A10\ 1hr}$ and $L_{A01\ 1hr\ levels}$ are represented as N/A if the duration of events do not occur for 10% or 1% of the 1 hour period)

R3: Existing dwelling to the south at 34 to 36 Kidston Street

NEAR CAR DOOR CLOSURES	Acoustic Quality Objectives			
	LAeq	LA10	LA01	
Noise source level for single event	75	78	80	dB(A)
Duration of single event		1.5		Seconds
Number of events in the measurement period		36		Events
Total time duration of combined events		54.0		Seconds
	LAeq 1hr	LA10 1hr	LA01 1hr	
Noise source level for assessment time period	57	N/A	80	dB(A)
Tonality / Impulsiveness correction		5		dB
Minimum distance to receiver		31.7		m
Distance attenuation (-6 dB per doubling of distance)		-30		dB
CARPORT SCREENING		-9.7		dB
Façade reflection		2.5		dB
Impact at nearest façade	**25**	**N/A**	**48**	**dB(A)**
Reduction through OPEN window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**17**	**N/A**	**40**	**dB(A)**

NEAR CAR BYPASSES	Acoustic Quality Objectives			
	LAeq	LA10	LA01	
Noise source level for single event	68	70	73	dB(A)
Duration of single event		20		Seconds
Number of events in the measurement period		36		Events
Total time duration of combined events		720.0		Seconds
	LAeq 1hr	LA10 1hr	LA01 1hr	
Noise source level for assessment time period	61	70	73	dB(A)
Tonality / Impulsiveness correction		0		dB
Minimum distance to receiver		40.0		m
Distance attenuation (-6 dB per doubling of distance)		-32		dB
CARPORT SCREENING		-8.0		dB
Façade reflection		2.5		dB
Impact at nearest façade	**23**	**32**	**35**	**dB(A)**
Reduction through OPEN window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**16**	**25**	**28**	**dB(A)**

FAR CAR DOOR CLOSURES	Acoustic Quality Objectives			
	LAeq	LA10	LA01	
Noise source level for single event	75	78	80	dB(A)
Duration of single event		1.5		Seconds
Number of events in the measurement period		36		Events
Total time duration of combined events		54.0		Seconds
	LAeq 1hr	LA10 1hr	LA01 1hr	
Noise source level for assessment time period	57	N/A	80	dB(A)
Tonality / Impulsiveness correction		5		dB
Minimum distance to receiver		49.5		m
Distance attenuation (-6 dB per doubling of distance)		-34		dB
CARPORT SCREENING		-5.0		dB
Façade reflection		2.5		dB
Impact at nearest façade	**25**	**N/A**	**49**	**dB(A)**
Reduction through OPEN window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**18**	**N/A**	**41**	**dB(A)**

FAR CAR BYPASSES	Acoustic Quality Objectives			
	LAeq	LA10	LA01	
Noise source level for single event	68	70	73	dB(A)
Duration of single event		20		Seconds
Number of events in the measurement period		36		Events
Total time duration of combined events		720.0		Seconds
	LAeq 1hr	LA10 1hr	LA01 1hr	
Noise source level for assessment time period	61	70	73	dB(A)
Tonality / Impulsiveness correction		0		dB
Minimum distance to receiver		57.5		m
Distance attenuation (-6 dB per doubling of distance)		-35		dB
CARPORT SCREENING		-5.0		dB
Façade reflection		2.5		dB
Impact at nearest façade	**23**	**32**	**35**	**dB(A)**
Reduction through OPEN window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**16**	**25**	**28**	**dB(A)**

Combined / maximum impacts CARPARK				
Impact at nearest façade	**30**	**32**	**49**	**dB(A)**
Reduction through OPEN window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**23**	**25**	**41**	**dB(A)**

R4: Existing dwelling to the southwest at 32 Kidston Street

NEAR CAR DOOR CLOSURES	Acoustic Quality Objectives			
	LAeq	LA10	LA01	
Noise source level for single event	75	78	80	dB(A)
Duration of single event		1.5		Seconds
Number of events in the measurement period		36		Events
Total time duration of combined events		54.0		Seconds
	LAeq 1hr	LA10 1hr	LA01 1hr	
Noise source level for assessment time period	57	N/A	80	dB(A)
Tonality / Impulsiveness correction		5		dB
Minimum distance to receiver		18		m
Distance attenuation (-6 dB per doubling of distance)		-25		dB
Barrier screening		-12.6		dB
Façade reflection		2.5		dB
Impact at nearest façade	**27**	**N/A**	**50**	**dB(A)**
Reduction through OPEN window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**19**	**N/A**	**42**	**dB(A)**

NEAR CAR BYPASSES	Acoustic Quality Objectives			
	LAeq	LA10	LA01	
Noise source level for single event	68	70	73	dB(A)
Duration of single event		20		Seconds
Number of events in the measurement period		36		Events
Total time duration of combined events		720.0		Seconds
	LAeq 1hr	LA10 1hr	LA01 1hr	
Noise source level for assessment time period	61	70	73	dB(A)
Tonality / Impulsiveness correction		0		dB
Minimum distance to receiver		25.5		m
Distance attenuation (-6 dB per doubling of distance)		-28		dB
Barrier screening		-8.9		dB
Façade reflection		2.5		dB
Impact at nearest façade	**27**	**36**	**39**	**dB(A)**
Reduction through OPEN window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**19**	**28**	**31**	**dB(A)**

FAR CAR DOOR CLOSURES	Acoustic Quality Objectives			
	LAeq	LA10	LA01	
Noise source level for single event	75	78	80	dB(A)
Duration of single event		1.5		Seconds
Number of events in the measurement period		36		Events
Total time duration of combined events		54.0		Seconds
	LAeq 1hr	LA10 1hr	LA01 1hr	
Noise source level for assessment time period	57	N/A	80	dB(A)
Tonality / Impulsiveness correction		5		dB
Minimum distance to receiver		35		m
Distance attenuation (-6 dB per doubling of distance)		-31		dB
Onsite building screening		-5.0		dB
Façade reflection		2.5		dB
Impact at nearest façade	**28**	**N/A**	**52**	**dB(A)**
Reduction through OPEN window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**21**	**N/A**	**44**	**dB(A)**

FAR CAR BYPASSES	Acoustic Quality Objectives			
	LAeq	LA10	LA01	
Noise source level for single event	68	70	73	dB(A)
Duration of single event		20		Seconds
Number of events in the measurement period		36		Events
Total time duration of combined events		720.0		Seconds
	LAeq 1hr	LA10 1hr	LA01 1hr	
Noise source level for assessment time period	61	70	73	dB(A)
Tonality / Impulsiveness correction		0		dB
Minimum distance to receiver		43		m
Distance attenuation (-6 dB per doubling of distance)		-33		dB
Barrier screening		-5.0		dB
Façade reflection		2.5		dB
Impact at nearest façade	**26**	**35**	**38**	**dB(A)**
Reduction through OPEN window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**18**	**27**	**30**	**dB(A)**

Combined / maximum impacts CARPARK				
Impact at nearest façade	**33**	**36**	**52**	**dB(A)**
Reduction through OPEN window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**25**	**28**	**44**	**dB(A)**

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CRGACOUSTICS

EL ACTIVITY NOISE PREDICTION CALCULATIONS: ($L_{A10\ 1hr}$ and $L_{A01\ 1hr\ levels}$ are represented as N/A if the duration of events do not occur for 10% or 1% of the 1 hour period)

R3: Existing dwelling to the south at 34 to 36 Kidston Street

NEAR PEOPLE TALKING IN CARPARK	Acoustic Quality Objectives			
	LAeq	LA10	LA01	
Noise source level for single event	58	60	62	dB(A)
Duration of single event		720		Seconds
Number of events in the measurement period		2		Events
Total time duration of combined events		1440.0		Seconds
	LAeq 1hr	LA10 1hr	LA01 1hr	
Noise source level for assessment time period	54	60	62	dB(A)
Tonality / Impulsiveness correction		0		dB
Minimum distance to receiver		44.5		m
Distance attenuation (-6 dB per doubling of distance)		-33		dB
CARPORT SCREENING		-5.0		dB
Façade reflection		2.5		dB
Impact at nearest façade	**19**	**25**	**27**	**dB(A)**
Reduction through OPEN window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**11**	**17**	**19**	**dB(A)**

FAR PEOPLE TALKING IN CARPARK	Acoustic Quality Objectives			
	LAeq	LA10	LA01	
Noise source level for single event	58	60	62	dB(A)
Duration of single event		720		Seconds
Number of events in the measurement period		2		Events
Total time duration of combined events		1440.0		Seconds
	LAeq 1hr	LA10 1hr	LA01 1hr	
Noise source level for assessment time period	54	60	62	dB(A)
Tonality / Impulsiveness correction		0		dB
Minimum distance to receiver		66.5		m
Distance attenuation (-6 dB per doubling of distance)		-36		dB
CARPORT SCREENING		-4.7		dB
Façade reflection		2.5		dB
Impact at nearest façade	**15**	**21**	**23**	**dB(A)**
Reduction through OPEN window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**8**	**14**	**16**	**dB(A)**

PATRONS AT VERANDAH / ENTRY	Acoustic Quality Objectives			
	LAeq	LA10	LA01	
Noise source level for single event	67	72	75	dB(A)
Duration of single event		900		Seconds
Number of events in the measurement period		2		Events
Total time duration of combined events		1800.0		Seconds
	LAeq 1hr	LA10 1hr	LA01 1hr	
Noise source level for assessment time period	64	72	75	dB(A)
Tonality / Impulsiveness correction		0		dB
Minimum distance to receiver		82		m
Distance attenuation (-6 dB per doubling of distance)		-38		dB
Onsite building screening		-15		dB
Façade reflection		2.5		dB
Impact at nearest façade	**13**	**21**	**24**	**dB(A)**
Reduction through OPEN window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**6**	**14**	**17**	**dB(A)**

INDOOR POKIE MACHINES	Acoustic Quality Objectives			
	LAeq	LA10	LA01	
Noise source level for single event	70	73	77	dB(A)
Duration of single event		900		Seconds
Number of events in the measurement period		4		Events
Total time duration of combined events		3600.0		Seconds
	LAeq 1hr	LA10 1hr	LA01 1hr	
Noise source level for assessment time period	70	73	77	dB(A)
Tonality / Impulsiveness correction		5		dB
Minimum distance to receiver		80		m
Distance attenuation (-6 dB per doubling of distance)		-38		dB
Inside to outside attenuation with automatic closer		-25		dB
Façade reflection		2.5		dB
Impact at nearest façade	**14**	**17**	**21**	**dB(A)**
Reduction through OPEN window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**7**	**10**	**14**	**dB(A)**

Combined / maximum impacts PATRONS				
Impact at nearest façade	**22**	**25**	**27**	**dB(A)**
Reduction through OPEN window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**14**	**17**	**19**	**dB(A)**

R4: Existing dwelling to the southwest at 32 Kidston Street

NEAR PEOPLE TALKING IN CARPARK	Acoustic Quality Objectives			
	LAeq	LA10	LA01	
Noise source level for single event	58	60	62	dB(A)
Duration of single event		720		Seconds
Number of events in the measurement period		2		Events
Total time duration of combined events		1440.0		Seconds
	LAeq 1hr	LA10 1hr	LA01 1hr	
Noise source level for assessment time period	54	60	62	dB(A)
Tonality / Impulsiveness correction		0		dB
Minimum distance to receiver		30		m
Distance attenuation (-6 dB per doubling of distance)		-30		dB
Barrier screening		-5.0		dB
Façade reflection		2.5		dB
Impact at nearest façade	**22**	**28**	**30**	**dB(A)**
Reduction through OPEN window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**14**	**20**	**22**	**dB(A)**

FAR PEOPLE TALKING IN CARPARK	Acoustic Quality Objectives			
	LAeq	LA10	LA01	
Noise source level for single event	58	60	62	dB(A)
Duration of single event		720		Seconds
Number of events in the measurement period		2		Events
Total time duration of combined events		1440.0		Seconds
	LAeq 1hr	LA10 1hr	LA01 1hr	
Noise source level for assessment time period	54	60	62	dB(A)
Tonality / Impulsiveness correction		0		dB
Minimum distance to receiver		47		m
Distance attenuation (-6 dB per doubling of distance)		-33		dB
Barrier screening		0		dB
Façade reflection		2.5		dB
Impact at nearest façade	**23**	**29**	**31**	**dB(A)**
Reduction through OPEN window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**16**	**22**	**24**	**dB(A)**

PATRONS AT VERANDAH / ENTRY	Acoustic Quality Objectives			
	LAeq	LA10	LA01	
Noise source level for single event	67	72	75	dB(A)
Duration of single event		900		Seconds
Number of events in the measurement period		2		Events
Total time duration of combined events		1800.0		Seconds
	LAeq 1hr	LA10 1hr	LA01 1hr	
Noise source level for assessment time period	64	72	75	dB(A)
Tonality / Impulsiveness correction		0		dB
Minimum distance to receiver		50		m
Distance attenuation (-6 dB per doubling of distance)		-34		dB
Onsite building screening		-15		dB
Façade reflection		2.5		dB
Impact at nearest façade	**18**	**26**	**29**	**dB(A)**
Reduction through OPEN window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**10**	**18**	**21**	**dB(A)**

INDOOR POKIE MACHINES	Acoustic Quality Objectives			
	LAeq	LA10	LA01	
Noise source level for single event	70	73	77	dB(A)
Duration of single event		900		Seconds
Number of events in the measurement period		4		Events
Total time duration of combined events		3600.0		Seconds
	LAeq 1hr	LA10 1hr	LA01 1hr	
Noise source level for assessment time period	70	73	77	dB(A)
Tonality / Impulsiveness correction		5		dB
Minimum distance to receiver		52		m
Distance attenuation (-6 dB per doubling of distance)		-34		dB
Inside to outside attenuation with automatic closer		-25		dB
Façade reflection		2.5		dB
Impact at nearest façade	**18**	**21**	**25**	**dB(A)**
Reduction through OPEN window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**11**	**14**	**18**	**dB(A)**

Combined / maximum impacts PATRONS				
Impact at nearest façade	**27**	**29**	**31**	**dB(A)**
Reduction through OPEN window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**19**	**22**	**24**	**dB(A)**

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CRGACOUSTICS

L ACTIVITY NOISE PREDICTION CALCULATIONS: ($L_{A10\ 1hr}$ and $L_{A01\ 1hr\ levels}$ are represented as N/A if the duration of events do not occur for 10% or 1% of the 1 hour period)

R3: Existing dwelling to the south at 34 to 36 Kidston Street

TRUCK MOVEMENT to site	Acoustic Quality Objectives			
	LAeq	LA10	LA01	
Noise source level for single event	87	89	90	dB(A)
Duration of single event		20		Seconds
Number of events in the measurement period		1		Events
Total time duration of combined events		20.0		Seconds
	LAeq 1hr	LA10 1hr	LA01 1hr	
Noise source level for assessment time period	64	N/A	N/A	dB(A)
Tonality / Impulsiveness correction		0		dB
Minimum distance to receiver	56.5	56.5		m
Distance attenuation (-6 dB per doubling of distance)	-35	-35		dB
Barrier screening	0.0	0.0		dB
Façade reflection		2.5		dB
Impact at nearest façade	**32**	**N/A**	**N/A**	**dB(A)**
Reduction through open window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**24**	**N/A**	**N/A**	**dB(A)**

TRUCK MOVEMENT from site	Acoustic Quality Objectives			
	LAeq	LA10	LA01	
Noise source level for single event	87	89	90	dB(A)
Duration of single event		20		Seconds
Number of events in the measurement period		1		Events
Total time duration of combined events		20.0		Seconds
	LAeq 1hr	LA10 1hr	LA01 1hr	
Noise source level for assessment time period	64	N/A	N/A	dB(A)
Tonality / Impulsiveness correction		0		dB
Minimum distance to receiver	64.5	64.5		m
Distance attenuation (-6 dB per doubling of distance)	-36	-36		dB
Acoustic barrier screening	0.0	0.0		dB
Façade reflection		2.5		dB
Impact at nearest façade	**31**	**N/A**	**N/A**	**dB(A)**
Reduction through open window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**23**	**N/A**	**N/A**	**dB(A)**

TRUCK AIRBRAKES	Acoustic Quality Objectives			
	LAeq	LA10	LA01	
Noise source level for single event	90	95	98	dB(A)
Duration of single event		1		Seconds
Number of events in the measurement period		1		Events
Total time duration of combined events		1.0		Seconds
	LAeq 1hr	LA10 1hr	LA01 1hr	
Noise source level for assessment time period	54	N/A	N/A	dB(A)
Tonality / Impulsiveness correction		5		dB
Minimum distance to receiver		56.5		m
Distance attenuation (-6 dB per doubling of distance)		-35		dB
Acoustic barrier screening		0.0		dB
Façade reflection		2.5		dB
Impact at nearest façade	**27**	**N/A**	**N/A**	**dB(A)**
Reduction through open window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**19**	**N/A**	**N/A**	**dB(A)**

FORKLIFT MOVEMENTS	Acoustic Quality Objectives			
	LAeq	LA10	LA01	
Noise source level for single event	71	74	75	dB(A)
Duration of single event		600		Seconds
Number of events in the measurement period		2		Events
Total time duration of combined events		1200.0		Seconds
	LAeq 1hr	LA10 1hr	LA01 1hr	
Noise source level for assessment time period	66	74	75	dB(A)
Tonality / Impulsiveness correction		0		dB
Minimum distance to receiver		53.5		m
Distance attenuation (-6 dB per doubling of distance)		-23		dB
Acoustic barrier screening		-8.5		dB
Façade reflection		2.5		dB
Impact at nearest façade	**38**	**45**	**46**	**dB(A)**
Reduction through open window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**30**	**38**	**39**	**dB(A)**

WASTE COLLECTION INDUSTRIAL BIN	Acoustic Quality Objectives			
	LAeq	LA10	LA01	
Noise source level for single event	92	97	102	dB(A)
Duration of single event		180		Seconds
Number of events in the measurement period		1		Events
Total time duration of combined events		180.0		Seconds
	LAeq 1hr	LA10 1hr	LA01 1hr	
Noise source level for assessment time period	79	N/A	102	dB(A)
Tonality / Impulsiveness correction		5		dB
Minimum distance to receiver		65		m
Distance attenuation (-6 dB per doubling of distance)		-36		dB
Onsite building screening		0.0		dB
Façade reflection		2.5		dB
Impact at nearest façade	**50**	**N/A**	**73**	**dB(A)**
Reduction through open window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**43**	**N/A**	**66**	**dB(A)**

R4: Existing dwelling to the southwest at 32 Kidston Street

TRUCK MOVEMENT to site	Acoustic Quality Objectives			
	LAeq	LA10	LA01	
Noise source level for single event	87	89	90	dB(A)
Duration of single event		20		Seconds
Number of events in the measurement period		1		Events
Total time duration of combined events		20.0		Seconds
	LAeq 1hr	LA10 1hr	LA01 1hr	
Noise source level for assessment time period	64	N/A	N/A	dB(A)
Tonality / Impulsiveness correction		0		dB
Minimum distance to receiver	25.5	25.5		m
Distance attenuation (-6 dB per doubling of distance)	-28	-28		dB
Barrier screening	0.0	0.0		dB
Façade reflection		2.5		dB
Impact at nearest façade	**39**	**N/A**	**N/A**	**dB(A)**
Reduction through open window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**31**	**N/A**	**N/A**	**dB(A)**

TRUCK MOVEMENT from site	Acoustic Quality Objectives			
	LAeq	LA10	LA01	
Noise source level for single event	87	89	90	dB(A)
Duration of single event		20		Seconds
Number of events in the measurement period		1		Events
Total time duration of combined events		20.0		Seconds
	LAeq 1hr	LA10 1hr	LA01 1hr	
Noise source level for assessment time period	64	N/A	N/A	dB(A)
Tonality / Impulsiveness correction		0		dB
Minimum distance to receiver	43.0	43.0		m
Distance attenuation (-6 dB per doubling of distance)	-33	-33		dB
Acoustic barrier screening	0.0	0.0		dB
Façade reflection		2.5		dB
Impact at nearest façade	**34**	**N/A**	**N/A**	**dB(A)**
Reduction through open window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**27**	**N/A**	**N/A**	**dB(A)**

TRUCK AIRBRAKES	Acoustic Quality Objectives			
	LAeq	LA10	LA01	
Noise source level for single event	90	95	98	dB(A)
Duration of single event		1		Seconds
Number of events in the measurement period		1		Events
Total time duration of combined events		1.0		Seconds
	LAeq 1hr	LA10 1hr	LA01 1hr	
Noise source level for assessment time period	54	N/A	N/A	dB(A)
Tonality / Impulsiveness correction		5		dB
Minimum distance to receiver		27		m
Distance attenuation (-6 dB per doubling of distance)		-29		dB
Acoustic barrier screening		-7.6		dB
Façade reflection		2.5		dB
Impact at nearest façade	**26**	**N/A**	**N/A**	**dB(A)**
Reduction through open window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**18**	**N/A**	**N/A**	**dB(A)**

FORKLIFT MOVEMENTS	Acoustic Quality Objectives			
	LAeq	LA10	LA01	
Noise source level for single event	71	74	75	dB(A)
Duration of single event		600		Seconds
Number of events in the measurement period		2		Events
Total time duration of combined events		1200.0		Seconds
	LAeq 1hr	LA10 1hr	LA01 1hr	
Noise source level for assessment time period	66	74	75	dB(A)
Tonality / Impulsiveness correction		0		dB
Minimum distance to receiver		27		m
Distance attenuation (-6 dB per doubling of distance)		-17		dB
Acoustic barrier screening		-7.6		dB
Façade reflection		2.5		dB
Impact at nearest façade	**45**	**52**	**53**	**dB(A)**
Reduction through open window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**37**	**45**	**46**	**dB(A)**

WASTE COLLECTION INDUSTRIAL BIN	Acoustic Quality Objectives			
	LAeq	LA10	LA01	
Noise source level for single event	92	97	102	dB(A)
Duration of single event		180		Seconds
Number of events in the measurement period		1		Events
Total time duration of combined events		180.0		Seconds
	LAeq 1hr	LA10 1hr	LA01 1hr	
Noise source level for assessment time period	79	N/A	102	dB(A)
Tonality / Impulsiveness correction		5		dB
Minimum distance to receiver		55		m
Distance attenuation (-6 dB per doubling of distance)		-35		dB
Onsite building screening		0.0		dB
Façade reflection		2.5		dB
Impact at nearest façade	**52**	**N/A**	**75**	**dB(A)**
Reduction through open window	-5	-5	-5	dB
Impact inside open window (excludes façade correction	**44**	**N/A**	**67**	**dB(A)**

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ONSITE MECH PLANT NOISE PREDICTION CALCULATIONS:

R1: Existing dwellings to the northeast across Appel Street

A/C Units	57	dB(A) @ 3m
Number of units	2	units
Refrig Units	62	dB(A) @ 3m
Number of units	1	units
Total noise level	64	dB(A) @ 3m
Distance to receiver	60	m
Distance attenuation (-6 dB per doubling of distance)	-26	dB(A)
Equipment directivity	0	dB(A)
Onsite building screening	-20	dB(A)
Façade reflection	2.5	dB(A)
Impact at façade	21	dB(A)
Reduction through OPEN window	-5	dB(A)
Impact inside open window (also minus 2.5 dB façade)	13	dB(A)

R2: Existing dwelling to the southeast at 11 Appel Street

A/C Units	57	dB(A) @ 3m
Number of units	2	units
Refrig Units	62	dB(A) @ 3m
Number of units	1	units
Total noise level	64	dB(A) @ 3m
Distance to receiver	67	m
Distance attenuation (-6 dB per doubling of distance)	-27	dB(A)
Equipment directivity	-5	dB(A)
Onsite building screening	-15	dB(A)
Façade reflection	2.5	dB(A)
Impact at façade	20	dB(A)
Reduction through OPEN window	-5	dB(A)
Impact inside open window (also minus 2.5 dB façade)	12	dB(A)

R3: Existing dwelling to the south at 34 to 36 Kidston Street

A/C Units	57	dB(A) @ 3m
Number of units	2	units
Refrig Units	62	dB(A) @ 3m
Number of units	1	units
Total noise level	64	dB(A) @ 3m
Distance to receiver	67	m
Distance attenuation (-6 dB per doubling of distance)	-27	dB(A)
Equipment directivity	-5	dB(A)
Onsite building screening	-15	dB(A)
Façade reflection	2.5	dB(A)
Impact at façade	20	dB(A)
Reduction through OPEN window	-5	dB(A)
Impact inside open window (also minus 2.5 dB façade)	12	dB(A)

R4: Existing dwelling to the southwest at 32 Kidston Street

A/C Units	57	dB(A) @ 3m
Number of units	2	units
Refrig Units	62	dB(A) @ 3m
Number of units	1	units
Total noise level	64	dB(A) @ 3m
Distance to receiver	35	m
Distance attenuation (-6 dB per doubling of distance)	-21	dB(A)
Equipment directivity	-5	dB(A)
Onsite building screening	-15	dB(A)
Façade reflection	2.5	dB(A)
Impact at façade	25	dB(A)
Reduction through OPEN window	-5	dB(A)
Impact inside open window (also minus 2.5 dB façade)	18	dB(A)

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Oakland Way
Beaudesert QLD 4285

LANDSCAPE CONCEPT PLAN

DECEMBER 2024 • 10966 ISSUE B

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27 OAKLAND WAY **BEAUDESERT** DESIGN CONTEXT

Millers Glen SCENIC RIM

LEGEND

- SITE EXTENT OF WORKS
- LOW DENSITY RESIDENTIAL
- LOW-MEDIUM RESIDENTIAL
- RURAL RESIDENTIAL
- NEIGHBOURHOOD RECREATION CENTRE
- COMMUNITY FACILITIES
- MAJOR CENTRE
- RECREATION AND OPEN SPACE
- RURAL
- MIXED USE
- LIMITED DEVELOPMENT
- BUS STOPS
- SHOPPING
- PARKS

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Design Principles

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Connection

The Masterplan highlights a strong affinity with the adjacent bushland, incorporating design elements inspired by the dry Eucalypt Forest. Drawing from the elegant shapes of Eucalypt leaves, the plan integrates these slender forms to define the layout of pathways and the overall site.

This approach aims to create a harmonious blend with nature, enhancing the environment with bush tucker and native plantings that further reflect the area's natural character. By mirroring the organic patterns and textures found in the Eucalypt bushland, the Masterplan not only seeks to beautify the surroundings but also to foster a sustainable ecosystem that supports local biodiversity. This design strategy ensures that the development respects and preserves the ecological integrity of the site while offering a visually appealing and functional space for inhabitants and visitors alike.

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Engagement

Throughout the development, various gathering and meeting spaces will be strategically placed across the site, encouraging community engagement. The design incorporates interactive and spectacle gardens to enhance this interaction. Interactive gardens will showcase bush tucker species with interpretative signage, educating residents about their diversity. Complementing these are traditional herb species, allowing residents to pick plants for personal use as they explore the gardens.

Spectacle gardens will feature native flowering species such as Grevillea and Callistemon, offering vibrant displays throughout different seasons. These gardens not only beautify the surroundings but also provide visual interest and a connection to the natural environment for residents. Together, these elements aim to create a harmonious and engaging living environment that fosters both community interaction and appreciation for local flora.

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Green Canopy / Comfort

The development prioritizes resident comfort by creating inviting spaces enriched with adequate shading from canopy covers, arbour structures, and resting areas along pedestrian pathways. These elements are complemented by native vegetation, both on the ground and vertically integrated throughout the site.

In addition to enhancing aesthetics, the green canopy cover synergizes with interactive and spectacle gardens, which include feature fruit trees. This thoughtful integration aims to foster a harmonious environment that not only provides shade and visual interest but also encourages residents to connect with nature.

By strategically incorporating these design elements, the development aims to create a welcoming atmosphere where residents can relax, socialize, and enjoy the natural beauty of their surroundings, enhancing the overall quality of life in the community.

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Connection to Place

The landscape design seeks to define a unique sense of place and character through the thoughtful use of consistent materials. It aims to integrate seamlessly with the surrounding semi-rural framework, blurring boundaries to create a cohesive and expansive open space.

External environments are designed to forge robust connections with nature, encouraging and incorporating both direct and incidental interactions into residents' daily lives. This approach ensures that residents can engage with the natural surroundings effortlessly, enhancing their overall living experience.

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Sensory Stimulation

The design will utilise plant species with a variety of textures, colours, shapes and strong fragrances to stimulate the senses across all seasons. Textures with the hard landscape elements will complement the architectural palette particularly in key nodal areas.

The design will incorporate fine grained detailed providing a variety of visual and sensory experiences. The design will create moments of discovery with a variety of other external stimulates such as artwork. These will be accessible to touch and interaction to enhance the experiential and aesthetic quality for residents.

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Prospect and Refuge

The design focuses on enhancing resident comfort by strategically placing seating along shared pathways and providing shelters to shield from natural elements throughout the day. It encourages exploration and interaction through thoughtfully designed spaces that invite discovery. Additionally, the design incorporates areas dedicated to rest and relaxation, ensuring residents can rejuvenate within a supportive environment.

By offering these amenities, the design aims to promote well-being and satisfaction among residents, fostering a sense of community and enjoyment of outdoor spaces. These features not only facilitate daily activities but also enrich the living experience, creating a harmonious balance between functionality and aesthetic appeal within the community.

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Landscape Masterplan

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27 OAKLAND WAY **BEAUDESERT** LANDSCAPE MASTER PLAN

Millers Glen SCENIC RIM

LEGEND

- SITE BOUNDARY
- SITE EXTENT OF WORKS

1. LOT LAYOUT
2. EXISTING LOTS UNDER CONSTRUCTION
3. MILLERS HOMESTEAD - MAIN CLUBHOUSE WITH POOL, SPA AND TERRACE AREAS.
4. MILLERS SPORTS PRECINCT WITH BOWLING GREEN, SWIMMING POOL, PICKLEBALL COURT AND BBQ AREA
5. PRIMARY ENTRY INTO MILLERS GLEN
6. PROPOSED TURF AREA WITH BIO TANK UNDER
7. DOG PARK
8. FEATURE SHADE TREES
   - See page 16 for Character Tree Plan
9. INDICATIVE STREET TREES
   - See page 16 for Character Tree Plan
10. CARAVAN PARKING
11. VISITOR PARKING
12. DRAINAGE BASIN
13. KOALA HABITAT AREA
14. PROPOSED COMMUNAL BBQ AREA
15. EXISTING DRAINAGE BASIN
16. CARWASH BAY

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Functional Diagrams

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27 OAKLAND WAY **BEAUDESERT** PEDESTRIAN CIRCULATION PLAN

Millers Glen SCENIC RIM

LEGEND

- SITE BOUNDARY
- PRIMARY PEDESTRIAN CONNECTION
- SECONDARY PEDESTRIAN CONNECTION
- RECREATION / LEISURE NODE

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27 OAKLAND WAY **BEAUDESERT** STAGING PLAN

Millers Glen SCENIC RIM

LEGEND

SITE BOUNDARY

STAGE BOUNDARY

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27 OAKLAND WAY **BEAUDESERT** SITE FENCING PLAN

Millers Glen SCENIC RIM

LEGEND

- SITE BOUNDARY
- FENCE TYPE A - 1.2M-1.5M HIGH PERMEABLE FENCING
- FENCE TYPE B - 1.8M HIGH SOLID FENCE
- FENCE TYPE C - 1.8M HIGH SEMI PERMEABLE FENCE
- VEHICULAR AND PEDESTRIAN GATE ACCESS

0M 100M 200M

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27 OAKLAND WAY **BEAUDESERT** TREE CHARACTER PLAN

Millers Glen SCENIC RIM

LEGEND

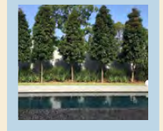
WATERHOUSIA floribunda

CUPANIOPSIS anacardioides

BACKHOUSIA citriodora

TRISTANIOPSIS laurina

HARPULLIA pendula


ELAEOCARPUS reticulatus

0M 100M 200M

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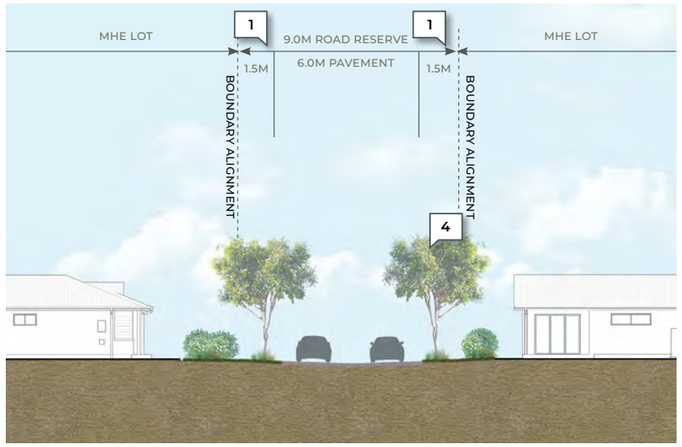
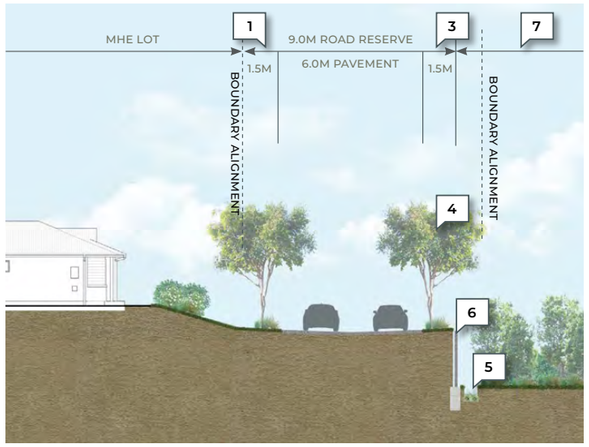
27 OAKLAND WAY **BEAUDESERT** ROAD TYPOLOGIES

Millers Glen SCENIC RIM

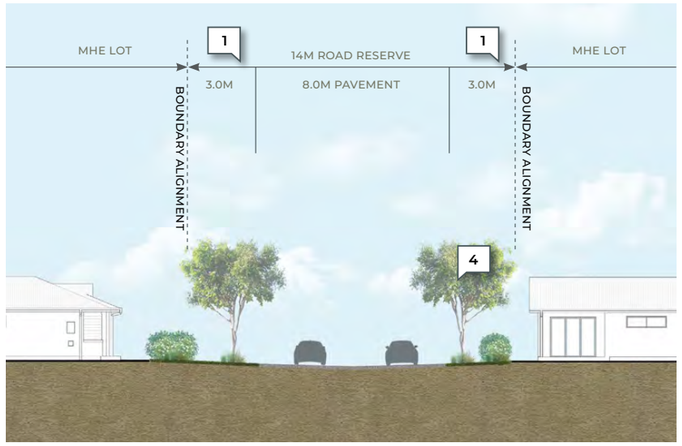


9.0M ROAD RESERVE TYPICAL SECTION

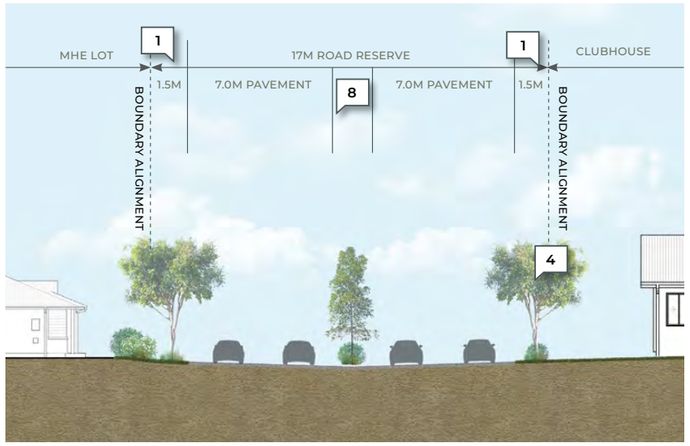


9.0M ROAD RESERVE TYPICAL SECTION

KEY PLAN:



14.0M ROAD RESERVE TYPICAL SECTION



17.0M ROAD RESERVE TYPICAL SECTION

LEGEND

1. VERGE
   Street Tree with groundcovers
2. VERGE
   Street Tree with small shrubs and ground covers
3. VERGE
   Street Tree with shrubs, ground covers and balustrade to top of wall
4. STREET TREES
5. PROPOSED SWALE
6. PROPOSED RETAINING
7. KOALA HABITAT AREA
8. 3.0M CENTRAL MEDIAN

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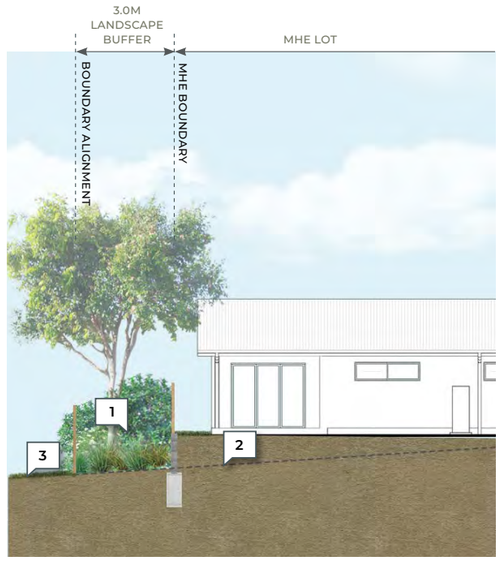
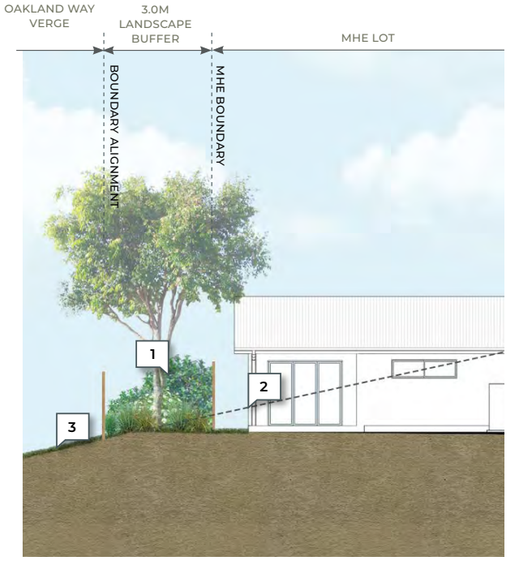
27 OAKLAND WAY **BEAUDESERT**

OAKLAND WAY ROAD SECTIONS

Millers Glen SCENIC RIM



SECTION A



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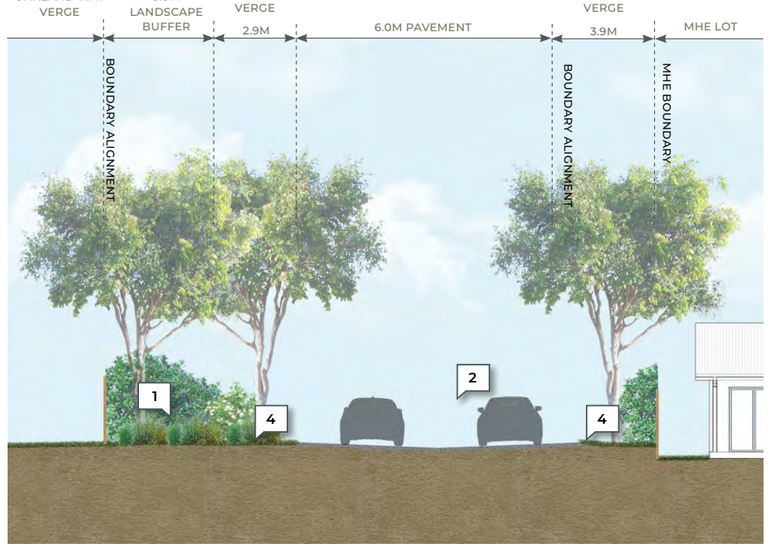

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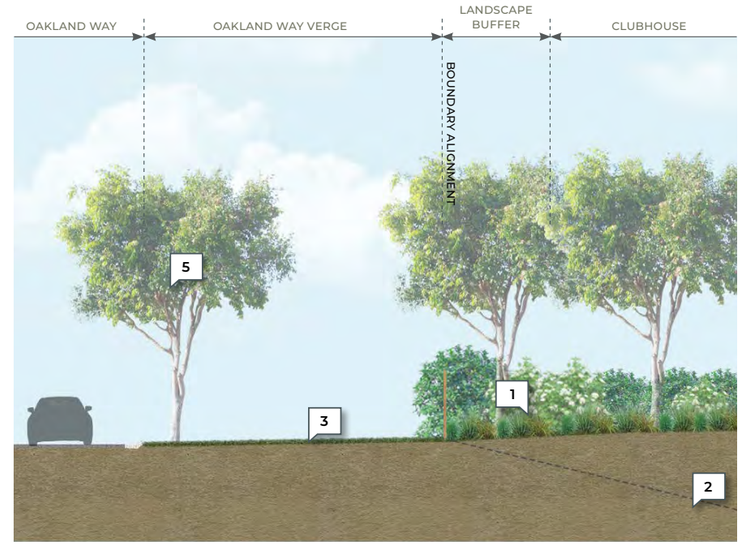

SECTION D

LEGEND

1. LANDSCAPE BUFFER
   Max scope 1:3 to include trees, shrubs and ground covers
2. EXISTING GROUND LINE
3. TURF
4. VERGE
   To include trees, small shrubs and groundcovers
5. EXISTING STREET TREE

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0M 12.5M

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Character Images

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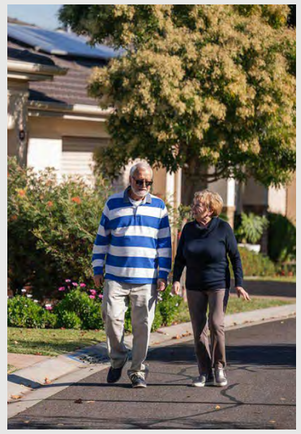
27 OAKLAND WAY **BEAUDESERT** CHARACTER IMAGES

Millers Glen SCENIC RIM

STREETSCAPE



COMMUNAL GARDENS

PASSIVE RECREATION

ACTIVE RECREATION

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Planting Palette

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27 OAKLAND WAY **BEAUDESERT** | INDICATIVE PLANT PALETTE - GENERAL PLANTING AREAS

Millers Glen SCENIC RIM

TREES

1.

2.

3.

4.

5.

6.

SHRUBS

7.

8.

9.

10.

11.

12.

GROUND COVERS

13.

14.

15.

16.

17.

18.

19.

20.

21.

22.

23.

CLIMBING VINES

24.

TREES

1. CUPANIOPSIS ANACARDIODIES
2. ELAEOCARPUS RETICULATUS
3. BACKHOUSIA CITRIODORA
4. HARPULIA PENDULA
5. TRISTANIOPSIS LAURINA
6. WATERHOUSEA FLORIBUNDA

SHRUBS

7. BAECKEA VIRGATA 'DWARF'
8. BANKSIA OBLONGIFOLIA
9. GARDENIA AUGUSTA 'FLORIDA'
10. PHYLLANTHUS MULTIFLORUS
11. RHAPHIOLEPIS INDICA
12. WESTRINGIA FRUTICOSA

GROUNDCOVERS

13. BRACHYSCOME MULTIFIDA
14. CUPHEA HYSSOPIFOLIA
15. DIETES BICOLOR
16. GAZANIA RIGENS
17. HYMENOCALIS LITTORALIS
18. LIRIOPE 'EVERGREEN GIANT'
19. MYOPORUM PARVIFOLIUM
20. PENNISETUM ALOPECUROIDESZ
21. SCAEVOLA AEMULA
22. CAREX APPRESSA
23. THEMEDA TRIANDRA

CLIMBING VINES

24. TRACHELOSPERMUM JASMINOIDES

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27 OAKLAND WAY **BEAUDESERT** INDICATIVE PLANT PALETTE - HERB AND BUSH TUCKER GARDEN

Millers Glen SCENIC RIM

TREES

1.

2.

3.

4.

5.

SHRUBS

6.

7.

8.

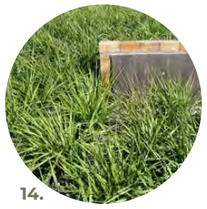
9.

10.

11.

GROUND COVERS

12.

13.

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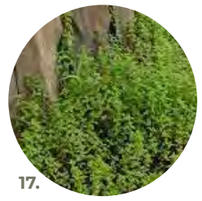
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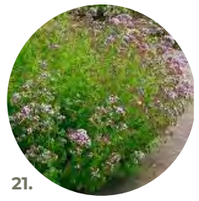
21.

22.

23.

CLIMBING VINES

24.

25.

TREES

1. ATRACTOCARPUS FITZALANII
2. ACRONYCHIA OBLONGIFOLIA
3. ACRONYCHIA IMPERFORATE
4. CITRUS LIMON
5. CIRTUS SINENSIS

SHRUBS

6. AUSTROMYRTUS DULCIS
7. LAURUS NOBILIS
8. LAVANDULA DENTATA
9. SYZYGIUM LUEHMANNII
10. GLYCOSMIS TRIFOLIATA
11. PODOCARPUS SPINULOSUS

GROUNDCOVERS

12. CYMBOPOGON AMBIGUS
13. PROSTANTHERA INCISA
14. DIANELLA CAERULEA
15. HELICHRYSUM ITALICUM
16. MENTHA SATUREIOIDES
17. MENTHA AUSTRALIS
18. ROSMARINUS OFFICINALIS
19. SALVIA OFFICINALIS
20. OCIMUM BASILLICUM
21. ORIGANUM VULGARE
22. TULBAGHIA VIOLACEA
23. THYMUS VULGARIS

CLIMBING VINES

24. EUSTREPHUS LATIFOLIUS
25. PASSIFLORA EDULIS

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27 OAKLAND WAY **BEAUDESERT** INDICATIVE PLANT PALETTE - SPECTACLE GARDEN

Millers Glen SCENIC RIM

TREES

1.

2.

SHRUBS

3.

4.

5.

6.

7.

8.

9.

10.

GROUND COVERS

11.

12.

13.

TREES

1. GREVILLEA ROBUSTA
2. BRACHYCHITON ACERIFOLIUS

SHRUBS

3. CALLISTEMON 'LITTLE JOHN'
4. CALLISTEMON 'FIREBRAND'
5. CALLISTEMON 'GREAT BALLS OF FIRE'
6. GREVILLEA 'SUPERB'
7. GREVILLEA 'MAJESTIC'
8. LEPTOSPERMUM 'CARDWELL'
9. LEPTOSPERMUM PETERSONII

GROUNDCOVERS

10. HIBBERTIA SCANDENS
11. GREVILLEA 'COOROORA CASCADE'
12. BANKSIA SPINULOSA

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Oakland Way, Beaudesert - Northern Expansion

Ingenia Communities

Stormwater Management Plan

24-0241-SMP-V1

December 2024

Accelerating success.

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Document Control

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Version	Date	Details	Prepared	Checked	Approved	Signed	RPEQ
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Executive Summary

Colliers Engineering & Design have been engaged by Ingenia Communities to provide a Stormwater Management Plan (SMP) in support of a development application to Scenic Rim Regional Council (SRRC). The application is over land located at Oakland Way Beaudesert, QLD 4285, currently described as Lot 802 on SP342583. This development application seeks a development permit for a Material Change of Use (MCU) application for aged persons accommodation, driveways, park and drainage reserves.

The proposed development is located approximately 1.6 km to the east of the Beaudesert CBD with a total land holdings area covering 9.387 ha. The site is consistent with rural land use with a majority of the site covered with sporadic vegetation and grassed clearings. The site fronts Oakland Way the west, private land to the north and east, and existing stages 1 – 8 to the south. The site is not impacted by Flood Hazard Area overlay (OM6).

Water Quantity

External flows will be managed via catch drains at the edge of the development, where flows will directed to stormwater infrastructure to bypass the development.

On-site flows will be directed via internal roads and drainage toward Outlets A1, A2 and C, with major flows (up to the 1-in-100-year event) conveyed through piped drainage. At each outlet, flow rates will be managed to discharge below pre-development rates. A hydrological assessment was undertaken, which determined that a detention volume of 4410 m^3 is needed for the basin at Outlet A2 and 600 m^3 for the underground tank at Outlet C to meet these requirements.

It is considered that discharge from the site will be managed in such a manner as to not substantially damage third party property, and as a result it is considered suitable lawful points of discharge has been identified and achieved.

Water Quality

A bioretention basin constructed in the southern area as part of the Stage 4 works has been designed, along with supporting stormwater pipe infrastructure, to accommodate runoff from future development stages, including the area within the site (developed catchment A2). Therefore, as part of the water quality strategy a small portion of the site to the southeast will be diverted to the existing water treatment device.

The rest of the internal site is proposed to be treated on site with stormwater quality treatment devices specified in accordance with water quality modelling, undertaken in MUSIC.

MUSIC modelling demonstrates that the proposed mitigation scenario achieves compliant load reductions set out within the State Planning Policy:

- *Runoff for the northern portion of the site (Catchment C) includes a treatment train of six (6) OceanGuard gully baskets and ten (10) PSORB StormFilters manufactured by Ocean Protect.*
- *Treatment flows (Q1 year) from the southern portion of the site will be directed to bioretention co-located in the base of the detention basin at the south-western corner of the site. A total bioretention filter area of 750 m^2 is proposed to meet water quality objectives at the site.*

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Appendices

Appendix A Reconfiguration of Lot Plan and Concept Engineering Drawings
Appendix B Rational Method

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1. Introduction

Colliers Engineering & Design have been engaged by Ingenia Communities to provide a Stormwater Management Plan (SMP) in support of a development application to Scenic Rim Regional Council (SRRC). The application is over land located at Oakland Way Beaudesert, QLD 4285, currently described as Lot 802 on SP342583. This development application seeks a development permit for a Material Change of Use (MCU) application for aged persons accommodation, driveways, park and drainage reserves.

The proposed outcome of this document is to identify stormwater management options that could be implemented within the development to achieve the requirements and targets of Scenic Rim Regional Council (SRRC) Planning Scheme development codes as well as the relevant provisions of State Planning Policy (SPP, 2017). The intent of the codes associated with these documents will be achieved through the appropriate integration of stormwater management options within the proposed residential land-use. The objectives of this Stormwater Management Plan are to:

- Detail the proposed stormwater quality management strategy and how the load reduction objectives specified by the State Planning Policy (SPP, DSDIP 2017) are achieved during the operational phase of the development.
- Consider suitable Stormwater Quality Improvement Devices (SQID's) based on Water Sensitive Urban Design (WSUD) principles.
- Ensure the development achieves non-worsening principles of stormwater flows downstream of the site.
- Demonstrate how the lawful point of discharge requirements for the site will be achieved.

The proposed Plan of Subdivision and concept engineering plans can be found in **Appendix A**.

1.1. Site Location

The proposed development is located approximately 1.6 km to the east of the Beaudesert CBD with a total land holdings area covering 9.387 ha. The site locality plan is shown in **Figure 1-1.** The site is consistent with rural land use with a majority of the site covered with sporadic vegetation and grassed clearings. The site fronts Oakland Way the west, private land to the north and east, and existing stages 1 – 8 to the south (refer **Figure 1-3**).

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Figure 1-1: Site Location

1.2. Flood Hazard Overlay and Overland Flow

The site is not impacted by Flood Hazard Area overlay (OM6) as highlighted in **Figure 1-2**.

Figure 1-2: Flood Hazard Overlay (OM6) (Source: Scenic Rim Regional Council Interactive Mapping).

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1.3. Lawful Point of Discharge

As outlined by the Queensland Urban Drainage Manual (4th Edition – Institute of Public Works Engineering Australasia, Queensland Division) a test can be undertaken to determine whether a lawful point of discharge exists:

The criteria for determining the lawful point of discharge (LPOD) are:

(i) Will the proposed development alter the site's stormwater discharge characteristics in a manner that may substantially damage a third-party property (see Section 3.6)?

- If not, then no further steps are required to obtain tenure for a lawful point of discharge (assuming any previous circumstances and changes were lawful).

It is proposed that discharge of runoff from the proposed development site will be collected internally and discharged as follows:

A. Outlet A – A detention basin is proposed at the southwestern corner of the site to control flows from the southern portion of the development, maintaining them at pre-development levels. Runoff, including up to the 1% AEP event, will be discharged to road and drainage at Oakland Way.
B. Outlet B – Internal site runoff will be redirected toward the detention basin at Outlet A, thereby reducing the flow to Outlet B. External flows will bypass the development and discharge to Oakland Way, consistent with existing conditions.
C. Outlet C – An underground detention tank at the northwestern corner of the site will control runoff from the northern portion of the development, maintaining flows at pre-development rates. Runoff, including up to the 1% AEP event, will be discharged to road and drainage at Oakland Way.

A summary of discharge locations is provided in **Figure 1-2**. It is considered that discharge from the site will be managed in such a manner as to not substantially damage third party property, and as a result it is considered suitable lawful points of discharge has been identified and achieved.

To ensure that the above LPOD objectives have been met by the proposed development, hydrologic modelling has been undertaken. Refer **Section 3** for further discussion.

1.4. Stormwater Management Strategy

1.4.1. Water quantity

On-site flows will be directed via internal roads and drainage toward Outlets A and C, with major flows (up to the 1-in-100-year event) conveyed through piped drainage. At each outlet, flow rates will be managed to discharge below pre-development rates. The hydrologic assessment determined that a detention volume of 4410 m³ is needed for the basin at Outlet A and 600 m³ for the underground tank at Outlet C to meet these requirements. See **Section 3** for further details.

External flows will be managed via catch drains at the edge of the development, where flows will directed to stormwater infrastructure to bypass the development.

1.4.2. Water quanlity

A bioretention basin constructed in the southern area as part of the Stage 4 works has been designed, along with supporting stormwater pipe infrastructure, to accommodate runoff from future development stages, including the area within the site (developed catchment A2). Therefore, as part of the water quality strategy a small portion of the site to the southeast will be diverted to the existing water treatment device.

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The rest of the internal site is proposed to be treated on site with stormwater quality treatment devices specified in accordance with water quality modelling (refer **Section 4**). For the northern portion of the site (Catchment C), the treatment train that includes six (6) OceanGuard gully baskets and ten (10) PSORB StormFilters manufactured by Ocean Protect. Treatment flows (Q1 year) from the southern portion of the site will be directed to bioretention co-located in the base of the detention basin at the south-western corner of the site. A total bioretention filter area of 800 m^2 is proposed to meet water quality objectives at the site.

Refer **Figure 1-3** for and overview of the stormwater management strategy.

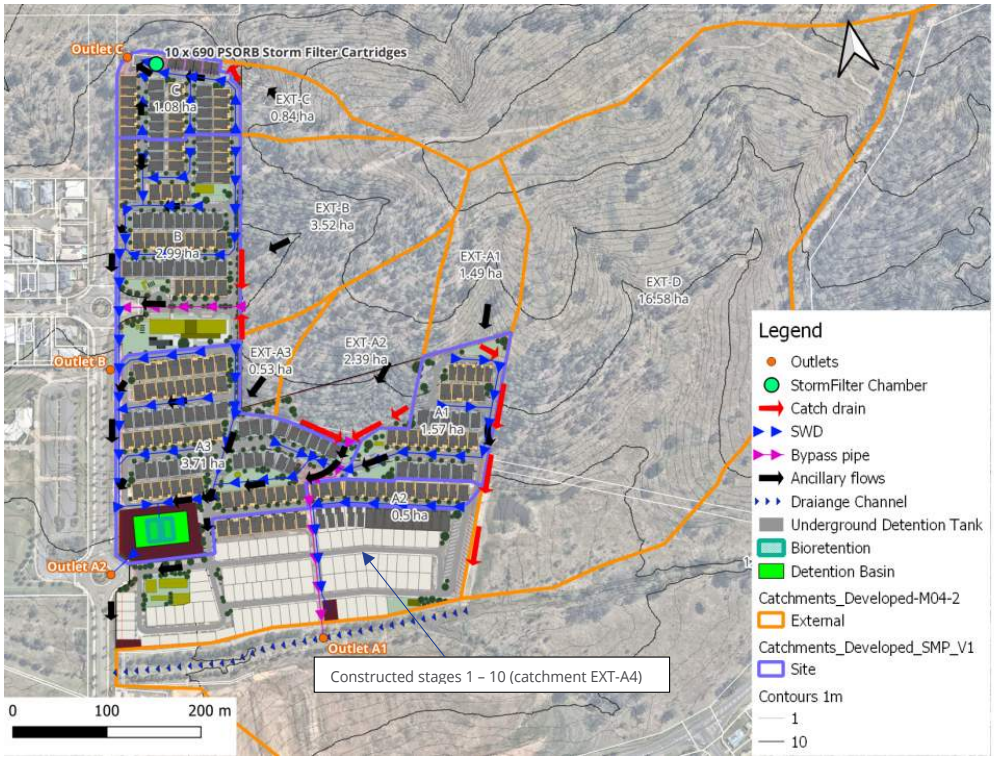

Figure 1-3: Stormwater Management Strategy - Overview

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2. Available Data

The data detailed in Figure 2-1 was reviewed and used in this assessment.

Figure 2-1: Summary of Study Data

ID	Data	Description
1	Digital Elevation Model	1 metre resolution digital elevation model (DEM) based on Aerial LiDAR survey captured by State of Queensland (Department of Resources) in 2019 (vertical accuracy of +/- 300mm [2 sigma error rate])
2	Aerial Photograph	Nearmap aerial Imagery
3	Lot Layout	Masterplan of the proposed development (15 November 2024) by OGE Group Achitects (23032-DA_2 Issue B)
4	Engineering Layout	AutoCAD layout of proposed development (29 November 2024 by Colliers Engineering & Design – 24-0241).

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3. Stormwater Quantity

The objective of this component of the study is to investigate the potential impact that the proposed development will have on peak flows discharging downstream of the site and any associated impacts of the proposed layout.

3.1. Hydrologic Model

Drains by Watercom has been used to undertake a hydrologic assessment of the catchment. The (latest version (July 12, 2024) has been used for this investigation, which utilises ARR2019 hydrology. Bureau of Meteorology IFD was utilised in enveloped format for the investigation.

Hydrologic modelling was simulated for events from 63.2% to 1% AEP and for durations of 15 minutes to 6 hours using the hydrological model. Modelling has been setup to be consistent with AR&R Datahub modelling parameters, with catchment lag parameter of 1.6 being applied to the model setup and rainfall losses applied as per **Figure 3-1**. Pre-burst rainfall with median depths was applied to the hydrological model.

Figure 3-1: Storm Losses

Initial Loss (mm)	Continuing Loss (mm/hr)
35	2.7

The following scenarios have been investigated:

1. Existing Scenario
2. Developed Scenario
3. Mitigation Scenario

3.2. Existing Scenario

The catchment area and fraction impervious values have been calculated using existing rural land-use. **Figure 3-8** shows the catchment delineation with a summary of parameters shown in **Table 3-1**. The model drains model layout is shown in Figures

Internal site catchments “A1” to “A3”, “B” and “C” convey flows to outlet A, B and C respectively. The subject site catchments presented in **Table 3-1** are highlighted **bold**, external catchments are highlighted yellow and routing between outlet nodes is shown *grey*.

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Table 3-1 - Summary of Existing Catchment Parameters

Sub-Catchment	Area (ha)	Imperviousness (%)
EXT-A1	1.97	0.0
EXT-A2	2.13	0.0
EXT-A3	0.81	0.0
EXT-B	3.55	0.0
B	**3.07**	**0.0**
EXT-C	0.93	0.0
EXT-D	16.10	0.0
EXT-D2	121.82	29.35
A1	**1.20**	**0.0**
A2	**1.16**	**0.0**
A3	**3.25**	**0.0**
EXT-A4	4.13	85.0
C	**1.03**	**0.0**
OUT-B	-	-

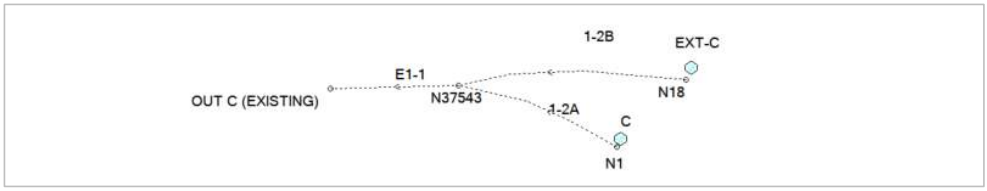

Figure 3-2: Northward draining catchment – DRAINS Existing Scenario Layout

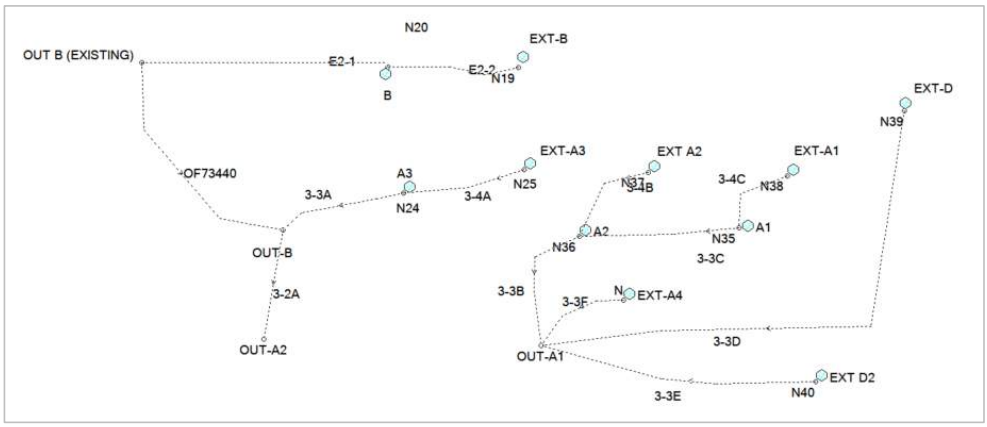

Figure 3-3: Southwards draining catchments – DRAINS Existing Scenario Layout

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3.2.1. External Catchments

External catchments are represented in the existing scenario as summarised below.

- **EXT-A1, EXT-A2 and EXT-A3** encapsulates rural residential land to the north of the site that drains southwards towards catchment A1, A2 and A3 respectively. Impervious values have been adopted as zero (0) based upon nearmap aerial imagery.
- **EXT-B** drains to the west and reports to site catchment B.
- **EXT-C** drains northwest and bypasses internal catchment C.
- **EXT-D and EXT-D2**: EXT-D was assigned an impervious value of zero based upon aerial nearmap imagery. Hydrological modelling previously undertaken by O2 Environment & Engineering (2012), defined parameters for the catchments contributing flows to the drainage channel to the south of the site. Refer Figure-3-4 and Figure 3-5 for details. These parameters were adopted to create a lumped catchment, EXT- D2, to the southwest of the site.

Figure-3-4: EXT-D2 external catchment parameters (Excerpt from Table 2, Source: Oaklands, Beudesert – Detention Basin Design Memo, O2 Environment + Engineering, 2013)

Catchment	Area (ha)	Lots		Road		School/ Service station		POS		Fraction Impervious
		Area (ha)	fi	Area (ha)	fi	Area (ha)	fi	Area (ha)	fi	
D01	14.66	13.05	0.52	1.61	0.70	-	-	-	-	0.54
D02	6.21	4.00	0.63	2.22	0.70	-	-	-	-	0.66
D03	7.56	5.76	0.52	1.80	0.70	-	-	-	-	0.56
D04	9.26	6.93	0.90	2.33	0.70	-	-	-	-	0.85
D05	2.83			0.27	0.70	1.00	0.90	1.56	0.00	0.38
D06	11.86	1.50	0.52	0.41	0.70	7.00	0.35	2.95	0.00	0.30
D07	12.97	12.75	0.52	0.22	0.70	-	-	-	-	0.52
D08	1.23	1.23	0.00	-	-	-	-	-	-	0.00
D09	29.09	29.09	0.00	-	-	-	-	-	-	0.00
D10	27.22	27.22	0.20	-	-	-	-	-	-	0.20
D11	22.73	22.73	0.30	-	-	-	-	-	-	0.30
D12	26.99	26.99	0.45	-	-	-	-	-	-	0.45
D13	2.52	2.52	0.00	-	-	-	-	-	-	0.00

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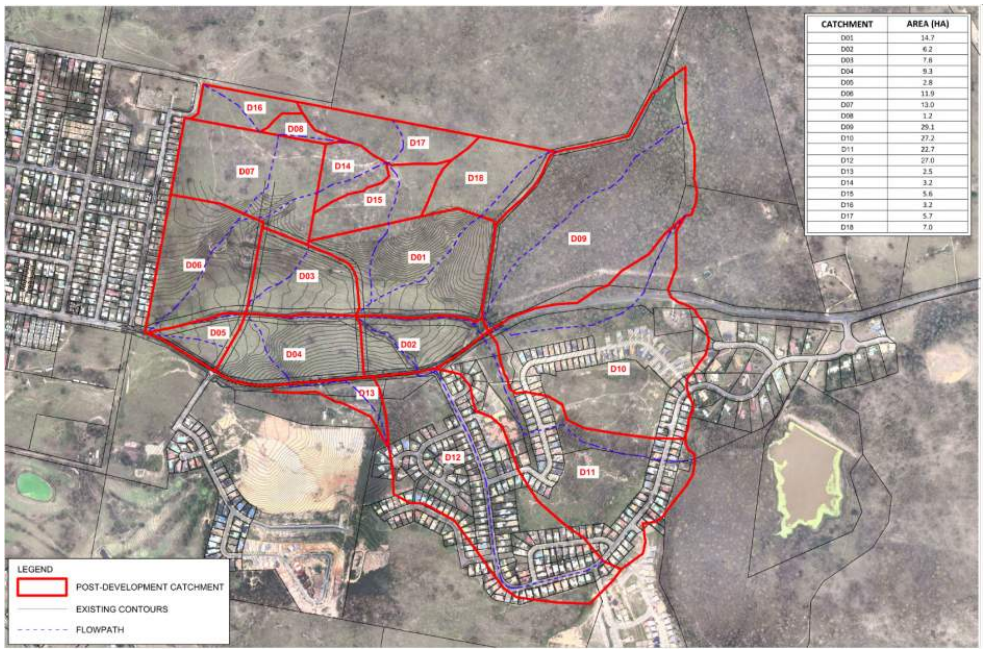

Figure 3-5: Catchment Map & Peak flow rates (Source: Oaklands, Beudesert – Detention Basin Design Memo, O2 Environment + Engineering, 2013)

External flows will be managed via catch drains at the edge of the development, where flows will directed to stormwater infrastructure to bypass the development. As part of previous stage 4 works to the south, a 3000 x 600 RCBC has been provided through a drainage easement that discharges to drainage channel to the south (refer **Figure 3-6** below). External runoff that reports to the southern portion of the site will be conveyed via bypass stormwater pipe with Q100 capacity to this drain. All other external flows will be conveyed via internal stormwater pipe network.

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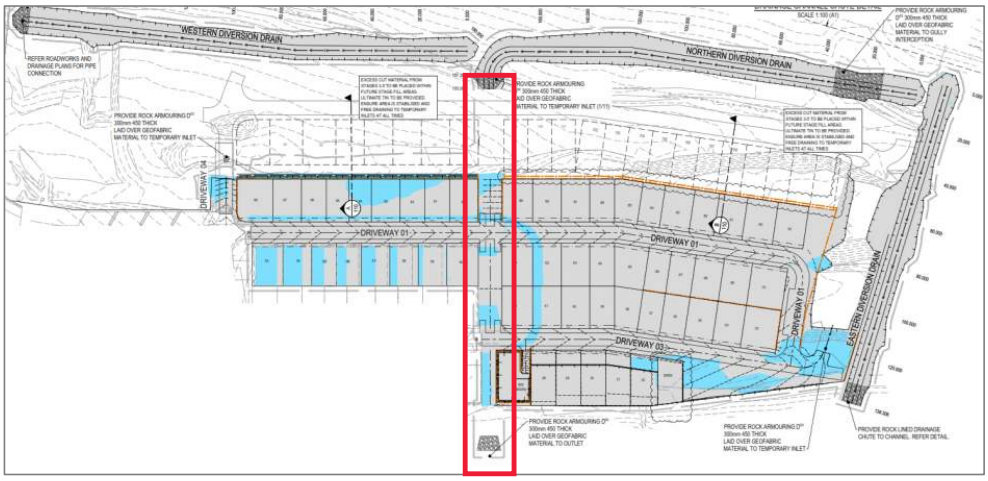

Figure 3-6: Drainage easement (highlighted) within constructed stages 2-8 to the south. (Source: Drawing 22-0580 -104 [Rev 7] by Colliers Engineering and Design)

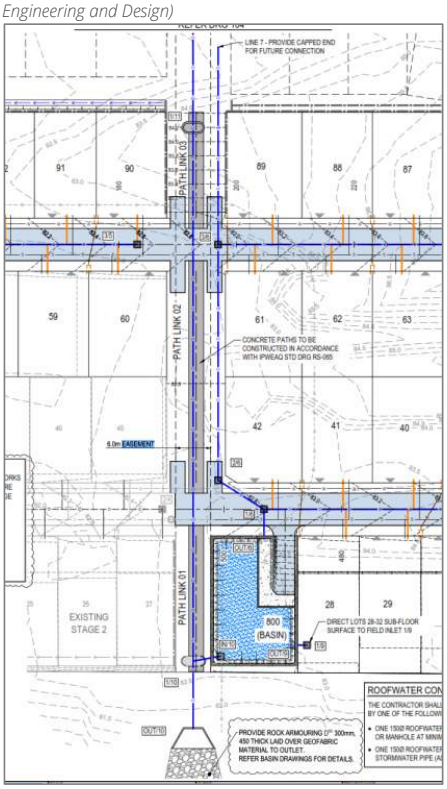

Figure 3-7: Constructed 3000 x 600 RCBC to the south. (Source: Drawing 22-0580 -112 [Rev 6] by Colliers Engineering and Design)

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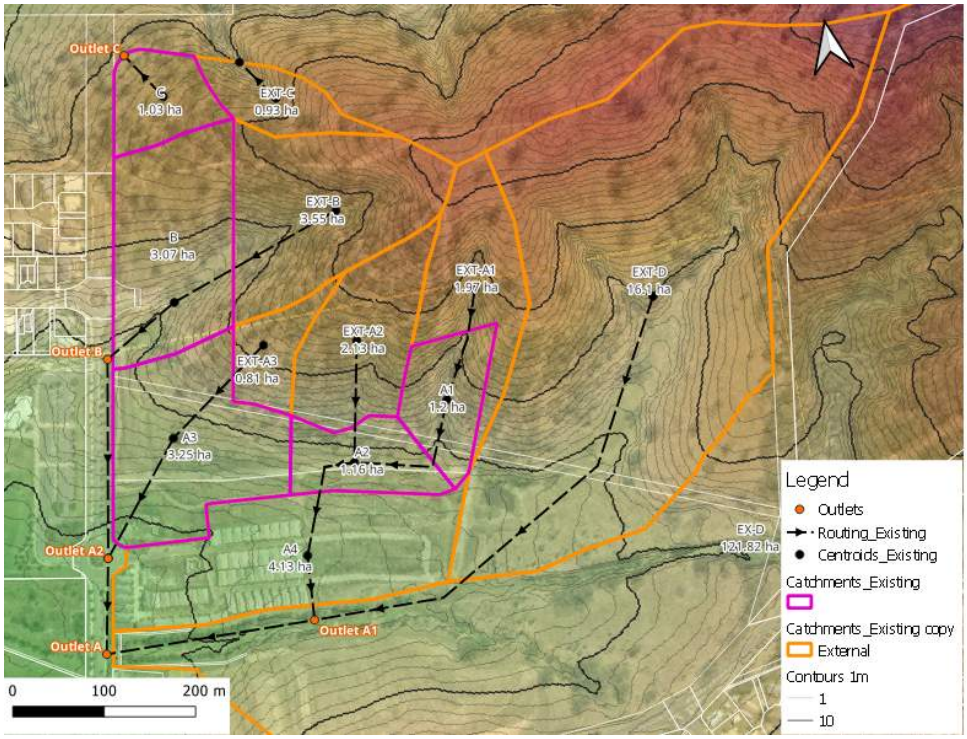

Figure 3-8: Existing Catchment Plan

3.2.2. Existing Scenario Results

Peak existing case discharge values for the critical storms is summarised in Table 3-2 at the site outlet locations. This scenario forms the basis for which impacts of the development have been assessed.

Table 3-2: Existing case peak flow results

Sub-catchment	Storm Event (% AEP)						
	63.2%	50%	20%	10%	5%	2%	1%
Outlet A1 - peak flow (m^3/s)	6.07	6.90	9.55	11.70	14.40	18.20	21.20
Outlet A2 - peak flow (m^3/s)	0.24	0.36	0.83	1.16	1.61	2.10	2.50
Outlet B - peak flow (m^3/s)	0.15	0.22	0.51	0.71	0.97	1.25	1.53
Outlet C - peak flow (m^3/s)	0.04	0.08	0.21	0.27	0.38	0.50	0.59

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3.2.3. Rational Method Validation

Catchment D2 was validated against the rational method. The difference between peak flows were typically within an acceptable range across assessed events.

Table 3-3: Comparison of DRAINS and Rational Method Peak Flows (Outlet B) – existing flows

Event AEP (%)	63.2	50	20	10	5	2	1
Drains (m^3/s)	6.07	6.90	9.55	11.70	14.40	18.20	21.20
Rational Method (m^3/s)	6.75	6.95	10.57	13.11	15.80	20.25	23.46
Difference (%)	10%	1%	10%	11%	9%	10%	10%

A summary of rational method calculations is provided in **Appendix B**.

3.3. Developed Scenario

Adjustments to the Existing Scenario sub-catchments were made to reflect the impacts of the proposed development. This scenario is referred to as the 'Developed Scenario' herein. The following changes are represented in the developed scenario:

- A2 is connected to the existing stormwater infrastructure constructed through the developed area to the south and discharges to the drainage channel downstream.
- External catchments EXT-B, EXT-A1 & EXT-A2 are bypassed around the development to existing stormwater infrastructure downstream.
- Catchment B is rerouted to the south through Q100 stormwater drain within drainage easement towards Outlet A to the south. Flows therefore bypass outlet-B.
- Catchment A1 and A3 are directed via internal stormwater pipe with Q100 capacity to Outlet A.

The changes in catchment parameters are detailed in **Table 3-2**, with differences between models highlighted in **bold**. The developed catchment plan is presented in **Figure 3-11**.

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Table 3-4: Summary of Developed Catchment Parameters

Developed Scenario		
Sub-Catchment	Area (ha)	Imperviousness (%)
EXT-A1	**1.49**	0
EXT-A2	2.39	0
EXT-A3	**0.53**	0
EXT-B	**3.52**	**0**
B	**2.99**	**80**
EXT-C	**0.84**	**0**
EXT-D1	**16.59**	**0**
EXT-D2	121.82	29.35
A1	**1.99**	**85**
A2	**0.50**	**80**
A3	**3.29**	**80**
EXT-A4	4.13	85
C	**1.08**	**85**
OUT-B	-	-

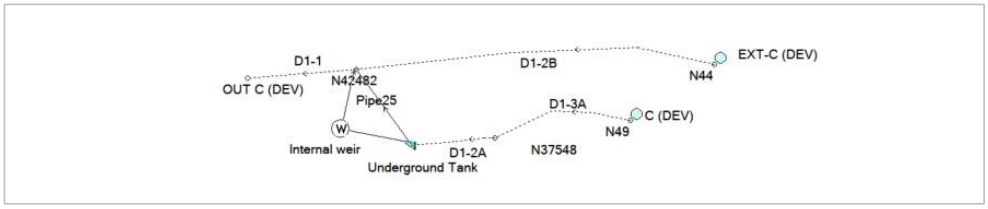

Figure 3-9: Northward draining catchments – DRAINS Developed Scenario Layout

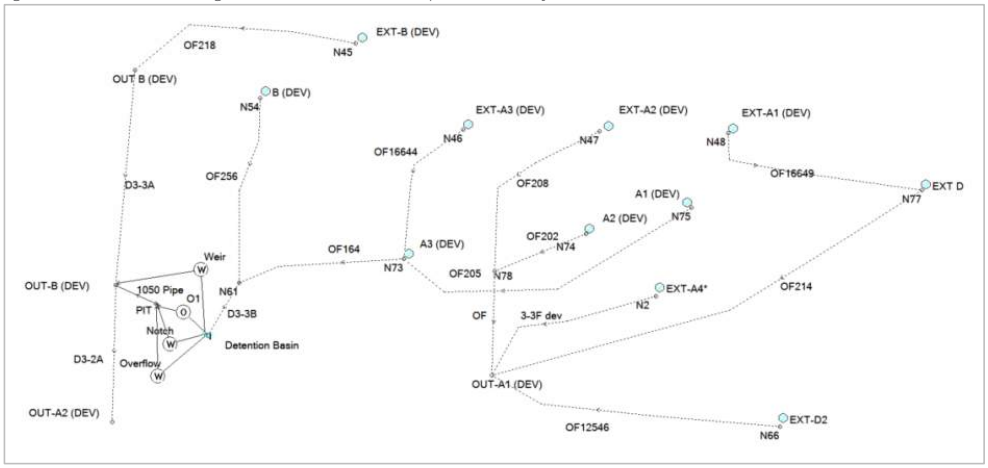

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Figure 3-10: Southward draining catchments – DRAINS Developed Scenario Layout

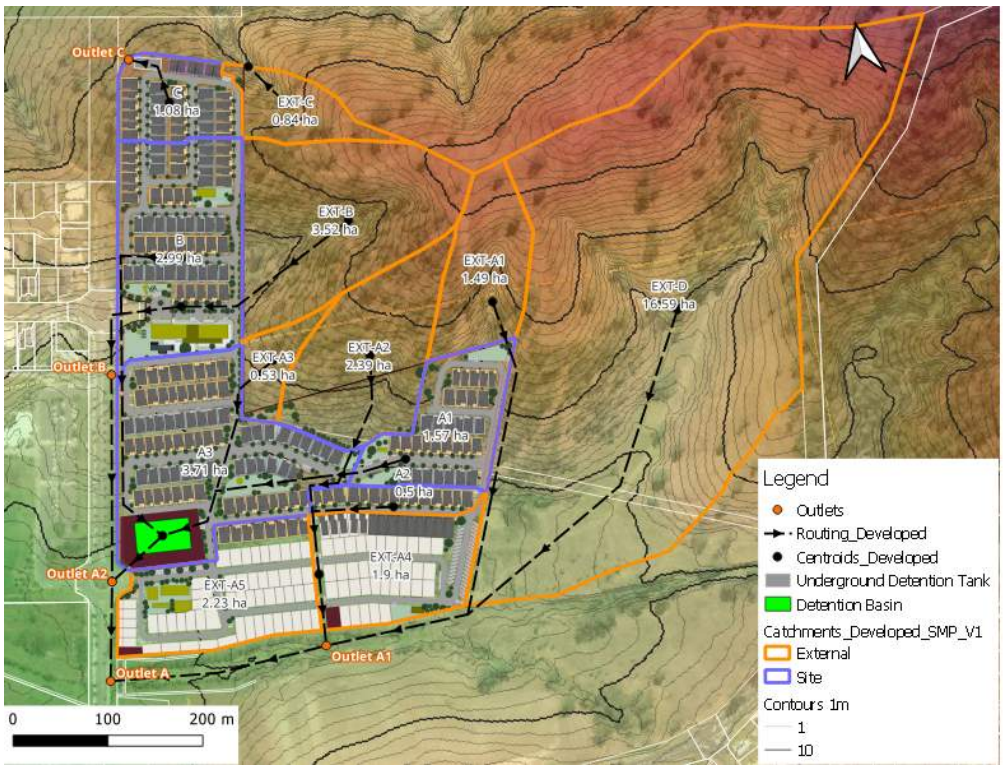

Figure 3-11: Developed Catchment Plan

3.3.1. Mitigation Structures

To achieve non-worsening and meet lawful point of discharge requirements, the following mitigation measures have been included in the mitigation scenario:

- A detention basin proposed within catchment A3 to attenuate flows from the southern portion of the site. The detention basin will be co-located with bioretention for water quality treatment. Within the bioretention, the volume below extended detention depth is considered for water quality treatment only and does not contribute to overall detention storage modelled.

- An underground on-site detention (OSD) tank located in catchment C to attenuate flows from the northern portion of the site. A stormfilter chamber containing water quality treatment cartridges will be installed within the OSD, however does not contribute to the overall storage volume modelled for detention. A concept detail has been provided in **Figure 4-11** to demonstrate the configuration.

The proposed structure details are summarised in Table 3-5 for the basin, and Table 3-6 for the underground OSD tank. Concept Engineering Drawings of the basins are included in **Appendix A**.

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Table 3-5: Storage and Outlet Details of Detention Basin (Located at Outlet A2)

Basin - Storage		
Stage (m AHD)	**Height (m) above EDD**	**Storage (m³)**
80.20	0 – Extended Detention Depth (EDD)	2
80.56	0.36	374
80.92	0.72	847
81.28	1.08	1435
81.64	1.44	2148
82.00	1.80	3000
82.10	1.90	3261
82.20	2.00	3533
82.30	2.10	3815
82.40	2.20	4107
82.50	2.30	4410
Basin - Outlet Configuration		
Pipe Outlet	1 x 1050 dia RCP	
Bio overflow pipe	1 x 250 dia RCP at IL 79.0	
Overflow weir	1 x 1200 x 900 dome covered field inlet to finish at SL 82.05. Field inlet with two 1200mm wide notches along sides to RL81.60	
Emergency Spillway	10m wide – crest at RL82.25	
Batter Slopes	1 on 4 (max)	
Embankment Height (m)	2.3m above EDD	
1% AEP WSL (m AHD)	RL82.18	
1% AEP freeboard (mm)	320mm	
1% AEP WSL – Outlets blocked (m AHD)	RL82.49	

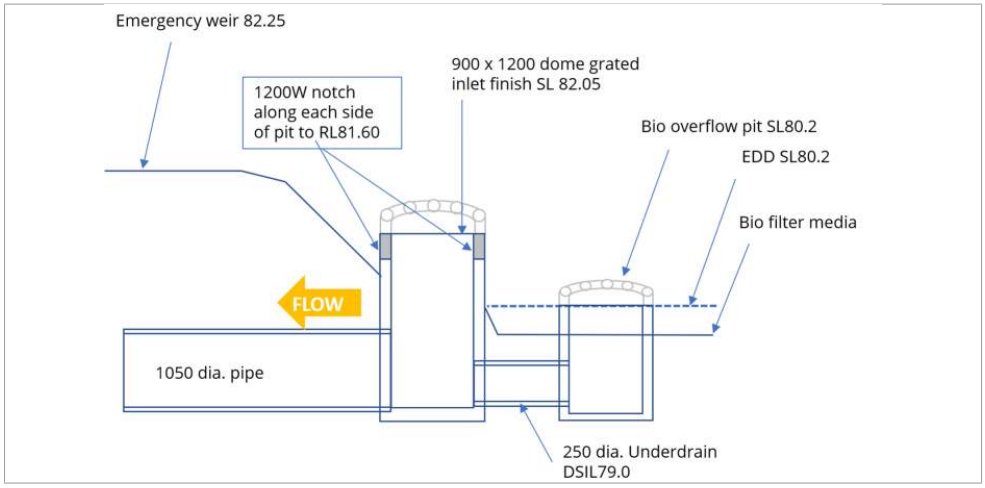

Figure 3-12: Outlet structure details – Detention Basin at Outlet A2

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Table 3-6: Storage and Outlet Details of underground on site Detention (OSD) tank – Outlet C

Tank - Storage		
Stage (m AHD)	**Height (m)**	**Storage (m³)**
101.2	0	0
101.5	0.3	120
101.8	0.6	240
102.1	0.9	360
102.4	1.2	480
102.7	1.5	600
Tank - Outlet Configuration		
Outlet	**Low flow outlet pipe** – 1 x 150 dia pipe at base of tank **Internal overflow weir** – 1m wide at 1m from base of tank (RL 99.0)	
1% AEP WSL (m AHD)	RL 102.37	
1% AEP WSL - Blocked low flow outlet pipe (m AHD)	RL102.43	

3.3.2. Developed Scenario Results

A comparison of the critical duration peak flows between the existing and mitigated scenarios are presented **Table 3-7** at site outlets. The results show a minor decrease in peak flows for the critical duration across all modelled events is predicted. Therefore, the results demonstrate that, by providing mitigation, discharge at outlet A and B can be successfully managed to ensure non-worsening downstream and achieved to satisfy the lawful point of discharge requirements.

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Table 3-7: Comparison of Mitigated Vs. Developed Case Peak Flows

Event AEP (%)	63.2	50	20	10	5	2	1
Outlet A1							
Existing Case (m^3/s)	6.07	6.90	9.55	11.70	14.40	18.20	21.20
Developed (m^3/s)	6.07	6.9	9.55	11.7	14.4	18.2	21.2
Difference (m^3/s)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Outlet A2							
Existing Case (m^3/s)	0.24	0.36	0.83	1.16	1.61	2.10	2.50
Developed (m^3/s)	0.24	0.29	0.53	1.03	1.49	2.07	2.50
Difference (m^3/s)	0.00	-0.07	-0.31	-0.13	-0.12	-0.03	0.00
Outlet B							
Existing Case (m^3/s)	0.15	0.22	0.51	0.71	0.97	1.25	1.53
Developed (m^3/s)	0.078	0.117	0.272	0.272	0.514	0.668	0.815
Difference (m^3/s)	-0.07	-0.10	-0.24	-0.43	-0.46	-0.58	-0.72
Outlet C							
Existing Case (m^3/s)	0.04	0.08	0.21	0.27	0.38	0.50	0.59
Developed (m^3/s)	0.044	0.059	0.128	0.194	0.302	0.389	0.507
Difference (m^3/s)	0.00	-0.02	-0.08	-0.08	-0.08	-0.11	-0.08

3.4. Waterway Stability

A requirement of the State Planning Policy (SPP) is to manage waterway stability in frequent 1 year ARI flood events. The objective of the SPP is to "limit the peak 1-year ARI event discharge within the receiving waterway to the pre-development peak 1-year ARI discharge".

The results of the hydrologic modelling found a minor decrease in the 1-year ARI peak flows at the outlet to the site (refer **Table 3-7**). Furthermore, the results in **Table 3-7** demonstrate that the flows to the drainage channel at Outlet A1 have been managed to existing flow rates. This satisfies the requirements of the SPP for waterway stability management.

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4. Stormwater Quality

4.1. Design Objectives

This report identifies the stormwater quality management objectives for the operational phase (post-construction phase) of the proposed development. Construction based stormwater quality management objectives will need to be addressed as part of operational works documentation.

The post-construction phase Water Quality Objectives for development is to be based on the load-based Water Quality Objectives (WQO's) stipulated in the State Planning Policy (DILGP, 2017) for the Southeast Queensland region, as shown in Figure 4-1 and achieving non-worsening when compared to the existing.

Figure 4-1: Site Stormwater Quality Objectives (Operational Phase)

Minimum reductions in mean annual loads from unmitigated development (%)			
Total Suspended Solids (TSS)	**Total Phosphorous (TP)**	**Total Nitrogen (TN)**	**Gross pollutants >5 mm**
80	60	45	90

4.2. Stormwater Quality

4.2.1. Strategy

The objective of this report is to assess the stormwater quality measures required based on the development layout to support the development application. Water quality will be managed at the site as follows:

- A bioretention basin constructed in the southern area as part of the Stage 4 works has been designed, along with supporting stormwater pipe infrastructure, to accommodate runoff from future development stages, including the area within the site (developed catchment A2). Therefore, as part of the water quality strategy a small portion of the site to the southeast will be diverted to the existing water treatment device. Refer **Figure 4-2** below.
- The rest of the internal site is proposed to be treated on site with stormwater quality treatment devices specified in accordance with MUSIC modelling. For the northern portion of the site (Catchment C), the treatment train includes six (6) OceanGuard gully baskets and ten (10) PSORB StormFilters manufactured by Ocean Protect. Treatment flows (Q1 year) from the southern portion of the site will be directed to bioretention co-located in the base of the detention basin at the south-western corner of the site. A total bioretention filter area of 750 m^2 is proposed to meet water quality objectives at the site.

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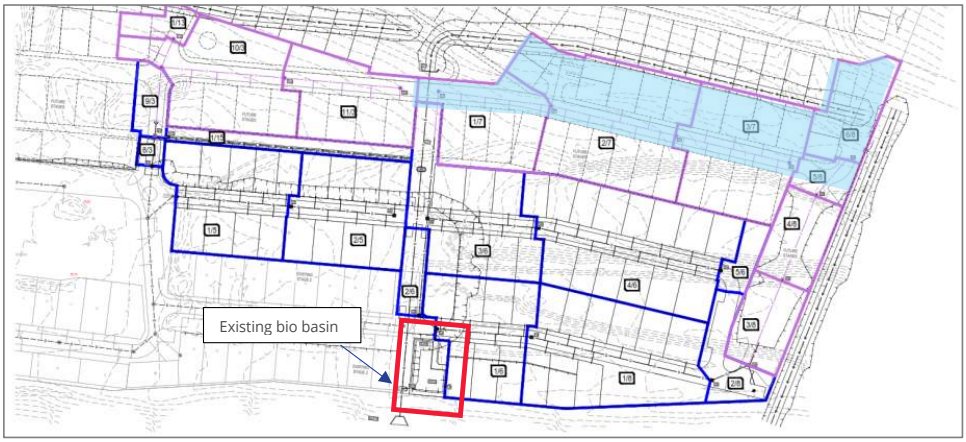

Figure 4-2: Future development area catered for in existing bio basin to the south.

4.2.2. MUSIC Parameters

An assessment of stormwater runoff quality from the existing conditions and proposed developed conditions has been undertaken using the Model for Urban Stormwater Improvement Conceptualisation (MUSIC) – Version 6.3, released in 2018.

Climate data for the catchment was sourced from the MUSIC model database. The rainfall and evaporation data template for this site has been based on data from Amberley (40004) from 1/1/1990 - 30/04/1999 with six (6) minute rainfall duration.

Figure 4-3 and **Figure 4-4** outline the adopted source node parameters from "MUSIC Modelling Guidelines" (Water By Design, 2010) that were used in the MUSIC model.

The site density of 40 dwellings per hectare, with the source nodes being assigned percentage impervious values based on 40 dwellings per hectare.

Figure 4-3: Urban land use (Split Source Nodes) – Pollutant Export Parameters

Land Use	Parameter	Total Suspended Solids (Log_{10} mg/L)		Total Phosphorous (Log_{10}mg/L)		Total Nitrogen (Log_{10}mg/L)	
		Storm Flow	Base Flow	Storm Flow	Base Flow	Storm Flow	Base Flow
Ground	Mean	2.18	1.0	-0.47	-0.97	0.26	0.20
	Std Deviation	0.39	0.34	0.31	0.31	0.23	0.20
Road	Mean	2.43	1.0	-0.30	-0.97	0.26	0.20
	Std Deviation	0.39	0.34	0.31	0.31	0.23	0.20
Roof	Mean	1.30	N/A	-0.89	N/A	0.26	N/A
	Std Deviation	0.39	N/A	0.31	N/A	0.23	N/A
Open Space/Rural	Mean	2.18	1.0	-0.47	-0.97	0.26	0.20
	Std Deviation	0.39	0.34	0.31	0.31	0.23	0.20

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Figure 4-4: MUSIC Runoff Generation Parameters

Parameter	Urban / Open Space
Rainfall Threshold (mm)	1
Soil Capacity (mm)	500
Initial Storage (%)	10
Field Capacity	200
Infiltration Capacity Coefficient a	211
Infiltration Capacity Coefficient b	5
Initial Depth (mm)	50
Daily Recharge (%)	28
Daily Drainage (%)	27
Daily Deep Seepage Rate (%)	0

4.2.3. Catchment Areas

The development site has been split into catchments containing split source nodes (road, roof and ground), with the ground source nodes representing open space and drainage reserves. **Figure 4-5** outlines the catchment areas and imperviousness represented within the MUSIC model. The stormwater quality catchments are provided in **Figure 4-6.**

Figure 4-5: Catchment Areas

Catchment	Total Area (ha)	Ground		Road		Roof	
		Area (ha)	Imp %	Area (ha)	Imp %	Area (ha)	Imp %
EXT-CAD-3	2.34	0.76	50.0	0.57	80.0	1.01	100.0
EXT-CAD-4	0.81	0.28	50.0	0.23	80.0	0.30	100.0
SITE-DEV1	5.13	1.84	50.0	1.42	80.0	1.96	100.0
SITE-DEV2	0.97	0.34	50.0	0.26	80.0	0.41	100.0
SITE-DEV3	0.84	0.34	50.0	-	80.0	0.39	100.0

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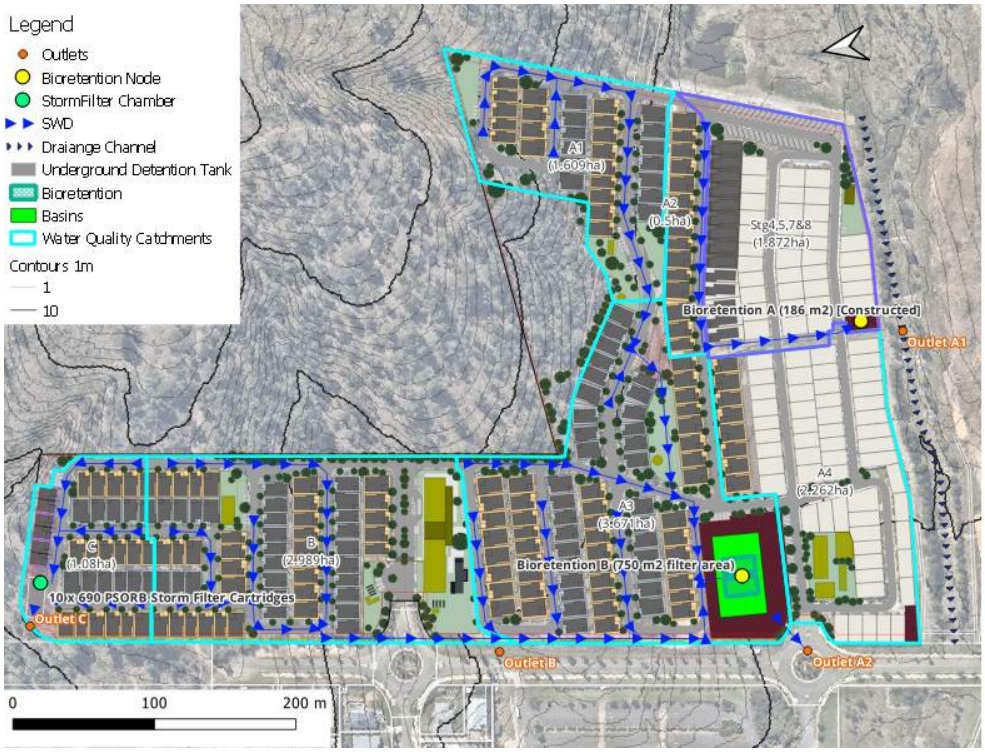

Figure 4-6: WSUD Catchment Locality Plan

4.2.4. MUSIC Model Layout

As the management of urban stormwater needs to take a holistic approach, specific management measures need to be implemented in series to form a treatment train. The correct utilisation of various devices within the treatment train is imperative to target the desired pollutants, from the gross solids to the fine colloidal partials. **Figure 4-7** shows the MUSIC model layout for the development.

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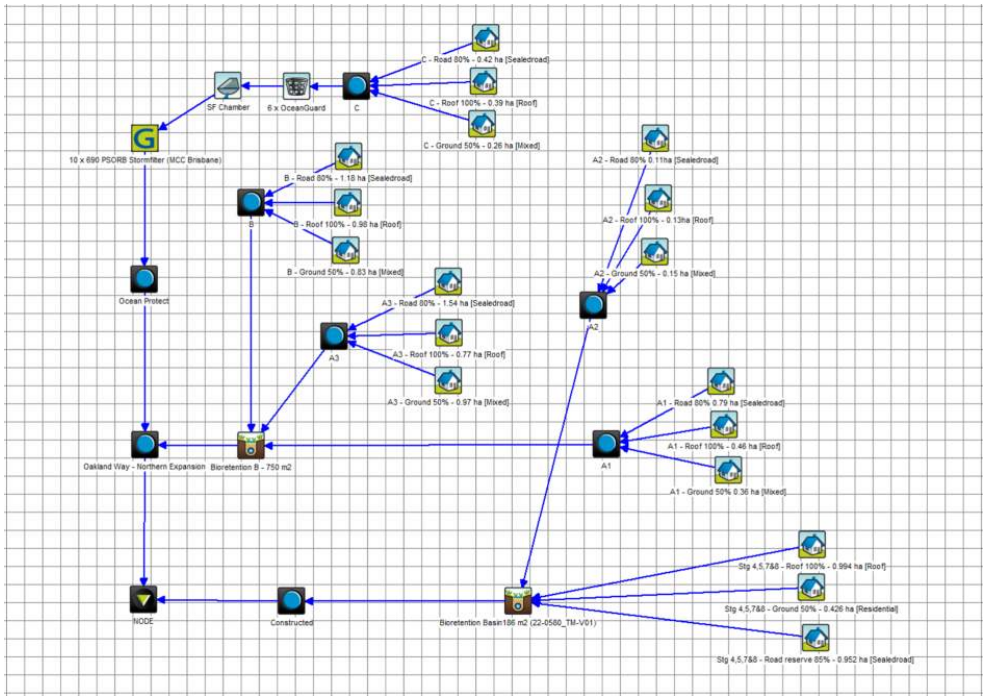

Figure 4-7: MUSIC Model Layout – Developed

4.3. Treatment Measures

4.3.1. Southern Catchments – Bioretention System

Runoff from catchment A1, A3 and B will be treated through a bioretention basin co-located in the detention basin, within the stormwater reserve (refer **Figure 4-6**). The bioretention filter area will be divided into 2 cells to limit the receiving catchment area to approximately 5 ha per filter area.

Bioretention systems use ponding above a treatment surface to maximise the volume of runoff flowing through the filtration media. They typically convey flows above the design event through overflow pits or a weir. The treatment system operates by firstly filtering surface flows through surface vegetation and then percolating runoff through prescribed filtration media. This media provides treatment through fine filtration, extended detention and biological uptake of nutrients.

As these systems take approximately 12-24hrs to drain, the maximum depth of pondage allowed to occur over the filter area has been limited to 300mm, with a minimum filter media depth of 500mm. **Figure 4-8** summ

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arises the proposed design parameters for the main bioretention system for this development. As noted above this may be split into several devices on detailed design. It is to be noted that the Orthophosphate content of the filter media has been reduced to 30mg/kg in line with recent advice from Healthy Waterways.

(http://healthywaterways.org/initiatives/waterbydesign/stormwater).

Figure 4-8: Bioretention Design Parameters

Parameter	Bioretention Basin A
Extended Detention Depth (m)	0.30
Storage Surface Area (m²)	750
Filter Media Area (m²)	750 (2 cells)
Unlined Filter Media Perimeter (m)	0.01
Saturated Hydraulic Conductivity (mm/hr)	200
Filter Depth (m)	0.5
TN Content of Filter Media (mg/kg)	400
Orthophosphate Content of Filter Media (mg/kg)	30
Exfiltration Rate (mm/hr)	0.0
Submerged zone with carbon present	Yes

4.3.1.1. Sediment Forebay

To ensure that the deposition of coarse sediment on the filter media surface does not affect the bioretention system function, bioretention systems should be designed with pre-treatment to limit the amount of coarse sediment reaching the filter media. As the basin has a contributing catchment area greater than 2 ha, forebays will be required.

4.3.2. Northern Catchment – Ocean Protect

Runoff from the catchment C will be treated through 10 x 690 Psorb StormFilters installed in a StormFilter chamber located within the underground detention tank. A diagram of the filters is shown in **Figure 4-10** and a concept detail of the stormfilter chamber within the underground OSD tank is shown in **Figure 4-11**. A summary of treatment node parameters is provided in Figure 4-9.

Figure 4-9: Childcare MUSIC treatment nodes

Catchment	Ocean Protect OceanGuard*	Ocean Protect 690 Psorb Stormfilter*
Catchment C	6 x 200 micron mesh bags (OG-200) High-flow bypass = 6 x 0.02 = 0.120 m³/s	10 x 690mm High-flow bypass = 10 x 0.0009 = 0.009 m³/s

The potential locality of the treatment devices servicing the development is shown in **Figure 4-6**.

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During a storm, runoff passes through the filtration media and starts filling the cartridge centre tube. The air inside the hood is purged through a one-way check valve as the water rises. When water reaches the top of the float, buoyant forces pull the float free and allow filtered water to exit the cartridge. A siphon is established within each cartridge that draws water uniformly across the full height of the media bed ensuring even distribution of pollutants and prolonged media longevity.

After a storm, the water level in the structure starts falling. A hanging water column remains under the cartridge hood until the water level reaches the scrubbing regulators at the bottom of the hood. Air then rushes through the regulators, breaking the siphon and creating air bubbles that agitate the surface of the filter media, causing accumulated sediment to settle on the treatment bay floor. This unique surface-cleaning mechanism prevents surface blinding and further extends cartridge life.

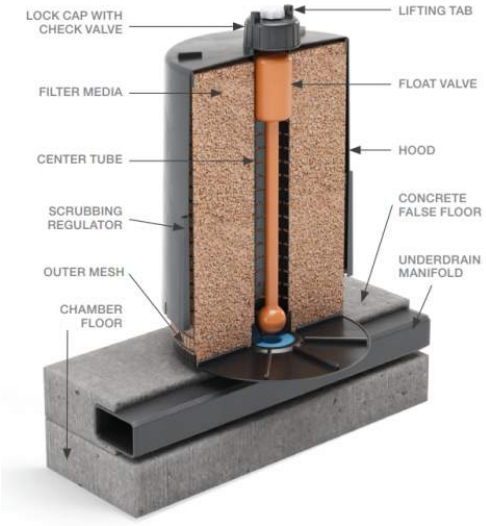

Figure 4-10: Ocean Protect Stormfilter

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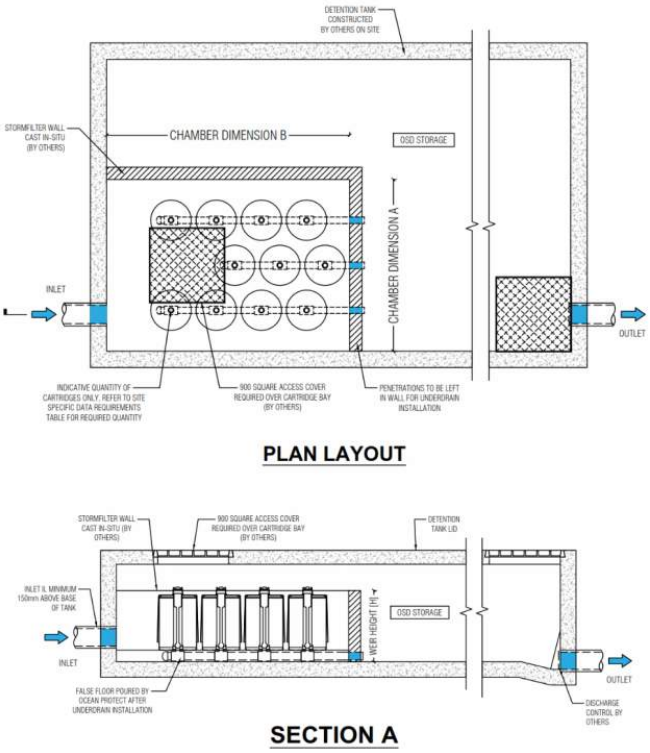

Figure 4-11: StormFilter chamber within underground OSD tank – concept detail

4.4. Results

Results of the MUSIC model is presented below, which demonstrates compliance with the load-based objectives.

4.4.1. Load Based Objectives

MUSIC modelling of the proposed treatment train was performed to ensure the WQO's were achieved. **Figure 4-12** presents the load-based outputs that are represented by this application. The results show the mitigated scenario, which achieves compliant load reductions set out within the State Planning Policy.

Figure 4-12: MUSIC Results – Load Based Pollutant Outputs

Pollutant	Unmitigated (kg/yr)	Mitigated (kg/yr)	Reduction Achieved (%)	Target Reduction	Compliance
TSS	13500	2280	83.1	80%	✓
TP	25.40	6.72	73.5	60%	✓
TN	128.0	65.4	48.7	45%	✓
GP	1780	0	100.0	90%	✓

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5. Construction Phase Management

5.1. Erosion & Sediment Control

The management of the site during the construction phase is an important step in ensuring water quality standards are achieved. Implementation of best practice Erosion and Sediment Control techniques is imperative to managing the quality of runoff affected by construction works.

The following points provide general guidance on the management of stormwater during the construction phase. Detailed Erosion and Sediment Control Management Plans should be developed in conjunction with the Operational Works design prior to construction works commencing in accordance with the International Erosion Control Association (IECA) - "*Best Practice Erosion and Sediment Control (BPESC) document*" and overseen by a Certified Professional in Erosion and Sediment Control (CPESC) or Registered Professional Engineer Queensland (RPEQ).

1. Establish a single stabilised entry/exit point for the site works;
2. Construct a shake-down grid at the entrance to facilitate the removal of sediment from trucks leaving the site. The access road extending from the end of existing road or kerb to the grid should comprise a 150-200mm deep pad of 40mm crushed rock;
3. Install sediment fences along the lower boundaries of the site;
4. Construct one or more strategically placed sediment basins in the proposed drainage reserve and construct contour drains / bunds to direct disturbed runoff to the sediment basins;
5. Install bins and/or wind-proof litter areas on-site to minimise the dispersion of gross pollutants;
6. Maintain on site sufficient materials necessary for the emergency repair of all erosion control devices. This includes silt fences, clean crushed rock for reapplication to the entrance road and for replacement of rock within temporary drainage channels, and flocculants for settling sediment basins;
7. Following each day's construction works, ensure that any material on road surfaces is swept from the road, and not permitted to be washed down the gutters and piped drainage systems;
8. Quality of pooled water within sediment basins are to be monitored prior to dewatering, sufficient time should be given to allow sediment to settle (possible with the assistance of a suitable flocculent if necessary) &/or filtering during pumping operations; and
9. Final establishment of bioretention basin should not occur until full stabilisation of upstream catchment has occurred; preferably these should be temporarily turfed during the maintenance period while dwelling construction is occurring.

It shall be the responsibility of the developer, through their principal contractor, to ensure that temporary sediment and erosion controls are installed and maintained correctly.

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6. Establishment and Operational Phase Management

6.1. Establishment

Experience shows that the critical periods in the life of WSUD vegetated stormwater systems are the construction and establishment phases. The timing and approach to these systems must be carefully considered to ensure successful establishment and long-term performance. Bioretention systems are now common stormwater treatment devices for new urban developments in Queensland. Successful construction and allowing adequate time for the systems to establish is critical to their long-term performance and function. Construction of the system is also linked to having suitable bioretention designs in place to ensure, civil contractors have appropriate plans to construct to. Applying due care in the design and construction phase will ensure the function of the system whilst also keeping on-going maintenance to a minimum. It is highly recommended that the constructed activities be completed in accordance with *the Construction and Establishment Guidelines: Swales, Bioretention Systems and Wetlands (Apr 2010).* This will require a sacrificial turf layer to be installed to protect the filter media from the building phase.

6.2. Operational

It is not proposed for water quality monitoring of the bioretention system to be undertaken during the operational phase of its life. The *"Maintaining Vegetated Asset"* guideline highlights that water quality monitoring is not recommended to determine the performance of every vegetated stormwater asset, as it is a specialised field that is complex and costly. In line with this guideline the on-going monitoring of water quality from this device is not considered necessary considering the small size of the development.

The bioretention system will be maintained by Ipswich City Council, who as the asset custodian, will be responsible for the on-going maintenance of the water quality device. Maintenance for the bioretention basin may involve the following:

1. Scheduled inspections;
2. Removal of noxious plants or weeds;
3. Maintaining the desired vegetation;
4. Repairing erosion;
5. Unblocking inlets and outlets;
6. Removing litter and debris;
7. Managing algal or moss growth; and
8. Maintaining the permeability of the filtration.

Operations and maintenance should be conducted in accordance with the *Maintaining Vegetated Stormwater Assets* (Feb 2012) guideline.

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7. Conclusion

Colliers Engineering & Design have been engaged by Ingenia Communities to provide a Stormwater Management Plan (SMP) in support of a development application to Scenic Rim Regional Council (SRRC). The application is over land located at Oakland Way Beaudesert, QLD 4285, currently described as Lot 802 on SP342583. This development application seeks a development permit for a a Material Change of Use (MCU) application for aged persons accommodation, driveways, park and drainage reserves.

The legal point of discharge requirements will be met via discharging to existing stormwater infrastructure provided within previous stages, constructed to the south, and stormwater pipe network within Oakland Way. The proposed arrangement results in no increased nuisance or adverse impacts to neighbouring properties. The assessment found that with the development of this site, that non-worsening has been demonstrated at the site outlets (refer **Table 3-7**).

It can be seen from the results, presented in **Figure 4-12**, that the proposed treatment train for the development site achieve the performance criteria set by Scenic Rim Regional Council and within the SPP (July 2017). Annual Load Reductions of Total Suspended Solids (TSS), Total Phosphorus, Total Nitrogen (TN) and Gross Pollutants (GP) between the Mitigated and Unmitigated Scenarios have been achieved.

This plan demonstrates that effective treatment of stormwater at the proposed development can be achieved through the integration of Water Sensitive Urban Design (WSUD) principles. Through the incorporation of water quality treatment and detention, the plan successfully demonstrates:

- Compliance with the requirements of the SPPs Load Based Objectives;
- The end-of-line bioretention basins are appropriately sized for the proposed development and can be incorporated into the development,
- Ecological sustainability in terms of the development's impact upon receiving waters and the viability of the proposed site development: and
- Small detention basin to ensure non-worsening of peak flows.

We therefore request Council approval of the engineering components for the proposed development with reasonable and relevant conditions. Detailed design may result in changes to the proposed strategy; however, the design objectives will be maintained.

Document Set ID: 12894588
Version: 1, Version Date: 10/12/2024

8. References

Commonwealth of Australia (Geoscience Australia). (2019). *Australian Rainfall and Runoff.*

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Water by Design. (2012). *Maintaining Vegetated Stormwater Assets.*

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Document Set ID: 12894588
Version: 1, Version Date: 10/12/2024

Appendices

Appendix A Reconfiguration of Lot Plan and Concept Engineering Drawings

Document Set ID: 12894588
Version: 1, Version Date: 10/12/2024

BEAUDESERT - SITE MASTERPLAN

COMMUNAL LEGEND

1 ***Main Clubhouse***
"Millers Homestead"
- Dance Floor / Function Hall
- Main Kitchen & Servery
- Bar / Lounge
- Recreation / Pool Tables
- Craft / Pool Tables
- Resort Style Pool & Spa
- Sauna
- Gym / Outdoor Yoga
- Formal Library
- Outdoor BBQ Area
- Outdoor Seating
- Hairdressing Salon
- Medical Consult Room
- Community Bus

2 ***Sports Precinct***
"Millers Yard"
- Bowling Green
- Pickleball Court
- Bocce
- Lap Pool

LEGEND

11000	**TYPE A1** *11 x 19m (FRONT ALFRESCO)*	34	10.8%
12000	**TYPE A2** *12 x 19m (FRONT ALFRESCO)*	30	9.2%
13000	**TYPE A3** *13 x 19m (FRONT ALFRESCO)*	25	7.7%
9000	**TYPE A4** *9 x 19m (FRONT ALFRESCO)*	34	10.2%
11000	**TYPE B1** *11 x 19m (REAR ALFRESCO)*	28	8.6%
12000	**TYPE B2** *12 x 19m (REAR ALFRESCO)*	24	7.4%
13000	**TYPE B3** *13 x 19m (REAR ALFRESCO)*	17	5.2%
9000	**TYPE B4** *9 x 19m (REAR ALFRESCO)*	13	4.0%
	TYPE C *12 x 19m (DUPLEX)*	6	1.8%
	EXISTING HOMES *SIZE VARIES*	113	32.4%
	TOTAL	**324**	

CAR 8500	**VIS CAR PARKING** *1 SPACE PER 5 DWELLINGS*	REQUIRED	66
		PROVIDED	70
CARAVAN	**CARAVAN PARKING** *1 SPACE PER 10 DWELLINGS*	REQUIRED	33
		PROVIDED	36

- COMMUNAL FACILITIES
- GREEN SPACE
- KOALA HABITAT AREA
- STORMWATER DETENTION
- WATER MAIN EASEMENT (existing)
- WATER MAIN EASEMENT (proposed)
- —W— WATER MAIN
- —D— STORMWATER DRAINAGE
- —S— SEWERAGE MAIN
- FENCE LINE
- WALKING TRACK

REV	DATE	DESCRIPTION	DRAWN	CHECKED
A	8/11/2024	Draft Development Approval	DH	
B	15/11/2024	Draft Development Approval	DH	

NOTE: Figured dimensions to be taken in preference to scaled. Verify all dimensions on site before commencing work or making shop drawings. When printing from electronic files it is the responsibility of the operator to ensure the required scale is achieved.

P R E L I M I N A R Y
N O T F O R C O N S T R U C T I O N

0 15 30 75 150
SCALE 1:3000

PROJECT
BEAUDESERT
27 Oakland Way, Beaudesert

DRAWING TITLE
SITE MASTERPLAN

CLIENT
INGENIA COMMUNITIES

PROJECT No. 23032
DATE 15/11/2024
DRAWING No. **DA_2**
SCALE @ A3 1:3000, 1:1
ISSUE No. **B**

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QLD Reg. No. 4212 NSW Reg. No. 11843
OGE Group Architects

Document Set ID: 12894588
Version: 1, Version Date: 10/12/2024

PROPOSED RESIDENTIAL DEVELOPMENT

INDEPENDENT LIVING UNITS
OAKLAND WAY, BEAUDESERT
FOR 'INGENIA COMMUNITIES'

DRAWING LIST

EARTHWORKS, ROADWORKS AND DRAINAGE

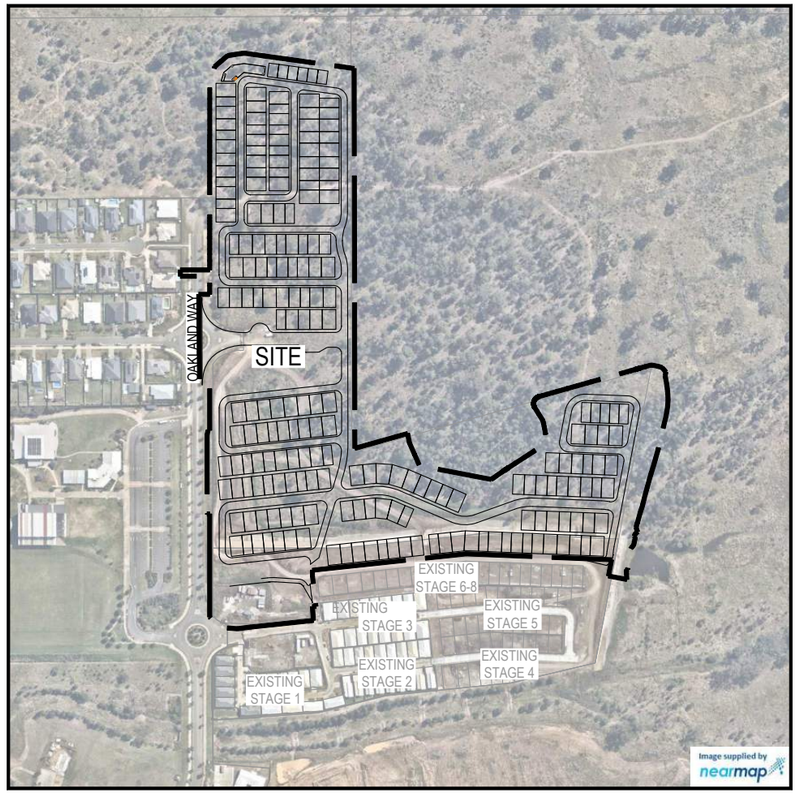
24-0241-P100	COVER PLAN
24-0241-P101	OVERALL LAYOUT PLAN
24-0241-P102	CONCEPT BULK EARTHWORKS LAYOUT PLAN SHEET 1 OF 4
24-0241-P103	CONCEPT BULK EARTHWORKS LAYOUT PLAN SHEET 2 OF 4
24-0241-P104	CONCEPT BULK EARTHWORKS LAYOUT PLAN SHEET 3 OF 4
24-0241-P105	CONCEPT BULK EARTHWORKS LAYOUT PLAN SHEET 4 OF 4
24-0241-P106	CONCEPT BULK EARTHWORKS TYPICAL SECTIONS SHEET 1 OF 2
24-0241-P107	CONCEPT BULK EARTHWORKS TYPICAL SECTIONS SHEET 2 OF 2
24-0241-P108	CONCEPT BULK EARTHWORKS TYPICAL DETAILS
24-0241-P109	CONCEPT ROADWORKS AND DRAINAGE LAYOUT PLAN SHEET 1 OF 4
24-0241-P110	CONCEPT ROADWORKS AND DRAINAGE LAYOUT PLAN SHEET 2 OF 4
24-0241-P111	CONCEPT ROADWORKS AND DRAINAGE LAYOUT PLAN SHEET 3 OF 4
24-0241-P112	CONCEPT ROADWORKS AND DRAINAGE LAYOUT PLAN SHEET 4 OF 4
24-0241-P113	CONCEPT TYPICAL DRIVEWAY CROSS SECTIONS
24-0241-P114	CONCEPT TYPICAL SERVICE ARRANGEMENT AND SECTION
24-0241-P115	CONCEPT DRIVEWAY 04 TYPICAL SERVICE ARRANGEMENT AND SECTION
24-0241-P116	CONCEPT OCEAN GUARD GULLY BASKET DETAILS

STORMWATER

24-0241-P200	CONCEPT STORMWATER CATCHMENT LAYOUT PLAN
24-0241-P201	CONCEPT BIO RETENTION AND DETENTION BASIN B LAYOUT PLAN
24-0241-P202	CONCEPT BIO RETENTION AND DETENTION BASIN B TYPICAL SECTIONS
24-0241-P203	CONCEPT UNDERGROUND DETENTION TANK LAYOUT PLAN AND SECTIONS

SEWERAGE AND WATER RETICULATION

24-0241-P300	CONCEPT SEWER AND WATER RETICULATION LAYOUT PLAN SHEET 1 OF 4
24-0241-P301	CONCEPT SEWER AND WATER RETICULATION LAYOUT PLAN SHEET 2 OF 4
24-0241-P302	CONCEPT SEWER AND WATER RETICULATION LAYOUT PLAN SHEET 3 OF 4
24-0241-P303	CONCEPT SEWER AND WATER RETICULATION LAYOUT PLAN SHEET 4 OF 4



LOCALITY PLAN
SCALE 1:2500 (A1)
SCALE 1:5000 (A3)

PROJECT INFORMATION SUMMARY:
No. OF LOTS = 324
AREA OF SITE = 10.97ha
RP DESCRIPTION LOT 4 ON SP 317420 LOT 802 ON SP 342583
DATUM LEVEL AND LOCATION P.S.M 200392 RL 93.944 AHD LOCATED
LOCAL AUTHORITY: SCENIC RIM REGIONAL COUNCIL
COUNCIL REFERENCE NUMBER: TBC

REV	DATE	DESIGN	DRAWN	REVISION DETAILS
A	28.11.24	JT	DH	ORIGINAL ISSUE

DRAWN

DESIGN

STATUS: FOR DEVELOPMENT APPLICATION NOT FOR CONSTRUCTION

APPROVED: DANIEL COLLINS RPEQ 18631 DATE: 28.11.24

FOR AND ON BEHALF OF COLLIERS INTERNATIONAL ENGINEERING & DESIGN PTY LTD

Colliers

SCALE: 1:2500 / 1:5000 — 50 0 50 100 — A1 / A3

CLIENT: INGENIA COMMUNITIES

ASSOCIATED CONSULTANT: SAUNDERS HAVILL GROUP 1300123744

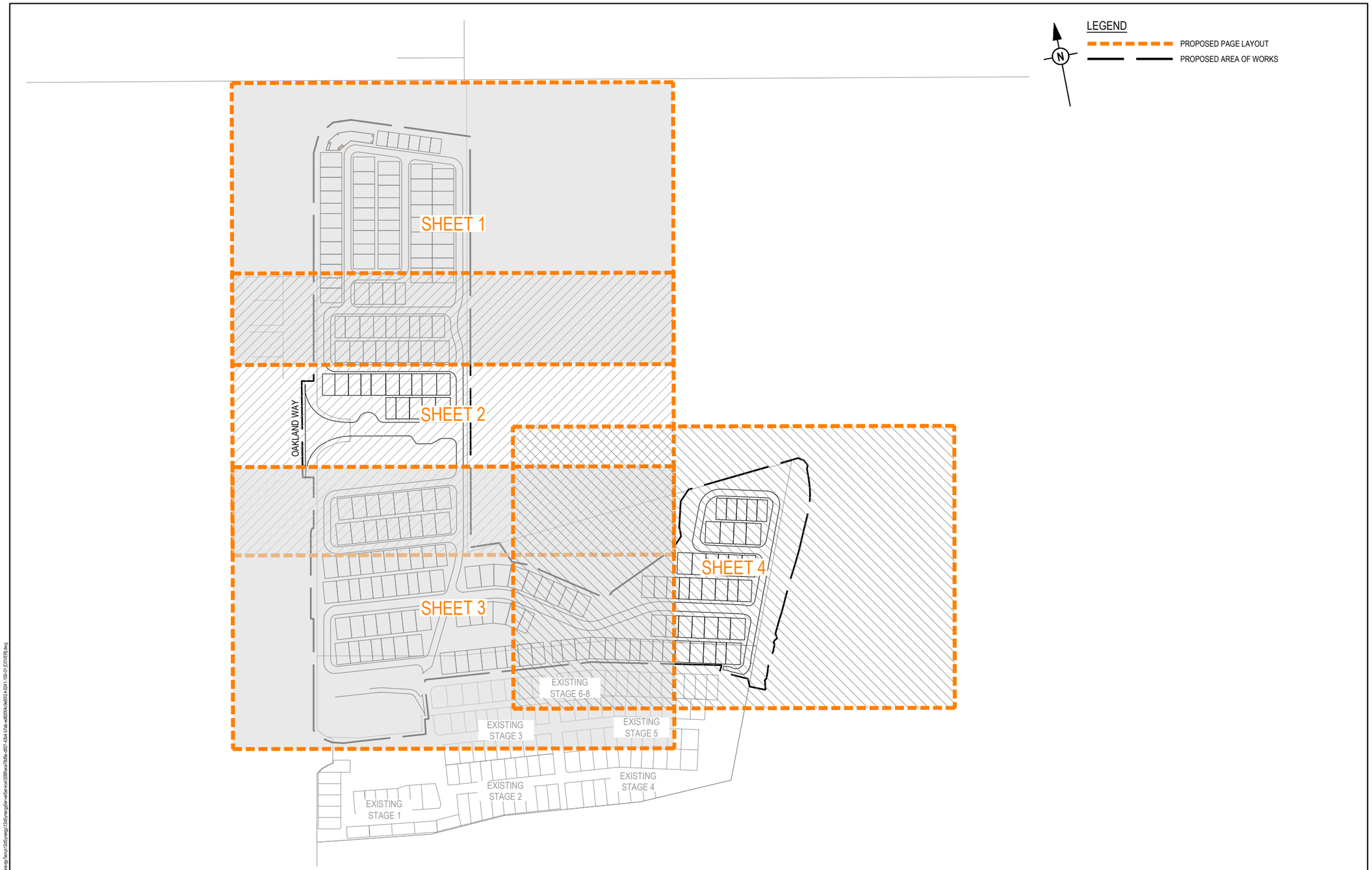
PROJECT NAME: MILLERS GLEN NORTHERN EXPANSION

OAKLAND WAY BEAUDESERT

DRAWING TITLE: COVER PLAN

PROJECT No.	DRAWING No.	REVISION
24-0241	P100	A

Document Set ID: 12894588
Version: 1, Version Date: 10/12/2024



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1:3000 A3

CLIENT: INGENIA COMMUNITIES

ASSOCIATED CONSULTANT: SAUNDERS HAVILL GROUP 1300123744

PROJECT NAME: MILLERS GLEN NORTHERN EXPANSION
OAKLAND WAY BEAUDESERT

DRAWING TITLE: OVERALL LAYOUT PLAN

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24-0241	P101	A

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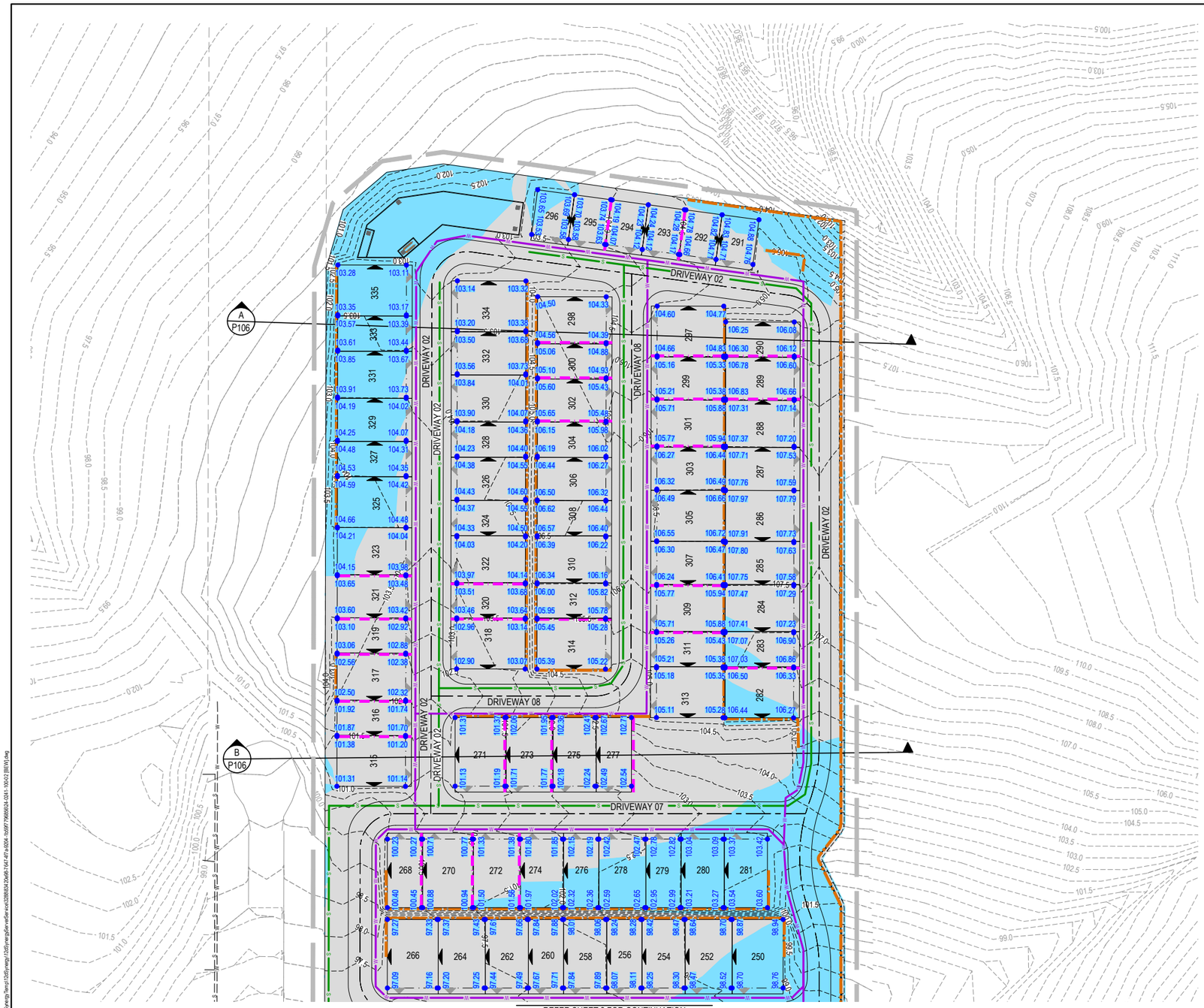

LEGEND

- PROPOSED AREA OF WORKS
- PROPOSED SURFACE CONTOUR
- EXISTING SURFACE CONTOUR
- PROPOSED EARTHWORKS PAD SETBACK LINE
- PROPOSED CONCRETE SLEEPER RETAINING WALL
- PROPOSED BUILDING INTERFACE ADJUSTMENT
- EXISTING SLEEPER RETAINING WALL
- PROPOSED FINISHED SURFACE SPOT LEVEL
- PROPOSED AREA OF CUT
- PROPOSED AREA OF FILL
- INDICATIVE DRIVEWAY LOCATIONS
- ZERO LOT BOUNDARY
- EXISTING STORMWATER DRAINAGE PIPE
- EXISTING ROOFWATER DRAINAGE PIPE
- EXISTING SEWER MAIN
- EXISTING WATER MAIN
- EXISTING WATER CONDUIT
- EXISTING ELECTRICAL CABLE U/G
- EXISTING TELECOMMUNICATION CABLE U/G
- EXISTING DRAIN

BUILDING AND LANSCAPING

ULTIMATE BUILDING AND LANDSCAPING WORKS (BY OTHERS) SHALL ENSURE ALL AREAS ARE FREE DRAINING

FINISHED FLOOR LEVELS (FFL) WILL BE DETERMINED AS PART OF THE ULTIMATE BUILDING WORK (BY OTHERS) AND SHALL CONSIDER RELEVANT BUILDING CODE REQUIREMENTS

EXISTING STOCKPILES

EXISTING STOCKPILES ON SITE TO BE REMOVED AND TREATED IN ACCORDANCE WITH GEOTECHNICAL ENGINEERS DETAILS.

EXISTING DAMS

EXISTING SITE DAMS TO BE DEWATERED AND UNSUITABLE MATERIAL REMOVED IN ACCORDANCE WITH SCENIC RIM REGIONAL COUNCIL SPECIFICATIONS.

KEY PLAN
SCALE 1:6000 (A1)
SCALE 1:12000 (A3)

REV	DATE	DESIGN	DRAWN	REVISION DETAILS
A	28.11.24	JT	DH	ORIGINAL ISSUE

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STATUS: FOR DEVELOPMENT APPLICATION NOT FOR CONSTRUCTION

APPROVED: DANIEL COLLINS RPEQ 18631 DATE: 28.11.24

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SCALE: 1:500 10 5 0 10 20 A1; 1:1000 A3

CLIENT: INGENIA COMMUNITIES

ASSOCIATED CONSULTANT: SAUNDERS HAVILL GROUP 1300123744

PROJECT NAME: MILLERS GLEN NORTHERN EXPANSION

OAKLAND WAY BEAUDESERT

DRAWING TITLE: CONCEPT BULK EARTHWORKS LAYOUT PLAN SHEET 1 OF 4

PROJECT No.	DRAWING No.	REVISION
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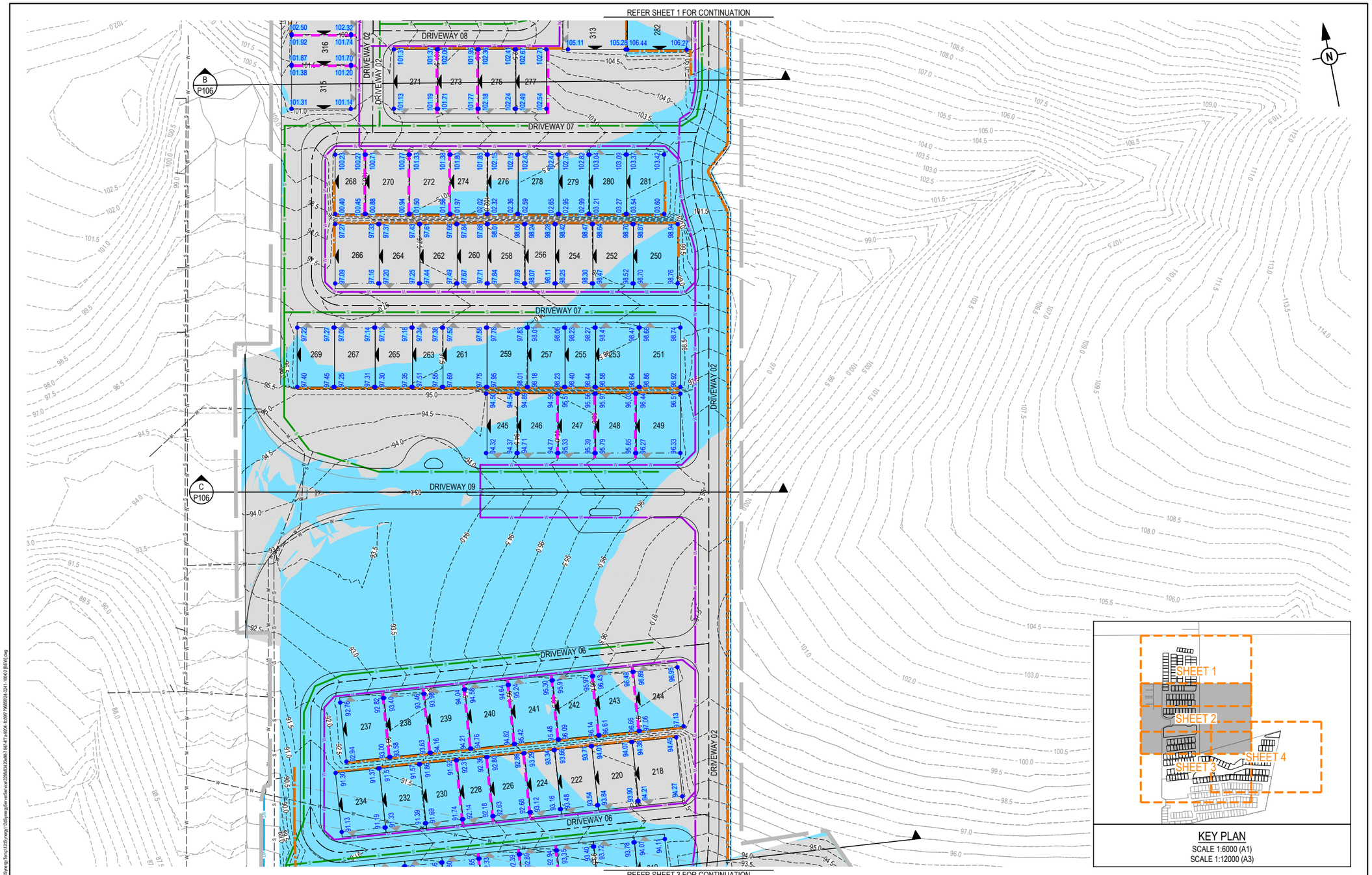
Version: 1, Version Date: 10/12/2024



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SCALE
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1:1000 A3

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INGENIA COMMUNITIES

ASSOCIATED CONSULTANT
SAUNDERS HAVILL GROUP
1300123744

PROJECT NAME
MILLERS GLEN
NORTHERN EXPANSION

OAKLAND WAY
BEAUDESERT

DRAWING TITLE
CONCEPT BULK EARTHWORKS LAYOUT PLAN SHEET 2 OF 4

PROJECT No.	DRAWING No.	REVISION
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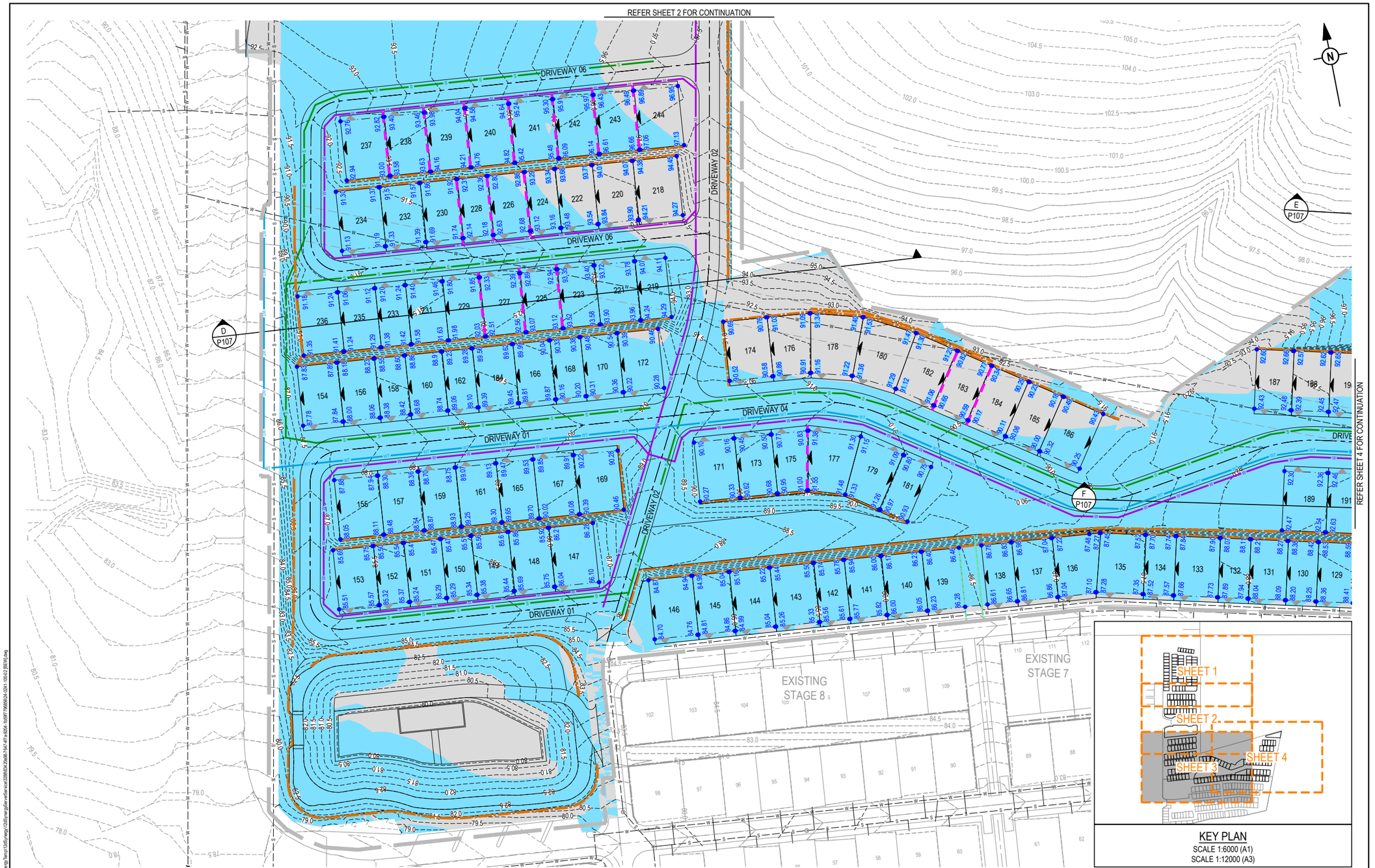
Version: 1, Version Date: 10/12/2024



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DESIGN

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Colliers

SCALE: 1:500 10 5 0 10 20 A1; 1:1000 A3

CLIENT: INGENIA COMMUNITIES

ASSOCIATED CONSULTANT: SAUNDERS HAVILL GROUP 1300123744

PROJECT NAME: MILLERS GLEN NORTHERN EXPANSION

OAKLAND WAY BEAUDESERT

DRAWING TITLE: CONCEPT BULK EARTHWORKS LAYOUT PLAN SHEET 3 OF 4

PROJECT No.	DRAWING No.	REVISION
24-0241	P104	A

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Document Set ID: 12894588
Version: 1, Version Date: 10/12/2024

REV	DATE	DESIGN	DRAWN	REVISION DETAILS
A	28.11.24	JT	DH	ORIGINAL ISSUE

DRAWN

DESIGN

STATUS
FOR DEVELOPMENT APPLICATION
NOT FOR CONSTRUCTION

APPROVED
DANIEL COLLINS RPEQ 18631 DATE 28.11.24

FOR AND ON BEHALF OF COLLIERS INTERNATIONAL ENGINEERING & DESIGN PTY LTD

Colliers

SCALE
1:500 10 5 0 10 20 A1
1:1000 A3

CLIENT
INGENIA COMMUNITIES

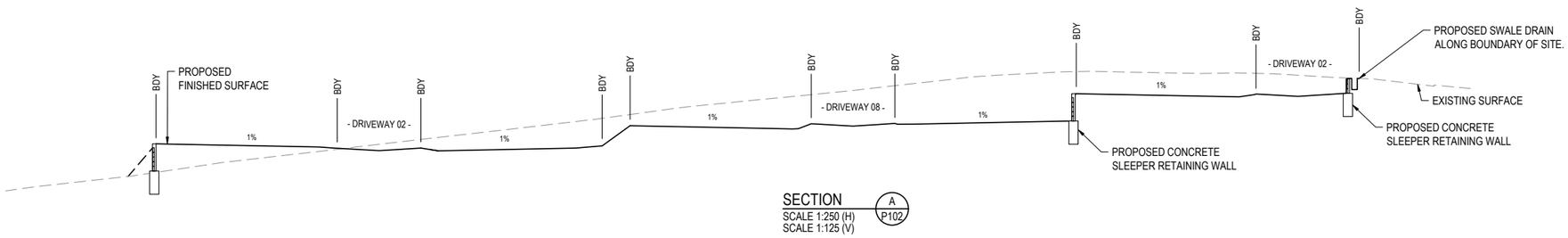
ASSOCIATED CONSULTANT
SAUNDERS HAVILL GROUP
1300123744

PROJECT NAME
MILLERS GLEN
NORTHERN EXPANSION
OAKLAND WAY
BEAUDESERT

DRAWING TITLE
CONCEPT BULK EARTHWORKS LAYOUT PLAN SHEET 4 OF 4

PROJECT No.	DRAWING No.	REVISION
24-0241	P105	A

Document Set ID: 12894588
Version: 1, Version Date: 10/12/2024



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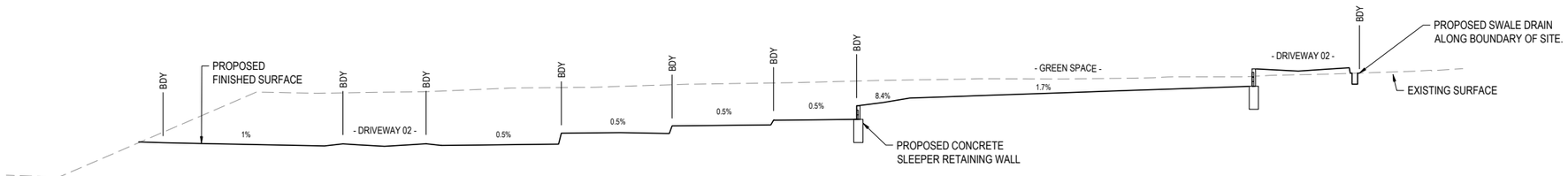
SCALE 1:125 (V)
P102



SECTION B
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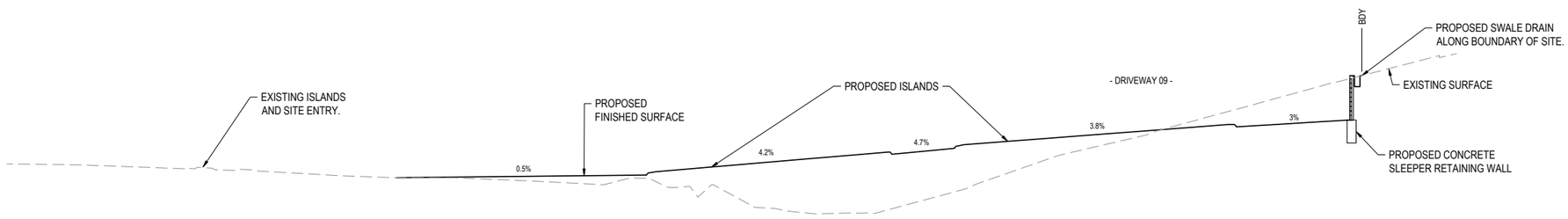
SCALE 1:125 (V)
P102



SECTION C
SCALE 1:250 (H)
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P102

REV	DATE	DESIGN	DRAWN	REVISION DETAILS
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DRAWN
DESIGN

STATUS: FOR DEVELOPMENT APPLICATION
NOT FOR CONSTRUCTION

APPROVED: DANIEL COLLINS RPEQ 18631 DATE: 28.11.24

FOR AND ON BEHALF OF COLLIERS INTERNATIONAL ENGINEERING & DESIGN PTY LTD

Colliers

SCALE
1:500 10 5 0 10 20 A1
1:1000 A3

CLIENT: INGENIA COMMUNITIES

ASSOCIATED CONSULTANT: SAUNDERS HAVILL GROUP 1300123744

PROJECT NAME: MILLERS GLEN
NORTHERN EXPANSION
OAKLAND WAY
BEAUDESERT

DRAWING TITLE: CONCEPT BULK EARTHWORKS
TYPICAL SECTIONS SHEET 1 OF 2

PROJECT No.	DRAWING No.	REVISION
24-0241	P106	A

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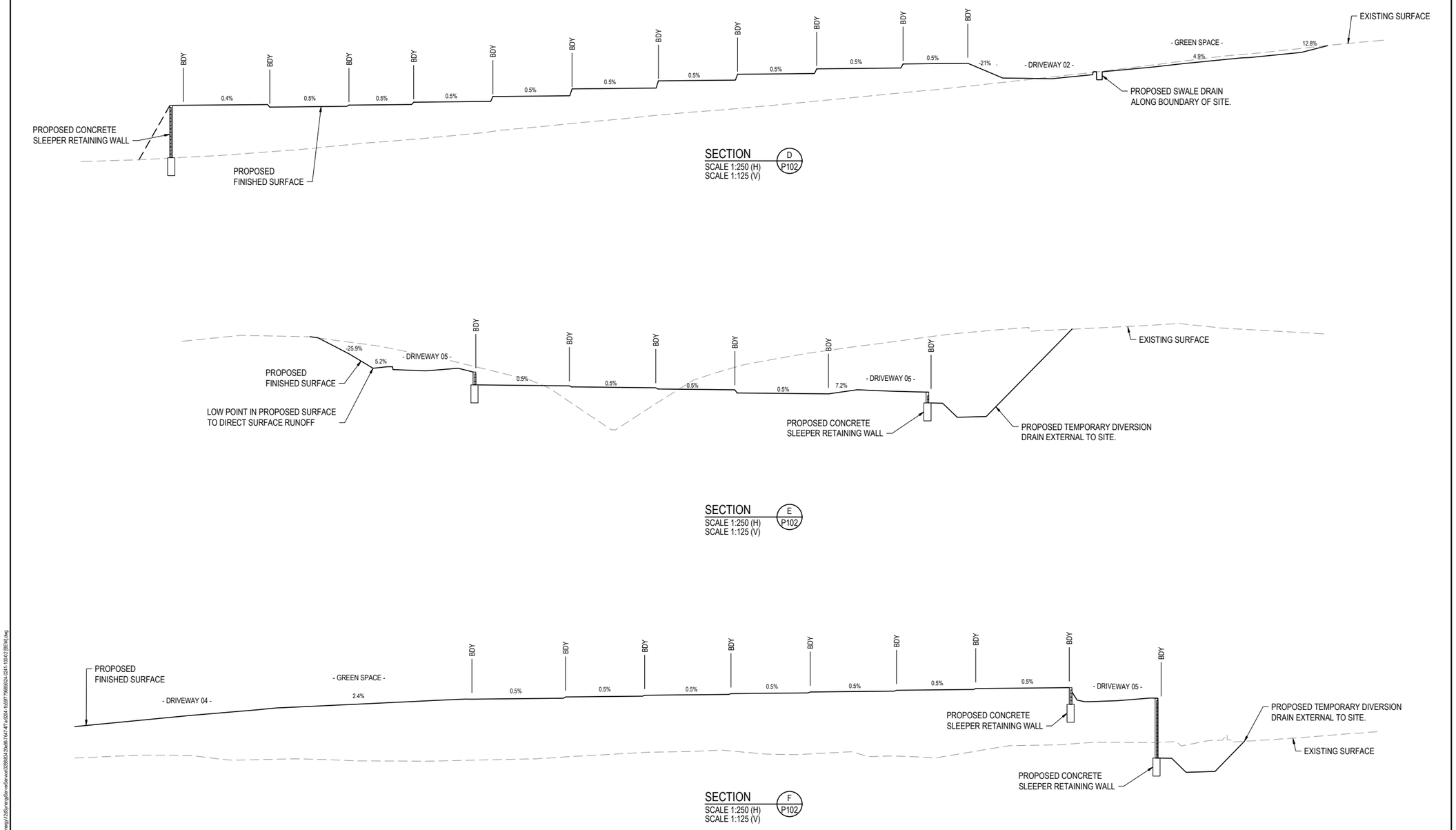
Document Set ID: 12894588
Version: 1, Version Date: 10/12/2024



REV	DATE	DESIGN	DRAWN	REVISION DETAILS
A	28.11.24	JT	DH	ORIGINAL ISSUE

DRAWN

DESIGN

STATUS: FOR DEVELOPMENT APPLICATION
NOT FOR CONSTRUCTION

APPROVED: DANIEL COLLINS RPEQ 18631 DATE: 28.11.24

FOR AND ON BEHALF OF COLLIERS INTERNATIONAL ENGINEERING & DESIGN PTY LTD

Colliers

SCALE
1:500 10 5 0 10 20 A1
1:1000 A3

CLIENT: INGENIA COMMUNITIES

ASSOCIATED CONSULTANT: SAUNDERS HAVILL GROUP 1300123744

PROJECT NAME: MILLERS GLEN NORTHERN EXPANSION
OAKLAND WAY
BEAUDESERT

DRAWING TITLE: CONCEPT BULK EARTHWORKS TYPICAL SECTIONS SHEET 2 OF 2

PROJECT No.	DRAWING No.	REVISION
24-0241	P107	A

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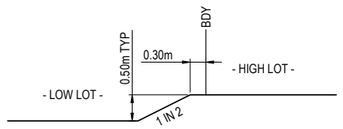
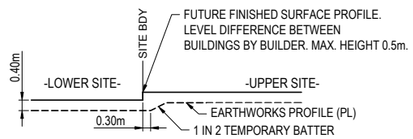
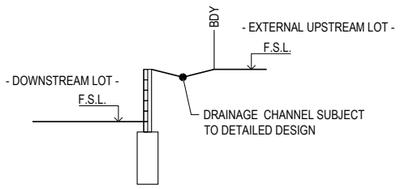
Version: 1, Version Date: 10/12/2024



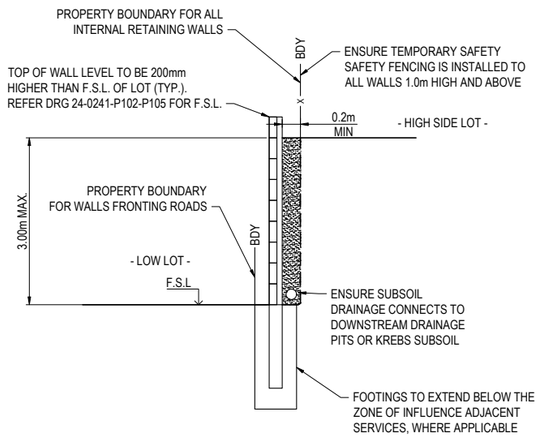
TYPICAL STEP BETWEEN LOTS DETAIL
SCALE 1:50 (A1)
SCALE 1:100 (A3)



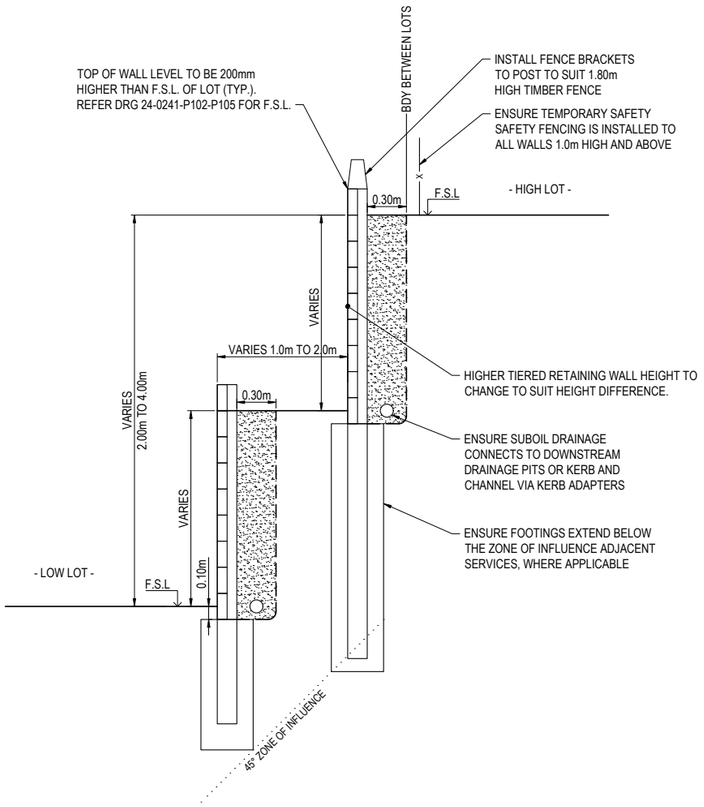
TYPICAL BATTER TREATMENT BETWEEN SITES
(SLAB TYPE CONSTRUCTION) DETAIL
N.T.S



TYPICAL REAR LOT SWALE DETAIL
(APPLIES TO REAR OF ALLOTMENTS WITH
EXTERNAL DRAINAGE - LOTS 38-42)
1:50 (A1)
1:100 (A3)



CONCRETE/COMPOSITE SLEEPER RETAINING WALL
TYPICAL DETAIL
N.T.S



2-TIER CONCRETE SLEEPER RETAINING WALL
TYPICAL DETAIL
SCALE 1:20 (A1)
SCALE 1:40 (A3)

RETAINING WALL NOTES:

1. ALL RETAINING WALLS ARE TO BE DELIVERED UNDER DESIGN AND CONSTRUCTION ARRANGEMENT - FORMS 15 AND 12 CERTIFICATIONS ARE TO BE PROVIDED BY THE CONTRACTOR.
2. DESIGN OF WALLS TO CONSIDER ALL LOADS (FENCES, DWELLINGS ETC) AS WELL AS ASSOCIATED IMPACTS FROM ANY ADJACENT SERVICES - FOOTING DEPTHS TO BE EXTENDED AS REQUIRED.
3. GEOTECHNICAL CONDITIONS ARE TO BE CONFIRMED AND APPROPRIATELY CONSIDERED FOR ALL WALLS.
4. REFER LANDSCAPE DRAWINGS FOR FURTHER INFORMATION ON RETAINING WALLS, PARTICULARLY RELATING TO FINISHES.
5. TEMPORARY SAFETY FENCING TO BE INSTALLED BEHIND ALL WALLS 1.0m HIGH AND GREATER.

REV	DATE	DESIGN	DRAWN	REVISION DETAILS
A	28.11.24	JT	DH	ORIGINAL ISSUE

DRAWN
DESIGN

STATUS: **FOR DEVELOPMENT APPLICATION NOT FOR CONSTRUCTION**

APPROVED: DANIEL COLLINS RPEQ 18631 DATE: 28.11.24

FOR AND ON BEHALF OF COLLIERS INTERNATIONAL ENGINEERING & DESIGN PTY LTD

Colliers

SCALE: 1:500 10 5 0 10 20 A1; 1:1000 A3

CLIENT: **INGENIA COMMUNITIES**

ASSOCIATED CONSULTANT: SAUNDERS HAVILL GROUP 1300123744

PROJECT NAME: **MILLERS GLEN NORTHERN EXPANSION**

OAKLAND WAY
BEAUDESERT

DRAWING TITLE: **CONCEPT BULK EARTHWORKS TYPICAL DETAILS**

PROJECT No.	DRAWING No.	REVISION
24-0241	P108	A

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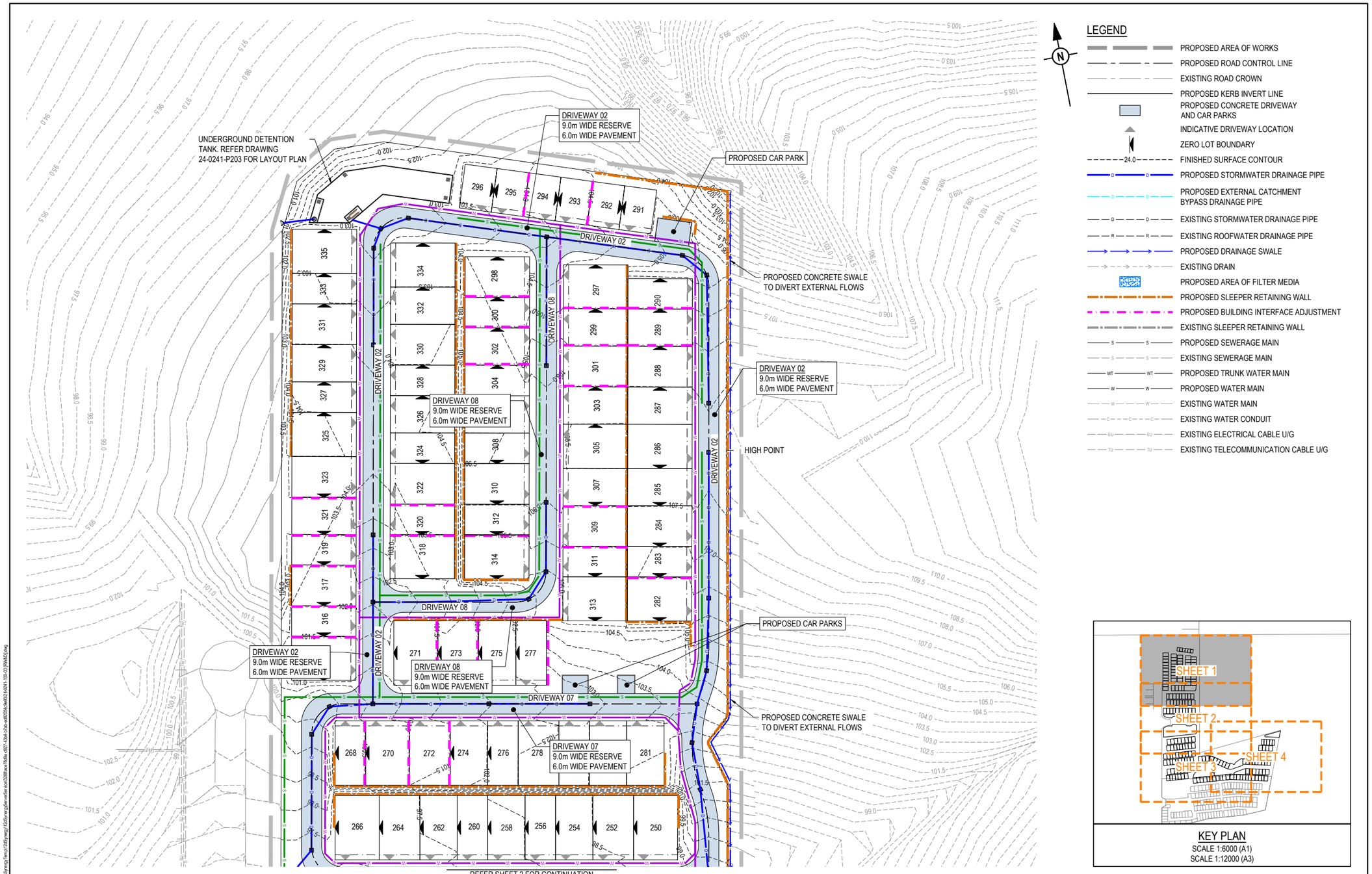
Version: 1, Version Date: 10/12/2024



REV	DATE	DESIGN	DRAWN	REVISION DETAILS
A	28.11.24	JT	DH	ORIGINAL ISSUE

DRAWN

DESIGN

STATUS: **FOR DEVELOPMENT APPLICATION NOT FOR CONSTRUCTION**

APPROVED: DANIEL COLLINS RPEQ 18631 DATE: 28.11.24

FOR AND ON BEHALF OF COLLIERS INTERNATIONAL ENGINEERING & DESIGN PTY LTD

Colliers

SCALE: 1:500 10 5 0 10 20 A1; 1:1000 A3

CLIENT: **INGENIA COMMUNITIES**

ASSOCIATED CONSULTANT: SAUNDERS HAVILL GROUP 1300123744

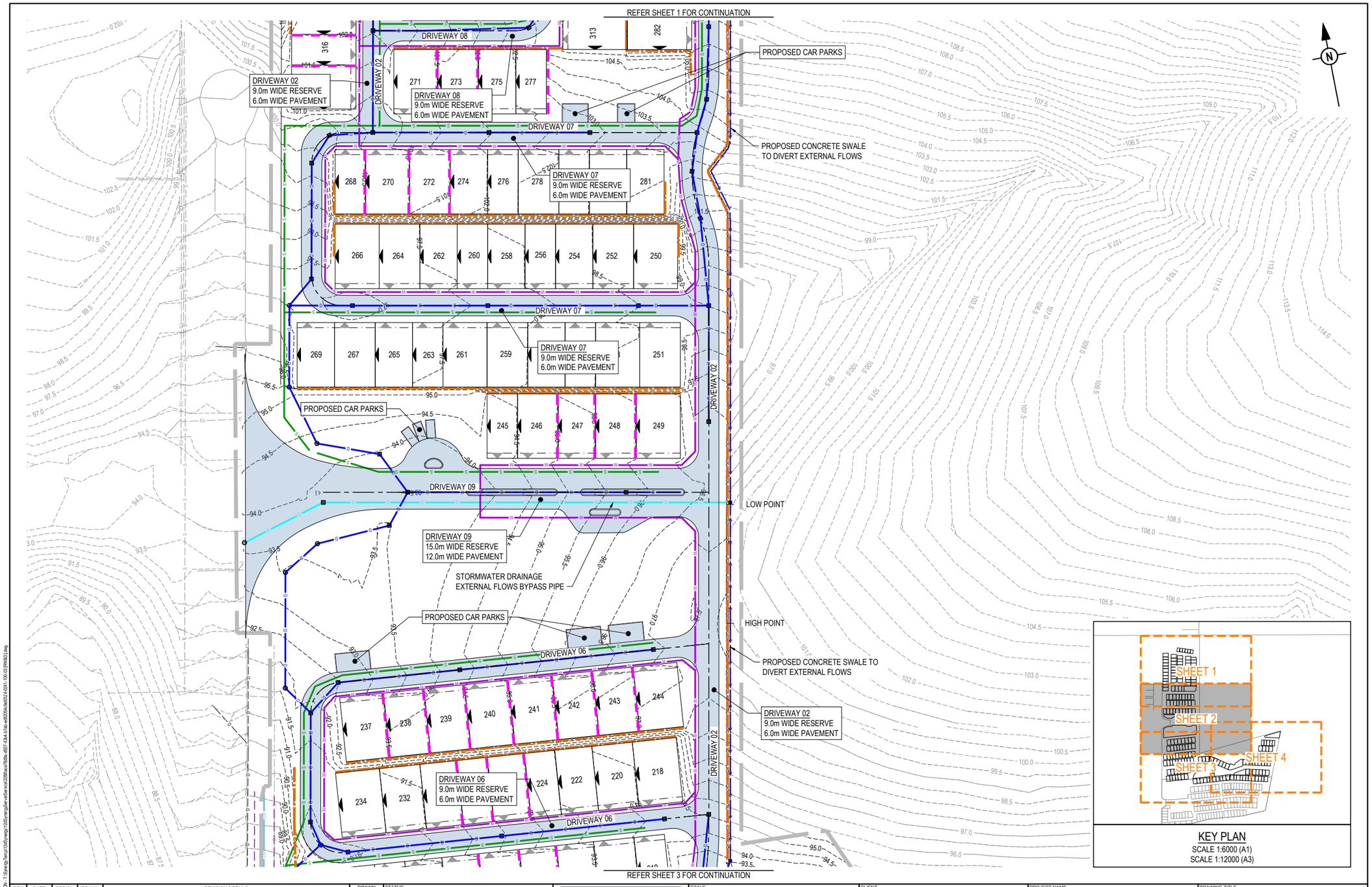
PROJECT NAME: **MILLERS GLEN NORTHERN EXPANSION**

OAKLAND WAY BEAUDESERT

DRAWING TITLE: **CONCEPT ROADWORKS AND DRAINAGE LAYOUT PLAN SHEET 1 OF 4**

PROJECT No.	DRAWING No.	REVISION
24-0241	P109	A

Document Set ID: 12894588
Version: 1, Version Date: 10/12/2024



REV	DATE	DESIGN	DRAWN	REVISION DETAILS
A	28.11.24	JT	DH	ORIGINAL ISSUE

DRAWN

DESIGN

STATUS: FOR DEVELOPMENT APPLICATION NOT FOR CONSTRUCTION

APPROVED: DANIEL COLLINS RPEQ 18631 DATE: 28.11.24

FOR AND ON BEHALF OF COLLIERS INTERNATIONAL ENGINEERING & DESIGN PTY LTD

Colliers

SCALE: 1:500 1:1000 10 5 0 10 20 A1 A3

CLIENT: INGENIA COMMUNITIES

ASSOCIATED CONSULTANT: SAUNDERS HAVILL GROUP 1300123744

PROJECT NAME: MILLERS GLEN NORTHERN EXPANSION

OAKLAND WAY BEAUDESERT

DRAWING TITLE: CONCEPT ROADWORKS AND DRAINAGE LAYOUT PLAN SHEET 2 OF 4

PROJECT No.	DRAWING No.	REVISION
24-0241	P110	A

Document Set ID: 12894588
Version: 1, Version Date: 10/12/2024

REV	DATE	DESIGN	DRAWN	REVISION DETAILS
A	28.11.24	JT	DH	ORIGINAL ISSUE

DRAWN

DESIGN

STATUS: **FOR DEVELOPMENT APPLICATION NOT FOR CONSTRUCTION**

APPROVED: DANIEL COLLINS RPEQ 18631 DATE: 28.11.24

FOR AND ON BEHALF OF COLLIERS INTERNATIONAL ENGINEERING & DESIGN PTY LTD

Colliers

SCALE: 1:500 10 5 0 10 20 A1; 1:1000 A3

CLIENT: **INGENIA COMMUNITIES**

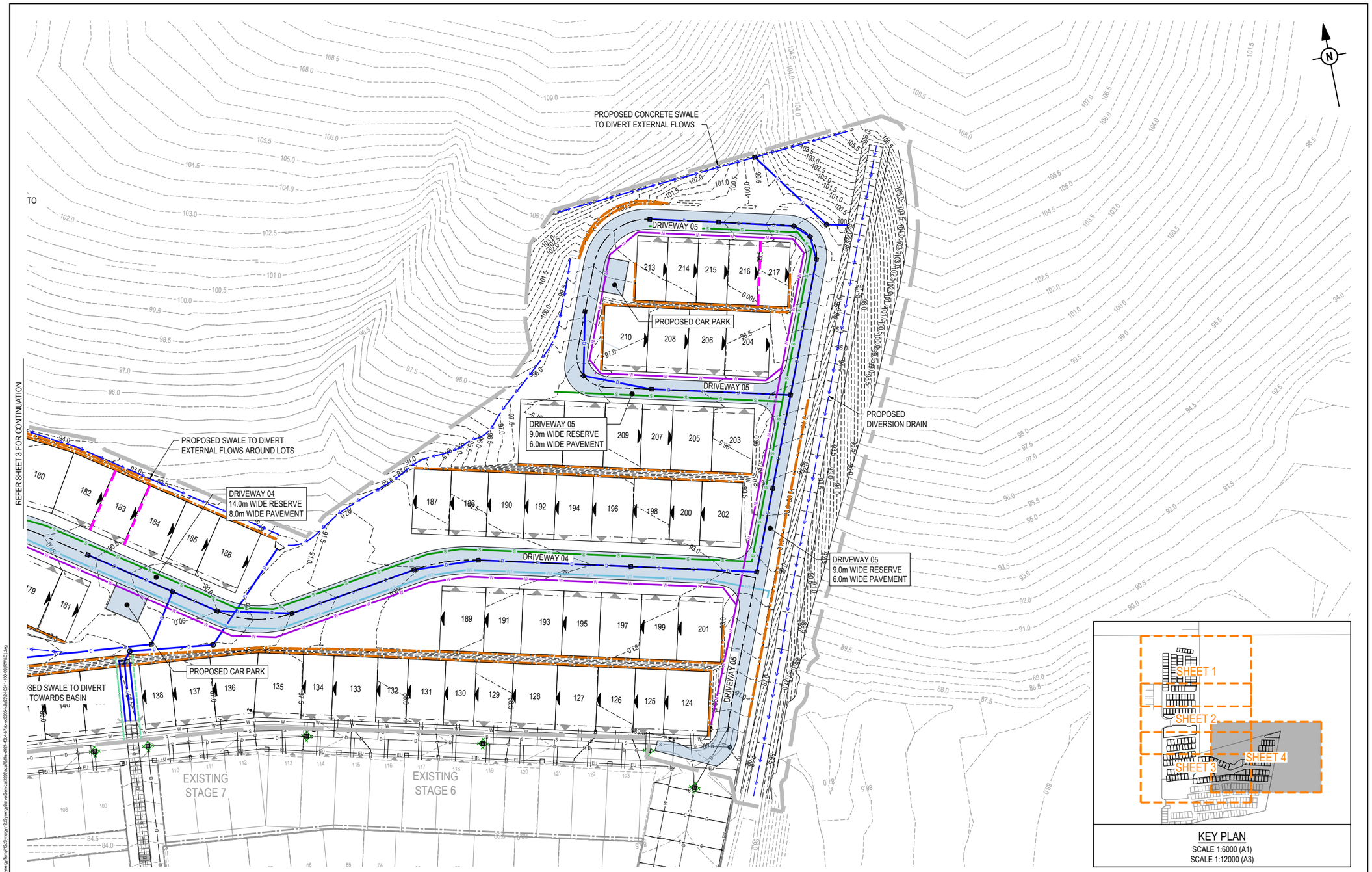
ASSOCIATED CONSULTANT: SAUNDERS HAVILL GROUP 1300123744

PROJECT NAME: **MILLERS GLEN NORTHERN EXPANSION** OAKLAND WAY BEAUDESERT

DRAWING TITLE: **CONCEPT ROADWORKS AND DRAINAGE LAYOUT PLAN SHEET 3 OF 4**

PROJECT No.	DRAWING No.	REVISION
24-0241	P111	A

Document Set ID: 12894588
Version: 1, Version Date: 10/12/2024



REV	DATE	DESIGN	DRAWN	REVISION DETAILS
A	28.11.24	JT	DH	ORIGINAL ISSUE

DRAWN

DESIGN

STATUS
FOR DEVELOPMENT APPLICATION
NOT FOR CONSTRUCTION

APPROVED DANIEL COLLINS RPEQ 18631 DATE 28.11.24

FOR AND ON BEHALF OF COLLIERS INTERNATIONAL ENGINEERING & DESIGN PTY LTD

Colliers

SCALE
1:500 10 5 0 10 20 A1
1:1000 A3

CLIENT
INGENIA COMMUNITIES

ASSOCIATED CONSULTANT
SAUNDERS HAVILL GROUP
1300123744

PROJECT NAME
MILLERS GLEN
NORTHERN EXPANSION
OAKLAND WAY
BEAUDESERT

DRAWING TITLE
CONCEPT ROADWORKS AND DRAINAGE LAYOUT PLAN SHEET 4 OF 4

PROJECT No.	DRAWING No.	REVISION
24-0241	P112	A

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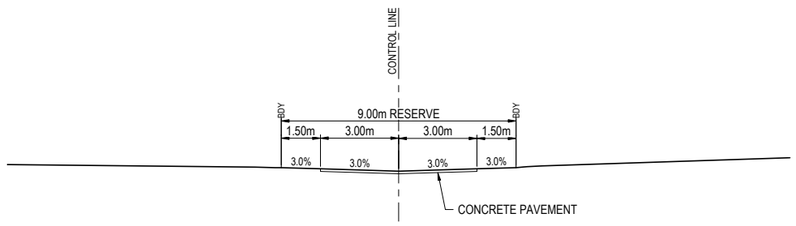

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(DRIVEWAY 01, 02, 05, 06, 07 & 08)

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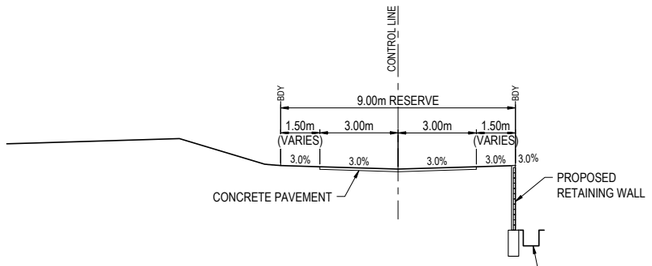

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(DRIVEWAY 02)

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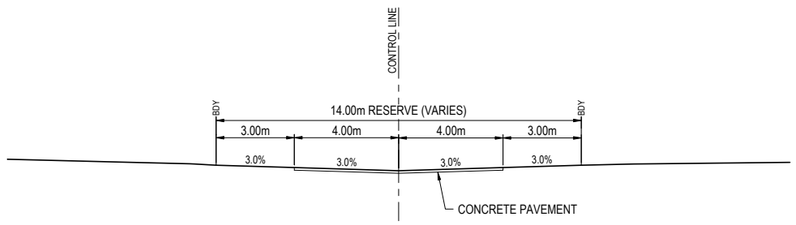

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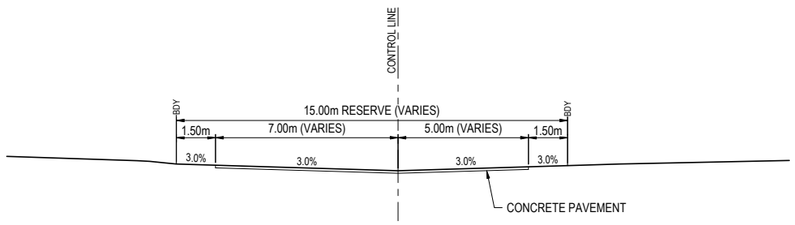

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(DRIVEWAY 09)

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REV	DATE	DESIGN	DRAWN	REVISION DETAILS
A	28.11.24	JT	DH	ORIGINAL ISSUE

DRAWN

DESIGN

STATUS
FOR DEVELOPMENT APPLICATION
NOT FOR CONSTRUCTION

APPROVED
DANIEL COLLINS RPEQ 18631 DATE 28.11.24

FOR AND ON BEHALF OF COLLIERS INTERNATIONAL ENGINEERING & DESIGN PTY LTD

Colliers

SCALE
1:100 1 0 1 2 3 4 5 A1
1:200 A3

CLIENT
INGENIA COMMUNITIES

ASSOCIATED CONSULTANT
SAUNDERS HAVILL GROUP
1300123744

PROJECT NAME
MILLERS GLEN
NORTHERN EXPANSION

OAKLAND WAY
BEAUDESERT

DRAWING TITLE
CONCEPT TYPICAL DRIVEWAY CROSS SECTIONS

PROJECT No.	DRAWING No.	REVISION
24-0241	P113	A

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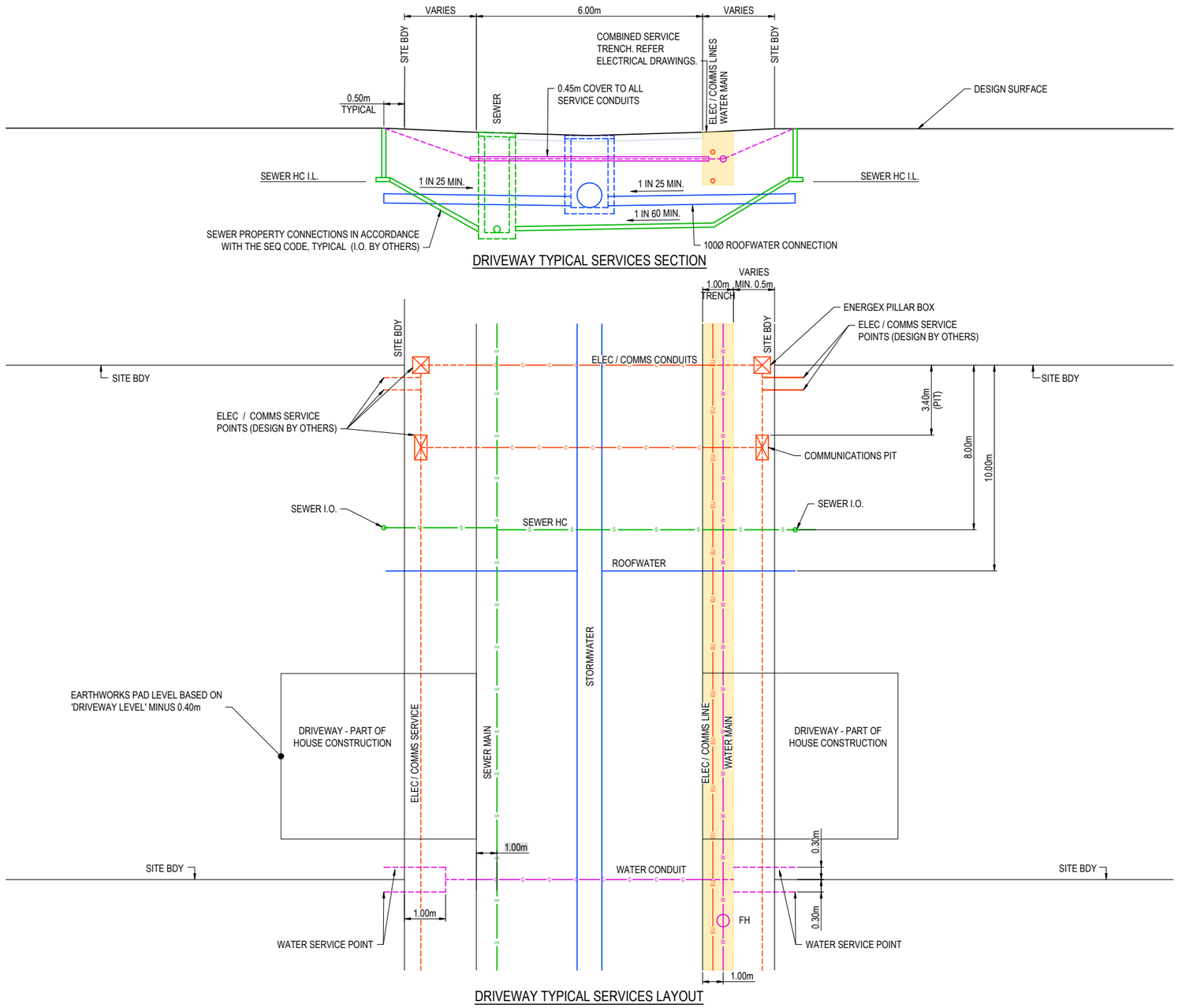

REV	DATE	DESIGN	DRAWN	REVISION DETAILS
A	28.11.24	JT	DH	ORIGINAL ISSUE

DRAWN
DESIGN

STATUS: **FOR DEVELOPMENT APPLICATION NOT FOR CONSTRUCTION**

APPROVED: DANIEL COLLINS RPEQ 18631 DATE: 28.11.24

FOR AND ON BEHALF OF COLLIERS INTERNATIONAL ENGINEERING & DESIGN PTY LTD

Colliers

SCALE: 1:100 / 1:200 — A1 / A3

CLIENT: **INGENIA COMMUNITIES**

ASSOCIATED CONSULTANT: SAUNDERS HAVILL GROUP 1300123744

PROJECT NAME: **MILLERS GLEN NORTHERN EXPANSION**

OAKLAND WAY BEAUDESERT

DRAWING TITLE: **CONCEPT TYPICAL SERVICE ARRANGEMENT AND SECTION**

PROJECT No.	DRAWING No.	REVISION
24-0241	P114	A

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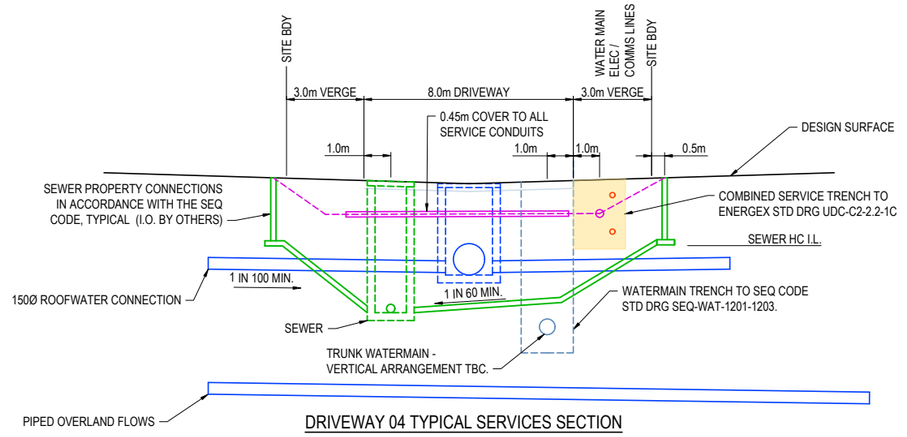
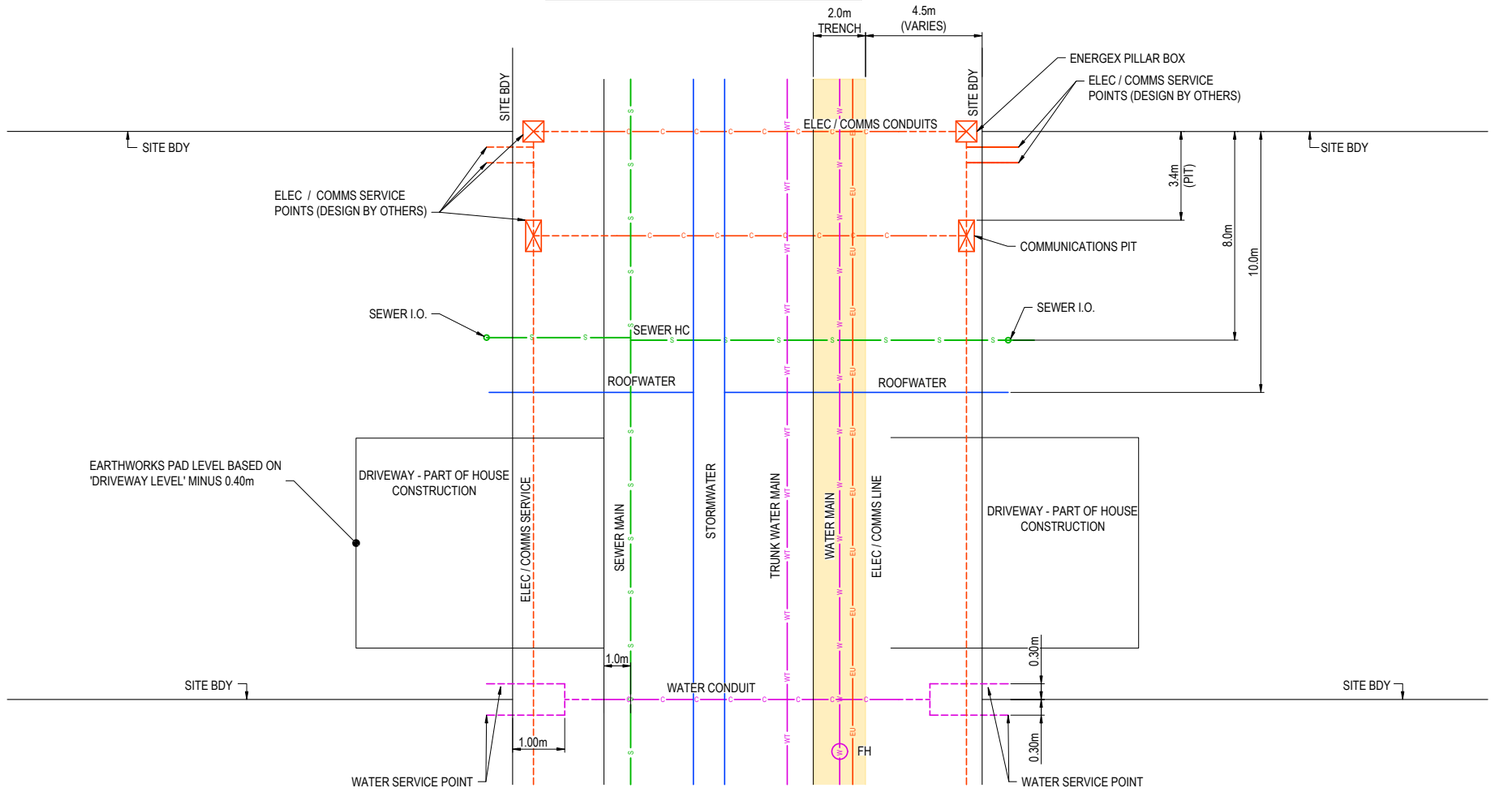


DRIVEWAY 04 TYPICAL SERVICES SECTION



DRIVEWAY 04 TYPICAL SERVICES LAYOUT

REV	DATE	DESIGN	DRAWN	REVISION DETAILS
A	28.11.24	JT	DH	ORIGINAL ISSUE

DRAWN

DESIGN

STATUS: **FOR DEVELOPMENT APPLICATION NOT FOR CONSTRUCTION**

APPROVED: DANIEL COLLINS RPEQ 18631 DATE: 28.11.24

FOR AND ON BEHALF OF COLLIERS INTERNATIONAL ENGINEERING & DESIGN PTY LTD

Colliers

SCALE: 1:100 1 0 1 2 3 4 5 A1; 1:200 A3

CLIENT: **INGENIA COMMUNITIES**

ASSOCIATED CONSULTANT: SAUNDERS HAVILL GROUP 1300123744

PROJECT NAME: **MILLERS GLEN NORTHERN EXPANSION**

OAKLAND WAY BEAUDESERT

DRAWING TITLE: **CONCEPT DRIVEWAY 04 TYPICAL SERVICE ARRANGEMENT AND SECTION**

PROJECT No.	DRAWING No.	REVISION
24-0241	P115	A

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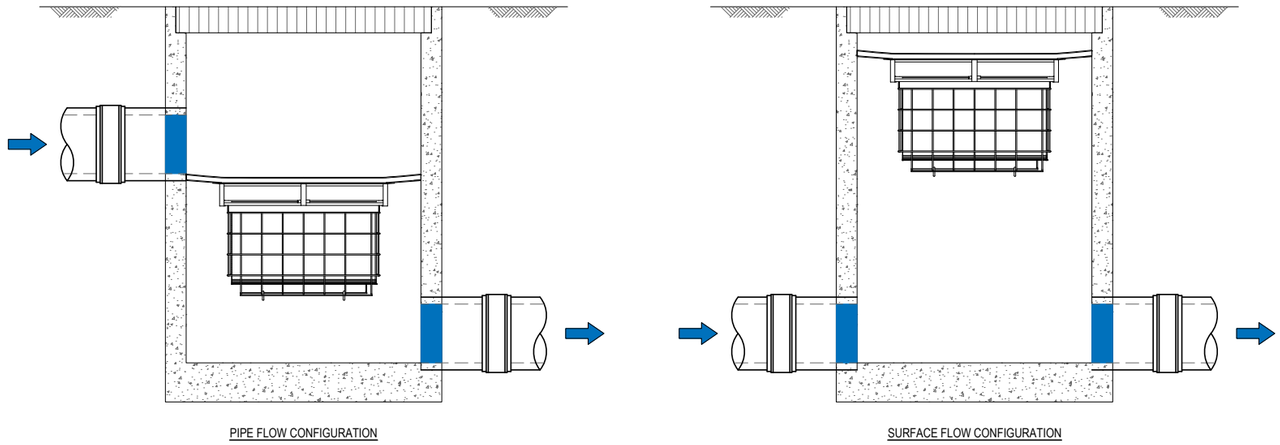
Version: 1, Version Date: 10/12/2024



OCEAN PROTECT "OCEAN GUARD"
GULLY BASKETS SECTIONS
N.T.S.

REV	DATE	DESIGN	DRAWN	REVISION DETAILS
A	28.11.24	JT	DH	ORIGINAL ISSUE

DRAWN

DESIGN

STATUS
FOR DEVELOPMENT APPLICATION
NOT FOR CONSTRUCTION

APPROVED DANIEL COLLINS RPEQ 18631 DATE 28.11.24

FOR AND ON BEHALF OF COLLIERS INTERNATIONAL ENGINEERING & DESIGN PTY LTD

Colliers

SCALE

CLIENT
INGENIA COMMUNITIES

ASSOCIATED CONSULTANT
SAUNDERS HAVILL GROUP
1300123744

PROJECT NAME
MILLERS GLEN
NORTHERN EXPANSION

OAKLAND WAY
BEAUDESERT

DRAWING TITLE
CONCEPT OCEAN GUARD
GULLY BASKET DETAILS

PROJECT No.	DRAWING No.	REVISION
24-0241	**P116**	**A**

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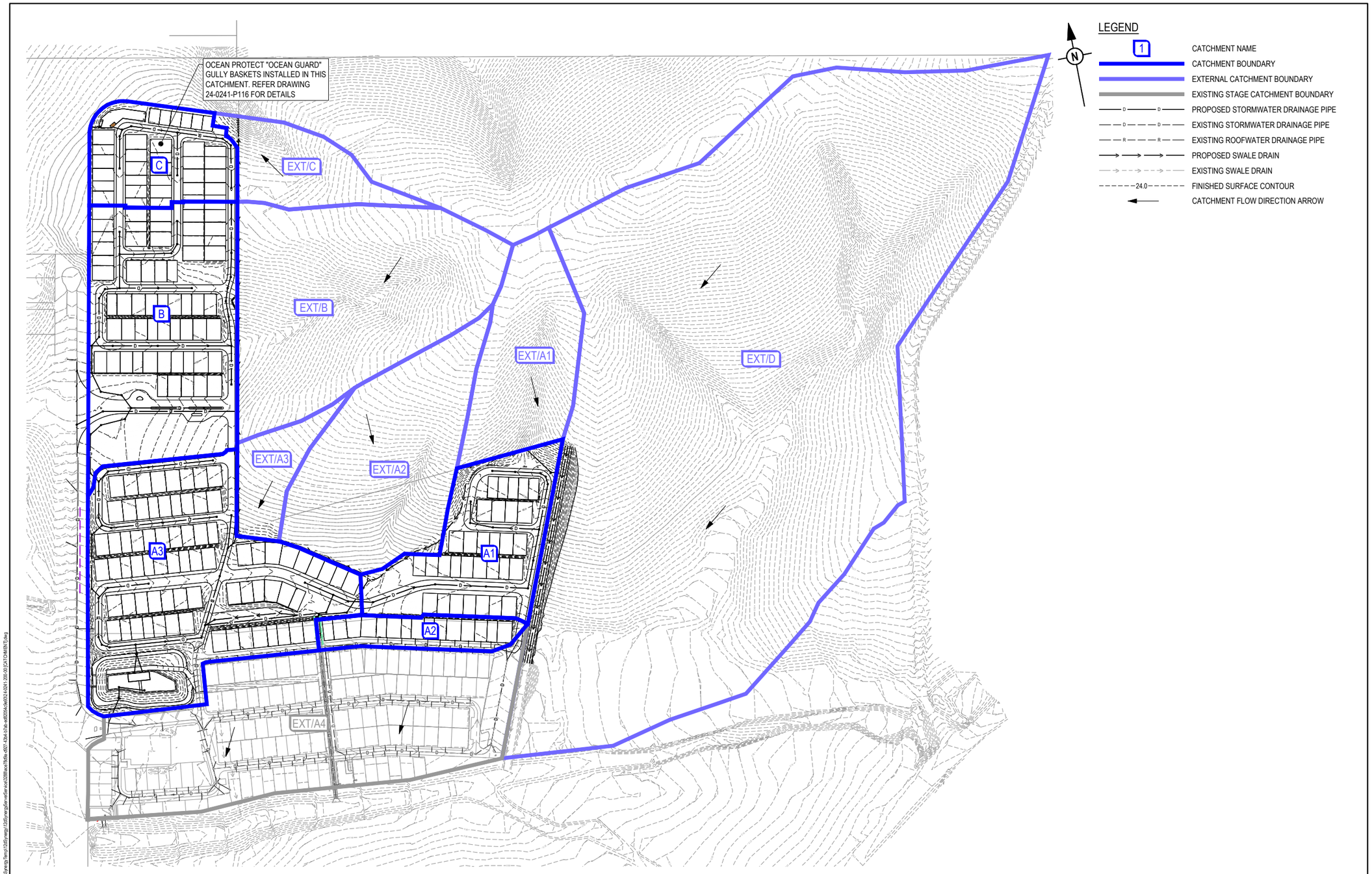

REV	DATE	DESIGN	DRAWN	REVISION DETAILS
A	28.11.24	JT	DH	ORIGINAL ISSUE

DRAWN

DESIGN

STATUS: FOR DEVELOPMENT APPLICATION NOT FOR CONSTRUCTION

APPROVED: DANIEL COLLINS RPEQ 18631 DATE: 28.11.24

FOR AND ON BEHALF OF COLLIERS INTERNATIONAL ENGINEERING & DESIGN PTY LTD

Colliers

SCALE: 1:500 10 5 0 10 20 A1; 1:1000 A3

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ASSOCIATED CONSULTANT: SAUNDERS HAVILL GROUP 1300123744

PROJECT NAME: MILLERS GLEN NORTHERN EXPANSION

OAKLAND WAY BEAUDESERT

DRAWING TITLE: CONCEPT STORMWATER CATCHMENT LAYOUT PLAN

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24-0241	P200	A

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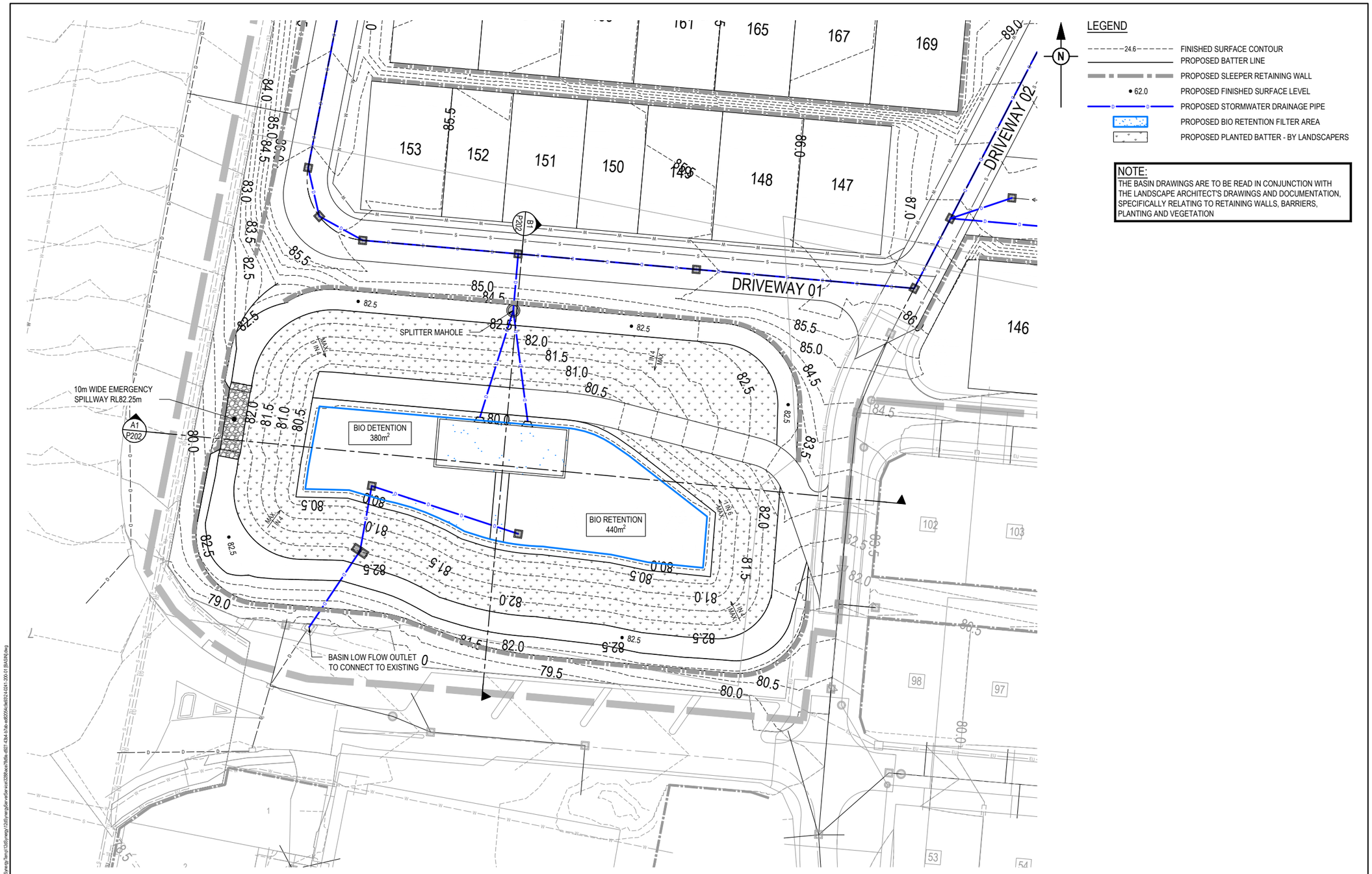

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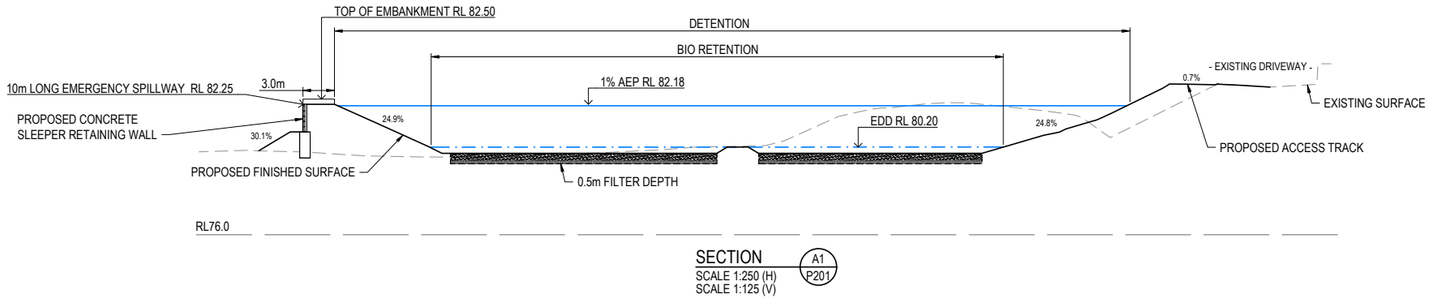

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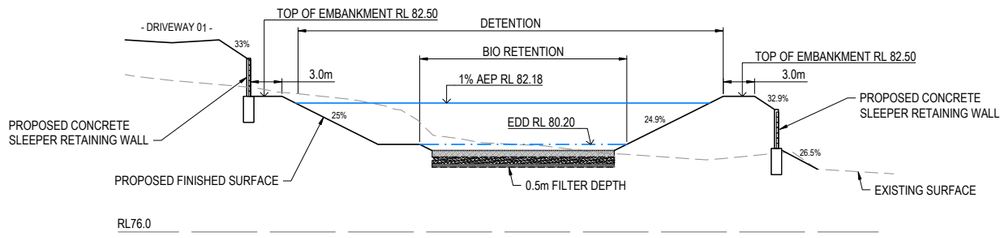

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OAKLAND WAY
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DRAWING TITLE: CONCEPT BIO RETENTION AND DETENTION BASIN B TYPICAL SECTIONS

PROJECT No.	DRAWING No.	REVISION
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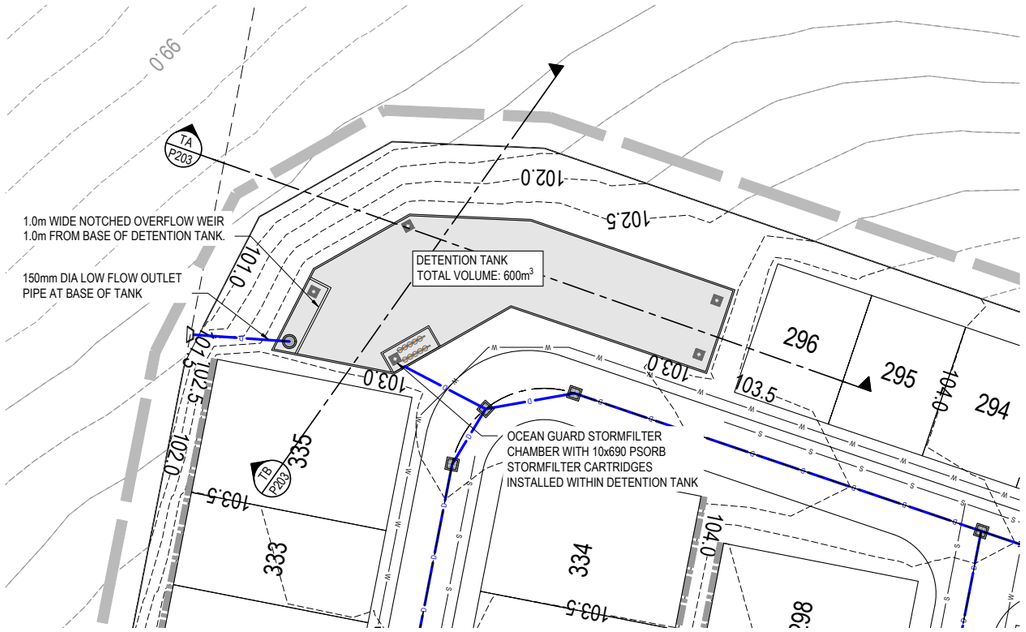

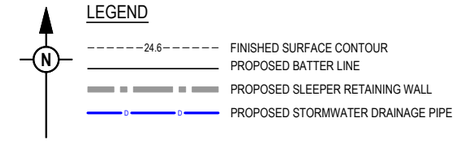

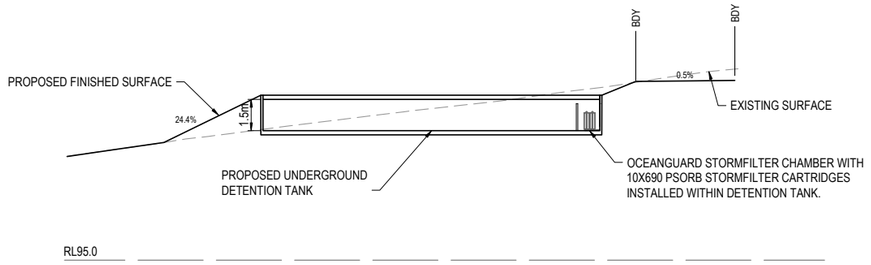

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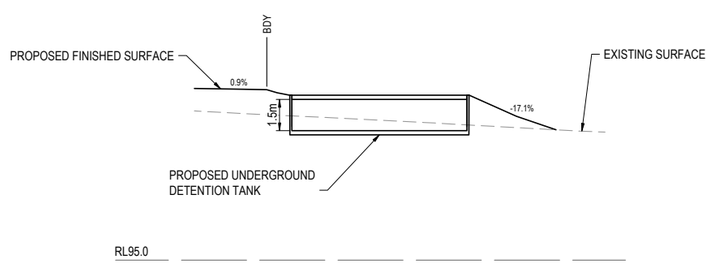

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ASSOCIATED CONSULTANT: SAUNDERS HAVILL GROUP 1300123744

PROJECT NAME: MILLERS GLEN NORTHERN EXPANSION
OAKLAND WAY
BEAUDESERT

DRAWING TITLE: CONCEPT UNDERGROUND DETENTION TANK LAYOUT PLAN AND SECTIONS

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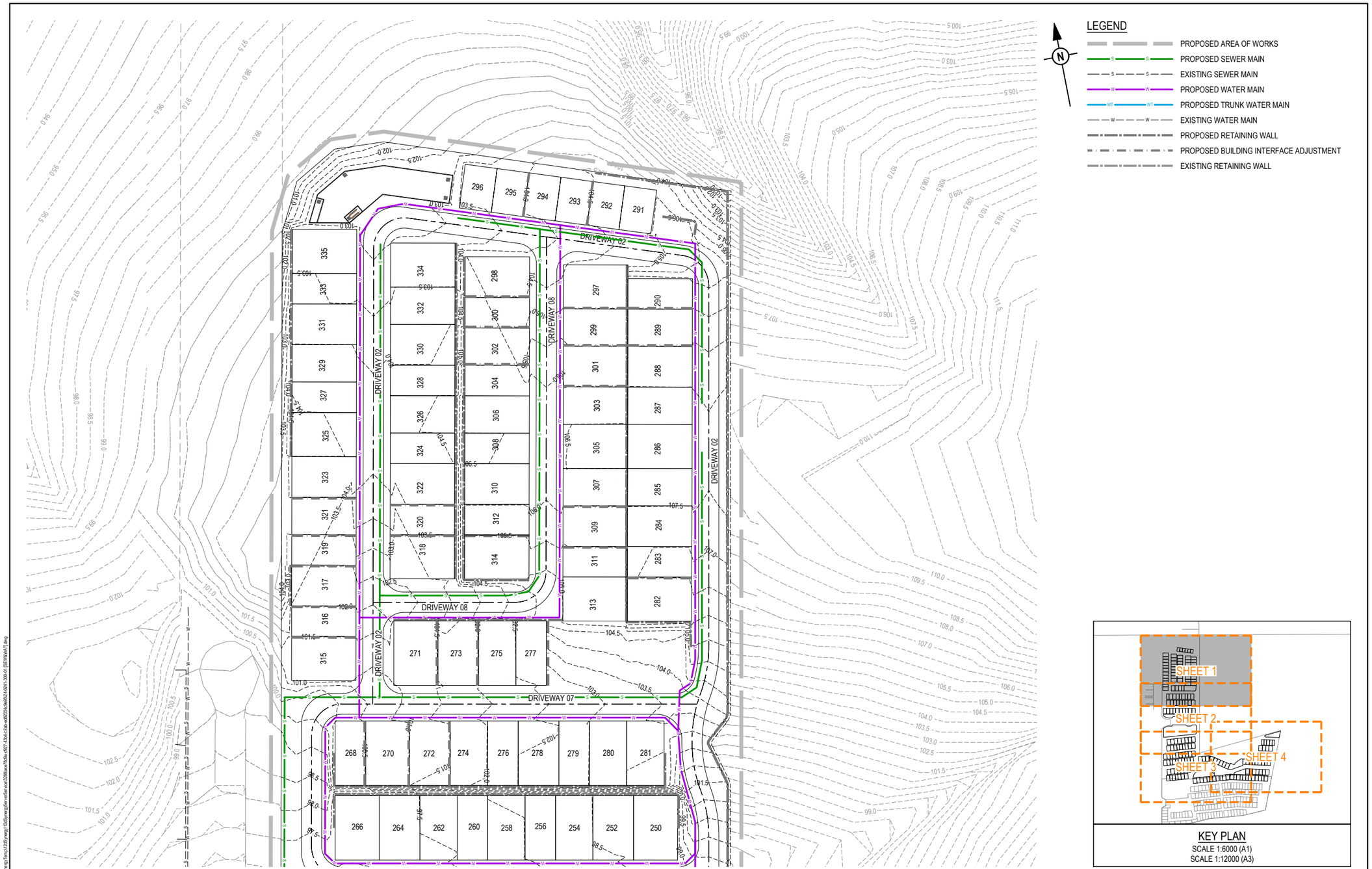

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PROJECT NAME: MILLERS GLEN NORTHERN EXPANSION

OAKLAND WAY BEAUDESERT

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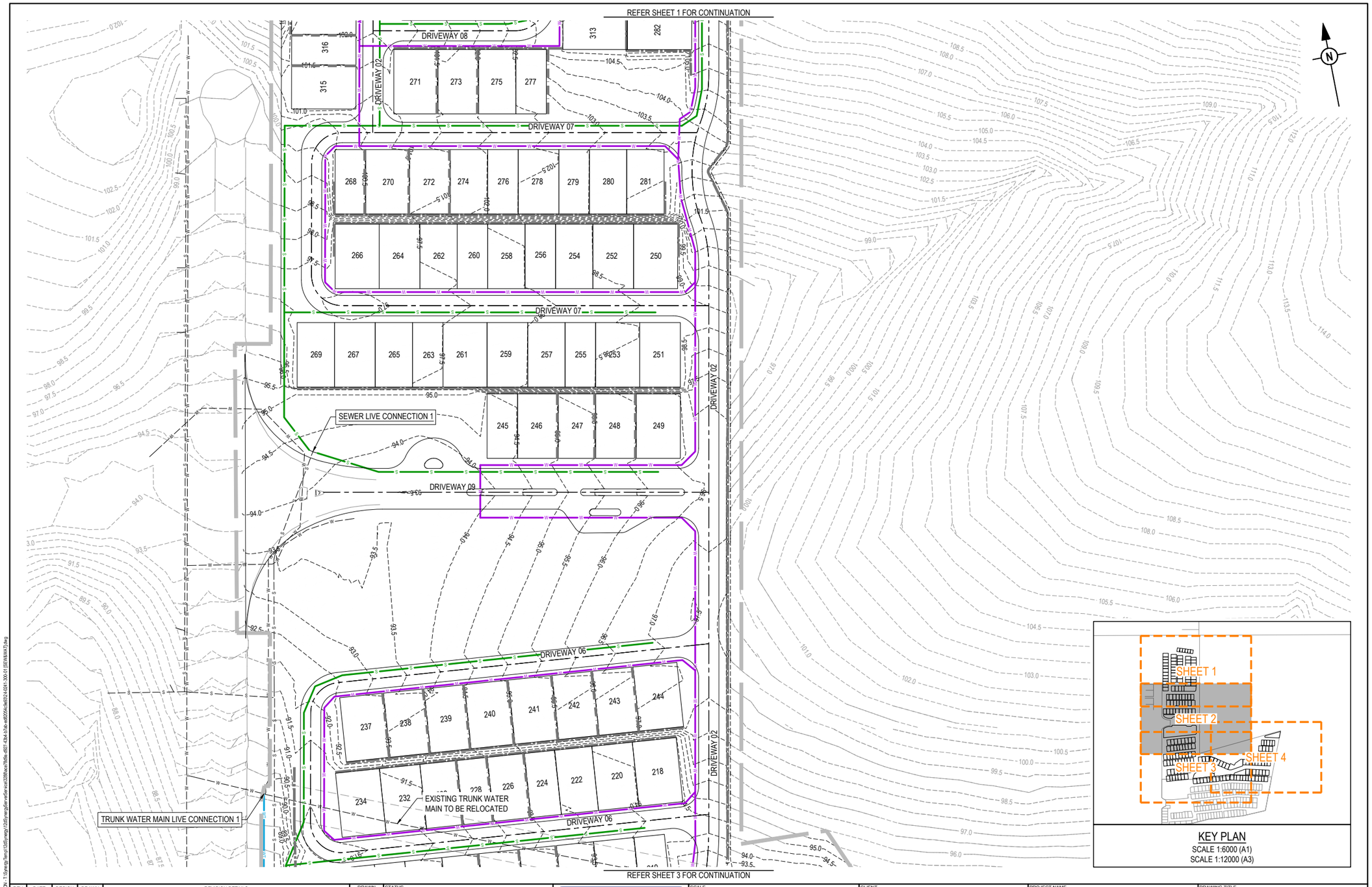

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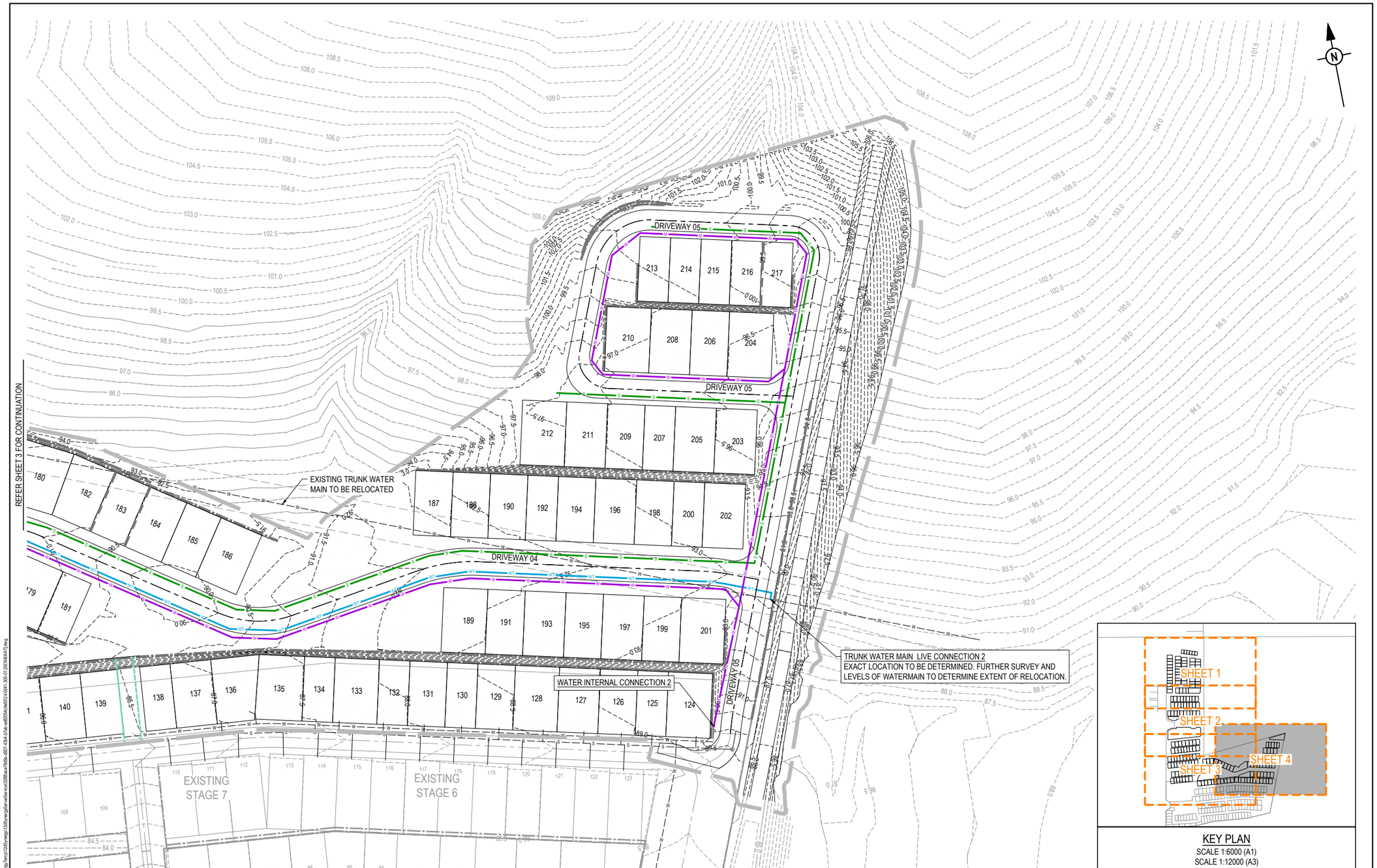

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Appendix B Rational Method

Document Set ID: 12894588
Version: 1, Version Date: 10/12/2024

Project Name:	Oakland Way
Project No.:	24-0241
Author:	L Gillis
Date:	27/11/2024
ARR:	R2019

RATIONAL METHOD SUMMARY & RAINFALL DATA

DURATION		ANNUAL EXCEEDANCE PROBABLILITY (years)						
(hours)	(minutes)	63.2%	50%	20%	10%	5%	2%	1%
0.02	1	138	156	212	251	288	336	373
0.03	2	112	126	172	204	236	280	316
0.05	3	105	119	162	192	221	262	295
0.07	4	101	114	155	183	212	250	280
0.08	5	97	110	149	176	203	238	266
0.17	10	81	91	124	146	167	195	215
0.25	15	68	77	105	124	141	165	182
0.33	20	59	67	91	107	123	143	158
0.42	25	52	59	81	95	109	127	140
0.50	30	47	53	72	85	98	114	127
0.75	45	36	41	56	66	76	89	100
1.00	60.00	30	33	46	**54**	63	74	83
1.50	90.00	22	25	34	41	47	56	64
2.00	120.00	18	20	28	33	39	46	53
3.00	180.00	13	15	21	25	29	35	40
4.50	270.00	10	11	16	19	22	27	31
6.00	360.00	8	9	13	16	19	23	26
9.00	540.00	6	7	10	12	14	18	20
12.00	720.00	5	6	8	10	12	15	17
18.00	1080.00	4	5	7	8	10	12	14
24.00	1440.00	3	4	6	7	8	10	11
30.00	1800.00	3	3	5	6	7	9	10
36.00	2160.00	3	3	4	5	6	8	9
48.00	2880.00	2	3	4	4	5	6	7
72.00	4320.00	2	2	3	3	4	5	6

		POLYNOMIAL COEFFICIENTS						
ARI	AEP	C0	C1	C2	C3	C4	C5	C6
1	63.2%	0.83297336	0.4959411	0.39713755	-0.180131	0.030178	-0.002191878	5.67658E-05
2	50%	0.95603836	0.4882665	0.40656772	-0.184211	0.0309477	-0.002254083	5.85158E-05
5	20%	1.2645247	0.4855198	0.41388589	-0.189521	0.032428	-0.002417801	6.47652E-05
10	10%	1.4291853	0.5057665	0.39328778	-0.182731	0.0315497	-0.002372229	6.40855E-05
20	5%	1.5669746	0.5328348	0.36495399	-0.172899	0.03015	-0.002286816	6.22963E-05
50	2%	1.7233235	0.591687	0.30000806	-0.148275	0.0260977	-0.001984439	5.393E-05
100	1%	1.8277719	0.6544231	0.22883151	-0.120027	0.0211113	-0.001576849	4.12919E-05

Catchment Data

Event (% AEP)	Freq Factor	C0	C1	C2	C3	C4	C5	C6
1%	1.20	1.8277719	0.654423	0.2288315	-0.12003	0.021111	-0.001576849	4.12919E-05

Rational Method - Catchment EXT-D2

(Single Catchment, multiple events)

Catchment	Event	Area (ha)	fi	C_{10}	Tc / Duration (min)	Tc / Duration (hours)	Intensity (mm/hr)	Discharge (cumecs)
EXT-D2	63.2%	121.82	0.00	0.46	37.61	0.63	40.63	5.0748
EXT-D2	50%	121.82	0.00	0.46	37.61	0.63	45.94	6.0960
EXT-D2	20%	121.82	0.00	0.46	37.61	0.63	62.58	9.2809
EXT-D2	10%	121.82	0.00	0.46	37.61	0.63	73.89	11.5354
EXT-D2	5%	121.82	0.00	0.46	37.61	0.63	84.96	13.9277
EXT-D2	2%	121.82	0.00	0.46	37.61	0.63	99.69	17.8974
EXT-D2	1%	121.82	0.00	0.46	37.61	0.63	111.01	20.7973

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Ecological Assessment Report

Lots 802 on SP342583, Oakland Way Beaudesert
Queensland, 4285
Prepared for INA Operations Pty Ltd
29 November 2024

Job 10966

saunders havill group

Document Set ID: 12894584
Version: 1, Version Date: 10/12/2024

Document control

Document: Oakland Way - Ecological Assessment Report, prepared by Saunders Havill Group for INA Operations Pty Ltd.

Document issue

Issue	Date	Prepared by	Checked by
A	29/11/2024	LB/HC	KT

Prepared by
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Acronyms

DAF	Department of Agriculture and Fisheries (Qld)
DAMS	Development Assessment Mapping System
DES	Department of Environment and Science
DSDILGP	Department of State Development, Infrastructure, Local Government and Planning
EAR	Ecological Assessment Report
EPBC	Environment Protection and Biodiversity Conservation Act 1999 (Cth)
EVNT	Endangered, Vulnerable or Near Threatened as listed under the NC Act
SRRC	Scenic Rim Regional Council
MCU	Material Change of Use
MLES	Matters of Local Environmental Significance
MNES	Matters of National Environmental Significance
MSES	Matters of State Environmental Significance
NC Act	Nature Conservation Act 1992
NCAR	Nature Conservation (Animals) Regulation 2020
NCPR	Nature Conservation (Plants) Regulation 2020
PA	Planning Act 2016 (Qld)
PMST	Protected Matters Search Tool
PR	Planning Regulation 2017 (Qld)
ROL	Reconfiguration of a Lot
SARA	State Assessment Referral Agency (part of DSDMIP)
SPP	State Planning Policy 2017 (Qld)
VM Act	Vegetation Management Act 1999 (Qld)
SRI	Significant Residual Impact

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1. Introduction

Saunders Havill Group was engaged by INA Operations Pty Ltd to prepare an Ecological Assessment Report (EAR) for land located at Oakland Way, Beaudesert (described as Lot 802 on SP342583) to support an urban residential community development application to Scenic Rim Regional Council (SRRC). This report provides a review of the site's ecological values in accordance with State and Local Government legislation.

Contextually, the site is located in the Scenic Rim Regional Council Local Government Area within the South-east Queensland Bioregion (Scenic Rim) and is zoned as 'Low-medium Density Residential'. Low-medium density residential land uses surround the referral area to the north-west, south, and south west, with community facilities to the west and rural zone land immediately to the north-east. (refer to **Figure 1** and **Figure 2**).

The development proposal is for a retirement facility, new internal roads, services, stormwater management areas, and a retained area containing koala habitat. Refer to **Appendix A** for the development layout plan.

1.1. Property summary

Table 1: Property summary

Address	Oakland Way, Beaudesert, Queensland 4285
Area (ha)	Approximately 9.38 Ha
Lots	Lot 802 SP342583
Vegetation Management Act 1999	Category X (non-remnant) Category B Remnant (Of Concern)
MSES	MSES – Wildlife habitat (koala habitat areas – core) MSES – Regulated vegetation (Category B) MSES – Regulated vegetation (essential habitat) MSES – Regulated vegetation (intersecting a watercourse)
Koala Habitat	Not within KPA Contains Koala Habitat Area (core)
LGA	Scenic Rim Regional Council
Planning Scheme	Scenic Rim Planning Scheme 2020
Planning Scheme Zoning	Low-medium density residential
Environmental overlays	Regulated Vegetation, Node Corridor

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1.2. Purpose of the report

The purpose of this EAR is to present the outcomes of ecological surveys, identify environmental site constraints, assess the potential of the project to impact on ecological features, and respond to relevant Scenic Rim Planning Scheme Policies and Codes.

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Legend

Site DCDB

Figure 1

Site Context

INA Operations Pty Ltd

File ref. 10966 E Figure 1 Site Context A
Date 3/10/2024
Project Oakland Way, Beaudesert

0 2 4 6 8 10 km

Scale (A4): 1:250,000 [GDA 2020 MGA Z56]

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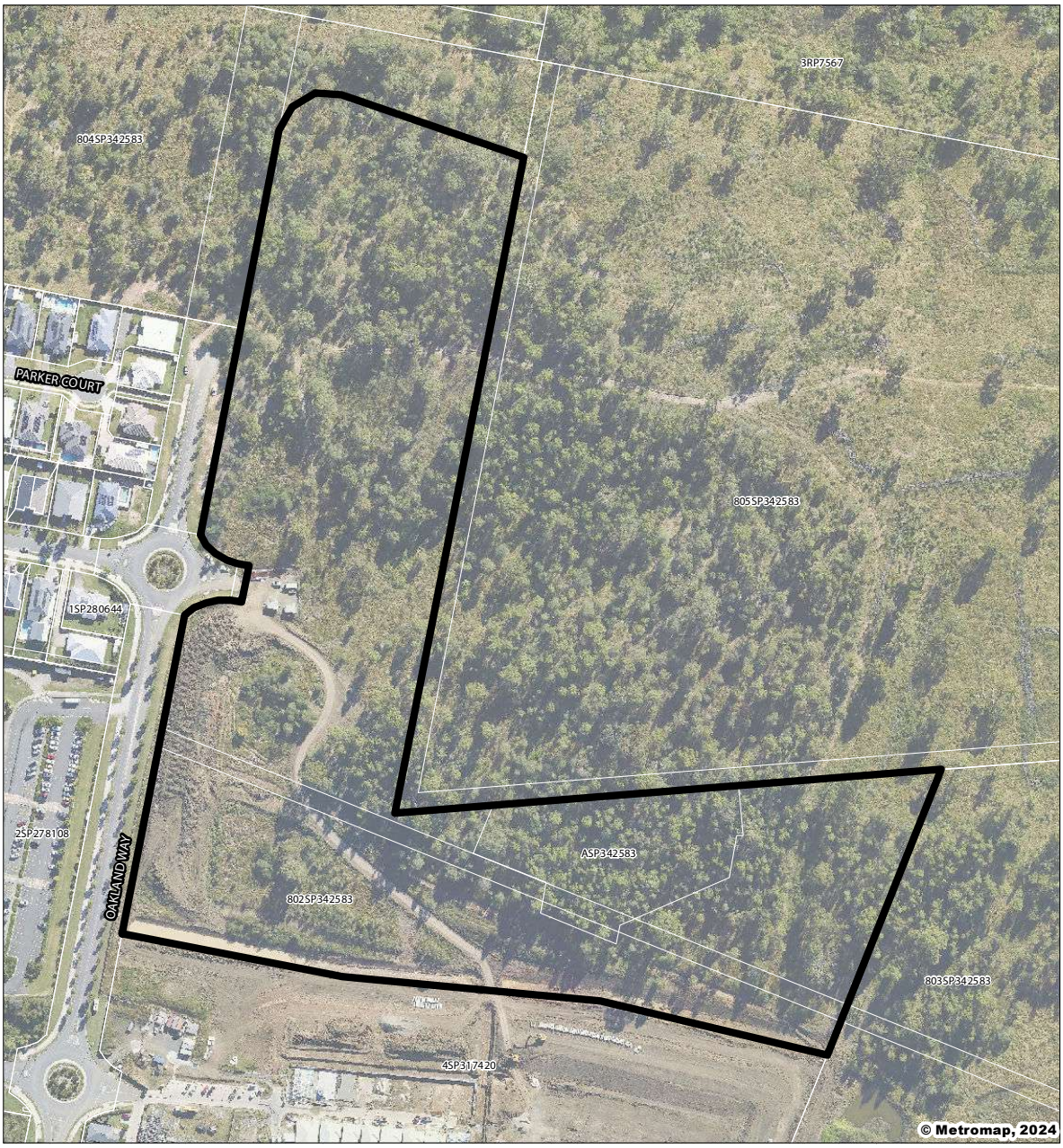

Legend

Site DCDB

Qld DCDB

Figure 2

Site Aerial

INA Operations Pty Ltd

File ref. 10966 E Figure 2 Site Aerial A
Date 3/10/2024
Project Oakland Way, Beaudesert

0 20 40 60 80 100 m

Scale (A4): 1:3,000 [GDA 2020 MGA Z56]

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2. Ecological assessment methodology and process

The following steps were undertaken in the preparation of this assessment:

1. Desktop analysis;
2. Legislation and policy review;
3. Field survey;
4. Development analysis; and
5. Conclusion and recommendations.

Details of the methodology undertaken for each of the assessment phases is provided in the following sections.

2.1. Desktop analysis methodology

Prior to the commencement of field surveys, a desktop analysis was conducted of Commonwealth, State and Local environmental databases and overlay mapping. Desktop analysis (refer to **Appendices B, C** and **D**) included the following:

- Commonwealth Matters of National Environmental Significance protected under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) on and around the site using the Protected Matters Search Tool (PMST);
- *Nature Conservation Act 1992* (NC Act) listed threatened species on and around the site using the Wildlife Online Database;
- Public environmental databases, including Atlas of Living Australia and BioMaps;
- State Government environmental overlay mapping, including:
    - Regulated Vegetation Maps under the *Vegetation Management Act 1999* (VM Act);
    - Flora Survey Trigger Areas under the NC Act;
    - Fish habitat and Waterway for Waterway Barrier Works under the *Fisheries Act 1994*;
    - Watercourses under the *Water Act 2000*;
    - Weeds under the *Biosecurity Act 2014*;
    - Coastal Development and Tidal Works (SARA Coastal Protection) under the Coastal Protection and Management Act 1995; and
    - Matters of State Environmental Significance under the State Planning Policy (SPP) (i.e., wetland protection areas, koala habitat, etc.); and relevant planning scheme documents and maps.

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- Scenic Rim Regional Council (Scenic Rim Planning Scheme) environmental overlay mapping including:
    - Zoning
    - Environmental significance overlays

A review of aerial photography history was undertaken to assist with the broad delineation of vegetation communities and to identify historical patterns and their potential effects on current local vegetation communities.

2.2. Field survey methodology

Ecological field surveys were conducted on the subject site in the attempt to confirm presence of potential matters of ecological significance.

2.2.1 Observational survey for significant flora and fauna, habitat trees and biodiversity values

The application area was walked to ensure all flora and fauna species were identified and recorded. Particular attention was paid to any threatened species listed as possibly occurring within or proximal to the application area. Specific micro-assemblages, which may support these threatened species, were also recorded when observed. This included observations of vertebrate fauna present within or proximal to the study area, including faunal lists and status of species significance under the Commonwealth's EPBC Act (using JAMBA, CAMBA, ROKAMBA and the Bonn Convention) and Queensland's NCA.

The observational survey included identification of ecological features and values such as broad vegetation communities, fauna habitats and ecological corridors. Identification and description of the fauna habitats present within the area included any habitat trees. Specific attention was paid to threatened flora and fauna species.

2.2.2 Ground-truthing of vegetation communities

Vegetation was ground-truthed and assessed against current VMA regional ecosystem mapping and pre-clear mapping. Surveys were undertaken in accordance with the requirements of the SRRC.

A comprehensive flora survey was undertaken using a methodology consistent with the established formats used by the Queensland Herbarium (Neldner et al. [2005]; Hnatiuk et al. [2009]). Survey methodology comprised an initial visual audit, followed by quantitative assessment of vegetation associations and communities.

2.2.3 Scats, tracks, and other traces search

Surveys for scats, tracks and other fauna traces were conducted throughout the survey period during. Both predator and non-predator scats were sought during all searches. Only those samples definitively identified were included in the survey results. Specific search efforts were made to locate the presence of Koalas or evidence of their occurrence on the subject lands and the local area. In addition, particular notice of potential dens, scats, and tracks for invasive species, such as European Red Fox and domestic cats, was taken to identify predator-prey interactions and understand existing impacts within the referral area.

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2.2.4 GPS Tree Plot

A tree survey was completed across the site to locate trees that contained habitat features, such as hollows or nests. A handheld GPS device (Trimble) is used to record sub metre accurate locations (in some cases use survey accurate locations), and the following parameters of each tree specimen recorded:

- tree species, via a combination of observations of the gum nuts, buds, leaves, bark, and growth form;
- diameter of the trunk of the tree is measured using the standard method of Diameter at Breast Height (DBH);
- height of the tree is measured using a laser rangefinder with three-point measurement capability (inclinometer);
- canopy spread;
- health assessment (canopy, trunk); and
- habitat values (for example, presence and/or number of hollows, nests, termites, scratches, scats)

2.2.5 Connectivity Assessment

A combination of contemporary aerial imagery, locality knowledge and field inspection can assist in understanding if there are barriers to fauna movement in the landscape. Once the aerial imagery is interrogated, location(s) for inspection are selected (typically roads) and barriers identified.

2.2.6 Incidental bird surveys

This technique is a non-intrusive active area search that provides an estimate of diurnal bird species occurrence and abundance. Inclement weather was avoided as this greatly reduces the detection of bird species. The abundance of flowering trees at the survey site was observed, as this can influence the abundance and composition of nectar feeding diurnal birds. Further observations were recorded over several hours during other survey activities. Birds were identified from either direct observation or by their calls.

2.2.7 Spot Assessment Technique (SAT) Koala Surveys

Koala Habitat and Spot Assessment Technique (SAT) surveys were undertaken on-site in accordance with the methodology developed by the Australian Koala Foundation (as per Phillips and Callaghan 2011). The SAT method is an assessment of Koala activity involving a search for any Koalas and signs of Koala usage.

The SAT methodology involves the selection of a focal non-juvenile tree that is either observed to have a Koala or scats or is known to be a food tree or otherwise important for Koalas, followed by a systematic search for scats, identifiable scratches, and direct observations of Koala. Assessment of each tree requires the assessor to search the ground for Koala scats within a 1 m radius of the trunk. If scats are not readily observed, the assessor should gently comb through the leaf litter or grass. After approximately two minutes of searching for scats, the base of the trunk is observed for scratches and the crown for Koala. The next closest non-juvenile tree to the first tree is then assessed and so on until 30 trees have been surveyed. Only non-juvenile trees (DBH of 100 mm or greater) are assessed which includes native and non-native species.

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A total of four (4) SAT surveys were completed within the referral area with two (2) completed in August 2022 and two (2) completed in September 2024. The number of trees showing evidence of Koala activity is expressed as a percentage of the total number of trees sampled to indicate the frequency of Koala usage.

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3. Legislation, policy, and planning instruments

3.1. *Environment Protection and Biodiversity Conservation Act 1999*

The Australian Government's key piece of environmental legislation is the EPBC Act. The EPBC Act aims to protect and manage matters of environmental significance, which include nationally and internationally important flora, fauna, ecological communities, and heritage places.

A search using the Commonwealth's Protected Matters Search Tool (PMST) was conducted for the site. The search provides a list of wetlands of international significance, threatened ecological communities and threatened species, migratory and marine-listed species which have the potential to be temporarily or permanently located within a 5 km radius from the central point of the site. **Table 2** lists a summary of these results relevant to the site. The complete results of this search are included in **Appendix B**.

Table 2: EPBC Act PMST search results

Wetlands of International Importance		
Moreton Bay – 20-30 km upstream from RAMSAR site		
Threatened Ecological Communities		
Coastal Swamp Oak (*Casuarina glauca*) Forest of New South Wales and South East Queensland ecological community (Endangered) – Community may occur within area		
Coastal Swamp Sclerophyll Forest of New South Wales and South East Queensland (Endangered) – Community may occur within area		
Grey Box-grey gum wet forest of subtropical eastern Australia (Endangered) – Community likely to occur within area		
Lowland Rainforest of Subtropical Australia (Critically Endangered) – Community may occur within area		
Poplar Box Grassy Woodland on Alluvial Plains (Endangered) – Community may occur within area		
Subtropical eucalypt floodplain forest and woodland of the New South Wales North Coast and South East Queensland bioregions (Endangered) – Community likely to occur within area		
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland (Critically Endangered) – Community likely to occur within area		
Threatened Species		
Scientific name	**Common name**	**Status**
Birds		
Anthochaera phrygia	Regent Honeyeater	Critically Endangered
Botaurus poiciloptilus	Australasian Bittern	Endangered
Calidris acuminata	Sharp-tailed Sandpiper	Vulnerable

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Threatened Species		
Scientific name	**Common name**	**Status**
Calidris ferruginea	Curlew Sandpiper	Critically Endangered
Calyptorhynchus lathami lathami	South-eastern Glossy Black-Cockatoo	Vulnerable
Charadrius leschenaultii	Greater Sand Plover, Large Sand Plover	Vulnerable
Climacteris picumnus victoriae	Brown Treecreeper (south-eastern)	Vulnerable
Cyclopsitta diophthalma coxeni	Coxen's Fig Parrot	Critically Endangered
Erythrotriorchis radiatus	Red Goshawk	Endangered
Falco hypoleucos	Grey Falcon	Vulnerable
Gallinago hardwickii	Lathams Snipe, Japanese Snipe	Vulnerable
Geophaps scripta scripta	Squatter Pigeon (southern)	Vulnerable
Grantiella picta	Painted Honeyeater	Vulnerable
Hirundapus caudacutus	White-throated needletail	Vulnerable
Lathamus discolor	Swift Parrot	Critically Endangered
Rostratula australis	Australian Painted Snipe	Endangered
Stagonopleura guttata	Diamond Firetail	Vulnerable
Tringa nebularia	Common Greenshank	Endangered
Turnix melanogaster	Black-breasted Button-quail	Vulnerable
Fish		
Maccullochella mariensis	Mary River Cod	Endangered
Frogs		
Mixophyes fleayi	Fleay's Frog	Endangered
Insects		
Argynnis hyperbius inconstans	Australian Fritillary	Critically Endangered
Mammals		
Chalinolobus dwyeri	Large-eared Pied Bat, Large Pied Bat	Endangered
Dasyurus maculatus maculatus (SE mainland population)	Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population)	Endangered
Macroderma gigas	Ghost Bat	Vulnerable
Notamacropus parma	Parma Wallaby	Vulnerable
Petauroides volans	Greater Glider (southern and central)	Endangered
Petaurus australis australis	Yellow-bellied Glider (south-eastern)	Vulnerable
Petrogale penicillata	Brush-tailed Rock-wallaby	Vulnerable

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Threatened Species		
Scientific name	**Common name**	**Status**
Phascolarctos cinereus (combined populations of Qld, NSW and ACT)	Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory)	Endangered
Potorous tridactylus tridactylus	Long-nosed Potoroo (SE mainland)	Vulnerable
Pseudomys novaehollandiae	New Holland mouse	Vulnerable
Pteropus poliocephalus	Grey-headed Flying-fox	Vulnerable
Plants		
Arthraxon hispidus	Hairy-joint Grass	Vulnerable
Bosistoa transversa	Three-leaved Bosistoa,	Vulnerable
Bulbophyllum globuliforme	Miniature Moss-orchid	Vulnerable
Clematis fawcettii	Stream Clematis	Vulnerable
Cupaniopsis shirleyana	Wedge-leaf tuckeroo	Vulnerable
Cupaniopsis tomentella	Boonah Tuckeroo	Vulnerable
Cynanchum elegans	White-flowered Wax Plant	Endangered
Dichanthium setosum	Bluegrass	Vulnerable
Fontainea venosa	-	Vulnerable
Lepidium peregrinum	Wandering Pepper-cress	Endangered
Leuzea australis listed as Rhaponticum australe	Austral Cornflower, Native Thistle	Vulnerable
Macadamia integrifolia	Macadamia nut	Vulnerable
Macadamia tetraphylla	Rough-shelled Macadamia	Vulnerable
Notelaea lloydii	Lloyd's Olive	Vulnerable
Notelaea ipsviciensis	Cooneana Olive	Critically Endangered
Picris evae	Hawkweed	Vulnerable
Planchonella eerwah	Shiny-leaved Condoo	Endangered
Rhodamnia rubescens	Scrub Turpentine, Brown Malletwood	Critically Endangered
Rhodomyrtus psidioides	Native Guava	Critically Endangered
Samadera bidwillii	Quassia	Vulnerable
Thesium australe	Australa toadflax	Vulnerable
Vincetoxicum woollsii listed as Tylophora woollsii	-	Endangered
Reptiles		
Delma torquata	Collared Delma	Vulnerable

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Threatened Species		
Scientific name	**Common name**	**Status**
Furina dunmalli	Dunmall's Snake	Vulnerable
Hemiaspis damelii	Grey Skink	Endangered
Migratory Terrestrial species		
Cuculus optatus	Oriental cuckoo	
Hirundapus caudacutus	White-throated Needletail	Vulnerable
Monarcha melanopsis	Black-faced monarch	
Monarcha trivirgatus	Spectacled monarch	
Motacilla flava	Yellow Wagtail	
Myiagra cyanoleuca	Satin flycatcher	
Rhipidura rufifrons	Rufous fantail	

3.2. Nature Conservation Act 1992

The NCA classifies and protects significant areas (Protected Areas) and protects threatened plant and animal species. The *Nature Conservation (Plants) Regulation 2020* (NCPR) and the *Nature Conservation (Animals) Regulation 2020* (NCAR) lists plant and animal species presumed extinct, endangered, vulnerable, near threatened, least concern, international or prohibited. The schedules of this regulation were considered in this report using a wildlife online database search with a 5 km radius from the site. Species listed under the NCAR and NCPR with the potential to occur in and around the subject site are shown in **Table 3**. Refer to **Appendix C** for full search results. A further rectified search utilising a 2km radius did not return records of any threatened species.

Table 3: NC Act wildlife online search results

Scientific name	Common name	Status
Mammals		
Phascolarctos cinereus	Koala	Endangered
Plants		
Leichhardtia longiloba	-	Vulnerable
Parsonsia tenuis	Slender Silkpod	Vulnerable
Wahlenbergia scopulicola	-	Vulnerable
Hibbertia hexandra	-	Near Threatened
Hibbertia monticola	Mountain Guinea Flower	Near Threatened
Agiortia cicatricata	-	Near Threatened
Ricinocarpos speciosus	-	Vulnerable

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Scientific name	Common name	Status
Coopernookia scabridiuscula	Coopernookia	Vulnerable
Westringia blakeana	-	Near Threatened
Acacia acrionastes	-	Near Threatened
Acacia saxicola	Mt. Maroon Wattle	Endangered
Pultenaea whiteana	Mt. Barney Bush Pea	Vulnerable
Phlegmariurus varius	-	Vulnerable
Gossia hallii		Vulnerable
Lenwebbia prominens	-	Near Threatened
Rhodamnia rubescens	Scrub Turpentine	Critically Endangered
Corybas montanus	Small Helmet Orchid	Vulnerable
Arundinella grevillensis	-	Vulnerable
Comesperma breviflorum	-	Near Threatened
Banksia conferta	-	Vulnerable
Clematis fawcettii	-	Vulnerable
Leionema elatius subsp. beckleri	-	Endangered
Solanum callium	Brush Nightshade	Vulnerable

The protected plants regulatory framework under the NC Act commenced on 31 March 2014, establishing approval triggers and processes for clearing protected plants. A protected plant is defined as extinct, endangered, vulnerable and/or near threatened (EVNT) plant species listed by name in Schedules 1-5 of the NCWR and least concern wildlife, not listed by name but identified as a plant indigenous to Australia in Schedule 6.

Under the amended NC Act, a protected plant that is in the wild must not be 'taken', which includes being cleared, unless taking is under:

- A conservation plan applicable to the plant;
- A license, permit, or other authority under a regulation; or
- An exemption under a regulation.

Under the NC Act, a native plant is a protected plant if it is 'in the wild' – defined in the NC Act as 'in an independent state of natural liberty'. A search of the protected plants flora survey trigger map identified that the site is located partially within a 'high risk' area for protected plants (refer to **Figure 3**). Therefore, an NCA Protected Plant flora survey will be required prior to vegetation clearing occurring on site, and if protected plants are found, a protected plant clearing permit obtained.

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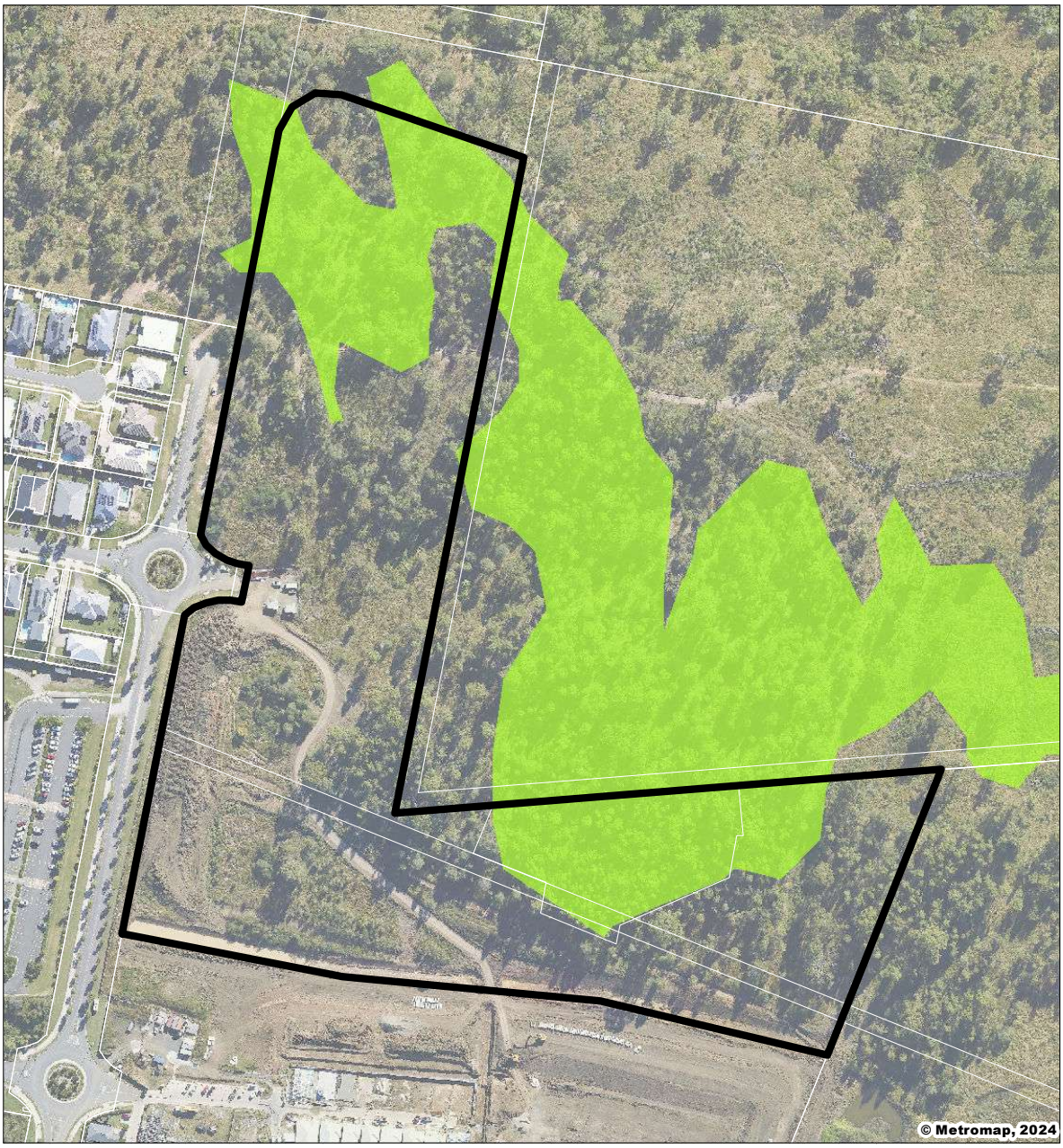

Legend

- Qld DCDB
- Site DCDB
- High risk area - flora survey trigger

Figure 3

NCA - Protected Plants
Flora Survey Trigger

File ref. 10966 E Figure 3 NCA A
Date 3/10/2024
Project Oakland Way, Beaudesert

0 20 40 60 80 100 m

Scale (A4): 1:3,000 [GDA 2020 MGA Z56]

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3.3. Vegetation Management Act 1999

The VM Act is the key mechanism by which the Queensland Government protects the state's environmental resources pertaining to vegetation. Under the VM Act, a series of maps delineate vegetation features across the landscape, which are each assigned a conservation value directly related to the remaining extent of these features in the landscape. The VM Act also protects 'essential habitat' vegetation where listed threatened species have been known to occur.

Regulated vegetation management mapping shows vegetation categories used to determine clearing requirements. While areas shown on the map as Category X are not regulated under the VM Act, those shown as category A, B, C or R are subject to clearing requirements. The latter vegetation categories can only be cleared in accordance with an exemption, self-assessable vegetation clearing code, area management plan or development approval. A supporting map defining regional ecosystems, wetlands, watercourses, and essential habitat, is provided with the regulated vegetation management map. Approval for clearing of native vegetation is required under the *Planning Act 2017*, specifically, assessment is required against State Code 16: Native Vegetation Clearing of the State Development Assessment Provisions (SDAP) which are administered by the State Assessment and Referral Agency (SARA) which is a division of the Department of Infrastructure, Local Government and Planning (DILGP).

A property search of the Regulated Vegetation Management Map identified the site as containing one area of Category Vegetation (**Figure 4**). Remnant vegetation is mapped as a Regional Ecosystem 'Of Concern' 12.9-10.3 (refer **Figure 5**). This vegetation has additional overlays applied under the VM Act being mapped as essential habitat for the Koala (*Phascolarctos cinereus*). The remainder of the site is Category X (non-remnant) vegetation, which is exempt from the provisions of the VM Act.

Almost all the mapped Category B (remnant) vegetation is proposed to be retained as part of the development. In addition, as the site is zoned as 'low-medium density residential' in the SRRC Planning Scheme 2020, any clearing of the Of Concern Category B vegetation on site would be considered exempt in accordance with the 'urban area, urban purpose' exemption contained within Schedule 21, Part 2 of the *Planning Regulation 2017*.

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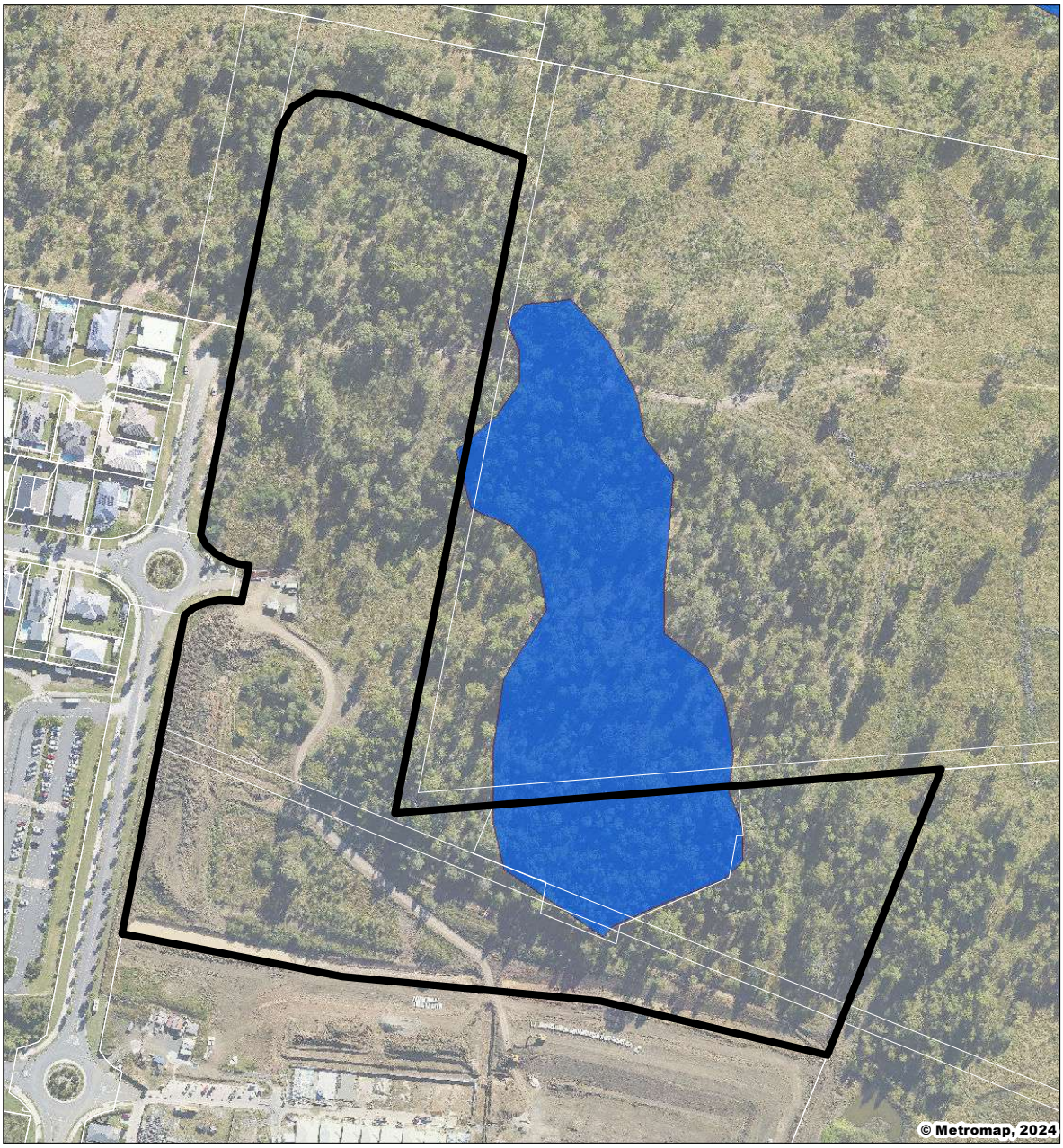

Legend

- Site DCDB
- Qld DCDB

Regulated Vegetation

- Category A area - Vegetation Offset/Compliance notices/VDecs
- Category B area - Remnant vegetation
- Category C area - High value regrowth vegetation
- Category R area - Reef regrowth watercourse vegetation
- Category X area
- Water
- Area not categorised

Figure 4

Regulated Vegetation Management Map

INA Operations Pty Ltd

File ref. 10966 E Figure 4 RVM A
Date 3/10/2024
Project Oakland Way, Beaudesert

0 20 40 60 80 100 m

Scale (A4): 1:3,000 [GDA 2020 MGA Z56]

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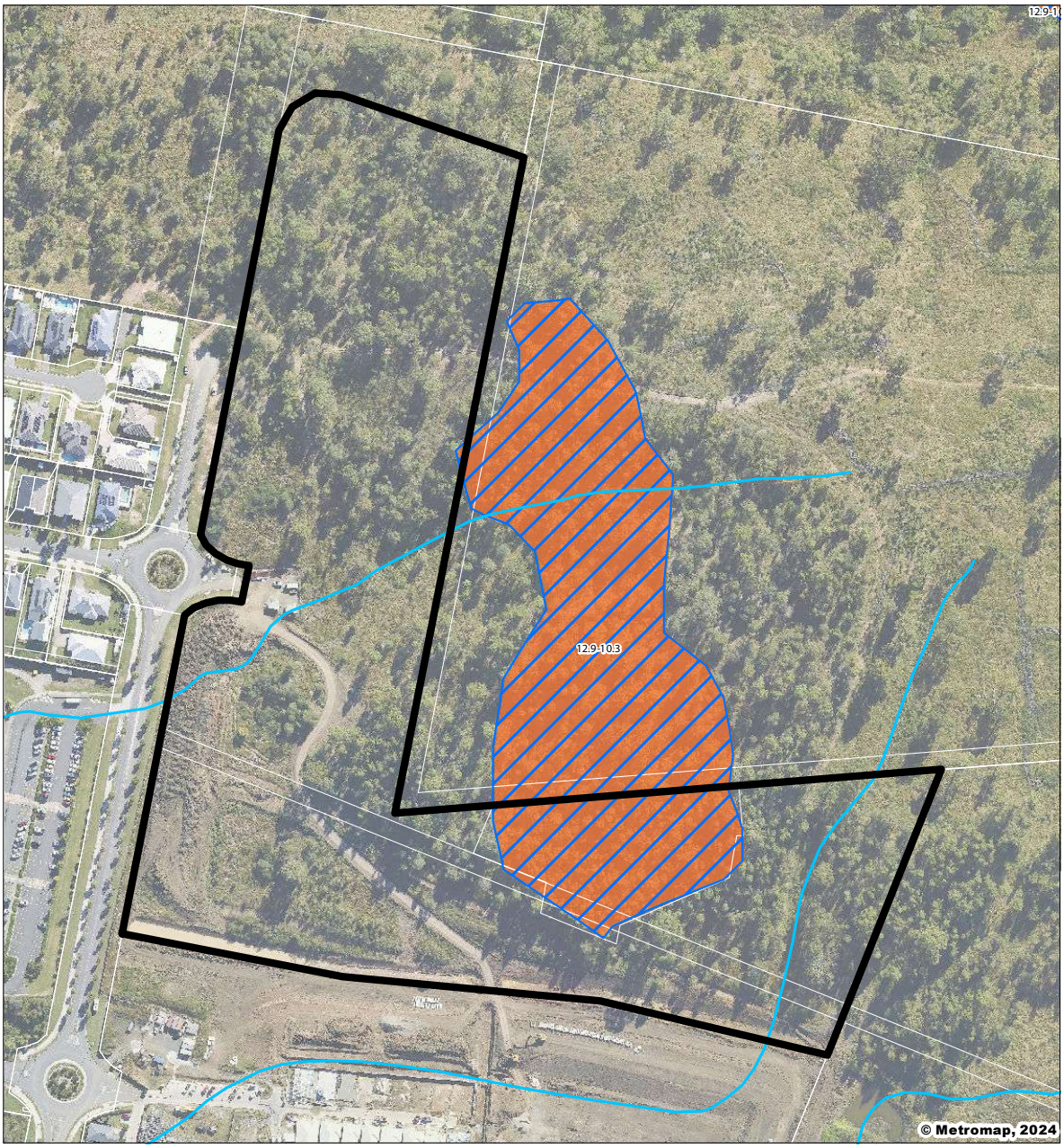

Legend

- Site DCDB
- Qld DCDB
- VM Watercourses
- VM Essential Habitat
- VM Wetland

Vegetation Management Regional Ecosystems Map

- Category A or B area containing endangered regional ecosystems
- Category A or B area containing of concern regional ecosystems
- Category A or B area that is a least concern regional ecosystem
- Category C area containing endangered regional ecosystems
- Category C area containing of concern regional ecosystems
- Category C area that is a least concern regional ecosystem

Figure 5

Vegetation Management Regional Ecosystem Map

File ref. 10966 E Figure 5 VMRE A
Date 3/10/2024
Project Oakland Way, Beaudesert

0 20 40 60 80 100 m

Scale (A4): 1:3,000 [GDA 2020 MGA Z56]

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3.4. *Biosecurity Act 2014*

The *Biosecurity Act 2014*, which commenced on 1 July 2016, establishes a framework to regulate and control invasive plants and animals. Under the *Biosecurity Act 2014*, landowners are responsible for taking all reasonable and practical steps to minimise the risks associated with invasive plants and animals under their control. This is known as the general biosecurity obligation (GBO).

The *Biosecurity Act 2014* categorises restricted matter (restricted plants and animals) into the following:

- Category 1: must be reported to an inspector within 24 hours (includes Red Imported Fire Ants, amongst others).
- Category 2: must be reported within 24 hours Biosecurity Queensland on 13 25 23.
- Category 3: must not be distributed either by sale or gift or released into the environment.
- Category 4: must not be moved.
- Category 5: must not be kept.
- Category 6: must not be fed (animals).
- Category 7: must be euthanised (animals).

Restricted matters observed in the site area are discussed in **Section 4**.

3.5. SEQ Koala Habitat

South East Queensland Koala habitat protection mechanisms are incorporated into the PR. Schedule 10 Part 10 of the PR sets out what is and is not prohibited or assessable development in a Koala Habitat Area (KHA). Where inside a Koala Priority Area (KPA), the provisions of Schedule 11 of the PR apply unless certain criteria are met (refer Part 10 Division 2 16 A 2). Where outside of a KPA, development that involves interfering with a Koala Habitat Area is assessable unless certain criteria apply (refer Part 10 Division 3 16 B 2). Development for extractive industries in key resource areas is dealt with under Part 10 Division 4.

Development that is assessable outside of a KPA is referrable to the State and must address SDAP Code 25 Development in South East Queensland Koala Habitat Areas. Interfering with Koala habitat is defined as:

a) removing, cutting down, ringbarking, pushing over, poisoning or destroying in any way, including by burning, flooding or draining, native vegetation in a koala habitat area; but

b) does not include destroying standing vegetation by stock, or lopping a tree.

The Koala priority and koala habitat area map administered by DES does not identify the site as within a KPA, however, the southern portion of the subject site is mapped as containing KHA (refer **Figure 6**). Therefore, development on the site will require referral to SARA if the development proposes to interfere with mapped KHA beyond the scope of *exempted development* purposes, as defined by the PR 2017 Schedule 24.

The proposed development will impact less than 500m^2 within the mapped KHA area, therefore referral to SARA and a response to State Code 25 is not required.

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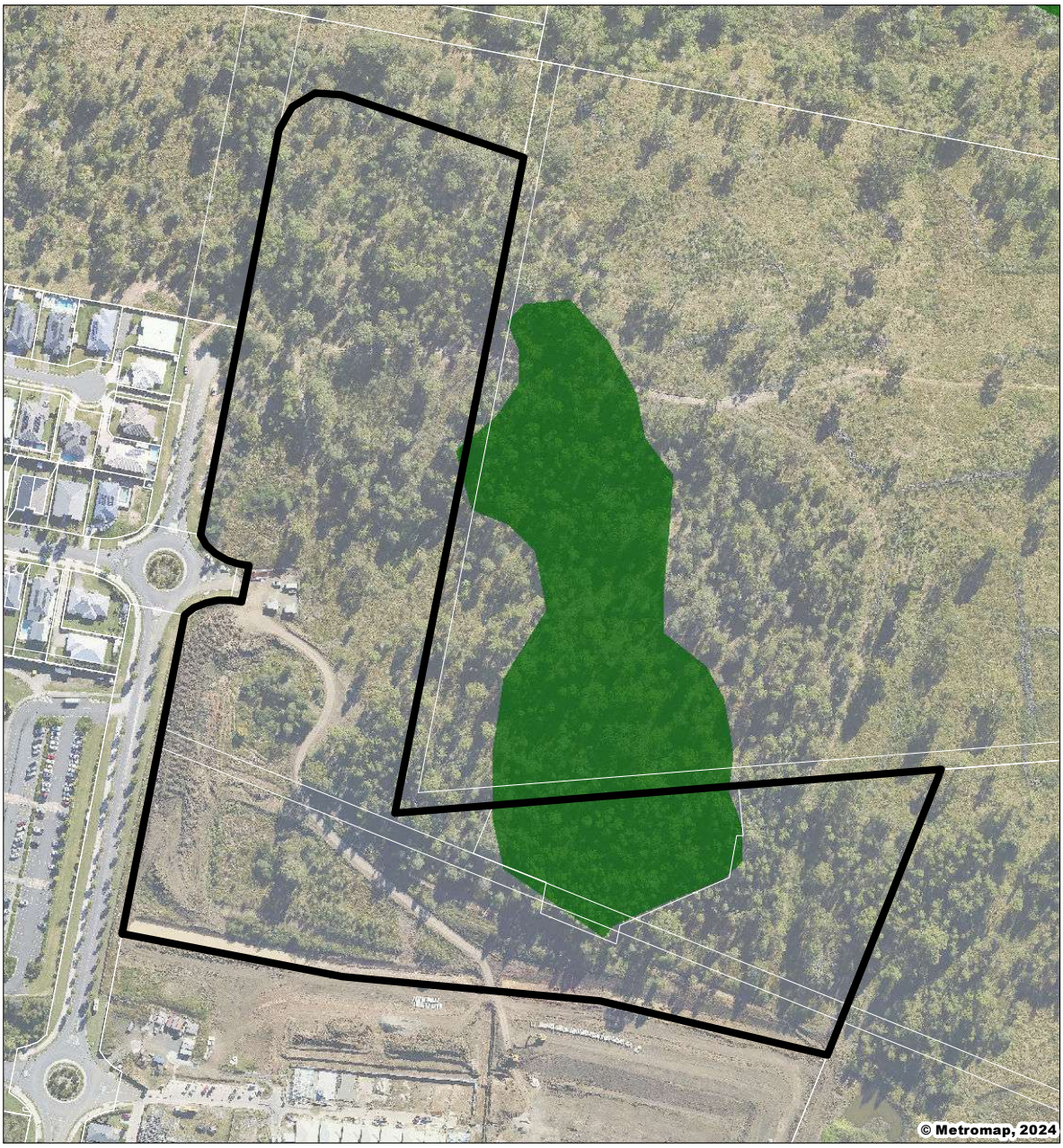

Legend

- Site DCDB
- Qld DCDB

Koala Habitat Areas

- Core Remnant Koala Habitat Areas
- Core Regrowth Koala Habitat Areas
- Locally Refined Koala Habitat Areas
- Koala Priority Areas

Figure 6

Koala Priority Areas and Koala Habitat Areas

INA Operations Pty Ltd

File ref. 10966 E Figure 6 Koala 2019 A
Date 3/10/2024
Project Oakland Way, Beaudesert

0 20 40 60 80 100 m

Scale (A4): 1:3,000 [GDA 2020 MGA Z56]

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3.6. Fisheries Act 1994 (Waterway barrier works)

The Fisheries Act 1994 deals with the use, conservation and improvement of Queensland's fisheries resources and fish habitats. The legislation deals with the impact from coastal development on marine fish habitat, including protected marine plants, and declared fish habitat areas.

The site contains two (2) mapped '*low risk*' waterways for waterway barrier works (WWBW) (refer to **Figure 7**). Referral to SARA for waterway barrier works and assessment against State Code 18 will be required at the Operational Works application stage if waterway barrier work impacts are proposed beyond the ground truthed top of bank of these mapped waterways. The need for this referral will be determined following the completion of the final detailed engineering design at Operational Works stage.

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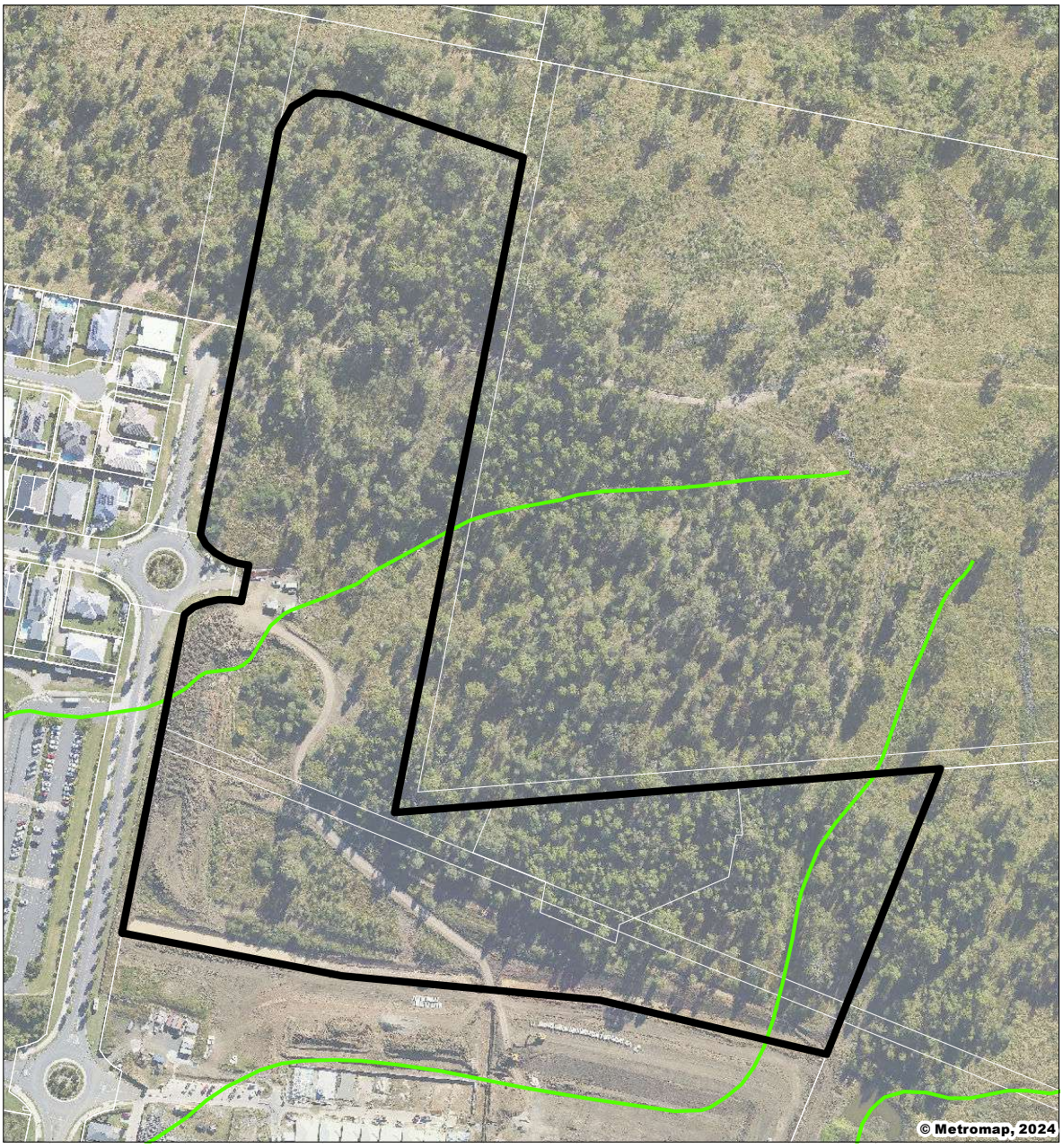

Legend

- Site DCDB
- Fish habitat area
- Qld DCDB

Waterways

Risk of Impact

- 1 - Low
- 2 - Moderate
- 3 - High
- 4 - Major
- Tidal waterway

Figure 7

Fisheries - Waterways for Waterway Barrier Works

INA Operations Pty Ltd

File ref. 10966 E Figure 7 Fisheries A
Date 3/10/2024
Project Oakland Way, Beaudesert

0 20 40 60 80 100 m

Scale (A4): 1:3,000 [GDA 2020 MGA Z56]

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3.7. Other Queensland environmental legislation

Other Queensland environmental legislation has been reviewed in the context of the proposed development. **Table 4** lists other relevant Queensland legislation that is not triggered by the proposed development, the purpose of the legislation, and its relevance to the proposed development site.

Table 4: Site relevance to other Queensland environmental legislation

Legislation	Purpose	Relevance to development site
Coastal Protection and Management Act 1995	Seeks to protect the coastal resources of the coastal zone through regulation of assessable coastal development	The site does not contain any coastal areas. Therefore, a response to State Code 8 is not required.
State Planning Policy 2017 (SPP)	Provides interim development assessment requirements which ensures that state interests are considered by local government when assessing development applications where the local government planning scheme does not yet integrate the State interests in the SPP. MSES include Biodiversity, Coastal Environment, and Water Quality.	The site is mapped as containing MSES – Wildlife Habitat (koala habitat areas – core), and Regulated vegetation (Category B, essential habitat and intersecting a watercourse) (refer **Figure 8**). MSES mapping overlays and requirements of the SPP are required to be incorporated into the SRRC Planning Scheme and are reflected in the planning scheme overlays. Compliance with the SPP is addressed through the provisions of the planning scheme.
Water Act 2000	The Water Act 2000 provides a framework for sustainable management of Queensland's water resources and quarry material. Under the Water Act 2000, a riverine protection permit is required to be obtained if works within a waterway result in filling or excavation unless these works meet an exemption.	A review of Queensland Globe indicates that drainage features defined under the Water Act 2000 are mapped onthe site. However, under the Water Act 2000, a watercourse does not include a drainage feature, therefore a riverine protection permit is not required.

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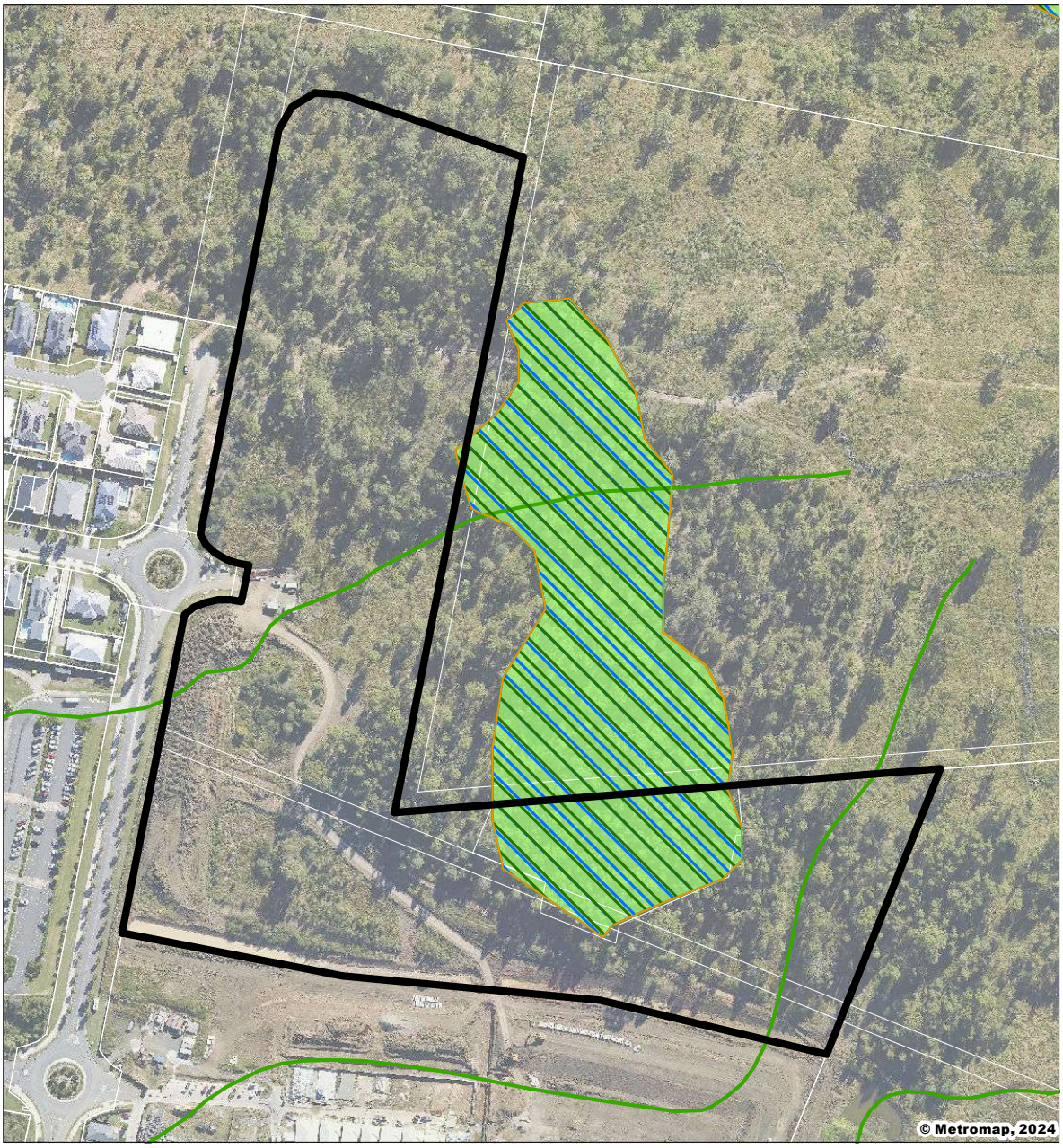

Legend

- Qld DCDB
- Site DCDB
- MSES Wildlife habitat (SEQ koala habitat - core)
- MSES Regulated vegetation (intersecting a watercourse)
- MSES Regulated vegetation (essential habitat)
- MSES Regulated vegetation (category B)
- MSES Regulated vegetation (category C)

Figure 8

Matters of State Environmental Significance

INA Operations Pty Ltd

File ref. 10966 E Figure 8 MSES A
Date 3/10/2024
Project Oakland Way, Beaudesert

0 20 40 60 80 100 m

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3.8. Town planning instruments

The site is located within the jurisdiction of SRRC and is subject to the provisions of the SRRC Planning Scheme.

3.8.1 Scenic Rim Planning Scheme

The proposed development is within land zoned as low-medium density residential (**Figure 9**).

Under the SRRC planning scheme, the proposed works area is mapped with the following ecologically relevant overlays:

- Environmental Significance – Biodiversity, Matters of State Environmental Significance (Regulated Vegetation) (refer to **Figure 10**); and
- Environmental Significance – Local Biodiversity, Matters of Local Environmental Significance (node Corridor) (refer to **Figure 11**).

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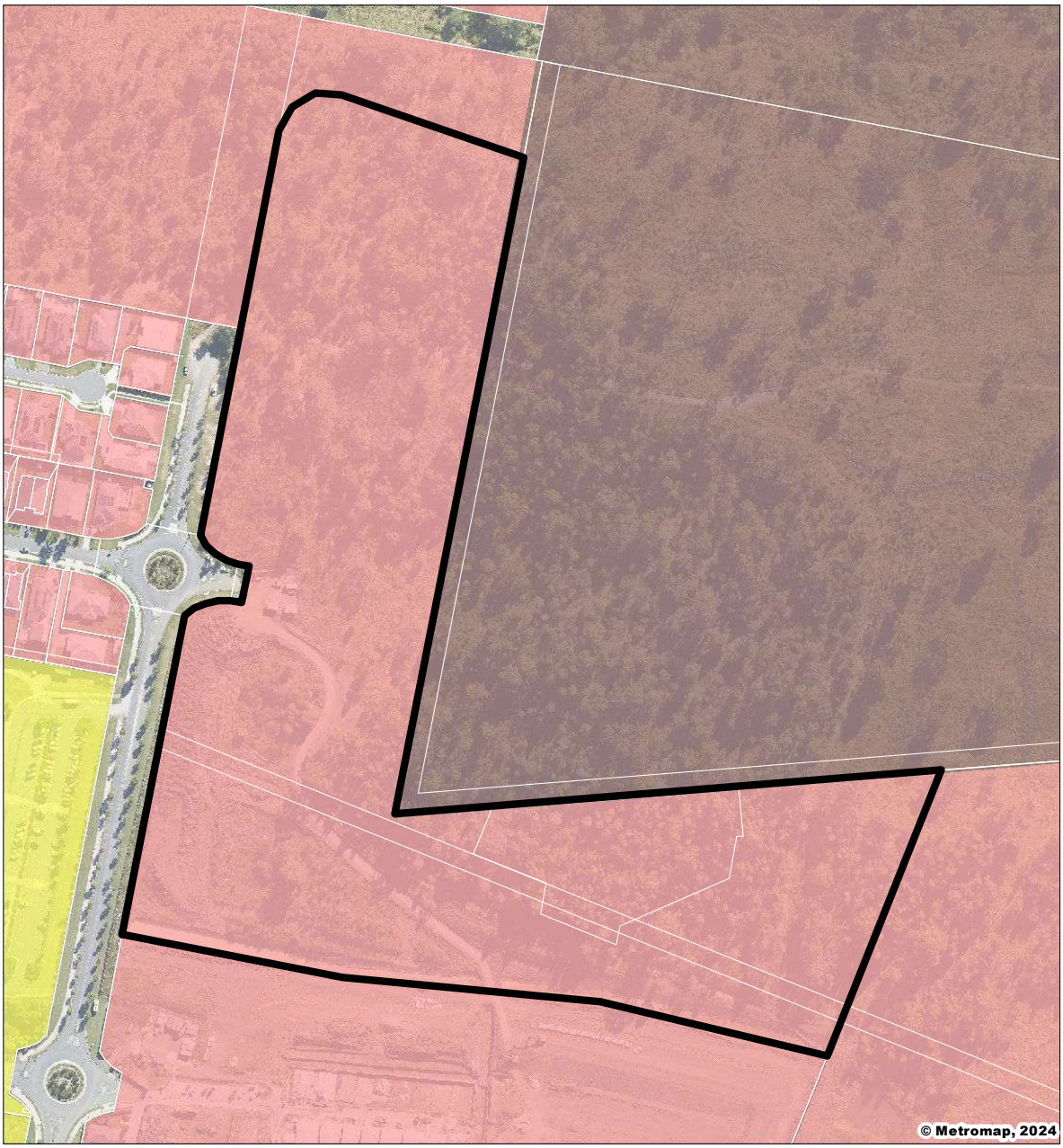

Legend

- Site DCDB
- Qld DCDB

Zoning

- Community Facilities
- Low-medium Density Residential
- Rural

Figure 9

Scenic Rim Regional Council Zoning

INA Operations Pty Ltd

File ref. 10966 E Figure 9 SRRC Zoning A
Date 3/10/2024
Project Oakland Way, Beaudesert

0 20 40 60 80 100 m

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Version: 1, Version Date: 10/12/2024

Legend

- Site DCDB
- Qld DCDB
- Regulated Vegetation
- Protected Areas

Figure 10

Scenic Rim Regional Council Environmental Significance - Biodiversity

File ref. 10966 E Figure 10 SRRC Biodiversity A
Date 3/10/2024
Project Oakland Way, Beaudesert

0 20 40 60 80 100 m

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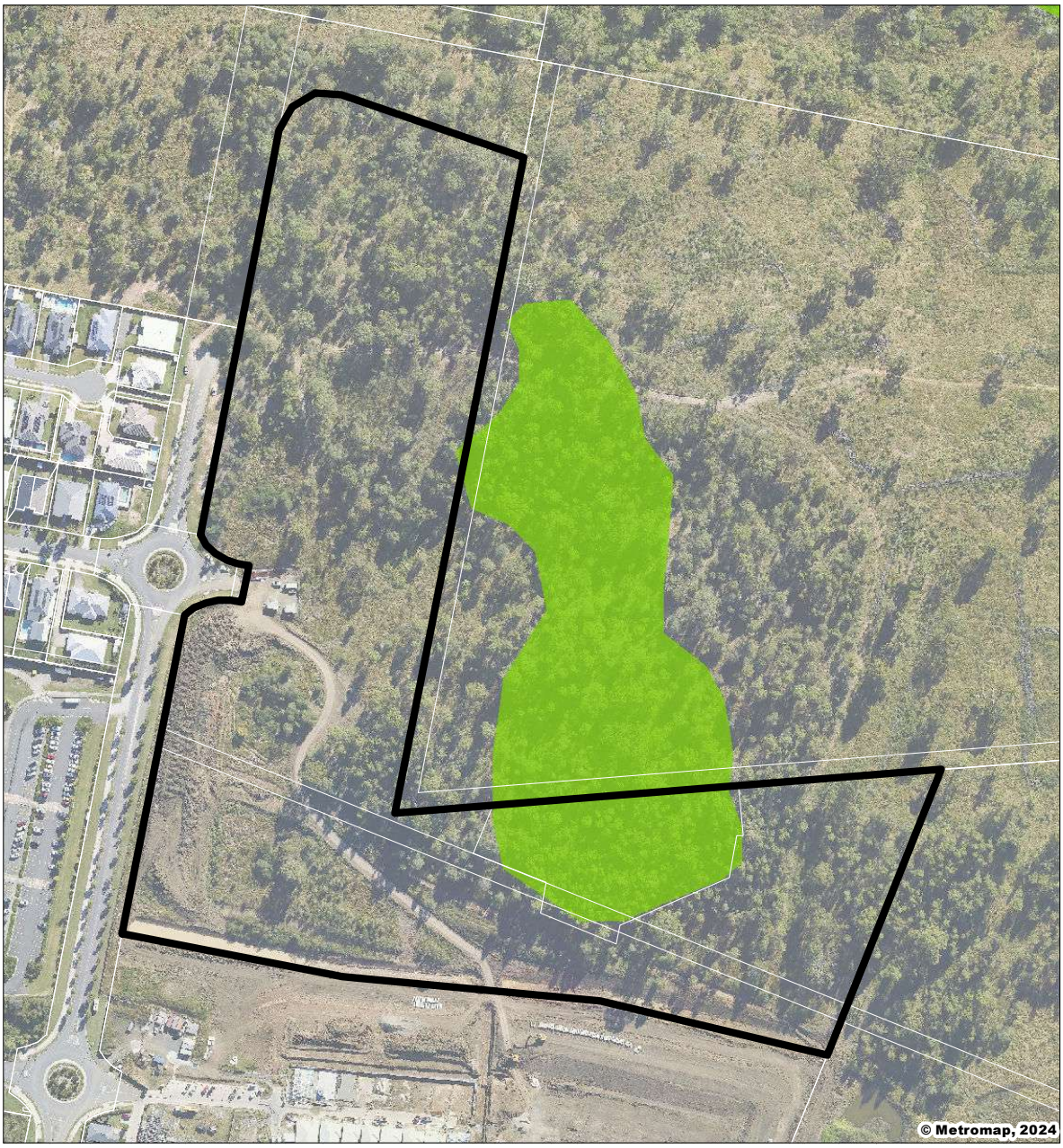

Legend

- Site DCDB
- Qld DCDB
- Core Corridor
- Node Corridor
- Stepping Stone
- Critical Linkage

Figure 11

Scenic Rim Regional Council Environmental Significance - Local Biodiversity

File ref. 10966 E Figure 11 SRRC Local Biodiversity A
Date 3/10/2024
Project Oakland Way, Beaudesert

0 20 40 60 80 100 m

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4. Ecological survey results

Ecologists from Saunders Havill Group (SHG) assessed the site over one (1) day in August 2022 and during two (2) days September 2024**.** Weather conditions are detailed in **Table 5**. The entire site was walked to ensure all vegetation communities and species were recorded. Particular attention was paid to any threatened flora and habitat for any threatened fauna species that were listed as potentially occurring within the vicinity of the application area, and specific micro assemblage which may support these threatened species. Refer to **Plan 1** for field surveys and ground rectified vegetation communities.

Table 5: Weather Conditions

Date	Weather Conditions	Rain (mm)
08 August 2022	3.1 °C min - 21.1°C max	0
2 September 2024	15.1°Cmin –33.0°C max	0
4 September 2024	5.3°C min – 23.3°C max	0

4.1. General site observations

The following observations were made during field surveys

- This site consists of a mixture of remnant and regrowth vegetation values reflective of historical land-uses. The majority of the site is mapped as Category X (non-remnant) vegetation with a small polygon of Category B (remnant) vegetation mapped as Least Concern RE 12.9-10.3. This polygon is also mapped as state Koala Habitat refer **Section 4.2** for further details.
- Areas of high disturbance were observed across the site characterised by dense *Lantana camara* (Lantana) dominance and acacia regrowth. Native tree species across the site include *Eucalyptus moluccana* (Gum-topped Box), *Eucalyptus siderophloia* (Grey Ironbark), *Eucalyptus crebra* (Narrow-leaved Ironbark), *Coymbia citriodora (*Spotted Gum) and *Eucalyptus tereticornis* (forest Red Gum).
- Contextually, the site is bound by Oakland Way to the west with a school and low-density residential developments present. To the south is a development under construction and to the north and east includes a mixture of intact and regrowth vegetation.
- There are two drainage lines across the site mapped as *low risk* waterways for WBW under *Fisheries 1994*.
- General fauna surveys and targeted fauna surveys were conducted across the site, with the results summarised in **Section 4.5**.

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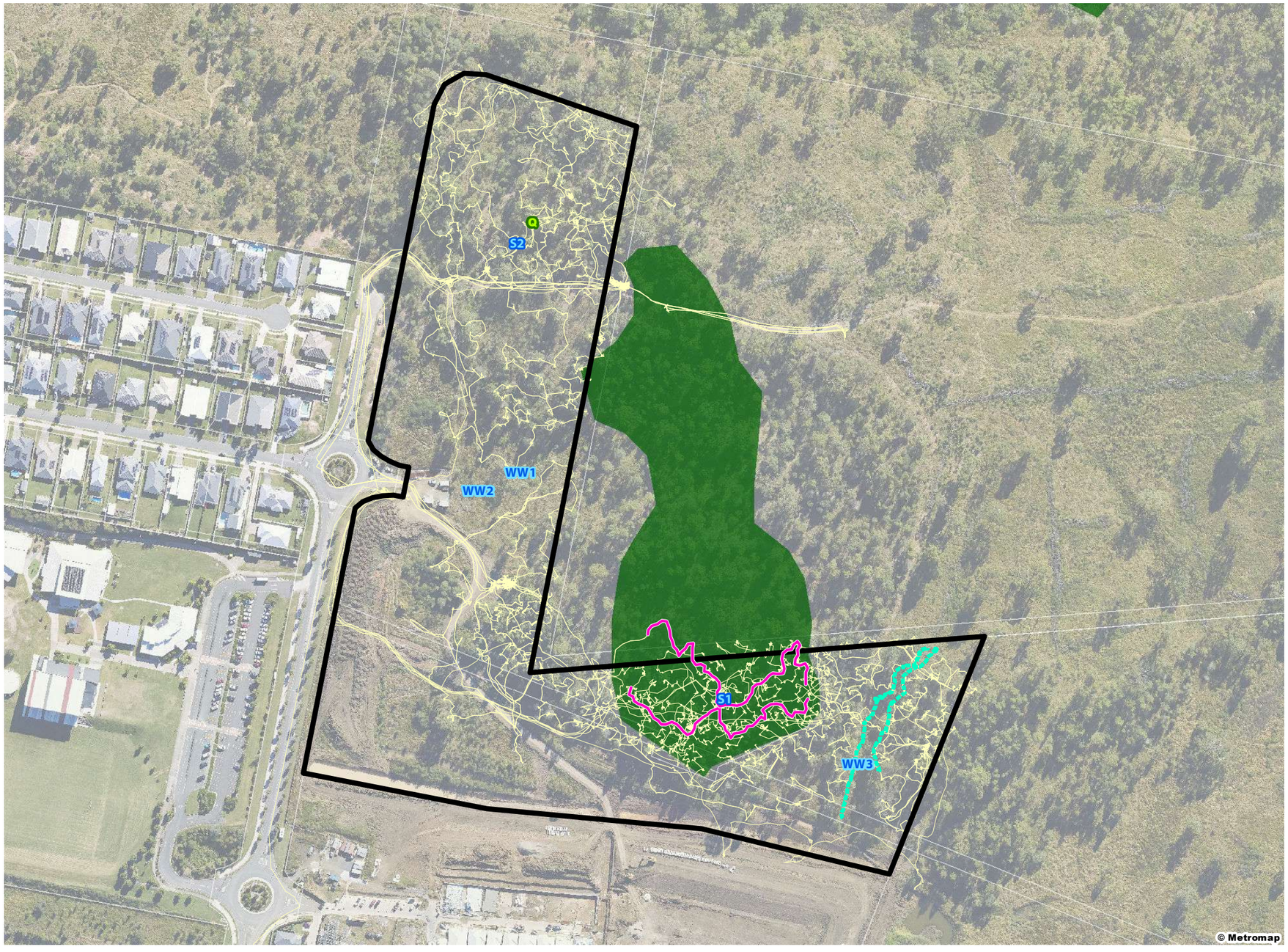
1.Field Survey Effort



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Legend

- Site DCDB
- Qld DCDB

Koala Habitat Areas

- Core Remnant Koala Habitat Areas
- Core Regrowth Koala Habitat Areas

Field Survey Effort

- GPS Track Logs
- Scat Meander
- Top of High Bank
- Quaternary Survey Location
- SAT Survey Locations
- Waterway Assessment Locations

Issue	Date	Description	Drawn	Checked
A	3/10/2024	Preliminary	TF	KT

0 20 40 60 80 100 m

Transverse Mercator | GDA 2020 | Zone 56 | 1:2,500 @ A3

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INA Operations Pty Ltd

Oakland Way, Beaudesert

Address / RPD: Beaudesert, QLD

3/10/2024 | 10966 E 01 Field Survey Effort A

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4.2. Mapped Koala Habitat and Category B Vegetation

One polygon of Category B (remnant) 'Of Concern' RE 12.9-10.3 vegetation is mapped as occurring in the southern area of the subject site (refer to **Figure 4**). **Table 6** below contains the relevant Regional Ecosystem descriptions. This area is also mapped as Koala Habitat Area (KHA) (refer to **Figure 5**).

Table 6: Regional Ecosystem Description

Regional Ecosystem	VMA Status	Description
RE12.9-10.3	Of concern	*Eucalyptus moluccana open forest. Other canopy species include Eucalyptus siderophloia or E. crebra, E. tereticornis and Corymbia citriodora subsp. variegata. Understorey generally sparse but can become shrubby in absence of fire. Occurs on Cainozoic and Mesozoic sediments, especially shales. Prefers lower slopes. Not a Wetland. (BVG1M: 13d).*

Vegetation within this area was confirmed as Koala Habitat with Koala habitat trees generally reflecting RE 12.9-10.3 being predominantly *Corymbia citriodora* (Spotted Gum) with some *Eucalyptus siderophloia* (Grey Ironbark), *Eucalyptus crebra* (Narrow-leaved Ironbark) and *Eucalyptus moluccana* (Gum-topped Box). Notably vegetation in this area was observed as containing scattered mature specimens however dominated by small diameter trees (i.e 100-200mm DBH). The shrub and ground layer consisted of predominantly native species with some infestations of Lantana camara (Lantana) and other weeds.

Photo set 1: Mapped Koala habitat contains recognised koala habitat trees.

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Version: 1, Version Date: 10/12/2024

4.3. Category X (non-remnant) Vegetation

Category X (non-remnant) vegetation is mapped across the majority of the site outside of the southern polygon of Category B and KHA vegetation discussed above in **Section 4.2**. The mapped Category X (non-remnant) vegetation on site covers cleared open areas with scattered trees and areas indicative of regrowth age vegetation, predominantly acacia species. The ground layer across the site was predominantly native and dominated by native *Imperata cylindrica* (Blady grass). However, weeds were present in higher densities where disturbance had occurred and associated with edge effects. Weed species observed include *Senecio madagascariensis* (Fireweed), *Heliotropium amplexicaule* (Blue heliotrope), *Ambrosia artemisifolia* (Annual Ragweed), *Onopordum acanthium* (Scotch Thistle) and *Verbena bonariensis* (Purple-top Verbena).

Photo set 2: The majority of the site is defined as non-remnant vegetation reflecting regrowth

4.4. Flora Survey Results

Flora was assessed during the site visits during August 2022 and September 2024.

- A total of 84 species of flora were recorded on-site including 46 native species and 38 introduced species. Native flora species recorded are presented in **Table 7** and introduced species in **Table 8**.

Table 7: Native flora species recorded on-site

Scientific Name	Common Name
Acacia disparrima	Hickory Wattle
Acacia concurrens	Black Wattle
Acacia glaucocarpa	Feathery Wattle
Acacia salicina	Sally Wattle
Aristida leptopoda	White Speargrass

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Version: 1, Version Date: 10/12/2024

Aristida vagans	Threeawn Speargrass
Capillipedium parviflorum	Scented-top Grass
Cheilanthes distans	Bristle Cloak Fern
Chrysocephalum apiculatum	Yellow Buttons
Corymbia citriodora	Spotted Gum
Corymbia henryi	Large-leaved Spotted Gum
Corymbia tessellaris	Moreton Bay Ash
Corymbia intermedia	Pink Bloodwood
Cymbopogon refractus	Barbed Wire Grass
Cynondon dactylon	Green Couch
Dianella caerulea	Blue Flax-lily
Dichondra repens	Kidney Weed
Entolasia stricta	Wiry Panic
Eremophila debilis	Winter Apple
Eucalyptus crebra	Narrow-leaved Ironbark
Eucalyptus moluccana	Gum-topped Box
Eucalyptus siderophloia	Northern Grey Ironbark
Eucalyptus tereticornis	Forest Red Gum
Eustrephus latifolius	Wombat Berry
Ficinia nodosa	Club rush
Flindersia australis	Crows Ash
Geitonoplesium cymosum	Scrambling Lily
Glycine clandestina	Twining Glycine
Glycine microphylla	Small-leaf Glycine
Goodenia rotundifolia	Star Goodenia
Hardenbergia violacea	False Sarsparilla
Imperata cylindrica	Blady Grass
Indigofera australis	Australian indigo
Juncus usitatus	Common Rush
Lepidosperma laterale	Variable Swordsedge
Lobelia purpurascens	White Root
Lomandra longifolia	Long-leaved Matrush
Lomandra multiflora	Many-flowered Matrush
Neptunia gracilis	Native Sensitive Plant

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Panicum decompositum	Native Millet
Persoonia sericea	Persoonia / Silky Geebung
Pseuderanthemum variable	Love Flower
Pultenaea villosa	Hairy Pea Bush
Rubus moluccanus	native raspberry
Themeda triandra	Kangaroo Grass
Wahlenbergia stricta	Australian Blue Bell

4.4.1 Introduced species

A total of 39 flora species detected on-site are introduced to Australia or the local region (**Table 8**). Seven (7) of these species are classified as Restricted Invasive under the Biosecurity Act 2014 and will require some form of targeted management on-site.

Table 8: Exotic/weed flora species detected on-site

Scientific Name	Common Name	*Biosecurity Act 2015*
Abrus precatorius	Gidee Gidee	
Ageratum houstonianum	Blue Billygoat Weed	
Asparagus africanus	Climbing Asparagus	Restricted Matter - Category 3
Baccharis halimifolia	Groundsel	Restricted Matter - Category 3
Bidens pilosa	Cobbler's pegs	
Bryophyllum delagoense	Mother of millions	Restricted Matter - Category 3
Conyza sumatrensis	Tall Fleabane	
Corymbia torelliana	Cadaghi	
Dolichandra unguis-cati	Cat's Claw Creeper	Restricted Matter - Category 3
Emilia sonchifolia	Emilia	
Gomphocarpus physocarpus	Balloon Cotton Bush	
Heliotropium amplexicaule	Blue Heliotrope	
Lantana camara	Lantana	Restricted Matter - Category 3
Medicago polymorpha	Bur medic	
Onopordum acanthium	Scotch Thistle	
Opuntia stricta	Prickly Pear	Restricted Matter - Category 3
Senecio madagascariensis	Fireweed	Restricted Matter - Category 3
Senna pendula	Easter Cassia	

Document Set ID: 12894584
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Sida cordifolia	Flannel Weed
Solanum chrysotrichum	Giant Devil's Fig
Solanum mauritianum	Tobacco Bush
Solanum nigrum	Blackberry Nightshade
Solanum seaforthianum	Brazilian Nightshade
Taraxacum officinale	Common Dandelion
Tipuana tipu	Tipuana
Trifolium repens	White Clover
Ambrosia artemisiifolia	Annual Ragweed
Cenchrus ciliaris	Buffel grass
Chloris gayana	Rhodes Grass
Crotalaria lanceolata	Lance-leaved Rattlepod
Cyperus rotundus	Nutgrass
Lantana montevidensis	Creeping Lantana
Megathyrsus maximus	Guinea Grass / Green Panic
Melinis repens	Red Natal Grass
Setaria sphacelata	South African Pigeon Grass
Sida rhombifolia	Common Sida
Urochloa decumbens	Signal Grass
Verbena bonariensis	Purple-top Verbena

4.4.2 GPS tree plot survey

A GPS Tree Plot Survey was carried out over the entire site locating and identifying all trees over 100mm DBH. Data for the GPS Tree Plot Survey have been extracted and summarised below. Refer to **Plan 2** for tree plot summary plan, and **Appendix E** for the detailed tree plot plans and tree schedule.

- The GPS Tree Plot Survey recorded 1146 individual specimens comprised of 12 tree species and DEAD/STAG. **Table 9** provides a summary of the results of the GPS Tree Plot Survey completed across the development site.
- The dominant species recorded was *Corymbia citriodora (Spotted Gum),* with 59.86%, followed by Eucalyptus siderophloia (Grey Ironbark) 14.14% and *Eucalyptus moluccana* (Gum-topped Box) 12.57%.
- **Table 10** provides a summary of the DBH of recorded trees. Over 78% of all trees recorded had a DBH <100mm indication a high prevalence of regrowth vegetation.

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Table 9: GPS tree plot, species composition

Scientific Name	Common Name	Count	Percent of Total
Acacia concurrens	Black Wattle	6	0.52%
Acacia disparrima	Hickory Wattle	116	10.12%
Brachychiton populneus	Kurrajong	1	0.09%
Corymbia citriodora	Spotted Gum	686	59.86%
Corymbia henryi	Large-leaf Spotted Gum	4	0.35%
Corymbia intermedia	Pink Bloodwood	9	0.79%
Corymbia tessellaris	Moreton Bay Ash	4	0.35%
Corymbia torelliana	Cadaghi	2	0.17%
Dead/Stag	-	2	0.17%
Eucalyptus crebra	Narrow-leaved Ironbark	9	0.79%
Eucalyptus moluccana	Gum-topped Box	144	12.57%
Eucalyptus siderophloia	Grey Ironbark	162	14.14%
Eucalyptus tereticornis	Forest Red Gum	**1146**	**100%**

Table 10: GPS tree plot, DBH thresholds

DBH (mm) thresholds	Count	Percentage of total
100-200	901	78.62%
200-300	162	14.14%
300-400	27	2.36%
400-500	25	2.18%
500-600	19	1.66%
600-700	6	0.52%
700-800	3	0.26%
800-900	1	0.09%
900-1000	1	0.09%
1100-1200	1	0.09%
	1146	**100%**

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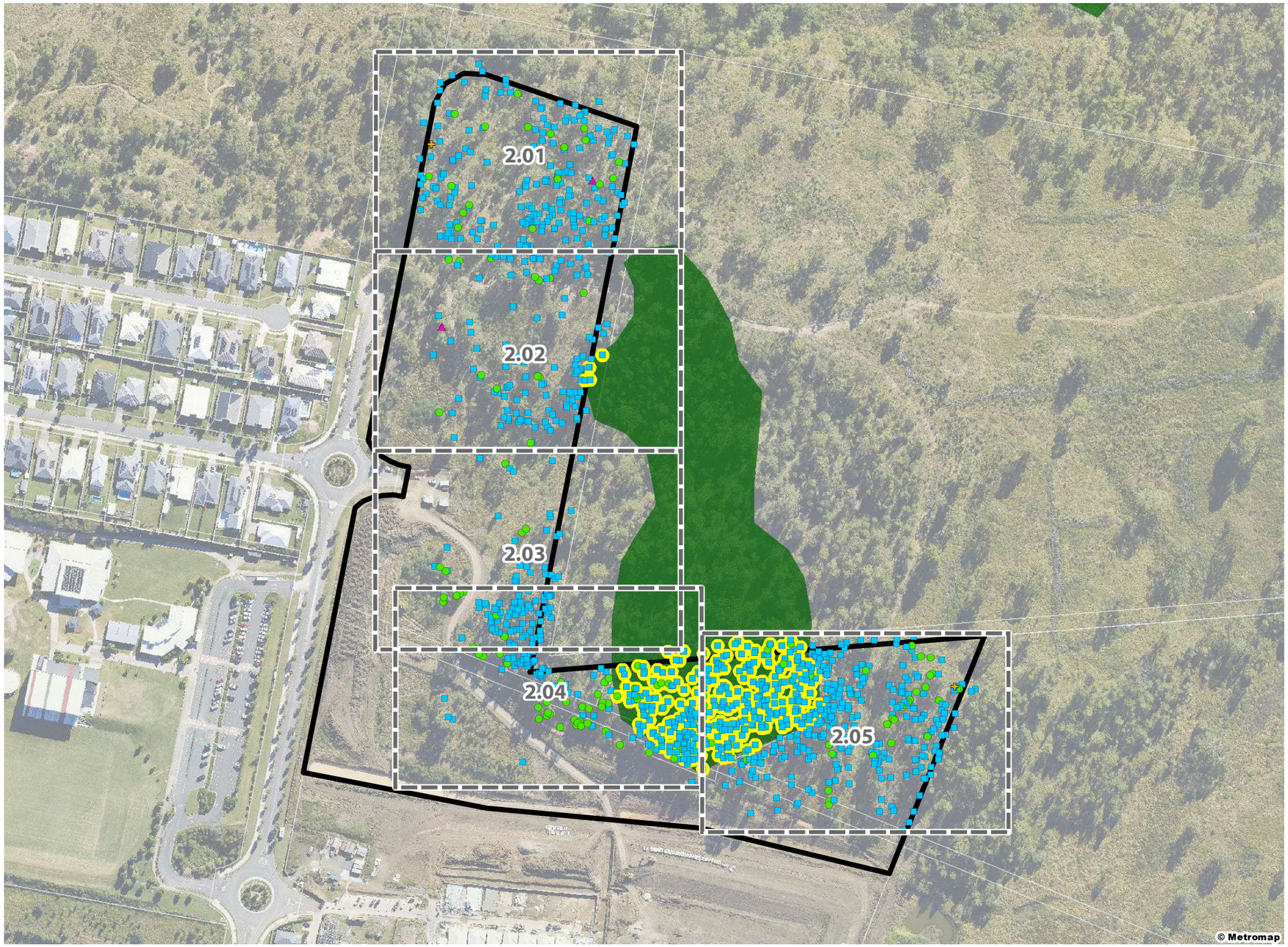
2.00 GPS Tree Plot



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Legend

- Site DCDB
- Qld DCDB

Koala Habitat Areas

- Core Remnant Koala Habitat Areas
- Core Regrowth Koala Habitat Areas

GPS Tree Plot

Non-juvenile Koala Habitat Tree	[1,019]
Native Tree	[123]
Dead/Stag Tree	[2]
Introduced Species/ Environmental Weed	[2]
Tree within Koala habitat area	[337]

Issue	Date	Description	Drawn	Checked
A	3/10/2024	Preliminary	TF	KT

0 20 40 60 80 100 m

Transverse Mercator | GDA 2020 | Zone 56 | 1:2,500 @ A3

Address / RPD: Beaudesert, QLD

3/10/2024 | 10966 E 02 GPS Tree Plot A

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Oakland Way, Beaudesert

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2.01 GPS Tree Plot

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Legend

- Site DCDB
- Qld DCDB

Koala Habitat Areas

- Core Remnant Koala Habitat Areas
- Core Regrowth Koala Habitat Areas

GPS Tree Plot (w/ TPZ)

Non-juvenile Koala Habitat Tree	[1,019]
Native Tree	[123]
Dead/Stag Tree	[2]
Introduced Species/ Environmental Weed	[2]
Tree within Koala habitat area	[337]

Issue	Date	Description	Drawn	Checked
A	3/10/2024	Preliminary	TF	KT

0 5 10 15 20 m

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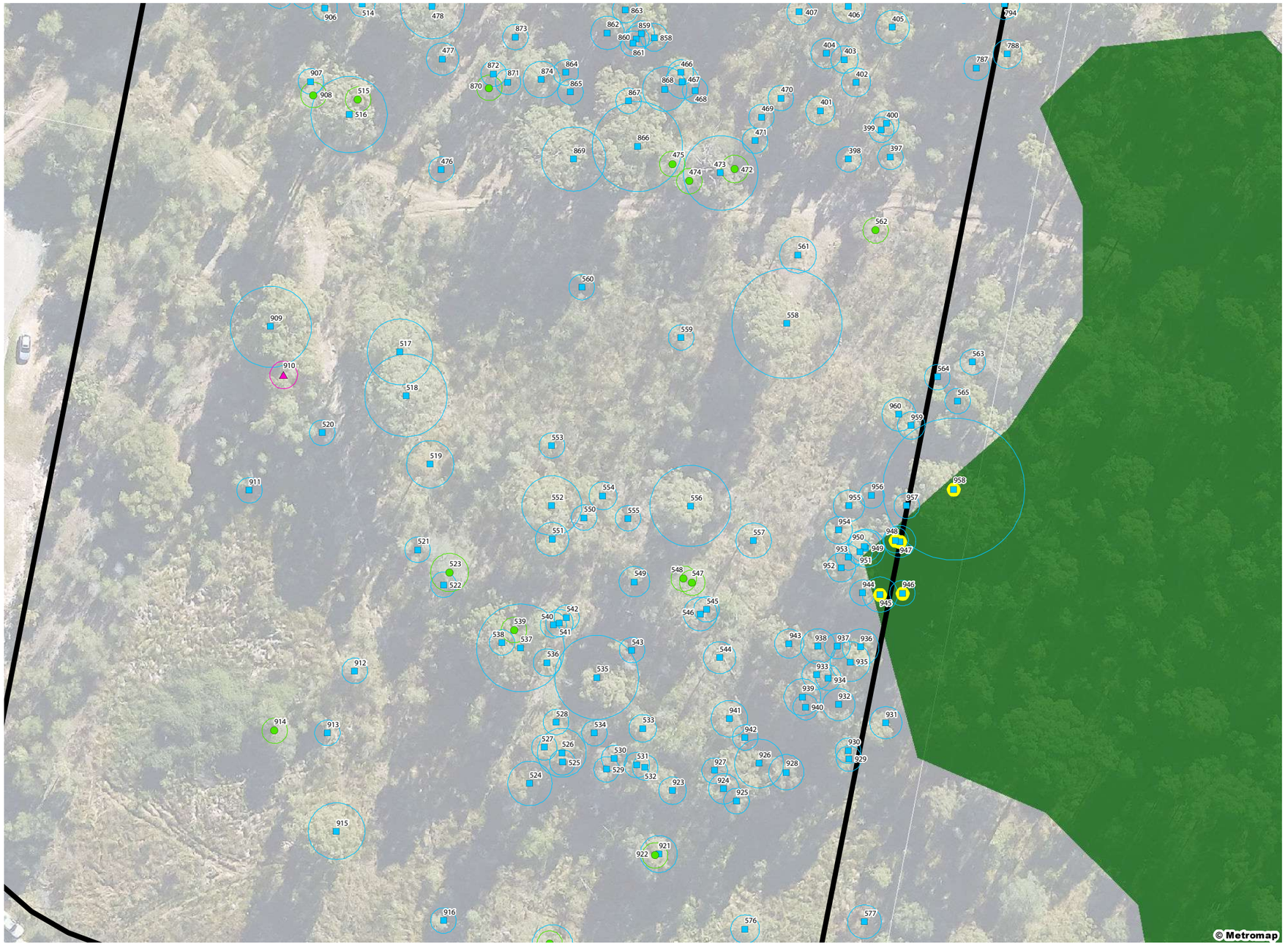
2.02 GPS Tree Plot



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- Qld DCDB

Koala Habitat Areas

- Core Remnant Koala Habitat Areas
- Core Regrowth Koala Habitat Areas

GPS Tree Plot (w/ TPZ)

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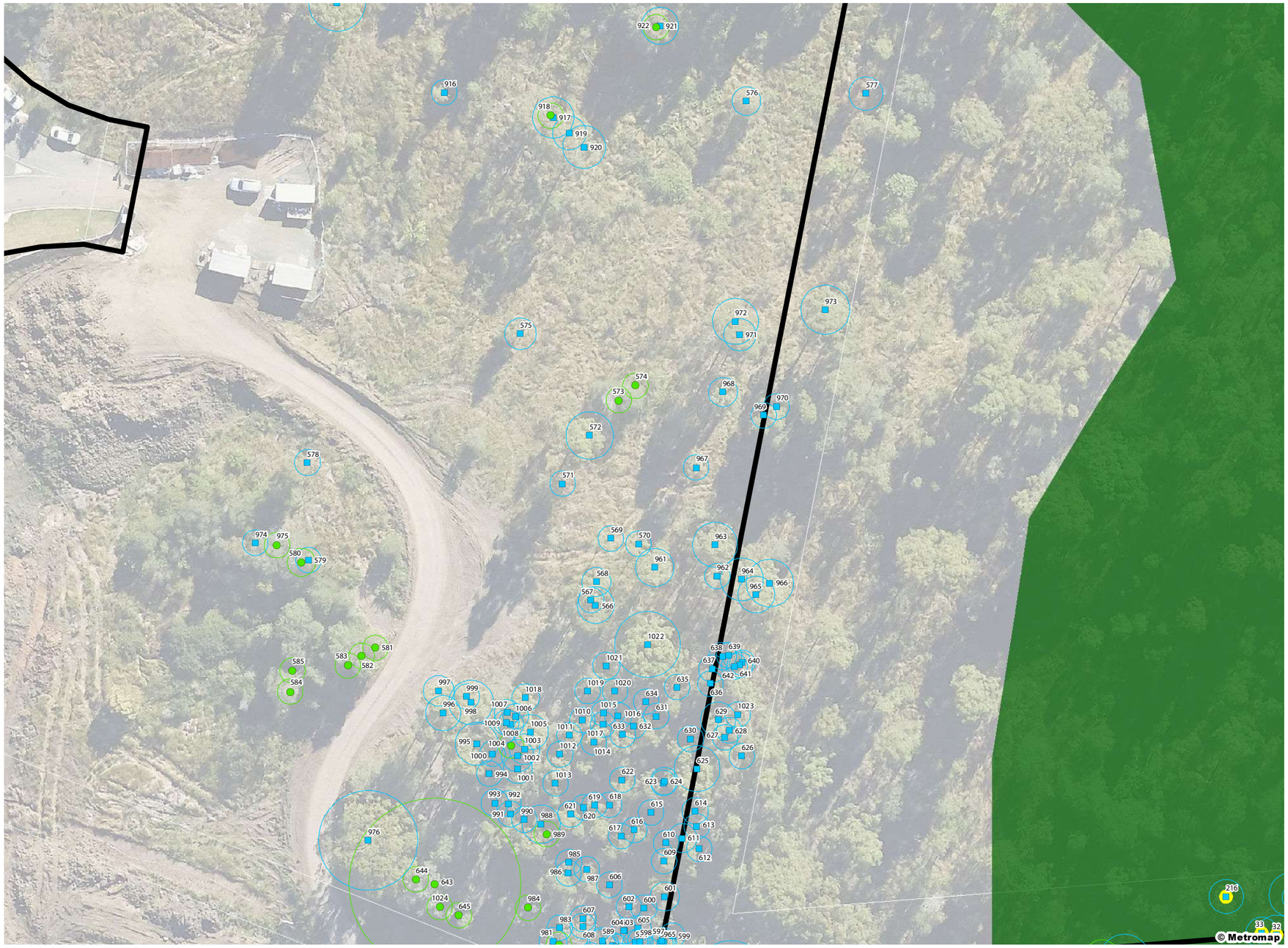
2.03 GPS Tree Plot



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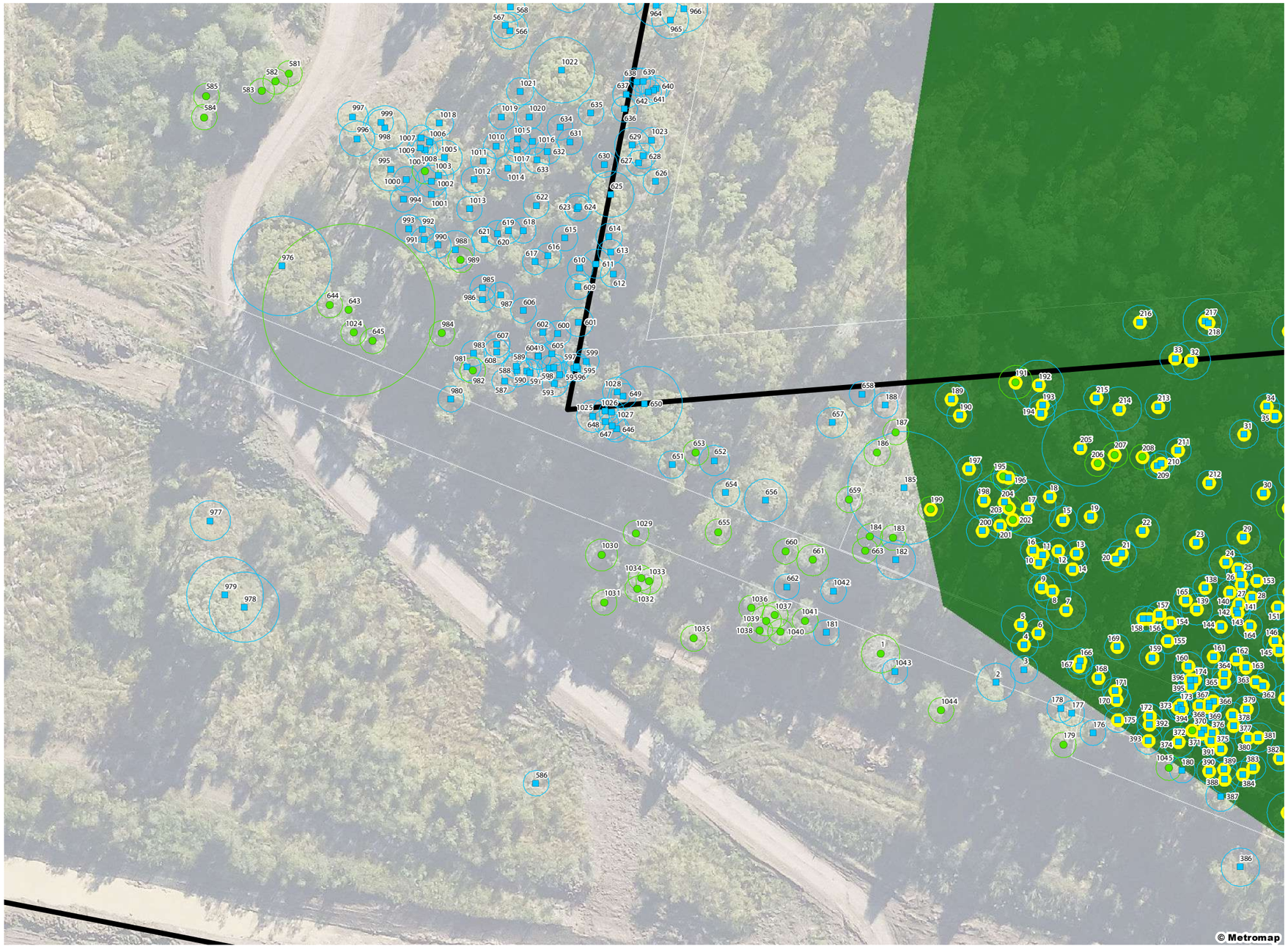
2.04 GPS Tree Plot



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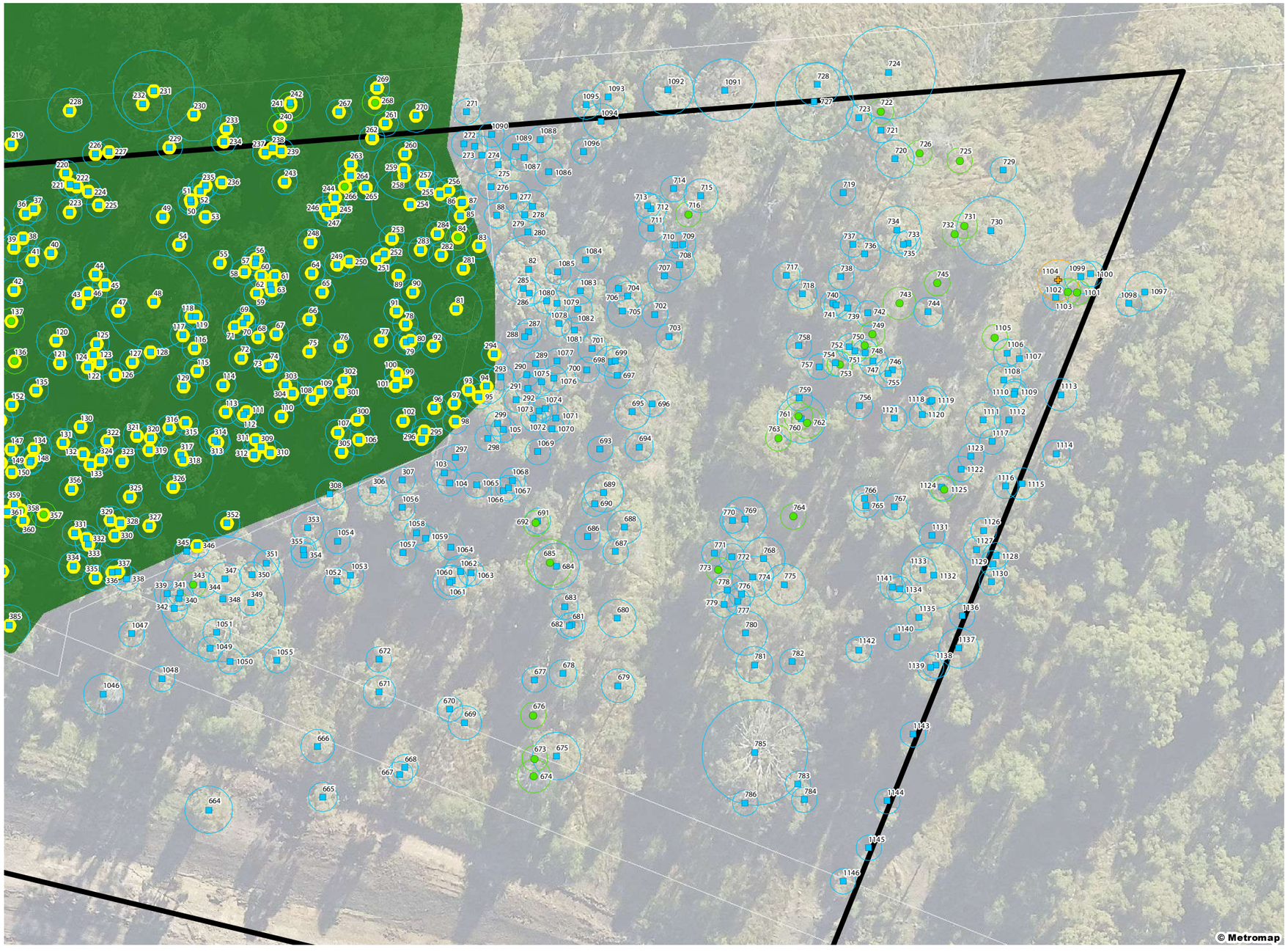

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4.5. Fauna survey results

A total of twenty-nine (29) fauna species were recorded throughout the survey periods in August 2022 and September 2024 including twenty-seven (27) birds, one (1) mammal and one (1) reptile. Species were identified through direct observations, through calls or via visual detection. Refer to **Table 11** for full species list.

All species observed were Least Concern. No direct observations of species listed as threatened under the EPBC Act or NCA were recorded on-site.

Table 11: Fauna recorded on-site

Scientific Name	Common Name	Native/exotic
BIRDS		
Gymnorhina tibicen	Australian Magpie	Native
Coracina novaehollandiae	Black-faced Cuckoo-shrike	Native
Lichmera indistincta	Brown Honeyeater	Native
Coturnix ypsilophora	Brown Quail	Native
Taeniopygia bichenovii	Double-barred Finch	Native
Petrochelidon ariel	Fairy Martin	Native
Cracticus torquatus	Grey Butcherbird	Native
Ardea intermedia	Intermediate Egret	Native
Cacatua sanguinea	Little Corella	Native
Anthochaera chrysoptera	Little Wattlebird	Native
Philemon corniculatus	Noisy Friarbird	Native
Manorina melanocephala	Noisy Miner	Native
Platycercus adscitus	Pale-headed Rosella	Native
Cracticus nigrogularis	Pied Butcherbird	Native
Strepera graculina	Pied Currawong	Native
Trichoglossus moluccanus	Rainbow Lorikeet	Native
Malurus melanocephalus	Red-backed Fairy Wren	Native
Pachycephala rufiventris	Rufous Whistler	Native
Trichoglossus chlorolepidotus	Scaly-breasted Lorikeet	Native
Pardalotus striatus	Striated Paradalote	Native
Cacatua galerita	Sulphur-crested Cockatoo	Native

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Podargus strigoides	Tawny Frogmouth	Native
Megalurus timoriensis	Tawny Grassbird	Native
Corvus orru	Torresian Crow	Native
Hirundo neoxena	Welcome Swallow	Native
Melithreptus albogularis	White-throated honeyeater	Native
Lichenostomus chrysops	Yellow-faced honeyeater	Native
REPTILES		
Carlia vivax	Lively Rainbow-skink	Native
MAMMALS		
Macropus rufogriseus	Red-necked Wallaby	Native

4.5.1 Koala SAT Surveys

A total of four (4) SAT surveys and a scat meander were completed on-site over August 2022 and in September 2024 (refer to **Plan 1**). The Australian Koala Foundation Koala activity level classification table provides an estimate of Koala utilisation based on defined Population Categories (East Coast (low), East Coast (med-high) and Western (med-high).

Categories are assigned as follows:

- Sites considered to be suitable or have high suitability for Koalas are assigned the East Coast (med-high) category;
- Sites considered to have low suitability are assigned the East Coast (low) category; and
- The Western category does not apply to South East Queensland local government areas.

Population density data for Koalas within the Scenic Rim is lacking. As such the East Coast (low) population activity category has been applied to the interpretation of SAT survey results based on the vegetation attributes of the site. The vegetation on-site and within the locality is dominated by lower fertility soil types (*i.e.,* Land Zone 9-10) and ecological communities containing secondary Koala food trees such as *Corymbia citriodora* (Spotted Gum) (Phillips and Callaghan, 2011; Phillips and Hopkins 2009). In addition, population density estimates for the Regional Ecosystems on-site range from low to medium (0.01 to 0.2 Koalas per hectare) (Bussey and Ellis, 2016). Refer to **Table 12** for Koala activity level classification extracted from Phillips and Callaghan (2011).

Table 12: Koala Activity Level Classification (Phillips and Callaghan 2011)

Activity	East Coast (low)	East Coast (med-high)	Western (med-high)
Low	<3.33%	<22.5%	<35.8
Moderate	3.33-12.6%	22.5-32.8%	35.8-46.7

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High	>12.6%	>32.8	>46.7

In accordance with the above, the Koala activity was recorded as 'low' activity category, as no koala scats were recorded on the site during SAT surveys or scat meander (refer **Table 13**). Refer to **Appendix F** for full SAT survey results. No direct observations of Koala were recorded during surveys.

Table 13: SAT survey results based on East Coast (low) activity threshold)

SAT ID	Number of trees with scats	Percentage usage	Koala activity
August 2022			
1	0	0	Low
2	0	0	Low
September 2024			
1	0	0	Low
2	0	0	Low

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4.6. Threatened species

For the purposes of this report, a significant species has been defined as a species that is:

- Scheduled as critically endangered, endangered, vulnerable or conservation dependent under the Commonwealth EPBC Act; and/or
- Scheduled as endangered, vulnerable, or near threatened under the Queensland NC Act; and/or

4.6.1 Threatened flora

Twenty-one (21) flora species listed as Threatened under the EPBC Act were indicated as having the potential to occur within 5 km of the site (refer to **Appendix B**). A search of the NC Act Wildlife Online database (refer to **Appendix C**) listed twenty-three (23) threatened flora species as potentially occurring within the area.

No flora species listed as threatened under the EPBC Act or the NC Act were recorded on-site.

The EPBC Act PMST (refer to **Appendix B**) listed seven (7) Threatened Ecological Communities (TECs) that may occur in, or relate to, the subject site (see **Section 3.1**). These are described as the following:

- The Coastal Swamp Oak (*Casuarina glauca*) Forest of New South Wales and South East Queensland Ecological community occurs in coastal catchments, mostly at elevations of less than 20 m above sea level that are typically found within 30 km of the coast however distance can vary by catchment. The canopy layer is dominated by *Casuarina glauca* (Swamp Oak) and in Queensland is represented by RE12.1.1 or RE12.3.20. None of these RE communities occur on site or within the immediate vicinity of the site.

- Coastal Swamp Sclerophyll Forest of New South Wales and South East Queensland occurs in coastal catchments, typically within 20km of the coast and below 20m above seas level, on low lying coastal alluvial areas such as swamps, floodplain pockets, depressions, alluvial flats, back-barrier flats, fans, terraces and behind fore dunes. The canopy is dominated by *Melaleuca sp.* and / or *Eucalyptus robusta*. Desktop analysis and field surveys confirmed that regional ecosystem RE12.2.7, RE12.3.4/12.3.4a, RE12.3.5, RE12.3.6, and RE 12.3.20 do not occur on-site.

- Grey box-grey gum wet forest of subtropical eastern Australia is a forest where the canopy dominated by its characteristic Eucalyptus species (being *Eucalyptus moluccana* or *Eucalyptus propinqua* less commonly *Eucalyptus punctata*) with or without *Araucaria cunninghamii* (hoop pine) and with an understorey that typically includes significant cover of species with drier vine-forest (rainforest) affiliations. In Queensland REs likely to represent or contain the ecological community includes RE 12.9-10.3 and 12.8.14a. Whilst RE 12.9-10.3 is mapped as occurring on the site, vegetation surveys confirmed that this area is dominated by *Corymbia citriodora.* The presence of mapped RE 12.9-10.3 alone is not a trigger for referral under the EPBC Act. The vegetation would need to meet the key diagnostics for this TEC, and the proposed development would need to have a significant residual impact on this community. It is noted that this mapped area is being retained by the development. In addition, the vegetation on site does not meet the key diagnostic of having a canopy that is dominated by one or a combination of E. *moluccana, E. propinqua, E. punctata, E. siderophloia (Northern grey*

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ironbark), or *Araucaria cunninghamii* (hoop pine), and due to dominant canopy species being *Corymbia citriodora*, this mapped RE12.9-10.3 area is therefore not considered to be reflective of this TEC.

- The Lowland Rainforest of Subtropical Australia TEC typically has high species richness. In Queensland, this TEC is part of a number of RE communities including 12.3.1, 12.5.13, 12.8.3, 12.8.4, 12.8.13, 12.11.1, 12.11.10, 12.12.1 and 12.12.16. None of these RE communities occur on site or within the immediate vicinity of the site.

- Poplar Box Grassy Woodland on Alluvial Plains ecological community is typically a grassy woodland with a canopy dominated by *Eucalyptus populnea* and understorey mostly of grasses and other herbs. The ecological community mostly occurs in gently undulating to flat landscapes and occasionally on gentle slopes on a wide range of soil types of alluvial and depositional origin. In Queensland, this TEC corresponds with 11.3.2, 11.3.17, 11.3.7, 11.4.12 and 12.3.10. None of these RE communities are present on-site.

- Subtropical eucalypt floodplain forest and woodland of the New South Wales North Coast and South East Queensland bioregions is found on alluvial landforms, including floodplains, the riparian zones of parent rivers and other order tributaries, alluvial flats, floodplain/alluvial terraces, and periodically flooded depressions. The structure of this TEC varies from tall open forest to woodland. The canopy is dominated by eucalypts and/or other myrtaceous trees, (specifically from *Angophora*, *Corymbia*, *Lophostemon* and *Syncarpia* genera). Regional Ecosystems generally associated with this TEC where key diagnostic characteristics are met include RE 12.3.2, 12.3.2a, 12.3.3, 12.3.3a, 12.3.3b, 12.3.3d, 12.3.4a, 12.3.7, 12.3.7c, 12.3.7d, 12.3.10, 12.3.11, 12.3.11a, 12.3.11b, 12.3.12, 12.3.14a, 12.3.15, 12.3.19. None of these RE communities occur on site or within the immediate vicinity of the site.

- White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland is characterised by a species-rich understorey of native tussock grasses, herbs, and scattered shrubs (where shrub cover comprises less than 30% cover), and a dominance or prior dominance of White Box (*Eucalyptus albens*) and/or Yellow Box (*E. melliodora)* and/or Blakely's Red Gum (*E. blakelyi*) trees. None of the RE communities associated with this TEC occur on site or within the immediate vicinity of the site.

No listed threatened Flora or TECs, nor any conditions to support them, were observed on-site.

4.6.2 Threatened fauna species

No fauna species listed as threatened under the EPBC Act or the NC Act were recorded on-site. The EPBC Act PMST listed thirty-six (36) fauna species listed as Threatened under the EPBC Act with the potential to occur within 5 km of the site (**Appendix B**). Field surveys did not detect presence of these species within the site, however indirect observations were made with the presence of koala scats following SAT surveys within the KHA.

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Koala (*Phascolarctos cinereus*)

There are s records of koala within 5 km of the referral area and koala habitat is mapped on site and within the surrounding landscape. However, no evidence of koala utilisation on-site was confirmed during field surveys as no Koala sighting were recorded and no indirect evidence in the form of scats was found, as demonstrated via SAT survey results (refer to **Appendix F**). The site has potential to support koala due to the presence of foraging habitat, however, due to the significant level of fragmentation of habitat within the adjacent sites, the potential for exposure to threats is increased.

The presence of Koala habitat alone is not a trigger for referral under the EPBC Act. The proposed development would need to have a significant residual impact to the species to require referral under the EPBC Act. The development proposes to retain almost the entirety of mapped koala habitat vegetation on site, consolidating the areas of greatest on-site ecological value and maintaining connectivity to mapped KHA to the north (refer to **Appendix A**).

4.7. Waterway Assessment

The site contains two watercourses mapped under the Queensland VMA (refer to **Figure 5)**, which are also mapped as low *risk* waterways mapped under the Queensland Fisheries Act for WBW (refer to **Figure 7**). The waterway features were assessed at a general level of detail during the September survey period. These *low risk* mapped fisheries waterways will be assessed for waterway barrier works referral requirements following the completion of the final detailed engineering design at Operational Works stage.

4.7.1 Central drainage line (Stream Order 1 - Low Risk for WBW)

The central drainage line is mapped as Stream Order 1 under the Queensland VMA, a *low risk* waterway for WBW under the Queensland *Fisheries Act 1994*. The mapping meanders from the east through the central portion of the site and west across Oakland Way. Refer to **Table 14** for an assessment of physical and hydrological attributes of the waterway.

Table 14: Central drainage line (Stream Order 1 - Low Risk for WBW) observed attributes.

Physical and Hydrological Attributes	
1. Defined bed and banks	The bed and bank features were not clearly defined along the drainage line which reflects a low-lying channel dominated by grasses. Areas of standing water were observed further downstream where erosion has occurred creating a more defined channel. There was no evidence on-ground that this drainage channel extends to the west of the site and more likely is directed south via a constructed channel.
2. An extended, if non-permanent, period of flow	No flowing water was observed however small areas of standing water were present and distinguished by an area of water dependent flora species. The majority of the mapped waterway

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Physical and Hydrological Attributes	
	did not contain macrophytes but instead dominated by *Imperata cylindrica* (Blady Grass)
3. Flow adequacy	Standing water was observed intermittently along the waterway. The flowpath predominantly reflects a low-lying shallow channel (15-20m wide). Downstream the channel narrows (8-10m wide) and becomes relatively more defined. An access track was observed crossing the mapped drainage line with temporary culvert. It would be considered that the flow regime for this drainage line was ephemeral.
4. Fish habitat at, or upstream of, the site	Instream habitat features are extremely limited as the mapped drainage line is dominated by grasses with no evidence of riparian vegetation, overhanging branches, undercuts or rocks.

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4.7.2 Eastern drainage line (Stream Order 1, Low Risk for WBW)

Photo set 3: Mapped waterway in the centre of the site lacks defined bed and bank features (top). Temprary culvert and eroded channel further south (bottom)

The eastern drainage line is mapped as Stream Order 1 under the Queensland VMA, a *low risk* waterway for WBW under the Queensland *Fisheries Act 1994*. The mapping meanders north to south across the eastern portion of the site and into development under construction further south. Refer to **Table 14** for an assessment of physical and hydrological attributes of the waterway.

Table 15: Eastern drainage line (Stream Order 1, Low Risk for WBW)line observed attributes.

Physical and Hydrological Attributes	
1. Defined bed and banks	This drainage cline was identified as a V-shaped channel occurring on stepper slopes. Bed and bank features were not clearly defined with the channel dominated by *Imperata cylindrica* (Blady Grass) and scattered native trees. Erosion in the base of the channel was evident, likely the result of heavy rainfall events. There was no evidence of the channel extending north out of the site. To the south, the area is

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Physical and Hydrological Attributes	
	undergoing earthworks as part of a new development resulting in constructed drainage channels.
2. An extended, if non-permanent, period of flow.	No evidence of standing water was observed within limited evidence of water dependent species. The flow regime for this drainage channel is considered ephemeral.
3. Flow adequacy.	No in-stream habitat, riparian vegetation (which is dependent upon significant water availability), or damp areas/features capable of sustaining ecological processes representative of a true waterway, was identified throughout the mapped waterway. This drainage feature was dominated by Lantana camara (Lantana) and *Imperata cylindrica* (Blady Grass) and likely directs overland flow during heavy rainfall events.
4. Fish habitat at, or upstream of, the site.	No in-stream habitat is identified throughout the mapped drainage feature. Water pooling and fish movement opportunities are not present. Overhanging embankments, flow path, wood debris, or wetland-dependent flora or fauna were not present within the drainage feature. The drainage feature feeds water into a series of constructed channel further downstream associated with the adjacent development.

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Photo set 4: Mapped waterway in the east of the site (top). Newly constructed channels to the south of the site (bottom)

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5. Impact assessment and development analysis

5.1. Proposed development

The proposed development is for a retirement community development subject to approval from Scenic Rim Regional Council. The proposal will involve retirement community, and associated internal roads, services, and stormwater management infrastructure. Vegetation clearing and subsequent development will occur across the majority of the site, with the vegetation within the mapped KHA to be retained.

The proposed development will result in the removal of native vegetation within the subject site (refer **Plan 3**). Of the proposed impact area, a very small portion of 223.8 m^2 is mapped with SRRC Environmental Significance overlay values. A response to the SRRC environmental significance overlay code is provided in **Appendix G**.

The development largely avoid impacts to areas of mapped KHA and Category B Of Concern remnant vegetation. Therefore, due to the relevant exempted development purposes, referral to SARA for assessment against the relevant state codes for these matters is not required.

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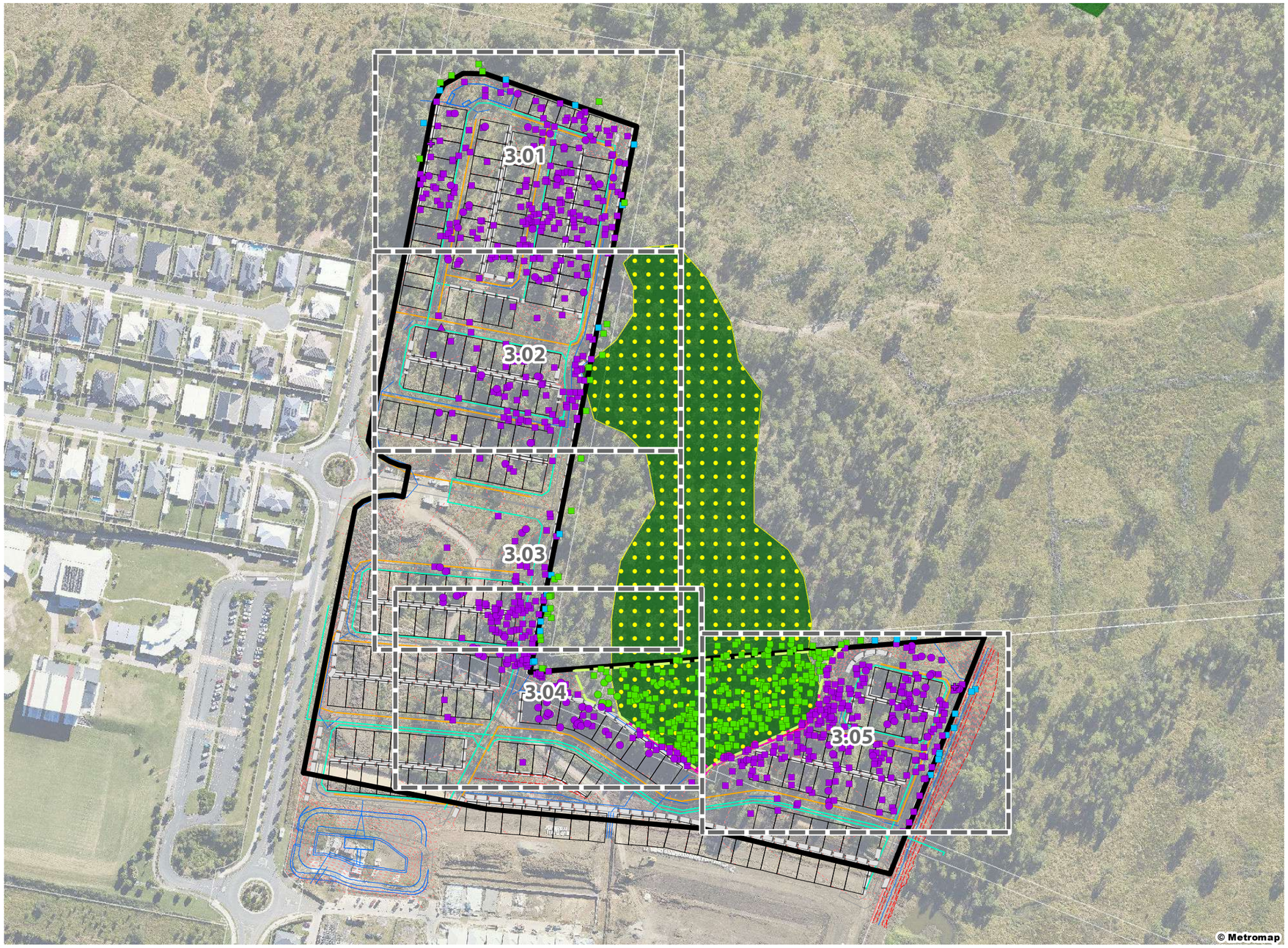
3.00 Impact Assessment



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Legend

- Qld DCDB
- Site DCDB
- Proposed Covenant

SRRC Environmental Overlays

- SRRC Environmental Areas (Local Biodiversity and Regulated Vegetation)
- SRRC Environmental Areas impacted [223.8m²]

Koala Habitat Areas

- Mapped Koala Habitat Areas
- Koala habitat impacted [374.4 m²]

Engineering Detail

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- Proposed Roads and Footpaths
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GPS Tree Plot

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Issue	Date	Description	Drawn	Checked
A	29/11/2024	Preliminary	TF	KT

0 20 40 60 80 100 m

Transverse Mercator | GDA 2020 | Zone 56 | 1:2,500 @ A3

Address / RPD: Beaudesert, QLD

29/11/2024 | 10966 E 03 Impact Assessment A

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Oakland Way, Beaudesert

Document Set ID: 12894584
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3.01 Impact Assessment

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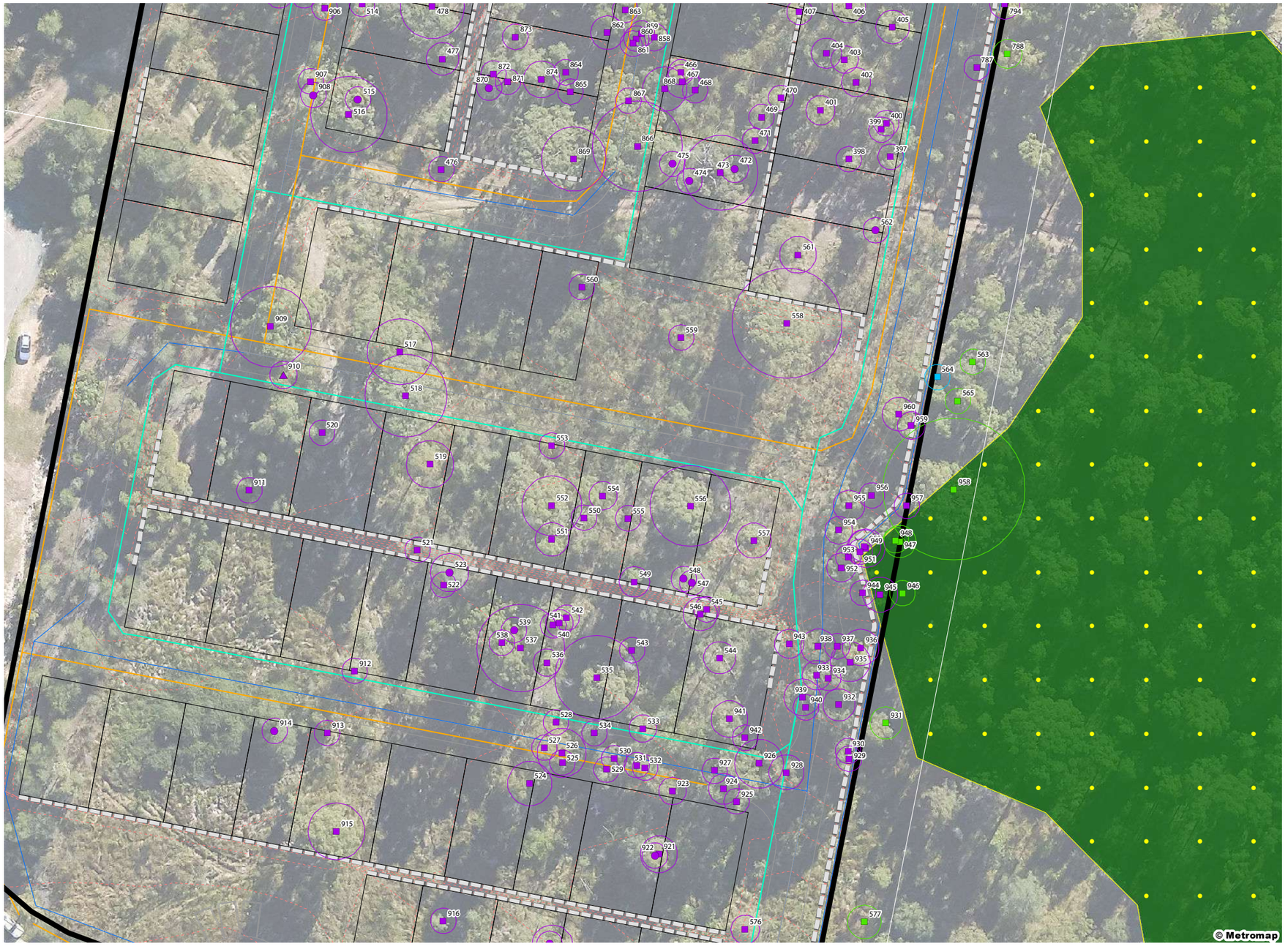
3.02 Impact Assessment



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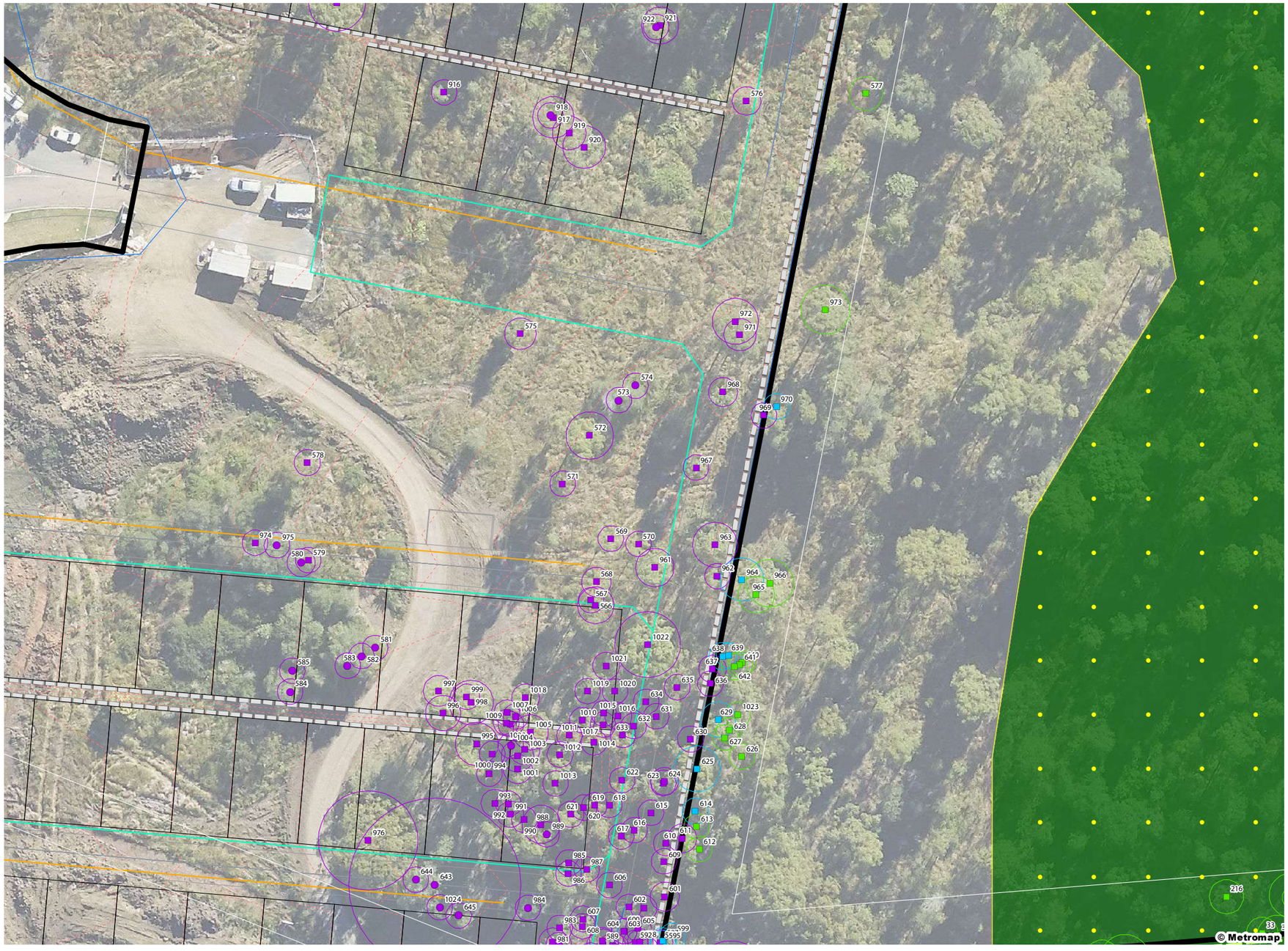
3.03 Impact Assessment



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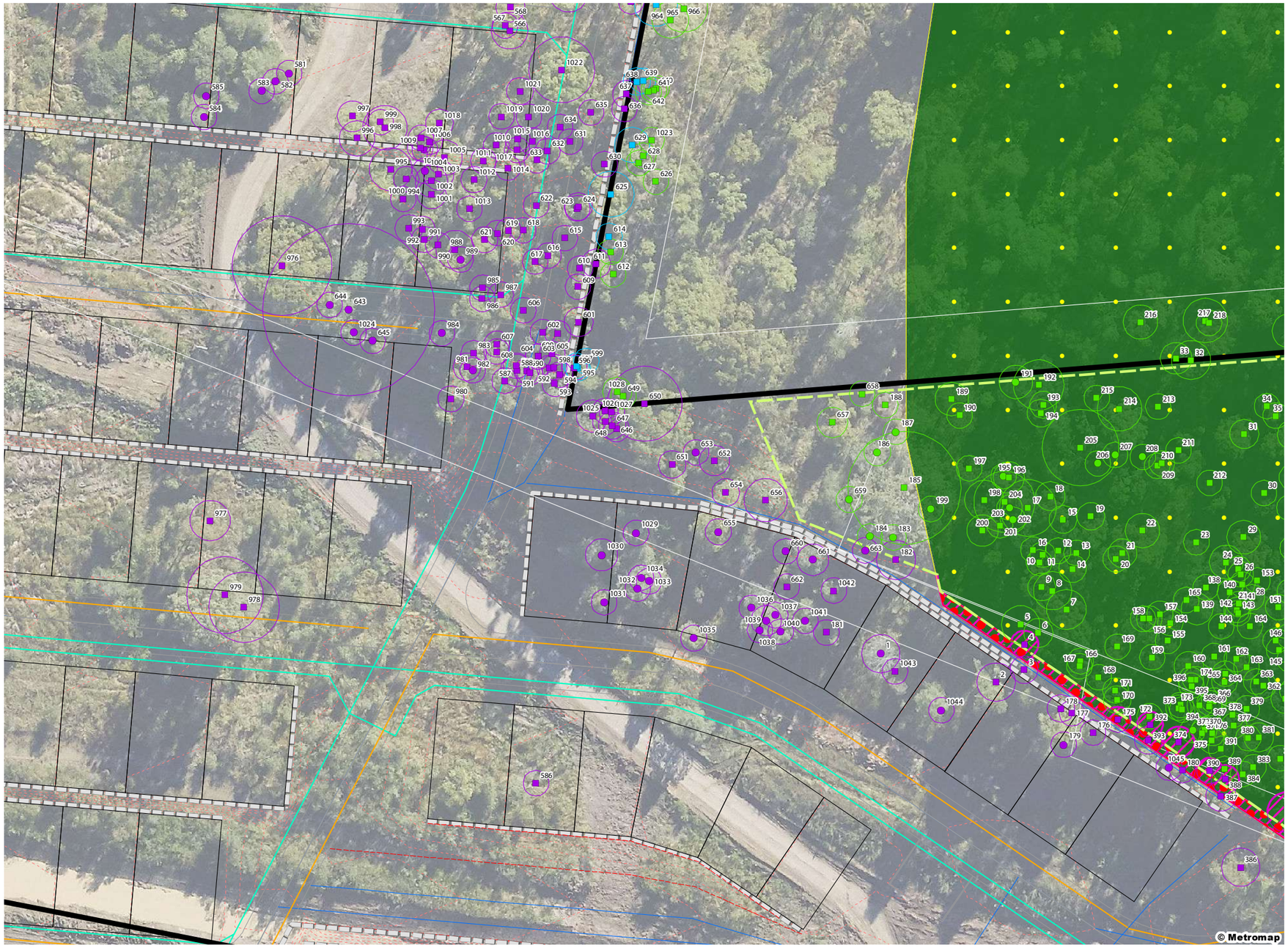
3.04 Impact Assessment



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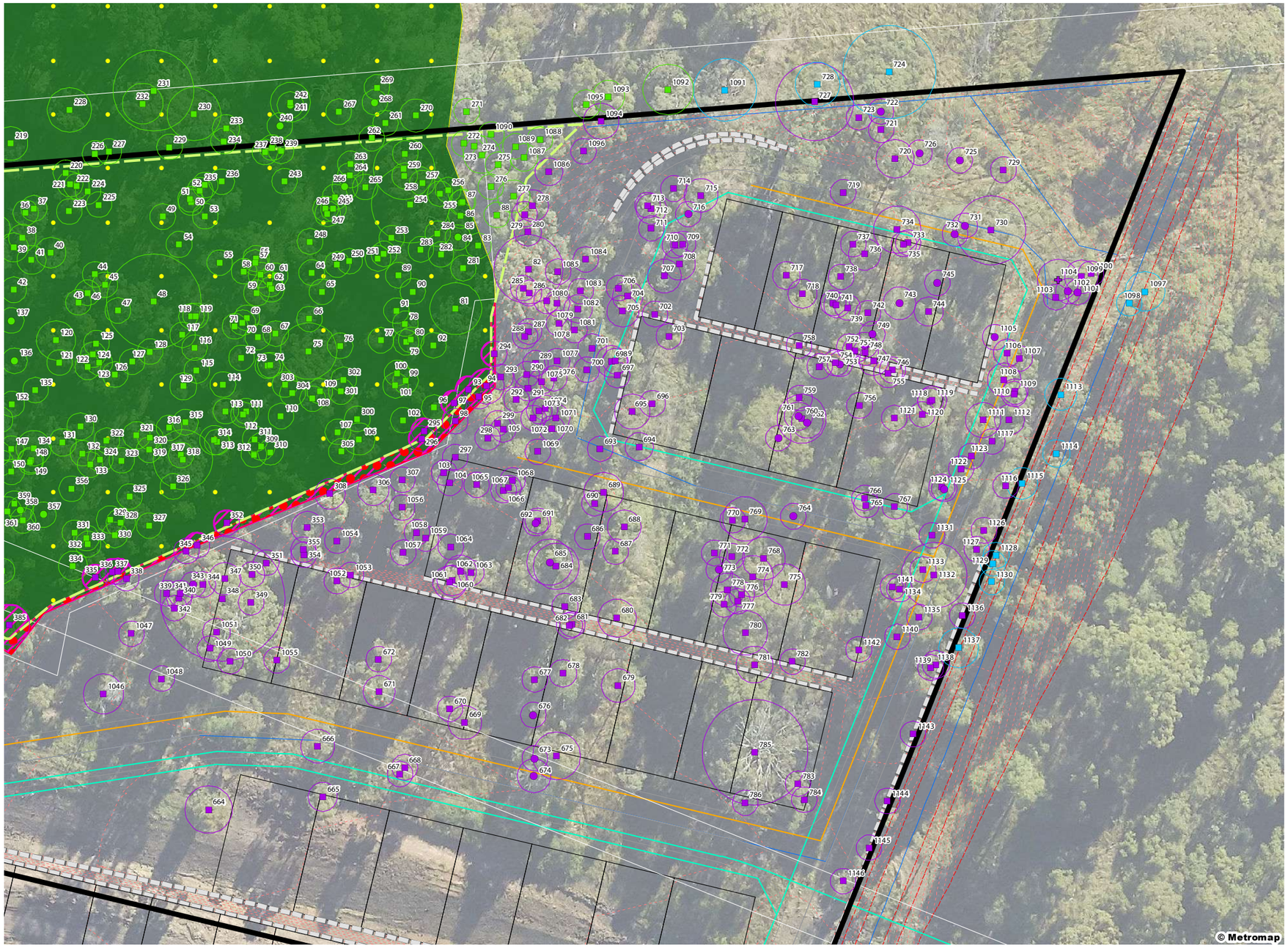

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5.2. Potential impacts

The key potential ecological impacts associated with the development proposal are:

5.2.1 Vegetation clearing

Clearing of vegetation to support the development will reduce vegetation cover and habitat for flora and fauna dependent on those habitat resources. Ecological field surveys did not identify any unique or significant biodiversity values within the proposed impact area, as the development has been located in the areas of the site that are modified and disturbed, with the areas of higher value native habitat retained in the proposed conservation area.

5.2.2 Weeds

Increased vehicle movement during the construction phase has the potential to increase the spread of weeds in the area, particularly during the vegetation clearing phase. With the implementation of standard mitigation measures, the project is likely to result in a negligible impact to ecological values due to the potential introduction/spread of weeds.

5.2.3 Vehicle movements

During construction, a large number of vehicles will be required on the subject site. Direct impacts from vehicle movements on threatened species and vegetation communities include:

- damage or destruction of vegetation or fauna habitat by vehicles traversing these areas; and
- fauna strike.

Indirect impacts from vehicle movements include:

- interference of fauna through visual and noise impacts. This in turn can affect feeding, roosting, breeding, or nesting behaviour;
- introducing and/or spreading weeds or feral animals carried on or in vehicles, resulting in deterioration or loss of vegetation and important fauna habitat; and
- damage or destruction of vegetation and fauna habitat through smothering by dust generated by vehicles traversing the project area.

With the implementation of standard mitigation measures, the project is likely to result in a temporary and minor impact to ecological values due to vehicular movements. Further, ecological field survey confirmed mostly common mammal species and avifauna are present on the site.

5.2.4 Earthworks

Construction activities have the potential to generate dust emissions. Dust emissions during construction will be temporary. The main sources of dust will be generated via:

- wheel-generated dust from the haul roads created for the construction phase;
- dust lift-off from exposed surfaces (e.g., construction roads and pads);

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- earthworks, including construction of the embankments, and moving, dumping, and shaping material; and
- vegetation and soil clearing of the land.

Excessive deposition of dust on leaves of plants can suppress the growth and photosynthesis, resulting in reduced habitat quality for fauna. High levels of airborne dust can irritate the respiratory systems of fauna and potentially result in ingestion of dust-coated seeds and other foods. Excessive deposition of dust on open water bodies may also degrade water quality and overall habitat quality for fauna. With the implementation of standard mitigation measures, the project is likely to result in a temporary and minor impact to ecological values due to the generation of dust.

5.2.5 Light emissions during construction

Artificial light can affect both nocturnal and diurnal animals by disrupting behavioural patterns, with quality of light (e.g., wavelength, colour), intensity and duration potentially evoking different faunal responses. Impacts from increased light levels include disorientation from, or attraction toward, artificial sources of light; mortality from collisions with structures; and effects on light-sensitive cycles of species (e.g., breeding and migration for fauna and flowering in plants). An artificial increase in lighting can also affect abundance of predators.

Presence and intensity of artificial light in the project area will temporarily increase during the construction phase; however, night works will not be common. Lighting will be directed to construction areas within the project area. Some light spillages will be inevitable and is likely to be contained. Potential impacts associated with light emissions will be temporary and unlikely to be significant.

With the implementation of standard mitigation measures, the project is likely to result in a negligible impact to ecological values due to the use of light pollution during construction.

5.2.6 Noise and vibration

Noise levels greater than existing ambient noise levels are expected during the construction within the project area. Sources of noise are likely to consist of noise in short, intense pulses from mobile plant equipment, and more prolonged noise, with consistent vibration, pitch and volume from generators, excavators, and pumps, in addition from noise from vehicles.

Both steady continuous and single noise events have the potential to lead to ecological impacts. Construction noise is expected to elicit some avoidance response from fauna using the surrounding vegetation though, with consideration of the extent of habitat available in the study area, this is likely to be a temporary and negligible to minor impact.

5.2.7 Waste disposal

Inappropriate disposal of non-hazardous wastes can attract invasive species such as feral cats, wild dogs and introduced rats (amongst other fauna) to site. This may exacerbate potential impacts (e.g., invasive species introduction, road mortality). Litter may also enter surrounding environments. With the implementation of

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standard mitigation measures, the project is likely to result in a negligible impact to ecological values due to the generation and handling of waste.

5.2.8 Hazardous and dangerous goods

Spills and leaks from transfers (e.g., fuel and/or chemicals) and inadequate storage of dangerous goods and hazardous wastes could result in point-source contamination of surrounding land. Direct adverse impacts could include toxic impacts on vegetation (resulting in degradation or loss of vegetation and habitats), direct toxic impacts on fauna (from contact, inhalation, or ingestion) or indirect impacts on threatened and migratory species from habitat loss. Direct adverse impacts on surface and groundwater quality are also possible.

With the application of standard mitigation and management measures, impacts from liquid and solid waste disposal will be avoided or localised and small in scale. Further to this, the likelihood of significant spillages is considered low. Therefore, the project is likely to result in a negligible impact to ecological values due to potential spills and leaks.

5.2.9 Increased human presence

Increased human activity during construction has the potential to disturb fauna within adjacent habitat areas. Resulting impacts to fauna include heightened vigilance and predator avoidance, which can disrupt foraging and roosting efficiency or deter wildlife from using particular areas. The proposed impacts represent a small reduction in marginal habitat that is already limited in extent and quality due to existing edge effects. The project is likely to result in a temporary and minor impact to ecological values due to increased human presence on site during the construction period.

5.3. Ongoing disturbances

After completion of development, significant increases in direct and indirect anthropogenic impacts on the surrounding ecological values are not anticipated. This is due to the proposed development being mostly situated in previously cleared and maintained areas, with limited ecological value. Potential increase to traffic along the roads at the extremity of the site indicate continuing risks to ecological values from:

- Weed incursion;
- Vehicle movements;
- Noise and light; and
- Increased human presence.

Each potential impact associated with the increased traffic is described in detail in the following sections.

5.3.1 Weed incursion

Landscaped gardens will introduce a variety of new and exotic species to the area. Garden escapes have the potential to be introduced into adjacent bushland areas through vectors such as birds, wind, and runoff. Weed incursion will be an ongoing and can be difficult to prevent. Nonetheless, the problem is often mostly constrained to edges of bushland that abut gardens and along urban drainage features.

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With the implementation of standard mitigation measures, the project is likely to result in a minor impact to ecological values due the introduction and spread of weeds. The conservation area will be subject to rehabilitation works, which will assist with managing the spread of weeds into retained areas.

5.3.2 Vehicle strike

Upon completion of the development, vehicle traffic may increase (compared to baseline conditions), increasing the likelihood of fauna strike. However, an environmental corridor has been strategically located to align with higher value ecological features on the site, including the DAF mapped low risk (green) waterway for WWBW and mapped Category B (remnant) vegetation and KHA. The corridor will retain potential habitat for more mobile and urbanised fauna species and provides immediate refuge and steppingstone connectivity for less mobile species within the wider landscape.

5.3.3 Noise and light

Noise levels are likely to increase once the extension is operational as there will be increased vehicular and pedestrian traffic. Road noise will be the primary source of noise impact. The establishment and use of garden paths through landscaped areas will also provide a source of noise and light due to pedestrian traffic. However, this is expected to result in a minor difference.

Artificial light from residences may affect nocturnal and diurnal animals by disrupting patterns, with quality of light (e.g., wave length and colour), intensity and duration potentially evoking different responses. Impacts from increased light levels include disorientation from or attraction toward artificial sources of light; mortality from collisions with structures; and effects on light-sensitive cycles of species (e.g., breeding and migration for fauna and flowering in plants). The presence and intensity of artificial light will have the most impact at the edge of adjacent vegetation communities. With suitable lighting installations, the project is likely to result in a negligible impact to wildlife due to light spillage.

5.3.4 Increased human presence

Increased human activity associated with land uses within the development has the potential to disturb fauna that exist within the broader area. Examples of impacts included heightened vigilance and predator avoidance, which can disrupt foraging and roosting efficiency, or deter wildlife from using particular areas.

Increased human presence is expected to have a minor to moderate impact to wildlife and vegetation, particularly given the proposed residential dwellings separation from the retained conservation area by esplanade road and adjacent buffers provided by indicative stormwater basins and local parks.

5.4. Management and compensatory measures

Several management and compensatory measures are proposed to minimise and mitigate impacts associated with the development. These include:

5.4.1 Vegetation Clearing and Management Plan

A Vegetation Clearing and Management Plan (VC&MP) should form part of the broader management document submitted as part of the operational works application for the development site.

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The VC&MP should cover clearing of all vegetation listed in this report and include details on:

- Clearly the retention or removal status of all surveyed trees, and their classification as native tree or native habitat trees according to the
- All civil works likely to impact on existing vegetation.
- Temporary and permanent exclusion and protection fencing.
- Roles and responsibilities for site contractors, the developer, and the consultant group.
- Stockpiling and site access locations.
- A clearing sequence plan showing the commencement of clearing and direction of removal (this should be in conjunction with the Fauna Management Plan (FMP) and Koala Management Plan (KMP) to allow for the appropriate flushing of fauna towards safe havens and/or the application of an appropriate relocation program).
- Links to weed management and revegetation proposals.
- The stock piling and reuse of cleared vegetation.

5.4.2 Fauna Management Plan

An FMP should be prepared for potential impacts of the construction phase covering the loss of vegetated areas, isolated trees and likely barriers and impediments to local dispersal.

The FMP should link closely with the VC&MP, or be included as part of a Vegetation Clearing and Fauna Management Plan (VC&FMP), and include details on:

- Species surveyed as using the site with a focus on those most likely impacted by development works
- A list of relevant State and Commonwealth legislation constraints and controls for the above listed fauna
- A plan showing existing habitat opportunities and locations
- Details of the threats to existing fauna species
- Clearing sequence plan from the VC&MP
- Management and mitigation measures i.e., temporary use of fauna exclusion fencing
- Fauna spotter role, contacts, and certification
- Specific fauna management procedures for potential or known habitat trees.

5.4.3 Fauna Spotter Catcher Supervision

It is recommended that all vegetation clearing for the proposed development be supervised by a DES approved Fauna Spotter Catcher to minimise the potential impacts and adverse outcomes for fauna disturbed during vegetation clearing. In addition, prior to vegetation clearing taking place, a preclearing assessment will be required to be undertaken by a qualified fauna spotter catcher to provide a contemporary assessment of likely fauna present within areas to cleared, and to ensure strategies are in place to manage the safe removal and relocation of fauna within the clearing areas.

If breeding places of protected animals that are classified as extinct in the wild, endangered, vulnerable, near threatened (ENVT), special least concern, colonial breeder or least concern under the NCA are found, a Species Management Program (SMP) may be required to be prepared and submitted to DES for approval prior to the disturbance of the breeding place.

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6. Conclusion

This EAR was prepared on behalf of INA Operations Pty Ltd who seek to develop land situated at Oakland Way, Beaudesert Queensland 4285 (legally described as Lot 4 SP317420 and Lot 802 SP342583) for the purposes of a Retirement Facility This EAR provides a review of the ecological values across the site in accordance with State and Local Government legislation.

Overall, the following conclusions can be made:

- Under the Scenic Rim Planning Scheme, the site is as zoned as 'Low-medium Density Residential'.
- This site consists of a mixture of remnant and regrowth vegetation values reflective of historical land-uses. The majority of the site is mapped as Category X (non-remnant) vegetation with a small polygon of Category B (remnant) vegetation mapped as Least Concern RE 12.9-10.3. This polygon is also mapped as state Koala Habitat Area (KHA) and proposed to be retained.
- Areas of high disturbance were observed across the site characterised by dense *Lantana camara* (Lantana) dominance and acacia regrowth. Native tree species across the site include *Eucalyptus moluccana* (Gum-topped Box), *Eucalyptus siderophloia* (Grey Ironbark), *Eucalyptus crebra* (Narrow-leaved Ironbark), *Coymbia citriodora (*Spotted Gum) and *Eucalyptus tereticornis* (forest Red Gum).
- Contextually, the site is bound by Oakland Way to the west with a school and low-density residential developments present. To the south is a development under construction and to the north and east includes a mixture of intact and regrowth vegetation.
- The site remains reasonably connected to other areas of native vegetation immediately to the north and east of the site, but adjacent development limits connectivity to the west and south.
- There are two drainage lines across the site mapped as *low risk* waterways for WBW under *Fisheries 1994*.
- A total of twenty-nine (29) fauna species were recorded throughout the survey periods in August 2022 and September 2024 including twenty-seven (27) birds, one (1) mammal and one (1) reptile.
- A total of 84 species of flora were recorded on-site including 46 native species and 38 introduced species.
- No Threatened flora species nor Threated Ecological Communities listed under the Environment Protection and Biodiversity Conservation Act 1999, or *Nature Conservation Act 1992* were recorded across the site.
- No threatened fauna species under the Environment Protection and Biodiversity Conservation Act 1999, or *Nature Conservation Act 1992* were observed on the site.

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Appendices

Appendix A

Development Layout Plan

Appendix B

EPBC Act 1999

PMST search results

Appendix C

Nature Conservation Act 1992

Wildlife online search results

Appendix D

Environmental Searches

Appendix E

Tree Plot and Tree Schedule

Appendix F

SAT Survey Results

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Appendix A

Development Layout Plan

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BEAUDESERT - SITE MASTERPLAN

COMMUNAL LEGEND

1 ***Main Clubhouse***
"Millers Homestead"
- Dance Floor / Function Hall
- Main Kitchen & Servery
- Bar / Lounge
- Recreation / Pool Tables
- Craft / Pool Tables
- Resort Style Pool & Spa
- Gym / Outdoor Yoga
- Formal Library
- Outdoor BBQ Area
- Outdoor Seating
- Hairdressing Salon
- Medical Consult Room
- Community Bus

2 ***Sports Precinct***
"Club Millers"
- Bowling Green
- Pickleball Court
- Lap Pool

LEGEND

	Duplex	6	2%
	9m x 19m Lots	48	15%
	11m x 19m Lots	62	20%
	12m x 19m Lots	54	18%
	13m x 19m Lots	41	13%
	EXISTING HOMES	113	32%
	TOTAL	**324**	

CAR	**VIS CAR PARKING** *1 SPACE PER 5 DWELLINGS*	PROVIDED	70
8500 CARAVAN	**CARAVAN PARKING** *1 SPACE PER 10 DWELLINGS*	PROVIDED	36

- COMMUNAL FACILITIES
- GREEN SPACE
- KOALA HABITAT AREA
- STORMWATER DETENTION
- WATER MAIN EASEMENT (existing)
- WATER MAIN EASEMENT (proposed)
- FENCE LINE
- WALKING TRACK

REV	DATE	DESCRIPTION	DRAWN	CHECKED
A	8/11/2024	Draft Development Approval	DH	
B	15/11/2024	Draft Development Approval	DH	
C	28/11/2024	Development Approval	DH	

NOTE: Figured dimensions to be taken in preference to scaled. Verify all dimensions on site before commencing work or making shop drawings. When printing from electronic files it is the responsibility of the operator to ensure the required scale is achieved.

Archicad 26/1/2021 BEAUDESERT INGENIA/23032 BEAUDESERT MASTER

PRELIMINARY
NOT FOR CONSTRUCTION

0 15 30 75 150
SCALE 1:3000

N

PROJECT
BEAUDESERT
27 Oakland Way, Beaudesert

DRAWING TITLE
SITE MASTERPLAN

CLIENT
INGENIA COMMUNITIES

PROJECT No. 23032
DATE 28/11/2024
DRAWING No. **DA_10**
SCALE @ A3
ISSUE No. **C**

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OGE Group Architects

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Appendix B

EPBC Act 1999

PMST search results

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Australian Government

Department of Climate Change, Energy, the Environment and Water

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 27-Aug-2024

Summary

Details

- Matters of NES
- Other Matters Protected by the EPBC Act
- Extra Information

Caveat

Acknowledgements

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Summary

Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance.

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance (Ramsar	1
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	7
Listed Threatened Species:	57
Listed Migratory Species:	16

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at https://www.dcceew.gov.au/parks-heritage/heritage

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Lands:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	23
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None
Habitat Critical to the Survival of Marine Turtles:	None

Extra Information

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

State and Territory Reserves:	None
Regional Forest Agreements:	None
Nationally Important Wetlands:	None
EPBC Act Referrals:	6
Key Ecological Features (Marine):	None
Biologically Important Areas:	None
Bioregional Assessments:	1
Geological and Bioregional Assessments:	None

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Details

Matters of National Environmental Significance

Wetlands of International Importance (Ramsar Wetlands) [Resource Information]

Ramsar Site Name	Proximity	Buffer Status
Moreton bay	20 - 30km upstream from Ramsar site	In feature area

Listed Threatened Ecological Communities [Resource Information]

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.
Status of Vulnerable, Disallowed and Ineligible are not MNES under the EPBC Act.

Community Name	Threatened Category	Presence Text	Buffer Status
Coastal Swamp Oak (Casuarina glauca) Forest of New South Wales and South East Queensland ecological community	Endangered	Community may occur within area	In buffer area only
Coastal Swamp Sclerophyll Forest of New South Wales and South East Queensland	Endangered	Community may occur within area	In feature area
Grey box-grey gum wet forest of subtropical eastern Australia	Endangered	Community likely to occur within area	In feature area
Lowland Rainforest of Subtropical Australia	Critically Endangered	Community may occur within area	In feature area
Poplar Box Grassy Woodland on Alluvial Plains	Endangered	Community may occur within area	In buffer area only
Subtropical eucalypt floodplain forest and woodland of the New South Wales North Coast and South East Queensland bioregions	Endangered	Community likely to occur within area	In feature area
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland	Critically Endangered	Community likely to occur within area	In feature area

Listed Threatened Species [Resource Information]

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.
Number is the current name ID.

Scientific Name	Threatened Category	Presence Text	Buffer Status
BIRD			

Scientific Name	Threatened Category	Presence Text	Buffer Status
Anthochaera phrygia Regent Honeyeater [82338]	Critically Endangered	Foraging, feeding or related behaviour likely to occur within area	In feature area
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat may occur within area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area	In feature area
Calyptorhynchus lathami lathami South-eastern Glossy Black-Cockatoo [67036]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Climacteris picumnus victoriae Brown Treecreeper (south-eastern) [67062]	Vulnerable	Species or species habitat may occur within area	In feature area
Cyclopsitta diophthalma coxeni Coxen's Fig-Parrot [59714]	Critically Endangered	Species or species habitat may occur within area	In feature area
Erythrotriorchis radiatus Red Goshawk [942]	Endangered	Species or species habitat likely to occur within area	In feature area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat known to occur within area	In feature area

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Scientific Name	Threatened Category	Presence Text	Buffer Status
Geophaps scripta scripta Squatter Pigeon (southern) [64440]	Vulnerable	Species or species habitat may occur within area	In feature area
Grantiella picta Painted Honeyeater [470]	Vulnerable	Species or species habitat may occur within area	In feature area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area	In feature area
Stagonopleura guttata Diamond Firetail [59398]	Vulnerable	Species or species habitat may occur within area	In feature area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area	In feature area
Turnix melanogaster Black-breasted Button-quail [923]	Vulnerable	Species or species habitat likely to occur within area	In feature area
FISH			
Maccullochella mariensis Mary River Cod [83806]	Endangered	Translocated population known to occur within area	In buffer area only
FROG			
Mixophyes fleayi Fleay's Frog [25960]	Endangered	Species or species habitat likely to occur within area	In feature area
INSECT			
Argynnis hyperbius inconstans Australian Fritillary [88056]	Critically Endangered	Species or species habitat may occur within area	In feature area

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Scientific Name	Threatened Category	Presence Text	Buffer Status
MAMMAL			
Chalinolobus dwyeri Large-eared Pied Bat, Large Pied Bat [183]	Endangered	Species or species habitat may occur within area	In feature area
Dasyurus maculatus maculatus (SE mainland population) Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]	Endangered	Species or species habitat likely to occur within area	In feature area
Macroderma gigas Ghost Bat [174]	Vulnerable	Species or species habitat may occur within area	In feature area
Notamacropus parma Parma Wallaby [89289]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Petauroides volans Greater Glider (southern and central) [254]	Endangered	Species or species habitat likely to occur within area	In feature area
Petaurus australis australis Yellow-bellied Glider (south-eastern) [87600]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Petrogale penicillata Brush-tailed Rock-wallaby [225]	Vulnerable	Species or species habitat may occur within area	In feature area
Phascolarctos cinereus (combined populations of Qld, NSW and the ACT) Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Endangered	Species or species habitat known to occur within area	In feature area
Potorous tridactylus tridactylus Long-nosed Potoroo (northern) [66645]	Vulnerable	Species or species habitat may occur within area	In feature area
Pseudomys novaehollandiae New Holland Mouse, Pookila [96]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Pteropus poliocephalus Grey-headed Flying-fox [186]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In feature area

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Scientific Name	Threatened Category	Presence Text	Buffer Status
PLANT			
Arthraxon hispidus Hairy-joint Grass [9338]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Bosistoa transversa Three-leaved Bosistoa, Yellow Satinheart [16091]	Vulnerable	Species or species habitat may occur within area	In feature area
Bulbophyllum globuliforme Miniature Moss-orchid, Hoop Pine Orchid [6649]	Vulnerable	Species or species habitat may occur within area	In feature area
Clematis fawcettii Stream Clematis [4311]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Cupaniopsis shirleyana Wedge-leaf Tuckeroo [3205]	Vulnerable	Species or species habitat may occur within area	In feature area
Cupaniopsis tomentella Boonah Tuckeroo [3322]	Vulnerable	Species or species habitat may occur within area	In feature area
Cynanchum elegans White-flowered Wax Plant [12533]	Endangered	Species or species habitat may occur within area	In buffer area only
Dichanthium setosum bluegrass [14159]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Fontainea venosa [24040]	Vulnerable	Species or species habitat may occur within area	In feature area
Lepidium peregrinum Wandering Pepper-cress [14035]	Endangered	Species or species habitat may occur within area	In buffer area only
Leuzea australis listed as Rhaponticum australe Austral Cornflower, Native Thistle [9363]	Vulnerable	Species or species habitat may occur within area	In feature area

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Scientific Name	Threatened Category	Presence Text	Buffer Status
Macadamia integrifolia			
Macadamia Nut, Queensland Nut Tree, Smooth-shelled Macadamia, Bush Nut, Nut Oak [7326]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only
Macadamia tetraphylla			
Rough-shelled Bush Nut, Macadamia Nut, Rough-shelled Macadamia, Rough-leaved Queensland Nut [6581]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Notelaea lloydii			
Lloyd's Olive [15002]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Notelaea x ipsviciensis listed as Notelaea ipsviciensis			
Cooneana Olive [93460]	Critically Endangered	Species or species habitat may occur within area	In feature area
Picris evae			
Hawkweed [10839]	Vulnerable	Species or species habitat may occur within area	In feature area
Planchonella eerwah			
Shiny-leaved Condoo, Black Plum, Wild Apple [17340]	Endangered	Species or species habitat known to occur within area	In feature area
Rhodamnia rubescens			
Scrub Turpentine, Brown Malletwood [15763]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
Rhodomyrtus psidioides			
Native Guava [19162]	Critically Endangered	Species or species habitat may occur within area	In feature area
Samadera bidwillii			
Quassia [29708]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Thesium australe			
Austral Toadflax, Toadflax [15202]	Vulnerable	Species or species habitat likely to occur within area	In feature area
REPTILE			
Delma torquata			
Adorned Delma, Collared Delma [1656]	Vulnerable	Species or species habitat may occur within area	In feature area

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Scientific Name	Threatened Category	Presence Text	Buffer Status
Furina dunmalli Dunmall's Snake [59254]	Vulnerable	Species or species habitat may occur within area	In feature area
Hemiaspis damelii Grey Snake [1179]	Endangered	Species or species habitat likely to occur within area	In feature area

Listed Migratory Species [Resource Information]

Scientific Name	Threatened Category	Presence Text	Buffer Status
Migratory Marine Birds			
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area	In feature area
Migratory Terrestrial Species			
Cuculus optatus Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat may occur within area	In feature area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area	In feature area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area	In feature area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat likely to occur within area	In feature area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area	In feature area
Symposiachrus trivirgatus as Monarcha trivirgatus Spectacled Monarch [83946]		Species or species habitat likely to occur within area	In feature area
Migratory Wetlands Species			

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Scientific Name	Threatened Category	Presence Text	Buffer Status
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area	In feature area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area	In feature area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat known to occur within area	In feature area
Pandion haliaetus Osprey [952]		Species or species habitat known to occur within area	In feature area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area	In feature area

Other Matters Protected by the EPBC Act

Listed Marine Species			[Resource Information]
Scientific Name	Threatened Category	Presence Text	Buffer Status
Bird			
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area	In feature area

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Scientific Name	Threatened Category	Presence Text	Buffer Status
Anseranas semipalmata Magpie Goose [978]		Species or species habitat may occur within area overfly marine area	In feature area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area	In feature area
Bubulcus ibis as Ardea ibis Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area overfly marine area	In feature area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area	In feature area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area	In feature area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area

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Scientific Name	Threatened Category	Presence Text	Buffer Status
[Lathamus discolor](#) Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area overfly marine area	In feature area
[Merops ornatus](#) Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area	In feature area
[Monarcha melanopsis](#) Black-faced Monarch [609]		Species or species habitat known to occur within area overfly marine area	In feature area
[Motacilla flava](#) Yellow Wagtail [644]		Species or species habitat may occur within area overfly marine area	In feature area
[Myiagra cyanoleuca](#) Satin Flycatcher [612]		Species or species habitat likely to occur within area overfly marine area	In feature area
[Pandion haliaetus](#) Osprey [952]		Species or species habitat known to occur within area	In feature area
[Pterodroma cervicalis](#) White-necked Petrel [59642]		Species or species habitat may occur within area	In feature area
[Rhipidura rufifrons](#) Rufous Fantail [592]		Species or species habitat known to occur within area overfly marine area	In feature area
[Rostratula australis as Rostratula benghalensis (sensu lato)](#) Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area overfly marine area	In feature area
[Sterna striata](#) White-fronted Tern [799]		Migration route may occur within area	In buffer area only

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Scientific Name	Threatened Category	Presence Text	Buffer Status
Symposiachrus trivirgatus as Monarcha trivirgatus			
Spectacled Monarch [83946]		Species or species habitat likely to occur within area overfly marine area	In feature area
Tringa nebularia			
Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area overfly marine area	In feature area

Extra Information

EPBC Act Referrals				[Resource Information]
Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Kerry Rd - Residential Development	2023/09687		Assessment	In buffer area only
Controlled action				
Casino Ipswich Pipeline	2007/3877	Controlled Action	Completed	In buffer area only
Southern Regional Water Pipeline	2006/2593	Controlled Action	Post-Approval	In buffer area only
Not controlled action				
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed	In feature area
South West Pipeline and Wyaralong Tanks Project, Qld	2018/8320	Not Controlled Action	Completed	In buffer area only
Upgraded sewerage infrastructure in the Helensvale/Coombabah catchment	2004/1427	Not Controlled Action	Completed	In feature area

Bioregional Assessments			[Resource Information]
SubRegion	BioRegion	Website	Buffer Status
Clarence-Moreton	Clarence-Moreton	BA website	In feature area

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Caveat

1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data are available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance

3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions

4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

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Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

-Office of Environment and Heritage, New South Wales
-Department of Environment and Primary Industries, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment, Water and Natural Resources, South Australia
-Department of Land and Resource Management, Northern Territory
-Department of Environmental and Heritage Protection, Queensland
-Department of Parks and Wildlife, Western Australia
-Environment and Planning Directorate, ACT
-Birdlife Australia
-Australian Bird and Bat Banding Scheme
-Australian National Wildlife Collection
-Natural history museums of Australia
-Museum Victoria
-Australian Museum
-South Australian Museum
-Queensland Museum
-Online Zoological Collections of Australian Museums
-Queensland Herbarium
-National Herbarium of NSW
-Royal Botanic Gardens and National Herbarium of Victoria
-Tasmanian Herbarium
-State Herbarium of South Australia
-Northern Territory Herbarium
-Western Australian Herbarium
-Australian National Herbarium, Canberra
-University of New England
-Ocean Biogeographic Information System
-Australian Government, Department of Defence
Forestry Corporation, NSW
-Geoscience Australia
-CSIRO
-Australian Tropical Herbarium, Cairns
-eBird Australia
-Australian Government – Australian Antarctic Data Centre
-Museum and Art Gallery of the Northern Territory
-Australian Government National Environmental Science Program
-Australian Institute of Marine Science
-Reef Life Survey Australia
-American Museum of Natural History
-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania
-Tasmanian Museum and Art Gallery, Hobart, Tasmania
-Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

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Please feel free to provide feedback via the Contact us page.

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Canberra ACT 2601 Australia
+61 2 6274 1111

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Appendix C

Nature Conservation Act 1992

Wildlife online search results

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Queensland Government

WildNet species list

Search Criteria: Species List for a Specified Point
Species: All
Type: Native
Queensland status: Rare and threatened species
Records: Confirmed
Date: Since 1980
Latitude: -27.9878
Longitude: 153.0139
Distance: 5
Email: harrisoncormack@saundershavill.com
Date submitted: Tuesday 27 Aug 2024 15:45:38
Date extracted: Tuesday 27 Aug 2024 15:50:02

The number of records retrieved = 24

Disclaimer

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The State of Queensland disclaims all responsibility for information contained in this product and all liability (including liability in negligence) for all expenses, losses, damages and costs you may incur as a result of the information being inaccurate or incomplete in any way for any reason.
Information about your Species lists request is logged for quality assurance, user support and product enhancement purposes only.
The information provided should be appropriately acknowledged as being derived from WildNet database when it is used. As the WildNet Program is still in a process of collating and vetting data, it is possible the information given is not complete. Go to the WildNet database webpage (https://www.qld.gov.au/environment/plants-animals/species-information/wildnet) to find out more about WildNet and where to access other WildNet information products approved for publication. Feedback about WildNet species lists should be emailed to wildlife.online@des.qld.gov.au.

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Version: 1, Version Date: 10/12/2024

Kingdom	Class	Family	Scientific Name	Common Name	I	Q	A	Records
animals	mammals	Phascolarctidae	*Phascolarctos cinereus*	koala		E	E	6
plants	land plants	Apocynaceae	*Leichhardtia longiloba*			V	V	1
plants	land plants	Apocynaceae	*Parsonsia tenuis*	slender silkpod		V		1
plants	land plants	Campanulaceae	*Wahlenbergia scopulicola*			V		1
plants	land plants	Dilleniaceae	*Hibbertia hexandra*			NT		1
plants	land plants	Dilleniaceae	*Hibbertia monticola*	mountain guinea flower		NT		1
plants	land plants	Ericaceae	*Agiortia cicatricata*			NT		2
plants	land plants	Euphorbiaceae	*Ricinocarpos speciosus*			V		1
plants	land plants	Goodeniaceae	*Coopernookia scabridiuscula*	coopernookia		V	V	1
plants	land plants	Lamiaceae	*Westringia blakeana*			NT		1
plants	land plants	Leguminosae	*Acacia acrionastes*			NT		1
plants	land plants	Leguminosae	*Acacia saxicola*	Mt. Maroon wattle		E		1
plants	land plants	Leguminosae	*Pultenaea whiteana*	Mt. Barney bush pea		V		1
plants	land plants	Lycopodiaceae	*Phlegmariurus varius*			V		1
plants	land plants	Myrtaceae	*Gossia hillii*			CR		1
plants	land plants	Myrtaceae	*Lenwebbia prominens*			NT		1
plants	land plants	Myrtaceae	*Rhodamnia rubescens*	scrub turpentine		CR	CE	1
plants	land plants	Orchidaceae	*Corybas montanus*	small helmet orchid		V	V	1
plants	land plants	Poaceae	*Arundinella grevillensis*			V		1
plants	land plants	Polygalaceae	*Comesperma breviflorum*			NT		1
plants	land plants	Proteaceae	*Banksia conferta*			V		1
plants	land plants	Ranunculaceae	*Clematis fawcettii*			V	V	1
plants	land plants	Rutaceae	*Leionema beckleri*			E		1
plants	land plants	Solanaceae	*Solanum callium*	brush nightshade		V		1

CODES

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

Q - Indicates the Queensland conservation status of each taxon under the *Nature Conservation Act 1992.*
The codes are Extinct (EX), Extinct in the Wild (PE), Critically Endangered (CR), Endangered (E), Vulnerable (V), Near Threatened (NT), Special Least Concern (SL) and Least Concern (C).

A - Indicates the Australian conservation status of each taxon under the *Environment Protection and Biodiversity Conservation Act 1999.*
The values of EPBC are Extinct (EX), Extinct in the Wild (XW), Critically Endangered (CE), Endangered (E), Vulnerable (V) and Conservation Dependent (CD).

Records - The first number indicates the total number of records of the taxon (wildlife records and species listings for selected areas).
This number is output as 99999 if it equals or exceeds this value. A second number located after a / indicates the number of specimen records for the taxon.
This number is output as 999 if it equals or exceeds this value.

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Appendix D

Environmental Searches

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Environmental Searches

Lot 802 Oakland Way,
Beaudesert, QLD 4285
INA Operations Pty Ltd
29 August 2024

J10966

Document Set ID: 12894584
Version: 1, Version Date: 10/12/2024

Published on 29 August 2024 by © Saunders Havill Group Pty Ltd 2024. ABN 24 144 972 949 www.saundershavill.com
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Property attributes	
Address	Lot 802 Oakland Way, Beaudesert, QLD 4285
Lot/plan(s)	802SP342583
Area (ha)	9.38 hectares (ha)
Local government area	Scenic Rim Regional Council

1. Federal Matters of National Environmental Significance

1.1 Protected Matters

A Protected Matters Report was generated from the environment.gov.au website and returned the following results. These matters may occur within a 10 km radius of the site and are protected under the *Environment Protection and Biodiversity Conservation Act 1999*.

World Heritage Properties	None
National Heritage Places	None
Wetlands of International Importance (Ramsar Wetlands)	1
Great Barrier Reef Marine Park	None
Commonwealth Marine Area	None
Listed Threatened Ecological Communities	7
Listed Threatened Species	57
Listed Migratory Species	16

1.2 Listed Threatened Ecological Communities

Community	Status	RE Mapped (On-site or within 100m of site)
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland	Critically Endangered	No
Grey box-grey gum wet forest of subtropical eastern Australia	Endangered	12.9-10.3 12.9-10.2/12.9-10.3/12.9-10.7/12.9-10.16, 12.9-10.3

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Version: 1, Version Date: 10/12/2024

Coastal Swamp Oak (Casuarina glauca) Forest of New South Wales and South East Queensland ecological community	Endangered	No
Poplar Box Grassy Woodland on Alluvial Plains	Endangered	No
Coastal Swamp Sclerophyll Forest of New South Wales and South East Queensland	Endangered	No
Subtropical eucalypt floodplain forest and woodland of the New South Wales North Coast and South East Queensland bioregions	Endangered	No
Lowland Rainforest of Subtropical Australia	Critically Endangered	No

2. State Matters

2.1 Vegetation Management Act 1999 and subordinate legislation			
Regional Ecosystem	VMA status	Category	Area (ha)
12.9-10.3	Of Concern	B	0.76
Non-Remnant Vegetation	None	X	8.62
Essential Habitat		Present	
Wetland/s		Not present	
Bioregion		Coastal bioregions and sub-regions	
2.2 Nature Conservation Act 1992 and subordinate legislation			
Protected Plants Flora Survey Trigger Map		Within high risk area	
2.3 Koala Habitat Mapping			
Koala Priority Area (KPA)		Not within KPA	
Koala Habitat Areas		Koala Habitat Area (Core)	
2.4 State Planning Policy Interactive Mapping System (selected environmental matters)			
SPP - Biodiversity		MSES - Wildlife habitat (Koala habitat areas - core) MSES - Regulated vegetation (intersecting a watercourse) MSES - Regulated vegetation (essential habitat) MSES - Regulated vegetation (category B)	
SPP - Coastal Environment		Not present	
SPP - Water Quality		Not present	

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SPP - Natural Hazards Risk and Resilience	Potential Impact Buffer Medium Potential Bushfire Intensity High Potential Bushfire Intensity
2.5 Development Assessment Mapping System	
DAMS - Coastal Protection	Not present
DAMS - Fish Habitat Areas	Queensland waterways for waterway barrier works: 1 - Low

3. Local matters — Scenic Rim Regional Council	
Zoning and Precincts	Low-medium Density Residential zone
Environmental Significance - Biodiversity	Biodiversity - Regulated Vegetation (as defined in the SPP)
Environmental Significance - Local Biodiversity	Local Biodiversity – Node Corridor
Environmental Significance – Priority Species	Not present
Environmental Significance – Wetlands and Waterways	Not present
Environmental Significance – Local Watercourses	Not present
Environmental Significance – Vegetation Management Areas	Not present
Bushfire Hazard	High Bushfire Hazard Area Medium Bushfire Hazard Area Potential Impact Buffer (Bushfire Hazard Area)
Flood Hazard	Not present
Steep Slope	Landslide Hazard Area - Slope Hazard 20.1% - 25% Landslide Hazard Area - Slope Hazard over 25% Landslide Hazard Area - Slope Hazard 15.1% - 20%
Landslide Hazard	Not present
Local Heritage	Not present
Master Plan Areas	Master plan area

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Site context

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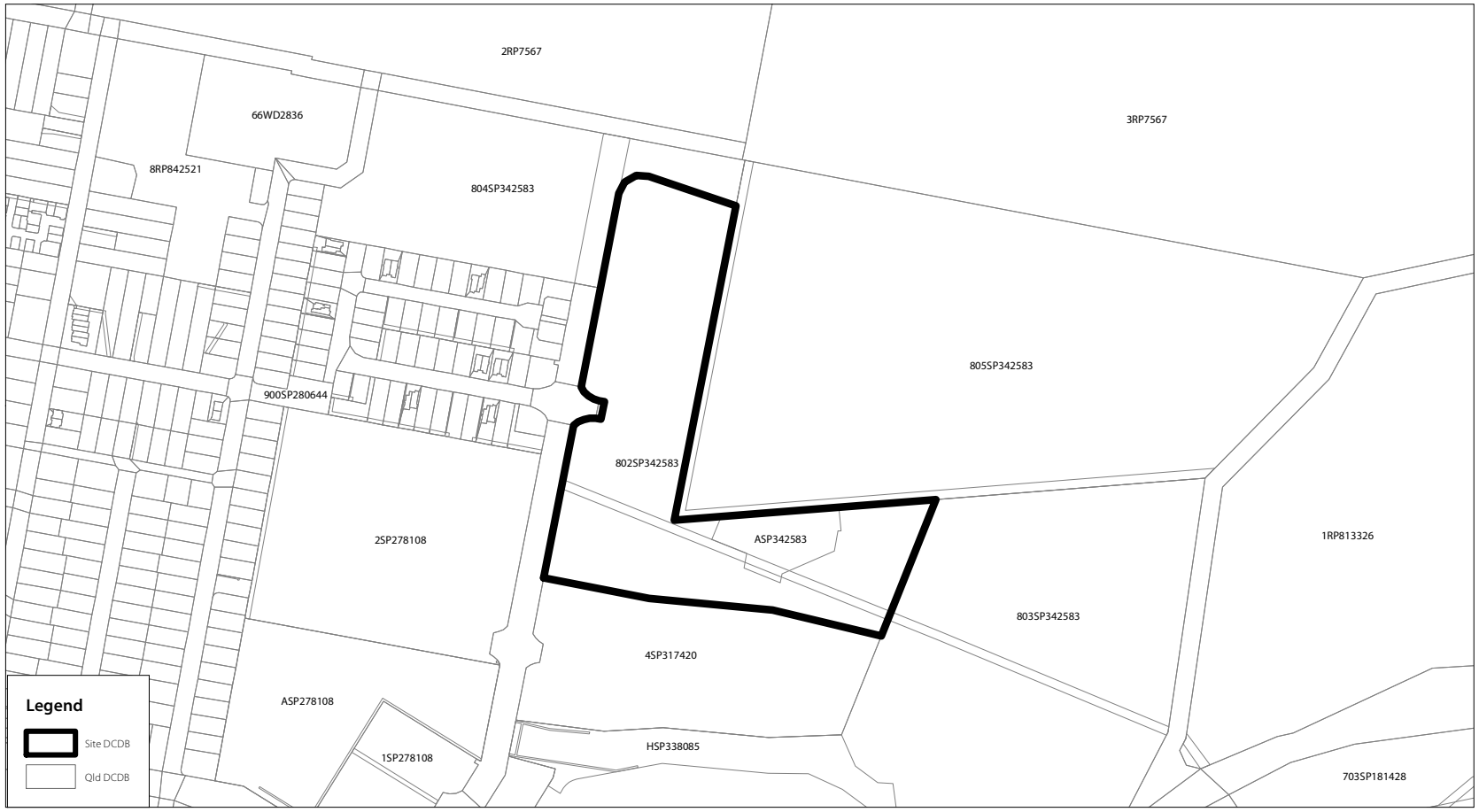
Environmental Searches

Map 1 — Lot/Plan(s)



Layer Source: © State of Queensland 2024

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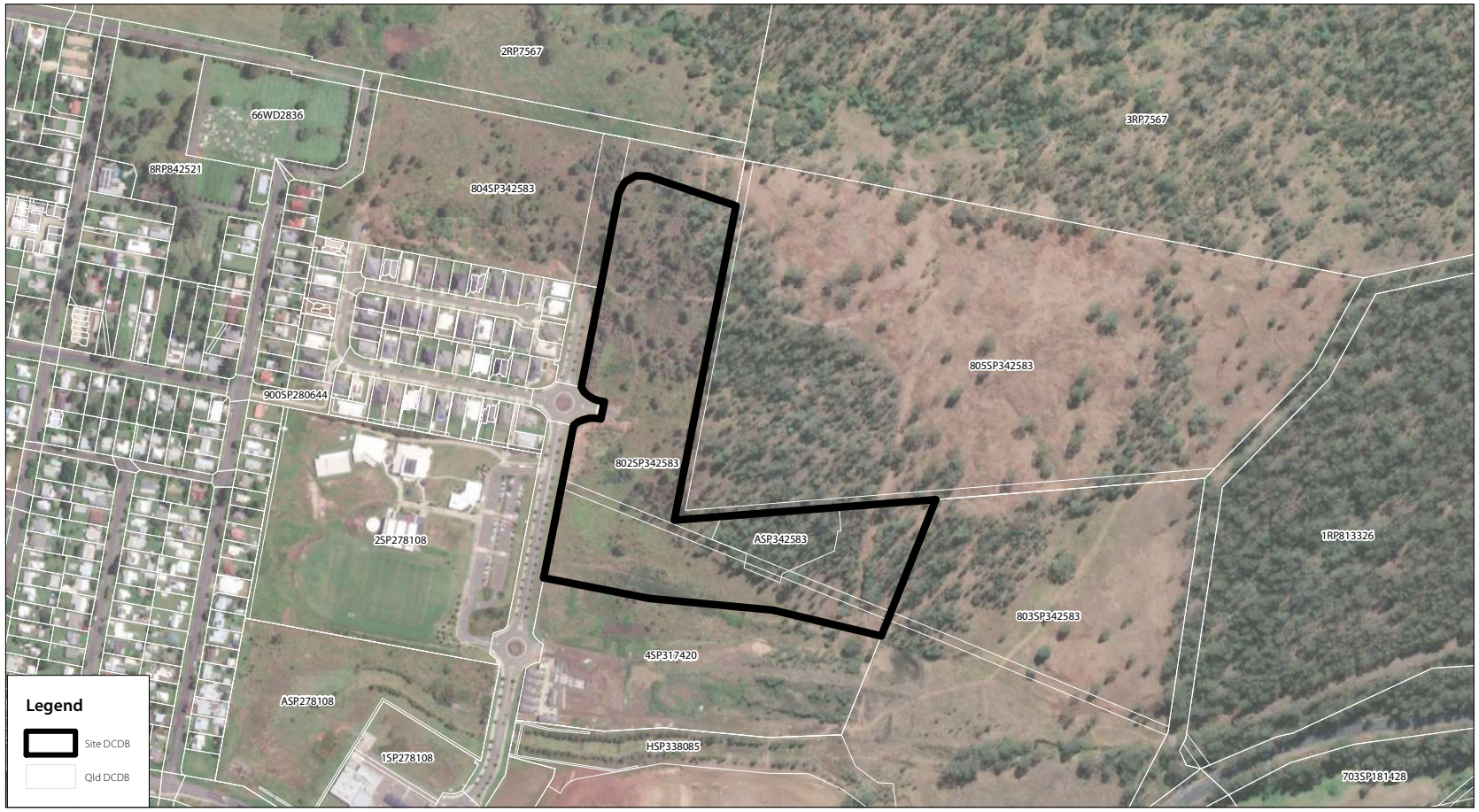
Environmental Searches

Map 2 — Aerial Image (Current)



Layer Sources: © State of Queensland 2024, Aerial Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

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Map 3 — Aerial Image (Historical)

Layer Sources: © State of Queensland 2024 ***Captured 05/08/1976***

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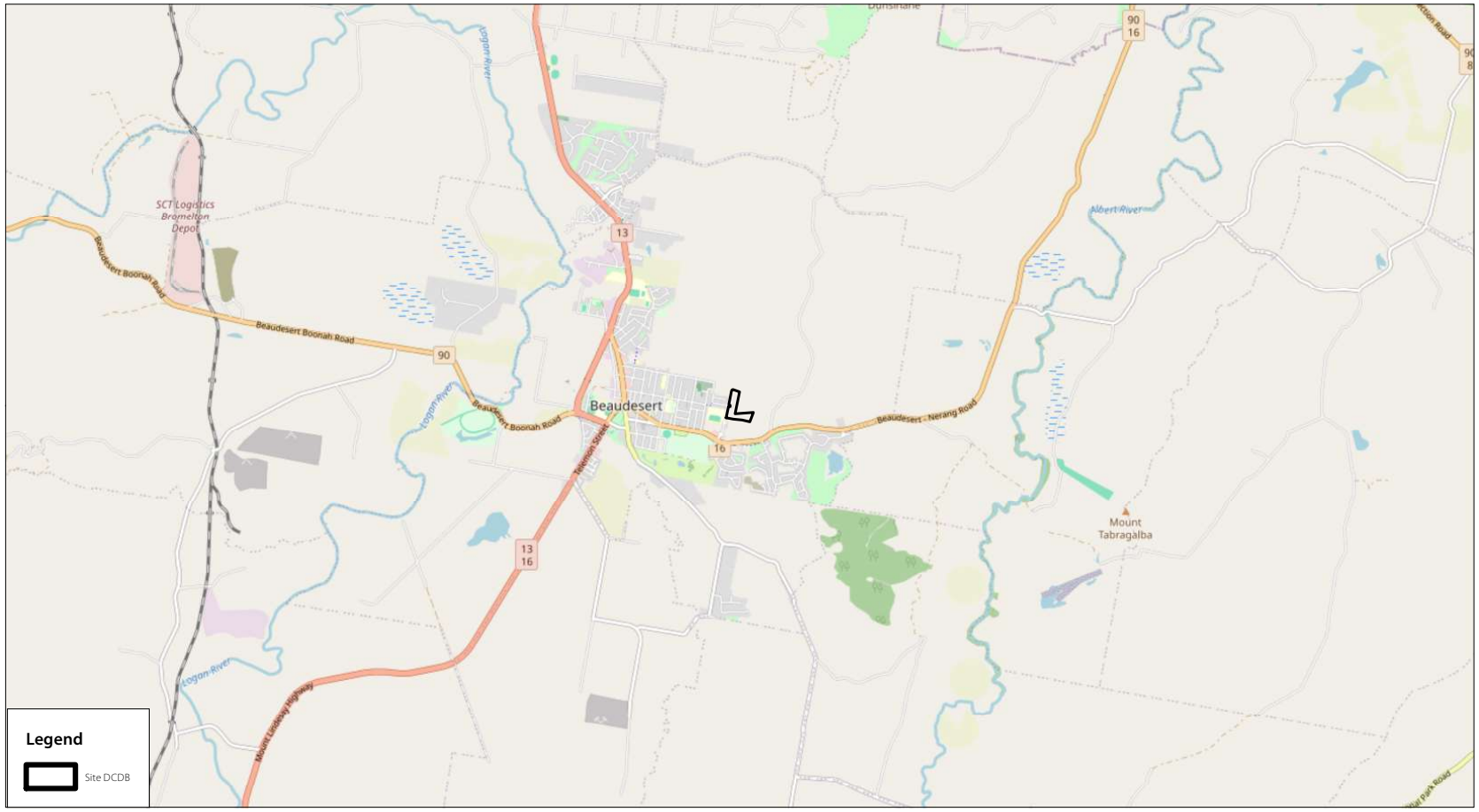
Map 4 — Locality



Layer Sources: © State of Queensland 2024, Aerial © OpenStreetMap (and) contributors, CC-BY-SA

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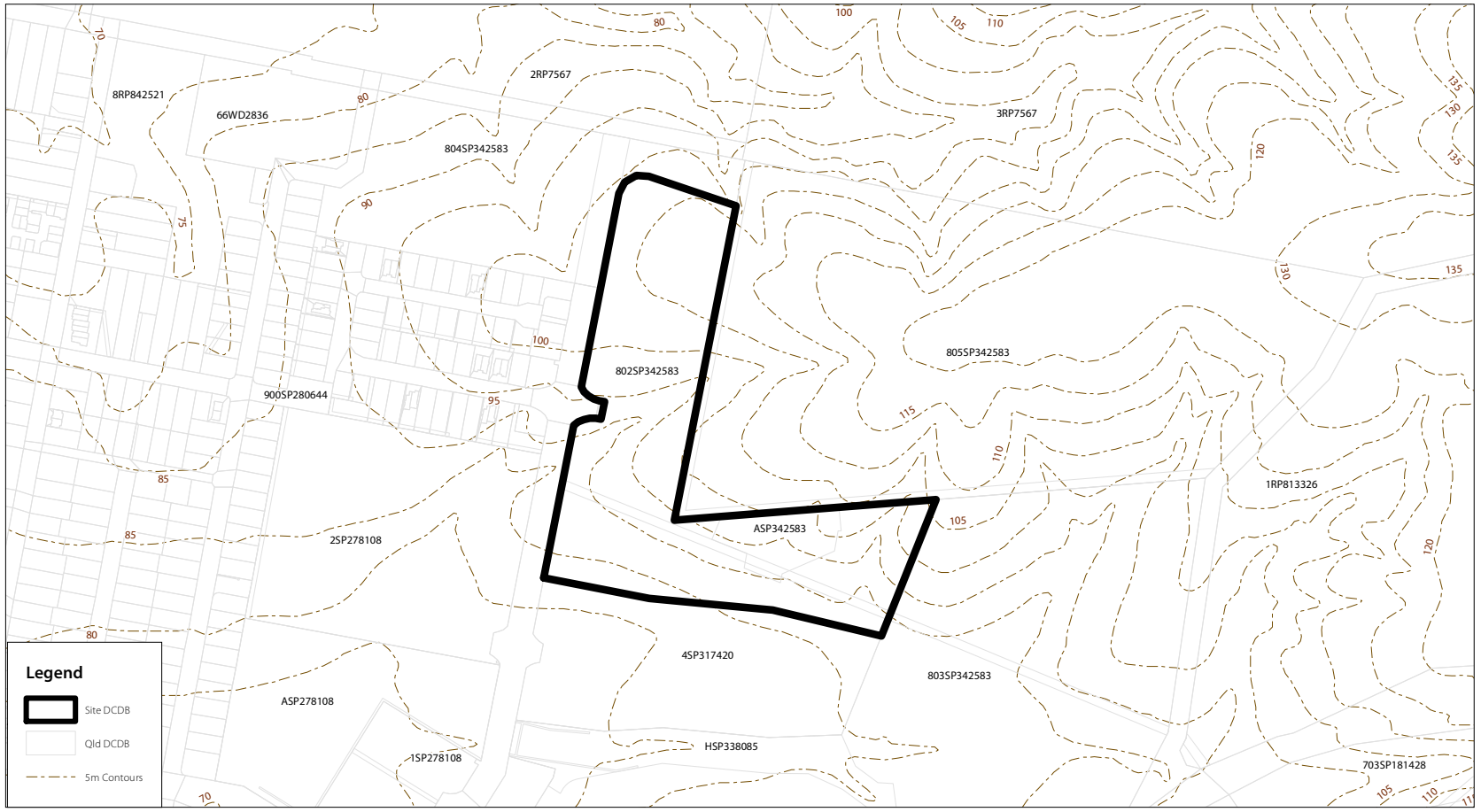
Map 5 — Contours



Layer Sources: © State of Queensland 2024

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State matters

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Map 6 — Regulated Vegetation Management Map

Layer Source: © State of Queensland 2024

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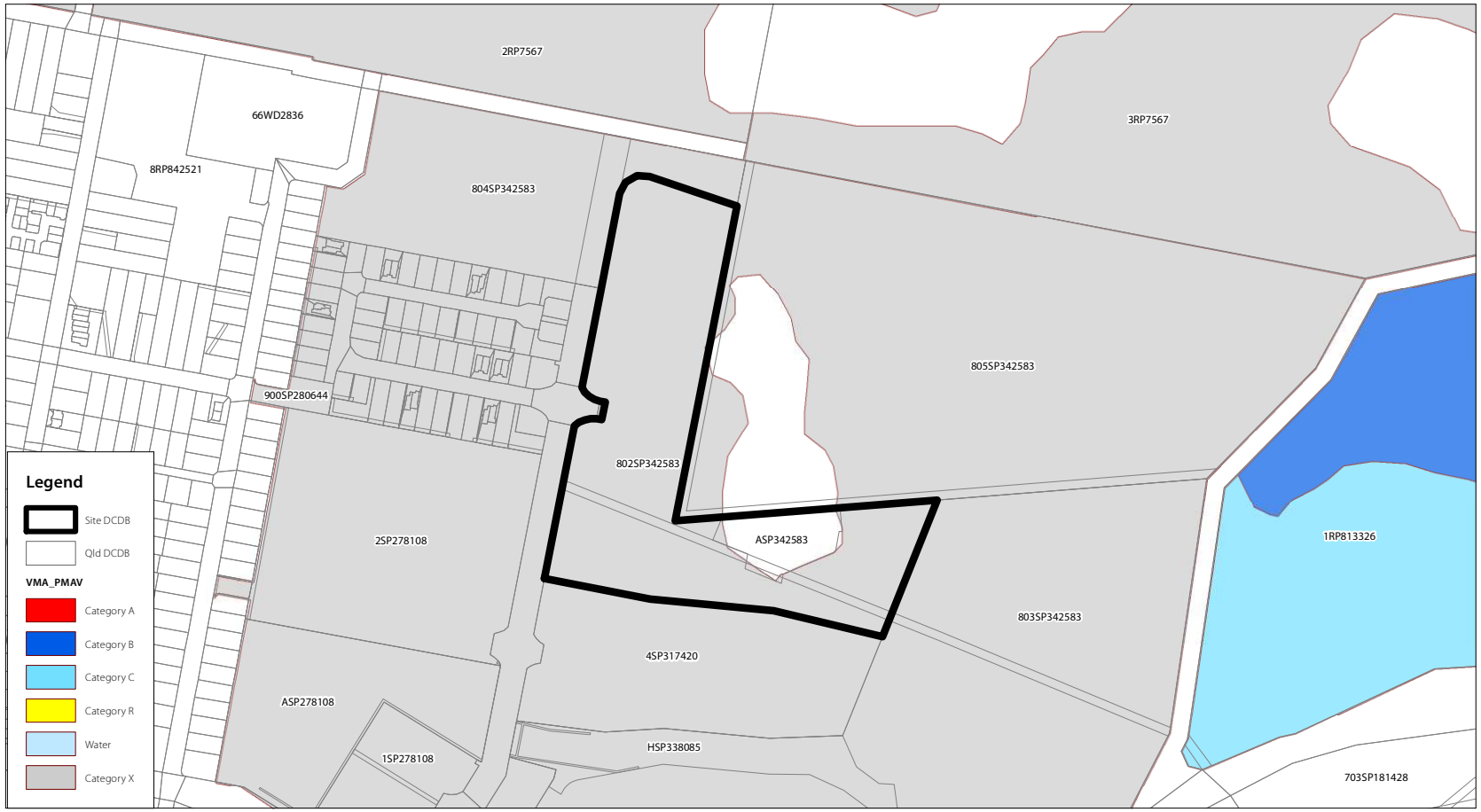
Environmental Searches

Map 7 — Property Maps Assessable Vegetation



Layer Source: © State of Queensland 2024

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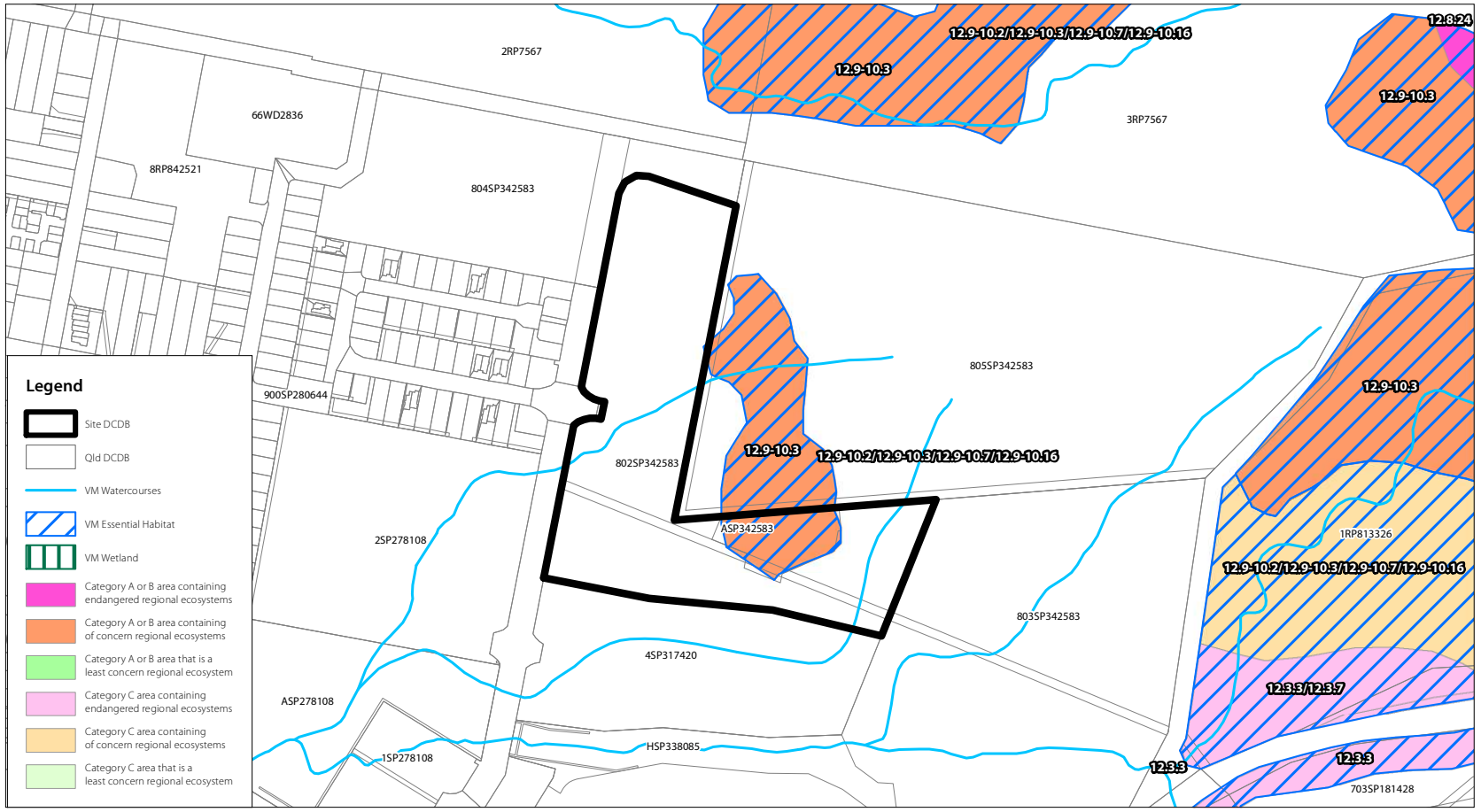
Map 8 — Vegetation Management Regional Ecosystem Map



Disclaimer: Regional ecosystem locations are indicative only. For precise RE mapping, please visit: https://qldglobe.information.qld.gov.au/ and enable the Vegetation management regional ecosystem map layers.

Layer Source: © State of Queensland 2024

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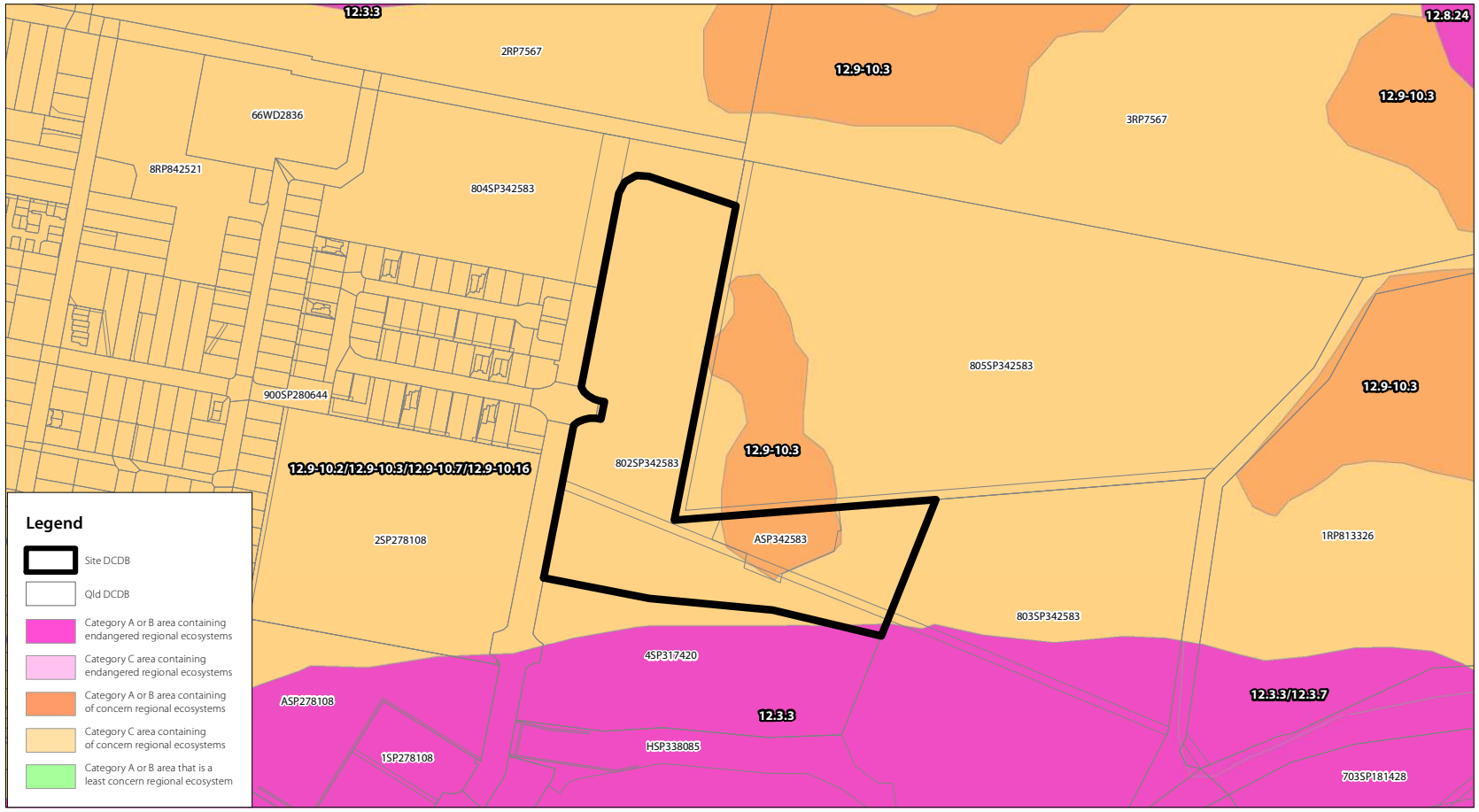
Map 9 — Pre-clear Regional Ecosystem Map



Layer Source: © State of Queensland 2024

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Map 10 — Protected Plants Flora Survey Trigger Map

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Map 11 — Koala Priority Areas and Koala Habitat Areas

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Map 12 — SPP — Biodiversity

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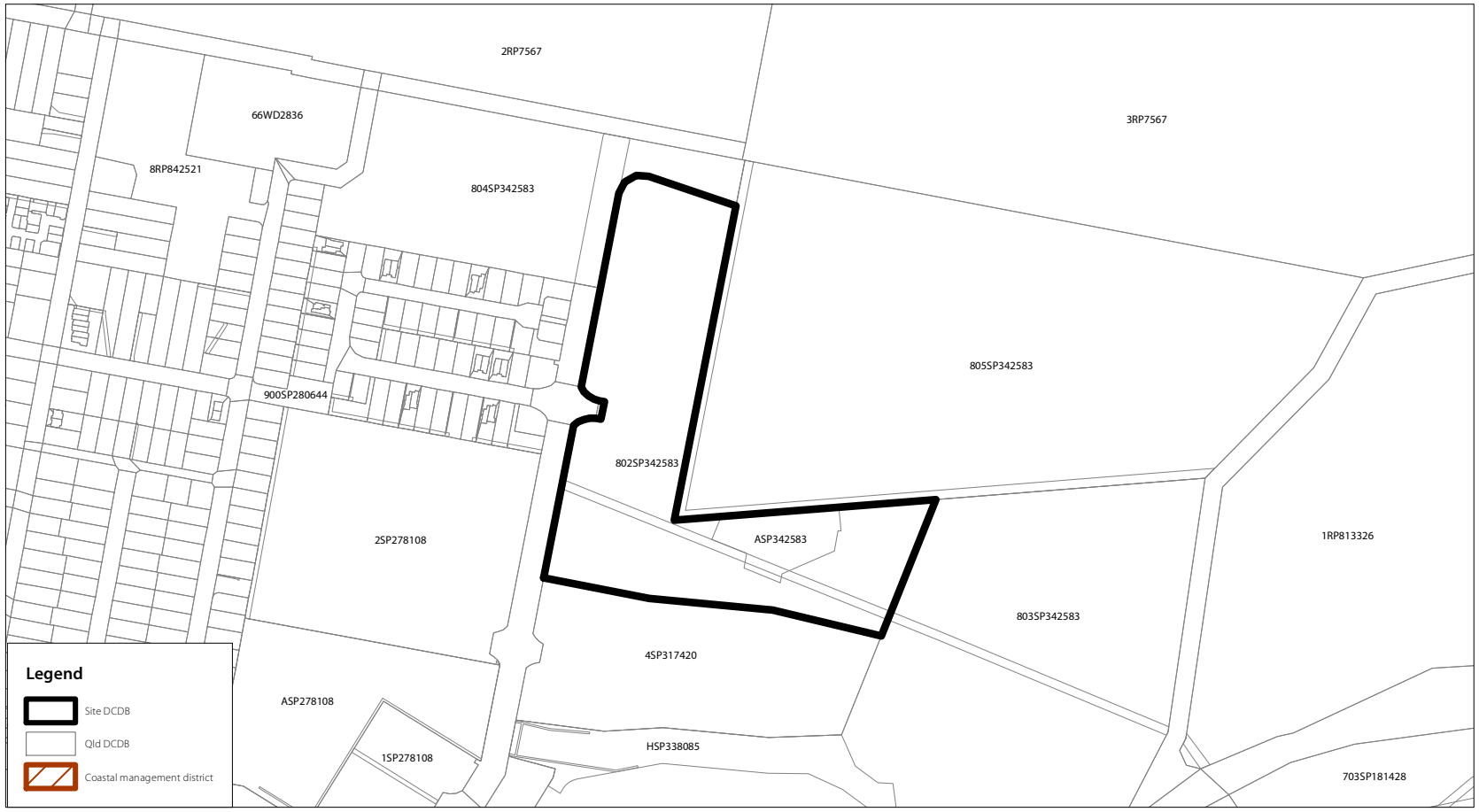
Map 13 — SPP — Coastal Environment



Layer Source: © State of Queensland 2024

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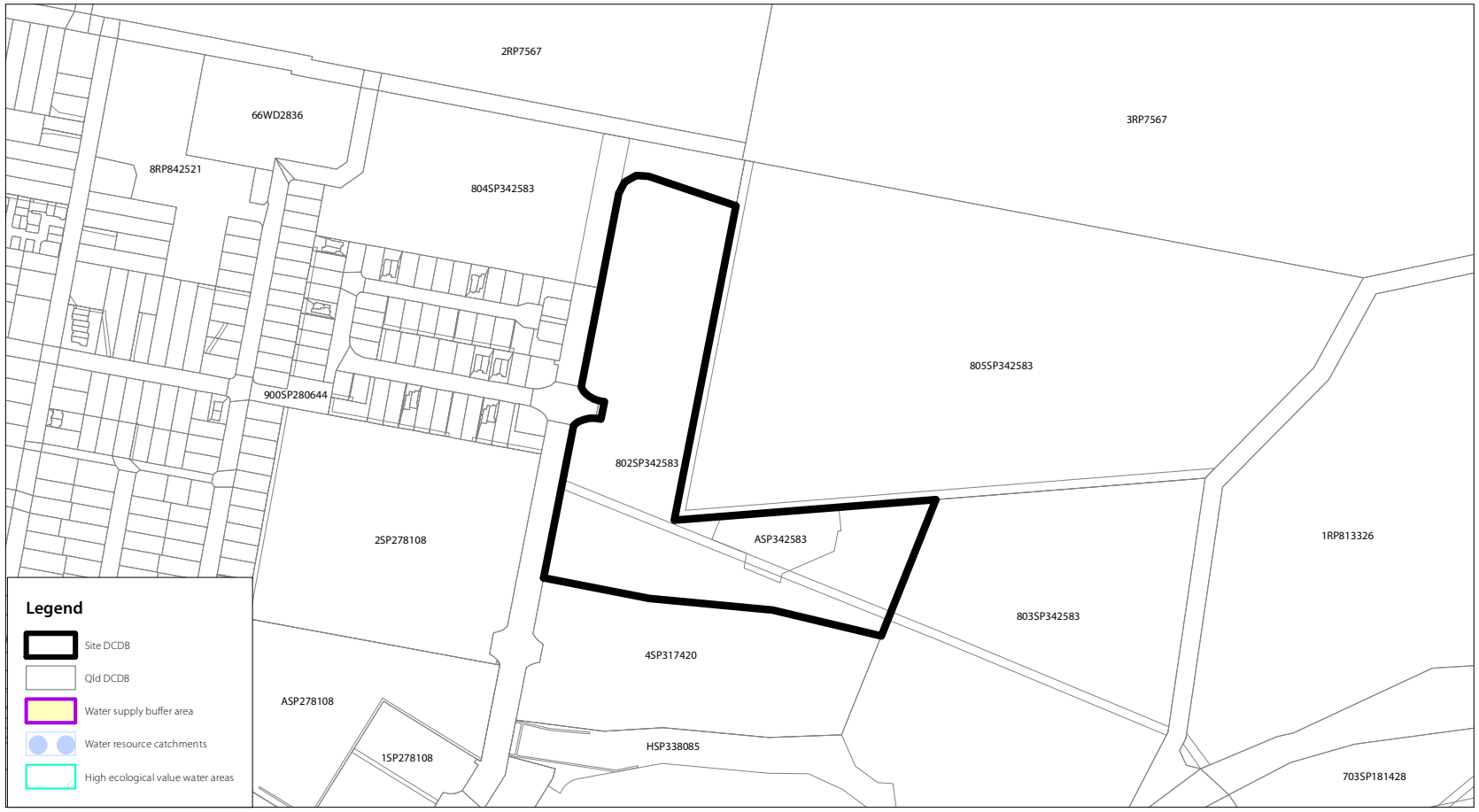
Map 14 — SPP — Water Quality



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Map 15 — SPP — Natural Hazards Risk and Resilience

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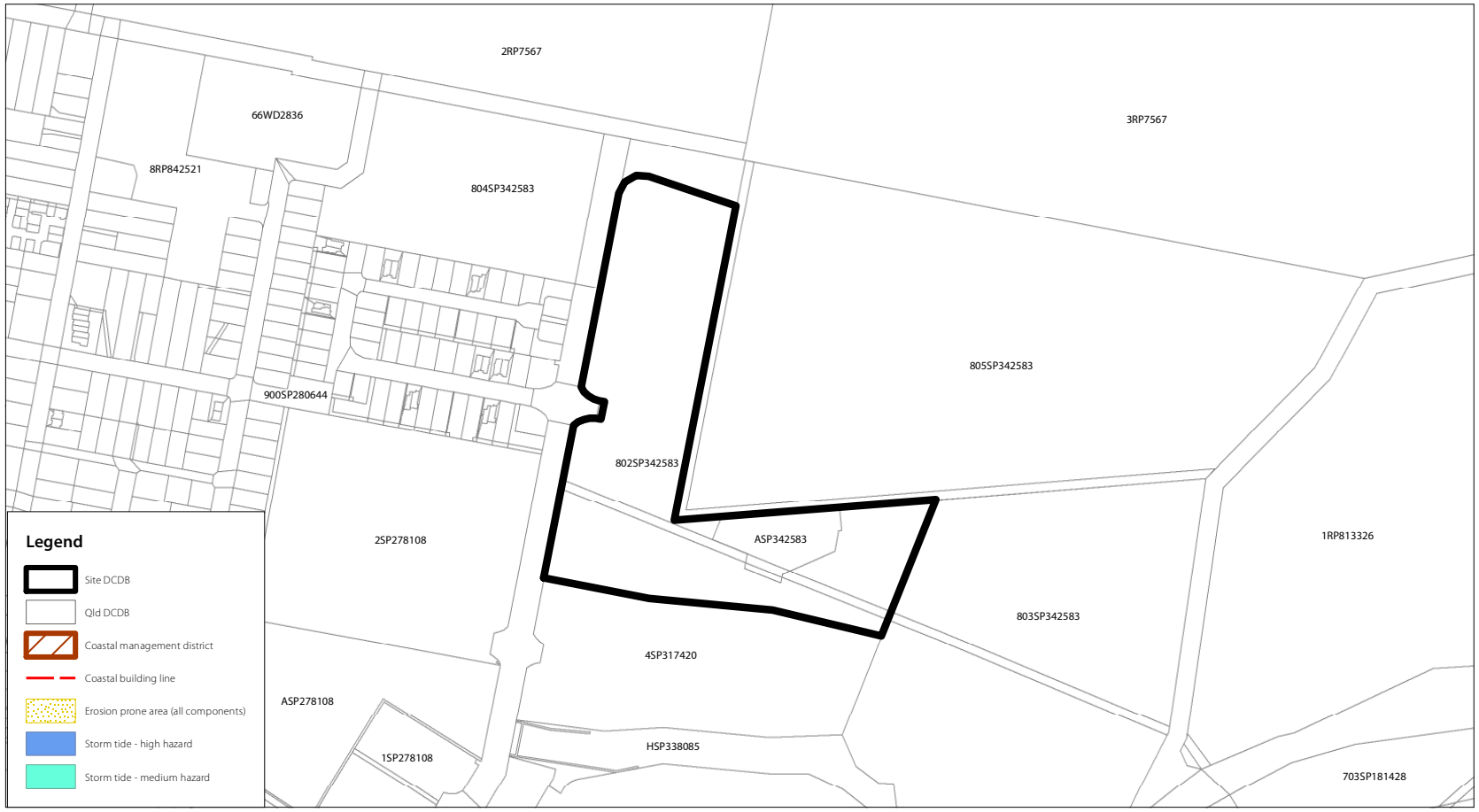
Map 16 — DAMS — Coastal Protection



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Map 17 — DAMS — Fish Habitat Areas

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Map 18 — Water Act 2000 — Watercourse Identification

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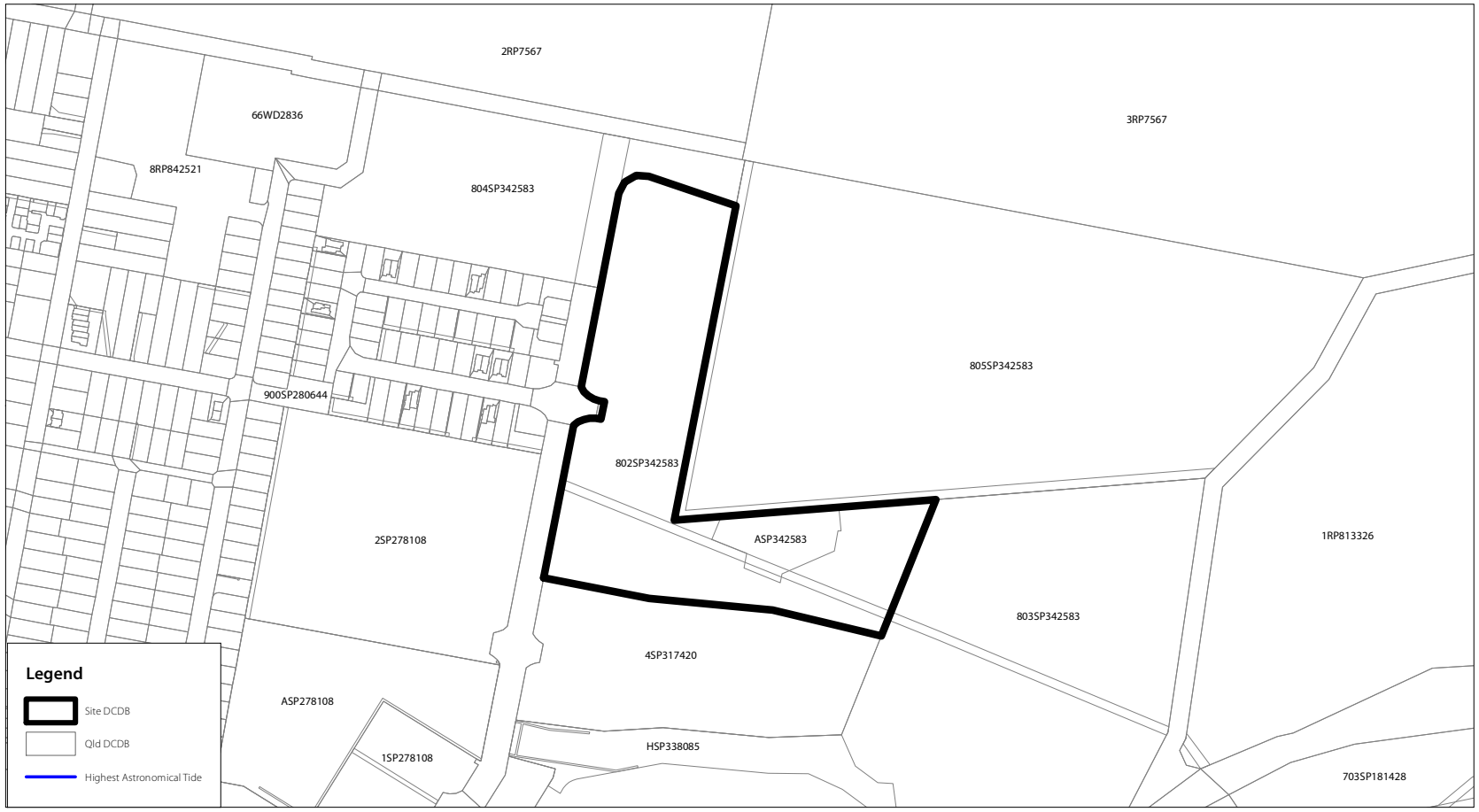
Map 19 — Highest Astronomical Tide



Layer Source: © State of Queensland 2024

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Local matters — Scenic Rim Regional Council

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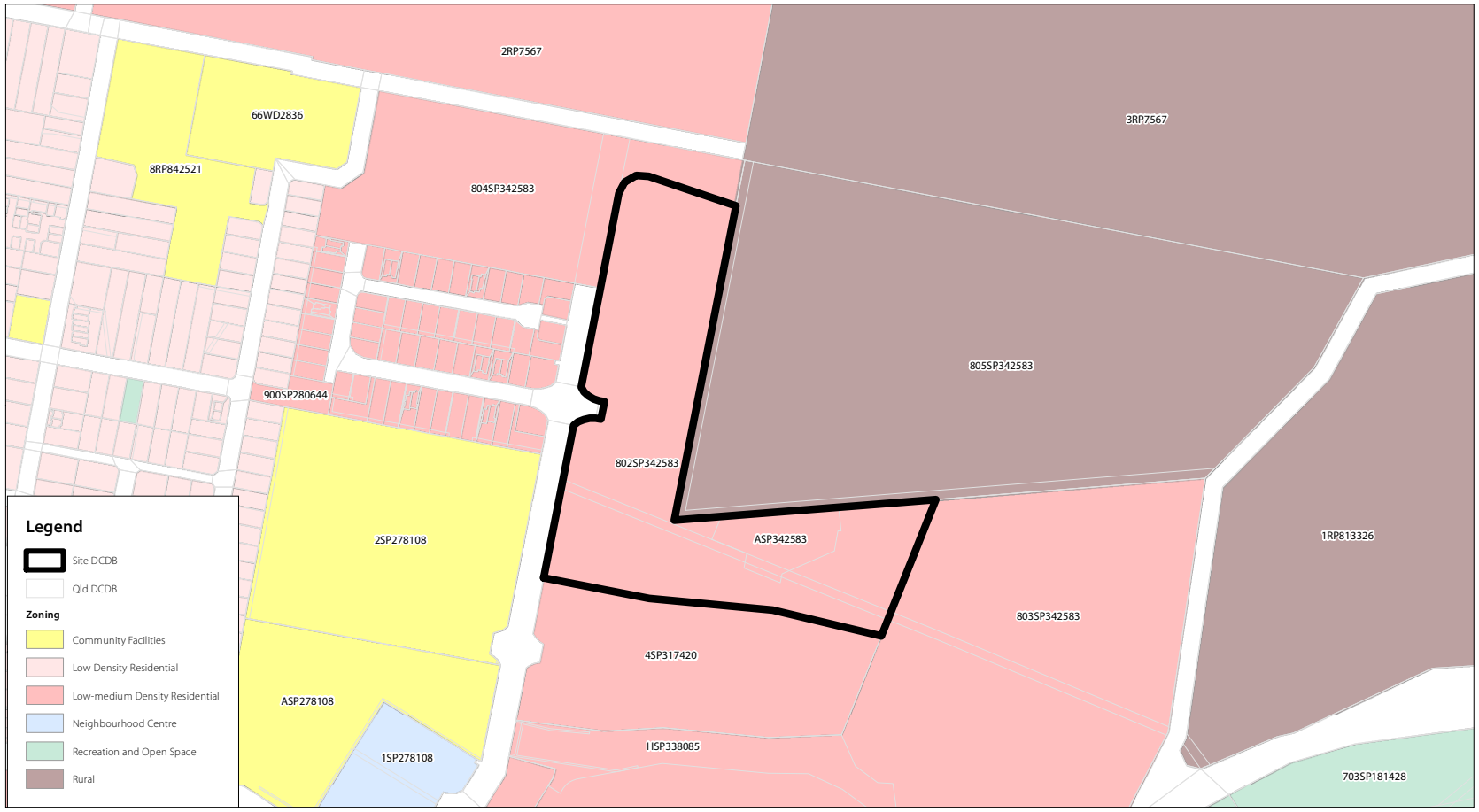
Map 20 — Zoning



Layer Sources: © State of Queensland 2024, Scenic Rim Regional Council 2024

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Map 21 — Environmental Significance - Biodiversity

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Map 22 — Environmental Significance - Local Biodiversity

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Map 23 — Environmental Significance - Priority Species

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Map 24 — Environmental Significance - Wetlands and Waterways

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Map 25 — Environmental Significance - Local Watercourses

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Map 26 — Environmental Significance - Vegetation Management

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Map 27 — Bushfire Hazard

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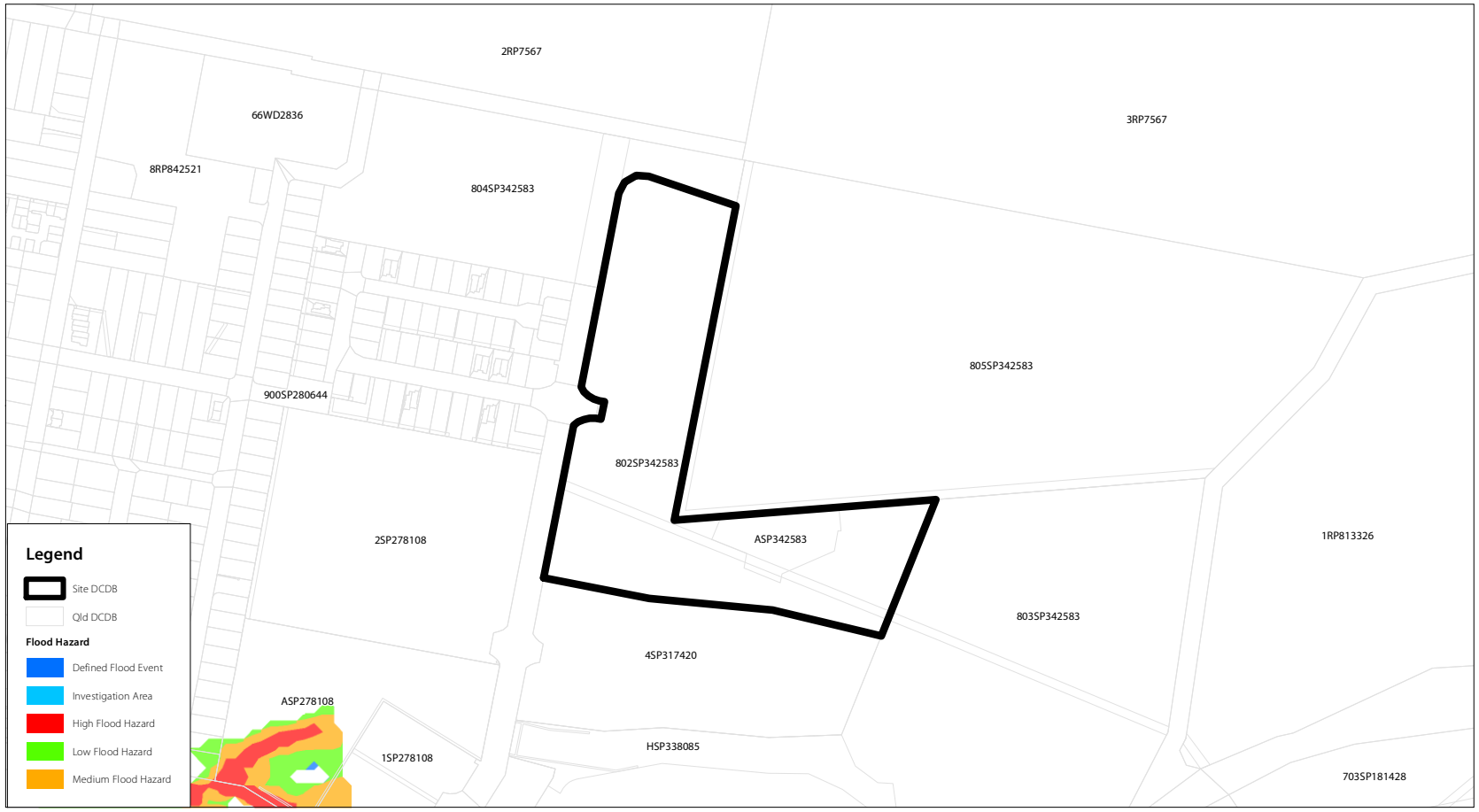
Map 28 — Flood Hazard



Layer Sources: © State of Queensland 2024, Scenic Rim Regional Council 2024

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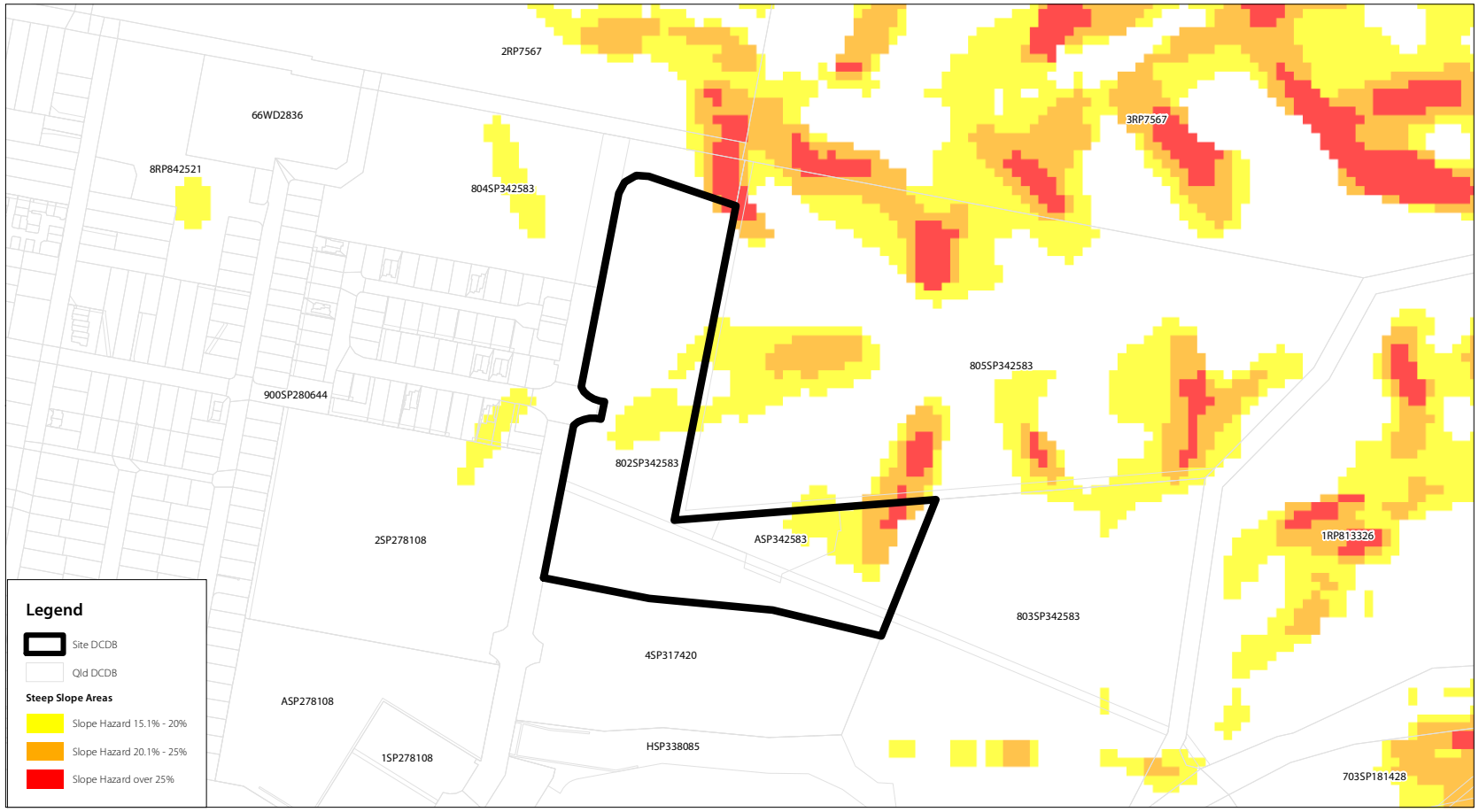
Environmental Searches

Map 29 — Steep Slope



Layer Sources: © State of Queensland 2024, Scenic Rim Regional Council 2024

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Map 30 — Landslide Hazard

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Map 31 — Local Heritage

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Map 32 — Master Plan Areas

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Appendix E

Tree Schedule

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Tree Schedule - 10966
Oakland Way, Beaudesert (INA Operations Pty Ltd (Attn Paul Brumpton)
Date: 2024/09/27

Specimen Details											Canopy Condition Details							Trunk Condition Details					Fauna Details and Habitat Value						Additional Details		
Tree ID	Botanical Name	Common Name	Trunk DBH (mm)	Additional Trunks DBH (mm)	Total DBH (mm) [AS 4970-2009]	Trunk Circumference (cm) [AS 4970-2009]	Height (m)	Spread (m)	Tree Protection Zone (m)	Structural Root Zone (m)	Canopy Form	Spreading	Thinning	Die-Back	Epicormic Growth	Lopped	Canopy Health	Leaning	Vines	Trunk Damage	Fire Damage	Trunk Health	Scats	Scratches	Hollows	Nest	Termite Nest	Habitat Value	Native Status	Retention	Additional Notes
1	*Acacia disparrima*	Hickory Wattle	130	100 120 90 90 70	250	78	7.0	8.0	3.0	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
2	*Corymbia citriodora*	Spotted Gum	250		250	79	15.0	3.0	3.0	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
3	*Corymbia citriodora*	Spotted Gum	180		180	57	14.0	3.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
4	*Corymbia citriodora*	Spotted Gum	180		180	57	9.0	4.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
5	*Corymbia citriodora*	Spotted Gum	250		250	79	13.0	4.0	3.0	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
6	*Corymbia citriodora*	Spotted Gum	190		190	60	15.0	5.0	2.3	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
7	*Corymbia citriodora*	Spotted Gum	260		260	82	15.0	7.0	3.1	1.9	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
8	*Corymbia citriodora*	Spotted Gum	250		250	79	16.0	7.0	3.0	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
9	*Corymbia citriodora*	Spotted Gum	180		180	57	14.0	3.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
10	*Corymbia citriodora*	Spotted Gum	170		170	53	15.0	2.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
11	*Corymbia citriodora*	Spotted Gum	110		110	35	14.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
12	*Corymbia citriodora*	Spotted Gum	120		120	38	14.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
13	*Corymbia citriodora*	Spotted Gum	110		110	35	10.0	3.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
14	*Corymbia citriodora*	Spotted Gum	180		180	57	15.0	6.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
15	*Eucalyptus siderophloia*	Northern Grey Ironbark	180		180	57	14.0	3.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
16	*Corymbia citriodora*	Spotted Gum	100		100	31	8.0	3.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
17	*Eucalyptus siderophloia*	Northern Grey Ironbark	370		370	116	18.0	10.0	4.4	2.2	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
18	*Corymbia citriodora*	Spotted Gum	190		190	60	17.0	7.0	2.3	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
19	*Corymbia citriodora*	Spotted Gum	180		180	57	15.0	3.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
20	*Corymbia citriodora*	Spotted Gum	170		170	53	14.0	5.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
21	*Corymbia citriodora*	Spotted Gum	170	80	188	59	14.0	3.0	2.3	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
22	*Corymbia citriodora*	Spotted Gum	210	80	225	71	13.0	7.0	2.7	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
23	*Corymbia citriodora*	Spotted Gum	140		140	44	12.0	4.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
24	*Corymbia citriodora*	Spotted Gum	170	140	220	69	15.0	4.0	2.6	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
25	*Corymbia citriodora*	Spotted Gum	120		120	38	13.0	4.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
26	*Corymbia citriodora*	Spotted Gum	110		110	35	13.0	3.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
27	*Corymbia citriodora*	Spotted Gum	120		120	38	14.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
28	*Corymbia citriodora*	Spotted Gum	160		160	50	16.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
29	*Corymbia citriodora*	Spotted Gum	220		220	69	17.0	8.0	2.6	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
30	*Corymbia citriodora*	Spotted Gum	150		150	47	13.0	4.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
31	*Corymbia citriodora*	Spotted Gum	190		190	60	15.0	5.0	2.3	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
32	*Corymbia citriodora*	Spotted Gum	220	130	256	80	13.0	3.0	3.1	1.9	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
33	*Corymbia citriodora*	Spotted Gum	160	130	206	65	9.0	3.0	2.5	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
34	*Corymbia citriodora*	Spotted Gum	120		120	38	13.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
35	*Corymbia citriodora*	Spotted Gum	120		120	38	13.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
36	*Corymbia citriodora*	Spotted Gum	110	100	149	47	14.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
37	*Corymbia citriodora*	Spotted Gum	170		170	53	17.0	8.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
38	*Corymbia citriodora*	Spotted Gum	180		180	57	16.0	5.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
39	*Corymbia citriodora*	Spotted Gum	190		190	60	16.0	4.0	2.3	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
40	*Corymbia citriodora*	Spotted Gum	200		200	63	20.0	9.0	2.4	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
41	*Corymbia citriodora*	Spotted Gum	190		190	60	17.0	8.0	2.3	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
42	*Corymbia citriodora*	Spotted Gum	120		120	38	10.0	4.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
43	*Corymbia citriodora*	Spotted Gum	140		140	44	16.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
44	*Corymbia citriodora*	Spotted Gum	140		140	44	15.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
45	*Corymbia citriodora*	Spotted Gum	110		110	35	8.0	3.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
46	*Corymbia citriodora*	Spotted Gum	160		160	50	18.0	4.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
47	*Corymbia citriodora*	Spotted Gum	110		110	35	8.0	4.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
48	*Eucalyptus siderophloia*	Northern Grey Ironbark	620		620	195	26.0	18.0	7.4	2.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	Large	-	-	Non-juvenile Koala Habitat Tree	Retain	-
49	*Corymbia citriodora*	Spotted Gum	140		140	44	14.0	4.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
50	*Corymbia citriodora*	Spotted Gum	170		170	53	15.0	4.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
51	*Corymbia citriodora*	Spotted Gum	110	90	142	45	9.0	2.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
52	*Corymbia citriodora*	Spotted Gum	170		170	53	18.0	4.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
53	*Corymbia citriodora*	Spotted Gum	160		160	50	18.0	5.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
54	*Corymbia citriodora*	Spotted Gum	170		170	53	16.0	5.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
55	*Corymbia citriodora*	Spotted Gum	120		120	38	11.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
56	*Corymbia citriodora*	Spotted Gum	170		170	53	17.0	4.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
57	*Corymbia citriodora*	Spotted Gum	160		160	50	16.0	4.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
58	*Corymbia citriodora*	Spotted Gum	140		140	44	17.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
59	*Corymbia citriodora*	Spotted Gum	170		170	53	16.0	3.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-

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Specimen Details											Canopy Condition Details							Trunk Condition Details					Fauna Details and Habitat Value						Additional Details		
Tree ID	Botanical Name	Common Name	Trunk DBH (mm)	Additional Trunks DBH (mm)	Total DBH (mm) [AS 4970-2009]	Trunk Circumference (cm) [AS 4970-2009]	Height (m)	Spread (m)	Tree Protection Zone (m)	Structural Root Zone (m)	Canopy Form	Spreading	Thinning	Die-Back	Epicormic Growth	Lopped	Canopy Health	Leaning	Vines	Trunk Damage	Fire Damage	Trunk Health	Scats	Scratches	Hollows	Nest	Termite Nest	Habitat Value	Native Status	Retention	Additional Notes
60	*Corymbia citriodora*	Spotted Gum	120		120	38	16.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
61	*Corymbia citriodora*	Spotted Gum	110		110	35	14.0	3.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
62	*Corymbia citriodora*	Spotted Gum	130		130	41	16.0	4.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
63	*Corymbia citriodora*	Spotted Gum	140		140	44	15.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
64	*Corymbia citriodora*	Spotted Gum	140		140	44	16.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
65	*Corymbia henryi*	Large-leaved Spotted Gum	110	70	130	41	9.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
66	*Corymbia citriodora*	Spotted Gum	150		150	47	14.0	4.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
67	*Corymbia citriodora*	Spotted Gum	120	100	156	49	14.0	4.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
68	*Corymbia citriodora*	Spotted Gum	110		110	35	14.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
69	*Corymbia citriodora*	Spotted Gum	120		120	38	12.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
70	*Corymbia citriodora*	Spotted Gum	120		120	38	12.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
71	*Corymbia citriodora*	Spotted Gum	130		130	41	16.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
72	*Corymbia citriodora*	Spotted Gum	120		120	38	16.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
73	*Corymbia citriodora*	Spotted Gum	110		110	35	9.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
74	*Corymbia citriodora*	Spotted Gum	100		100	31	7.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
75	*Corymbia citriodora*	Spotted Gum	370		370	116	27.0	12.0	4.4	2.2	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
76	*Corymbia citriodora*	Spotted Gum	110		110	35	11.0	3.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
77	*Corymbia citriodora*	Spotted Gum	120		120	38	13.0	4.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
78	*Corymbia citriodora*	Spotted Gum	130		130	41	13.0	4.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
79	*Corymbia citriodora*	Spotted Gum	110		110	35	9.0	3.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
80	*Corymbia citriodora*	Spotted Gum	100		100	31	13.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
81	*Eucalyptus siderophloia*	Northern Grey Ironbark	340		340	107	27.0	14.0	4.1	2.1	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
82	*Eucalyptus siderophloia*	Northern Grey Ironbark	450		450	141	28.0	14.0	5.4	2.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
83	*Corymbia citriodora*	Spotted Gum	120	80	144	45	17.0	4.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
84	*Acacia disparrima*	Hickory Wattle	110		110	35	7.0	6.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Retain	-
85	*Corymbia citriodora*	Spotted Gum	120	50	130	41	13.0	4.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
86	*Corymbia citriodora*	Spotted Gum	120		120	38	18.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
87	*Corymbia citriodora*	Spotted Gum	100		100	31	12.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
88	*Corymbia citriodora*	Spotted Gum	150		150	47	16.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
89	*Corymbia citriodora*	Spotted Gum	120		120	38	12.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
90	*Corymbia citriodora*	Spotted Gum	100		100	31	14.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
91	*Corymbia citriodora*	Spotted Gum	110		110	35	13.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
92	*Corymbia citriodora*	Spotted Gum	100		100	31	8.0	4.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
93	*Corymbia citriodora*	Spotted Gum	120		120	38	14.0	5.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
94	*Corymbia citriodora*	Spotted Gum	230		230	72	18.0	4.0	2.8	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
95	*Corymbia citriodora*	Spotted Gum	100		100	31	8.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
96	*Corymbia citriodora*	Spotted Gum	130		130	41	14.0	4.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
97	*Corymbia citriodora*	Spotted Gum	120		120	38	10.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
98	*Corymbia citriodora*	Spotted Gum	110	100	149	47	13.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
99	*Corymbia citriodora*	Spotted Gum	140		140	44	16.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
100	*Corymbia citriodora*	Spotted Gum	100		100	31	9.0	3.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
101	*Corymbia citriodora*	Spotted Gum	120		120	38	13.0	4.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
102	*Corymbia citriodora*	Spotted Gum	100		100	31	12.0	1.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
103	*Corymbia citriodora*	Spotted Gum	140		140	44	16.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
104	*Corymbia citriodora*	Spotted Gum	130		130	41	16.0	4.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
105	*Corymbia citriodora*	Spotted Gum	160		160	50	17.0	5.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
106	*Eucalyptus moluccana*	Gum-topped Box	210		210	66	17.0	4.0	2.5	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
107	*Eucalyptus moluccana*	Gum-topped Box	150		150	47	16.0	5.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
108	*Corymbia citriodora*	Spotted Gum	110		110	35	10.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
109	*Corymbia citriodora*	Spotted Gum	140		140	44	13.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
110	*Corymbia citriodora*	Spotted Gum	110		110	35	13.0	3.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
111	*Eucalyptus moluccana*	Gum-topped Box	140		140	44	14.0	4.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
112	*Corymbia citriodora*	Spotted Gum	120		120	38	12.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
113	*Corymbia citriodora*	Spotted Gum	140		140	44	12.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
114	*Corymbia citriodora*	Spotted Gum	110		110	35	7.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
115	*Corymbia citriodora*	Spotted Gum	100		100	31	6.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
116	*Corymbia citriodora*	Spotted Gum	120		120	38	14.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
117	*Corymbia citriodora*	Spotted Gum	100		100	31	12.0	3.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
118	*Corymbia citriodora*	Spotted Gum	120		120	38	13.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
119	*Corymbia citriodora*	Spotted Gum	120		120	38	12.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
120	*Corymbia citriodora*	Spotted Gum	190	170	255	80	16.0	8.0	3.1	1.9	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
121	*Corymbia citriodora*	Spotted Gum	130		130	41	16.0	4.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-

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Specimen Details											Canopy Condition Details							Trunk Condition Details					Fauna Details and Habitat Value						Additional Details		
Tree ID	Botanical Name	Common Name	Trunk DBH (mm)	Additional Trunks DBH (mm)	Total DBH (mm) [AS 4970-2009]	Trunk Circumference (cm) [AS 4970-2009]	Height (m)	Spread (m)	Tree Protection Zone (m)	Structural Root Zone (m)	Canopy Form	Spreading	Thinning	Die-Back	Epicormic Growth	Lopped	Canopy Health	Leaning	Vines	Trunk Damage	Fire Damage	Trunk Health	Scats	Scratches	Hollows	Nest	Termite Nest	Habitat Value	Native Status	Retention	Additional Notes
122	*Corymbia citriodora*	Spotted Gum	140		140	44	15.0	4.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
123	*Corymbia citriodora*	Spotted Gum	130		130	41	14.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
124	*Corymbia citriodora*	Spotted Gum	120		120	38	14.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
125	*Corymbia citriodora*	Spotted Gum	100		100	31	13.0	3.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
126	*Corymbia citriodora*	Spotted Gum	120		120	38	16.0	4.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
127	*Corymbia citriodora*	Spotted Gum	110		110	35	8.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
128	*Corymbia citriodora*	Spotted Gum	140		140	44	16.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
129	*Corymbia citriodora*	Spotted Gum	130	120	177	56	12.0	4.0	2.1	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
130	*Corymbia citriodora*	Spotted Gum	130	90 80	177	56	14.0	4.0	2.1	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
131	*Corymbia citriodora*	Spotted Gum	180		180	57	17.0	4.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
132	*Corymbia citriodora*	Spotted Gum	120		120	38	14.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
133	*Corymbia citriodora*	Spotted Gum	140		140	44	15.0	5.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
134	*Corymbia citriodora*	Spotted Gum	130	190	230	72	12.0	2.0	2.8	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
135	*Corymbia citriodora*	Spotted Gum	140		140	44	14.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
136	*Acacia disparrima*	Hickory Wattle	110		110	35	7.0	6.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Retain	-
137	*Acacia disparrima*	Hickory Wattle	120	90	150	47	3.0	5.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Retain	-
138	*Corymbia citriodora*	Spotted Gum	130		130	41	16.0	6.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
139	*Corymbia citriodora*	Spotted Gum	160	130	206	65	16.0	4.0	2.5	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
140	*Corymbia citriodora*	Spotted Gum	110		110	35	16.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
141	*Corymbia citriodora*	Spotted Gum	120		120	38	14.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
142	*Corymbia citriodora*	Spotted Gum	130		130	41	14.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
143	*Corymbia citriodora*	Spotted Gum	100		100	31	14.0	1.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
144	*Corymbia citriodora*	Spotted Gum	120		120	38	14.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
145	*Corymbia citriodora*	Spotted Gum	110		110	35	12.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
146	*Corymbia citriodora*	Spotted Gum	100		100	31	9.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
147	*Corymbia citriodora*	Spotted Gum	140		140	44	13.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
148	*Corymbia citriodora*	Spotted Gum	120		120	38	13.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
149	*Corymbia citriodora*	Spotted Gum	130		130	41	14.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
150	*Corymbia citriodora*	Spotted Gum	150		150	47	15.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
151	*Corymbia citriodora*	Spotted Gum	130		130	41	15.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
152	*Corymbia citriodora*	Spotted Gum	110		110	35	13.0	3.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
153	*Corymbia citriodora*	Spotted Gum	110		110	35	12.0	3.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
154	*Corymbia citriodora*	Spotted Gum	120		120	38	14.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
155	*Corymbia citriodora*	Spotted Gum	150		150	47	13.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
156	*Corymbia citriodora*	Spotted Gum	150		150	47	17.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
157	*Corymbia citriodora*	Spotted Gum	170		170	53	17.0	3.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
158	*Corymbia citriodora*	Spotted Gum	140		140	44	16.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
159	*Corymbia citriodora*	Spotted Gum	130		130	41	17.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
160	*Corymbia citriodora*	Spotted Gum	190		190	60	22.0	4.0	2.3	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
161	*Corymbia citriodora*	Spotted Gum	120		120	38	14.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
162	*Corymbia citriodora*	Spotted Gum	140		140	44	17.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
163	*Corymbia citriodora*	Spotted Gum	120		120	38	9.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
164	*Corymbia citriodora*	Spotted Gum	100		100	31	12.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
165	*Corymbia citriodora*	Spotted Gum	110		110	35	14.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
166	*Corymbia citriodora*	Spotted Gum	170		170	53	16.0	4.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
167	*Corymbia citriodora*	Spotted Gum	100		100	31	10.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
168	*Corymbia citriodora*	Spotted Gum	140		140	44	14.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
169	*Corymbia citriodora*	Spotted Gum	130		130	41	15.0	5.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
170	*Corymbia citriodora*	Spotted Gum	180		180	57	18.0	5.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
171	*Corymbia citriodora*	Spotted Gum	150		150	47	17.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
172	*Corymbia citriodora*	Spotted Gum	110		110	35	14.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
173	*Corymbia citriodora*	Spotted Gum	110		110	35	9.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
174	*Corymbia citriodora*	Spotted Gum	110		110	35	8.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
175	*Corymbia citriodora*	Spotted Gum	100		100	31	8.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
176	*Corymbia citriodora*	Spotted Gum	140		140	44	14.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
177	*Corymbia citriodora*	Spotted Gum	160		160	50	15.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
178	*Corymbia citriodora*	Spotted Gum	180		180	57	17.0	4.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
179	*Acacia disparrima*	Hickory Wattle	120	110	163	51	7.0	7.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
180	*Corymbia citriodora*	Spotted Gum	140		140	44	14.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
181	*Corymbia intermedia*	Pink Bloodwood	110		110	35	5.0	1.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
182	*Eucalyptus moluccana*	Gum-topped Box	255		255	80	14.0	4.0	3.1	1.9	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
183	*Acacia disparrima*	Hickory Wattle	110		110	35	6.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Retain	-

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Specimen Details											Canopy Condition Details							Trunk Condition Details					Fauna Details and Habitat Value						Additional Details		
Tree ID	Botanical Name	Common Name	Trunk DBH (mm)	Additional Trunks DBH (mm)	Total DBH (mm) [AS 4970-2009]	Trunk Circumference (cm) [AS 4970-2009]	Height (m)	Spread (m)	Tree Protection Zone (m)	Structural Root Zone (m)	Canopy Form	Spreading	Thinning	Die-Back	Epicormic Growth	Lopped	Canopy Health	Leaning	Vines	Trunk Damage	Fire Damage	Trunk Health	Scats	Scratches	Hollows	Nest	Termite Nest	Habitat Value	Native Status	Retention	Additional Notes
184	*Acacia disparrima*	Hickory Wattle	130		130	41	7.0	4.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Retain	-
185	*Eucalyptus siderophloia*	Northern Grey Ironbark	740		740	232	17.0	10.0	8.9	2.9	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
186	*Acacia disparrima*	Hickory Wattle	135	110	174	55	5.0	3.0	2.1	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Retain	-
187	*Acacia disparrima*	Hickory Wattle	130		130	41	4.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Retain	-
188	*Eucalyptus siderophloia*	Northern Grey Ironbark	160		160	50	7.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
189	*Eucalyptus moluccana*	Gum-topped Box	185	115	218	68	8.0	4.0	2.6	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
190	*Eucalyptus moluccana*	Gum-topped Box	165		165	52	8.0	2.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
191	*Acacia disparrima*	Hickory Wattle	160	150	219	69	7.0	4.0	2.6	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Retain	-
192	*Eucalyptus siderophloia*	Northern Grey Ironbark	330		330	104	18.0	9.0	4.0	2.1	Regular	-	-	Die-back	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
193	*Eucalyptus siderophloia*	Northern Grey Ironbark	175		175	55	9.0	4.0	2.1	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
194	*Corymbia citriodora*	Spotted Gum	130	125	180	57	9.0	4.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
195	*Acacia disparrima*	Hickory Wattle	105	85	135	42	6.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Retain	-
196	*Corymbia citriodora*	Spotted Gum	205		205	64	13.0	5.0	2.5	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
197	*Corymbia citriodora*	Spotted Gum	135		135	42	8.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
198	*Corymbia citriodora*	Spotted Gum	220	130	256	80	15.0	6.0	3.1	1.9	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
199	*Acacia disparrima*	Hickory Wattle	120		120	38	4.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Retain	-
200	*Corymbia citriodora*	Spotted Gum	205		205	64	15.0	6.0	2.5	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
201	*Eucalyptus siderophloia*	Northern Grey Ironbark	110		110	35	4.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
202	*Acacia disparrima*	Hickory Wattle	115	95	149	47	7.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Retain	-
203	*Acacia disparrima*	Hickory Wattle	130		130	41	5.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Retain	-
204	*Eucalyptus siderophloia*	Northern Grey Ironbark	400		400	126	17.0	9.0	4.8	2.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
205	*Eucalyptus siderophloia*	Northern Grey Ironbark	500		500	157	13.0	7.0	6.0	2.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
206	*Acacia disparrima*	Hickory Wattle	130		130	41	5.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Retain	-
207	*Acacia disparrima*	Hickory Wattle	100	90	135	42	5.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Retain	-
208	*Acacia disparrima*	Hickory Wattle	120	100	156	49	6.0	4.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Retain	-
209	*Corymbia citriodora*	Spotted Gum	145		145	46	11.0	4.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
210	*Eucalyptus siderophloia*	Northern Grey Ironbark	100		100	31	5.0	5.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
211	*Corymbia citriodora*	Spotted Gum	125		125	39	12.0	4.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
212	*Corymbia citriodora*	Spotted Gum	125		125	39	12.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
213	*Eucalyptus siderophloia*	Northern Grey Ironbark	110	95	145	46	7.0	2.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
214	*Corymbia citriodora*	Spotted Gum	290		290	91	18.0	8.0	3.5	2.0	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
215	*Eucalyptus siderophloia*	Northern Grey Ironbark	140		140	44	7.0	2.0	2.0	1.4	Regular	-	-	Die-back	-	-	Poor	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
216	*Corymbia citriodora*	Spotted Gum	145	170	223	70	15.0	5.0	2.7	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
217	*Corymbia citriodora*	Spotted Gum	220	125 140	289	91	16.0	5.0	3.5	2.0	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
218	*Eucalyptus siderophloia*	Northern Grey Ironbark	100		100	31	6.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
219	*Eucalyptus crebra*	Narrow-leaved Ironbark	220		220	69	15.0	6.0	2.6	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
220	*Corymbia citriodora*	Spotted Gum	130		130	41	15.0	5.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
221	*Corymbia citriodora*	Spotted Gum	160		160	50	15.0	5.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
222	*Corymbia citriodora*	Spotted Gum	110		110	35	10.0	3.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
223	*Corymbia citriodora*	Spotted Gum	110	70	130	41	10.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
224	*Corymbia citriodora*	Spotted Gum	115		115	36	12.0	3.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
225	*Corymbia citriodora*	Spotted Gum	150		150	47	11.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
226	*Corymbia citriodora*	Spotted Gum	170		170	53	11.0	3.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
227	*Corymbia citriodora*	Spotted Gum	125		125	39	8.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
228	*Corymbia citriodora*	Spotted Gum	290		290	91	15.0	5.0	3.5	2.0	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
229	*Corymbia citriodora*	Spotted Gum	160		160	50	15.0	5.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
230	*Eucalyptus crebra*	Narrow-leaved Ironbark	350		350	110	16.0	8.0	4.2	2.1	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
231	*Corymbia citriodora*	Spotted Gum	530		530	167	20.0	11.0	6.4	2.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
232	*Eucalyptus siderophloia*	Northern Grey Ironbark	265		265	83	16.0	7.0	3.2	1.9	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
233	*Corymbia henryi*	Large-leaved Spotted Gum	180		180	57	15.0	5.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
234	*Corymbia citriodora*	Spotted Gum	150		150	47	15.0	5.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
235	*Corymbia citriodora*	Spotted Gum	140		140	44	15.0	5.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
236	*Corymbia citriodora*	Spotted Gum	120		120	38	10.0	4.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
237	*Corymbia henryi*	Large-leaved Spotted Gum	135		135	42	10.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
238	*Corymbia citriodora*	Spotted Gum	125	95	157	49	12.0	4.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
239	*Corymbia citriodora*	Spotted Gum	165		165	52	15.0	4.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
240	*Acacia disparrima*	Hickory Wattle	120	95	153	48	7.0	4.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Retain	-
241	*Acacia disparrima*	Hickory Wattle	115	95 85	172	54	5.0	2.0	2.1	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Retain	-
242	*Eucalyptus crebra*	Narrow-leaved Ironbark	260		260	82	10.0	9.0	3.1	1.9	Regular	-	-	-	-	Lopped	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
243	*Corymbia citriodora*	Spotted Gum	125		125	39	9.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
244	*Corymbia citriodora*	Spotted Gum	145		145	46	12.0	4.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
245	*Corymbia citriodora*	Spotted Gum	120	110	163	51	13.0	5.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-

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Specimen Details											Canopy Condition Details							Trunk Condition Details					Fauna Details and Habitat Value						Additional Details		
Tree ID	Botanical Name	Common Name	Trunk DBH (mm)	Additional Trunks DBH (mm)	Total DBH (mm) [AS 4970-2009]	Trunk Circumference (cm) [AS 4970-2009]	Height (m)	Spread (m)	Tree Protection Zone (m)	Structural Root Zone (m)	Canopy Form	Spreading	Thinning	Die-Back	Epicormic Growth	Lopped	Canopy Health	Leaning	Vines	Trunk Damage	Fire Damage	Trunk Health	Scats	Scratches	Hollows	Nest	Termite Nest	Habitat Value	Native Status	Retention	Additional Notes
246	*Corymbia citriodora*	Spotted Gum	125		125	39	15.0	5.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
247	*Corymbia henryi*	Large-leaved Spotted Gum	110	55 80	147	46	9.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
248	*Corymbia citriodora*	Spotted Gum	170		170	53	13.0	4.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
249	*Corymbia citriodora*	Spotted Gum	110		110	35	9.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
250	*Corymbia citriodora*	Spotted Gum	110	60	125	39	9.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
251	*Corymbia citriodora*	Spotted Gum	145	85	168	53	10.0	3.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
252	*Corymbia citriodora*	Spotted Gum	105		105	33	10.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
253	*Corymbia citriodora*	Spotted Gum	165		165	52	13.0	5.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
254	*Eucalyptus siderophloia*	Northern Grey Ironbark	510		510	160	16.0	11.0	6.1	2.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
255	*Corymbia citriodora*	Spotted Gum	125		125	39	10.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
256	*Corymbia citriodora*	Spotted Gum	145	60	157	49	11.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
257	*Corymbia citriodora*	Spotted Gum	105		105	33	9.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
258	*Corymbia citriodora*	Spotted Gum	100	80	128	40	9.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
259	*Corymbia citriodora*	Spotted Gum	400		400	126	18.0	8.0	4.8	2.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
260	*Eucalyptus crebra*	Narrow-leaved Ironbark	100		100	31	4.0	1.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
261	*Eucalyptus crebra*	Narrow-leaved Ironbark	110	100	149	47	7.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
262	*Eucalyptus crebra*	Narrow-leaved Ironbark	115		115	36	6.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
263	*Eucalyptus crebra*	Narrow-leaved Ironbark	110		110	35	5.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
264	*Corymbia citriodora*	Spotted Gum	105		105	33	9.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
265	*Corymbia citriodora*	Spotted Gum	105		105	33	7.0	1.0	2.0	1.3	Regular	-	-	Die-back	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
266	*Acacia disparrima*	Hickory Wattle	115	105 65	169	53	7.0	4.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Retain	-
267	*Eucalyptus siderophloia*	Northern Grey Ironbark	110		110	35	7.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
268	*Acacia disparrima*	Hickory Wattle	140		140	44	5.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Retain	-
269	*Eucalyptus siderophloia*	Northern Grey Ironbark	115	90	146	46	4.0	2.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
270	*Corymbia citriodora*	Spotted Gum	155	150	216	68	12.0	5.0	2.6	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
271	*Corymbia citriodora*	Spotted Gum	135		135	42	13.0	4.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
272	*Corymbia citriodora*	Spotted Gum	100		100	31	6.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
273	*Corymbia citriodora*	Spotted Gum	115	80	140	44	6.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
274	*Corymbia citriodora*	Spotted Gum	160	165 85	245	77	13.0	5.0	2.9	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
275	*Corymbia citriodora*	Spotted Gum	145		145	46	12.0	4.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
276	*Corymbia citriodora*	Spotted Gum	100		100	31	10.0	3.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
277	*Corymbia citriodora*	Spotted Gum	180	115	214	67	15.0	5.0	2.6	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
278	*Corymbia citriodora*	Spotted Gum	165	125	207	65	14.0	5.0	2.5	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
279	*Corymbia citriodora*	Spotted Gum	120		120	38	11.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
280	*Eucalyptus siderophloia*	Northern Grey Ironbark	180		180	57	10.0	4.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
281	*Corymbia citriodora*	Spotted Gum	110	80	136	43	9.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
282	*Corymbia citriodora*	Spotted Gum	155		155	49	11.0	4.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
283	*Corymbia citriodora*	Spotted Gum	100		100	31	9.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
284	*Corymbia citriodora*	Spotted Gum	120		120	38	10.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
285	*Corymbia citriodora*	Spotted Gum	140		140	44	11.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
286	*Corymbia citriodora*	Spotted Gum	110		110	35	7.0	1.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
287	*Corymbia citriodora*	Spotted Gum	105		105	33	7.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
288	*Corymbia citriodora*	Spotted Gum	120		120	38	11.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
289	*Corymbia citriodora*	Spotted Gum	115		115	36	7.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
290	*Corymbia citriodora*	Spotted Gum	145		145	46	12.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
291	*Corymbia citriodora*	Spotted Gum	130		130	41	12.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
292	*Corymbia citriodora*	Spotted Gum	160		160	50	15.0	5.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
293	*Corymbia citriodora*	Spotted Gum	105		105	33	10.0	3.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
294	*Corymbia citriodora*	Spotted Gum	105		105	33	7.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
295	*Corymbia citriodora*	Spotted Gum	100		100	31	7.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
296	*Eucalyptus moluccana*	Gum-topped Box	100		100	31	9.0	3.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
297	*Eucalyptus moluccana*	Gum-topped Box	125		125	39	9.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
298	*Corymbia citriodora*	Spotted Gum	130		130	41	10.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
299	*Corymbia citriodora*	Spotted Gum	125		125	39	15.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
300	*Corymbia citriodora*	Spotted Gum	120		120	38	5.0	1.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
301	*Corymbia citriodora*	Spotted Gum	115		115	36	11.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
302	*Corymbia citriodora*	Spotted Gum	110		110	35	8.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
303	*Corymbia citriodora*	Spotted Gum	115		115	36	9.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
304	*Corymbia citriodora*	Spotted Gum	110		110	35	11.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
305	*Corymbia citriodora*	Spotted Gum	130		130	41	10.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
306	*Eucalyptus moluccana*	Gum-topped Box	205		205	64	10.0	4.0	2.5	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
307	*Eucalyptus moluccana*	Gum-topped Box	120		120	38	6.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-

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Specimen Details											Canopy Condition Details							Trunk Condition Details					Fauna Details and Habitat Value						Additional Details		
Tree ID	Botanical Name	Common Name	Trunk DBH (mm)	Additional Trunks DBH (mm)	Total DBH (mm) [AS 4970-2009]	Trunk Circumference (cm) [AS 4970-2009]	Height (m)	Spread (m)	Tree Protection Zone (m)	Structural Root Zone (m)	Canopy Form	Spreading	Thinning	Die-Back	Epicormic Growth	Lopped	Canopy Health	Leaning	Vines	Trunk Damage	Fire Damage	Trunk Health	Scats	Scratches	Hollows	Nest	Termite Nest	Habitat Value	Native Status	Retention	Additional Notes
308	*Corymbia citriodora*	Spotted Gum	175	95	199	63	9.0	3.0	2.4	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
309	*Eucalyptus moluccana*	Gum-topped Box	180		180	57	11.0	3.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
310	*Eucalyptus moluccana*	Gum-topped Box	100		100	31	4.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
311	*Corymbia citriodora*	Spotted Gum	110		110	35	8.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
312	*Corymbia citriodora*	Spotted Gum	135		135	42	12.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
313	*Corymbia citriodora*	Spotted Gum	130	85	155	49	11.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
314	*Corymbia citriodora*	Spotted Gum	155	70 90	192	60	11.0	4.0	2.3	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
315	*Corymbia citriodora*	Spotted Gum	110		110	35	10.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
316	*Corymbia citriodora*	Spotted Gum	115		115	36	11.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
317	*Corymbia citriodora*	Spotted Gum	110		110	35	8.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
318	*Eucalyptus siderophloia*	Northern Grey Ironbark	390		390	123	16.0	9.0	4.7	2.2	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
319	*Corymbia citriodora*	Spotted Gum	125	105	163	51	10.0	4.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
320	*Corymbia citriodora*	Spotted Gum	115	95	149	47	12.0	4.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
321	*Corymbia citriodora*	Spotted Gum	155	90	179	56	12.0	5.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
322	*Corymbia citriodora*	Spotted Gum	150		150	47	15.0	4.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
323	*Corymbia citriodora*	Spotted Gum	135	95	165	52	12.0	4.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
324	*Corymbia citriodora*	Spotted Gum	115		115	36	9.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
325	*Corymbia citriodora*	Spotted Gum	165		165	52	11.0	3.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
326	*Corymbia citriodora*	Spotted Gum	150	75	168	53	9.0	2.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
327	*Corymbia citriodora*	Spotted Gum	135		135	42	10.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
328	*Corymbia citriodora*	Spotted Gum	140	130	191	60	13.0	5.0	2.3	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
329	*Eucalyptus moluccana*	Gum-topped Box	180		180	57	14.0	4.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
330	*Eucalyptus moluccana*	Gum-topped Box	155		155	49	8.0	2.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
331	*Corymbia citriodora*	Spotted Gum	105		105	33	8.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
332	*Corymbia citriodora*	Spotted Gum	160		160	50	15.0	4.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
333	*Corymbia citriodora*	Spotted Gum	140	95	169	53	15.0	4.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
334	*Corymbia citriodora*	Spotted Gum	190		190	60	15.0	4.0	2.3	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
335	*Corymbia citriodora*	Spotted Gum	110		110	35	6.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
336	*Corymbia citriodora*	Spotted Gum	130		130	41	10.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
337	*Corymbia citriodora*	Spotted Gum	170		170	53	12.0	3.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
338	*Corymbia citriodora*	Spotted Gum	115		115	36	9.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
339	*Corymbia citriodora*	Spotted Gum	130		130	41	9.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
340	*Corymbia citriodora*	Spotted Gum	140		140	44	7.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
341	*Corymbia citriodora*	Spotted Gum	105		105	33	11.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
342	*Corymbia citriodora*	Spotted Gum	160		160	50	9.0	2.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
343	*Acacia disparrima*	Hickory Wattle	110		110	35	5.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
344	*Corymbia citriodora*	Spotted Gum	100		100	31	7.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
345	*Eucalyptus moluccana*	Gum-topped Box	120		120	38	5.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
346	*Eucalyptus moluccana*	Gum-topped Box	140		140	44	6.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
347	*Eucalyptus moluccana*	Gum-topped Box	150	150	212	67	10.0	2.0	2.5	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
348	*Corymbia citriodora*	Spotted Gum	815		815	256	22.0	15.0	9.8	3.0	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
349	*Corymbia citriodora*	Spotted Gum	140		140	44	7.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
350	*Corymbia citriodora*	Spotted Gum	115	90	146	46	8.0	2.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
351	*Corymbia citriodora*	Spotted Gum	110		110	35	10.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
352	*Corymbia citriodora*	Spotted Gum	130		130	41	6.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
353	*Corymbia citriodora*	Spotted Gum	180	105	208	65	10.0	3.0	2.5	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
354	*Corymbia citriodora*	Spotted Gum	120		120	38	9.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
355	*Corymbia citriodora*	Spotted Gum	105		105	33	7.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
356	*Corymbia citriodora*	Spotted Gum	120		120	38	9.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
357	*Acacia disparrima*	Hickory Wattle	125		125	39	6.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Retain	-
358	*Acacia disparrima*	Hickory Wattle	120		120	38	5.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Retain	-
359	*Corymbia citriodora*	Spotted Gum	155		155	49	14.0	5.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
360	*Corymbia citriodora*	Spotted Gum	125		125	39	9.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
361	*Corymbia citriodora*	Spotted Gum	190		190	60	15.0	4.0	2.3	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
362	*Corymbia citriodora*	Spotted Gum	135		135	42	11.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
363	*Corymbia citriodora*	Spotted Gum	100		100	31	9.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
364	*Corymbia citriodora*	Spotted Gum	125		125	39	12.0	4.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
365	*Corymbia citriodora*	Spotted Gum	165		165	52	15.0	5.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
366	*Corymbia citriodora*	Spotted Gum	155		155	49	15.0	4.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
367	*Corymbia citriodora*	Spotted Gum	110		110	35	11.0	4.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
368	*Corymbia citriodora*	Spotted Gum	130		130	41	14.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
369	*Corymbia citriodora*	Spotted Gum	165		165	52	16.0	5.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-

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Specimen Details											Canopy Condition Details							Trunk Condition Details					Fauna Details and Habitat Value						Additional Details		
Tree ID	Botanical Name	Common Name	Trunk DBH (mm)	Additional Trunks DBH (mm)	Total DBH (mm) [AS 4970-2009]	Trunk Circumference (cm) [AS 4970-2009]	Height (m)	Spread (m)	Tree Protection Zone (m)	Structural Root Zone (m)	Canopy Form	Spreading	Thinning	Die-Back	Epicormic Growth	Lopped	Canopy Health	Leaning	Vines	Trunk Damage	Fire Damage	Trunk Health	Scats	Scratches	Hollows	Nest	Termite Nest	Habitat Value	Native Status	Retention	Additional Notes
370	*Corymbia citriodora*	Spotted Gum	100		100	31	9.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
371	*Corymbia citriodora*	Spotted Gum	105		105	33	8.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
372	*Acacia disparrima*	Hickory Wattle	115		115	36	5.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Retain	-
373	*Corymbia citriodora*	Spotted Gum	110		110	35	10.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
374	*Corymbia citriodora*	Spotted Gum	200		200	63	15.0	4.0	2.4	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
375	*Corymbia citriodora*	Spotted Gum	110		110	35	11.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
376	*Corymbia citriodora*	Spotted Gum	120		120	38	10.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
377	*Corymbia citriodora*	Spotted Gum	130		130	41	10.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
378	*Corymbia citriodora*	Spotted Gum	125		125	39	10.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
379	*Corymbia citriodora*	Spotted Gum	120		120	38	10.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
380	*Corymbia citriodora*	Spotted Gum	135		135	42	9.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
381	*Corymbia citriodora*	Spotted Gum	140	130	191	60	12.0	4.0	2.3	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
382	*Corymbia citriodora*	Spotted Gum	160		160	50	12.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
383	*Corymbia citriodora*	Spotted Gum	145		145	46	11.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
384	*Corymbia citriodora*	Spotted Gum	140		140	44	10.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
385	*Corymbia citriodora*	Spotted Gum	240	110	264	83	15.0	5.0	3.2	1.9	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
386	*Eucalyptus moluccana*	Gum-topped Box	250		250	79	12.0	4.0	3.0	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
387	*Corymbia citriodora*	Spotted Gum	165	110	198	62	14.0	4.0	2.4	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
388	*Corymbia citriodora*	Spotted Gum	185		185	58	15.0	4.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
389	*Corymbia citriodora*	Spotted Gum	145		145	46	12.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
390	*Corymbia citriodora*	Spotted Gum	165		165	52	13.0	4.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
391	*Corymbia citriodora*	Spotted Gum	120		120	38	13.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
392	*Corymbia citriodora*	Spotted Gum	105		105	33	12.0	3.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
393	*Corymbia citriodora*	Spotted Gum	140	115	181	57	10.0	3.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
394	*Corymbia citriodora*	Spotted Gum	100		100	31	9.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
395	*Corymbia citriodora*	Spotted Gum	110		110	35	14.0	4.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
396	*Corymbia citriodora*	Spotted Gum	100		100	31	11.0	3.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
397	*Eucalyptus siderophloia*	Northern Grey Ironbark	160		160	50	8.0	4.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
398	*Eucalyptus siderophloia*	Northern Grey Ironbark	130		130	41	6.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
399	*Eucalyptus siderophloia*	Northern Grey Ironbark	130		130	41	8.0	4.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
400	*Corymbia citriodora*	Spotted Gum	120		120	38	7.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
401	*Corymbia citriodora*	Spotted Gum	190		190	60	13.0	5.0	2.3	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
402	*Eucalyptus siderophloia*	Northern Grey Ironbark	190		190	60	12.0	5.0	2.3	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
403	*Corymbia citriodora*	Spotted Gum	180		180	57	14.0	6.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
404	*Eucalyptus siderophloia*	Northern Grey Ironbark	200		200	63	8.0	5.0	2.4	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
405	*Corymbia citriodora*	Spotted Gum	220		220	69	13.0	7.0	2.6	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
406	*Corymbia citriodora*	Spotted Gum	220		220	69	13.0	5.0	2.6	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
407	*Eucalyptus siderophloia*	Northern Grey Ironbark	150		150	47	8.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
408	*Corymbia citriodora*	Spotted Gum	120		120	38	8.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
409	*Corymbia citriodora*	Spotted Gum	150		150	47	12.0	4.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
410	*Eucalyptus siderophloia*	Northern Grey Ironbark	110		110	35	6.0	3.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
411	*Acacia disparrima*	Hickory Wattle	110		110	35	6.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
412	*Corymbia citriodora*	Spotted Gum	120		120	38	9.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
413	*Eucalyptus siderophloia*	Northern Grey Ironbark	100		100	31	6.0	4.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
414	*Eucalyptus siderophloia*	Northern Grey Ironbark	120	120	170	53	7.0	3.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
415	*Corymbia citriodora*	Spotted Gum	190		190	60	8.0	3.0	2.3	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
416	*Eucalyptus siderophloia*	Northern Grey Ironbark	190		190	60	9.0	4.0	2.3	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
417	*Eucalyptus siderophloia*	Northern Grey Ironbark	180		180	57	11.0	4.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
418	*Eucalyptus siderophloia*	Northern Grey Ironbark	110		110	35	5.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
419	*Eucalyptus siderophloia*	Northern Grey Ironbark	220		220	69	13.0	6.0	2.6	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
420	*Eucalyptus siderophloia*	Northern Grey Ironbark	120		120	38	9.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
421	*Eucalyptus siderophloia*	Northern Grey Ironbark	210		210	66	12.0	5.0	2.5	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
422	*Corymbia citriodora*	Spotted Gum	110		110	35	9.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
423	*Eucalyptus siderophloia*	Northern Grey Ironbark	120		120	38	9.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
424	*Corymbia citriodora*	Spotted Gum	100		100	31	7.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
425	*Eucalyptus siderophloia*	Northern Grey Ironbark	120		120	38	7.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
426	*Eucalyptus siderophloia*	Northern Grey Ironbark	500		500	157	17.0	9.0	6.0	2.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
427	*Eucalyptus siderophloia*	Northern Grey Ironbark	100		100	31	6.0	3.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
428	*Corymbia citriodora*	Spotted Gum	120		120	38	9.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
429	*Acacia concurrens*	Black Wattle	140		140	44	7.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
430	*Acacia disparrima*	Hickory Wattle	120		120	38	9.0	4.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
431	*Eucalyptus siderophloia*	Northern Grey Ironbark	790		790	248	23.0	14.0	9.5	3.0	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-

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Specimen Details											Canopy Condition Details							Trunk Condition Details					Fauna Details and Habitat Value						Additional Details		
Tree ID	Botanical Name	Common Name	Trunk DBH (mm)	Additional Trunks DBH (mm)	Total DBH (mm) [AS 4970-2009]	Trunk Circumference (cm) [AS 4970-2009]	Height (m)	Spread (m)	Tree Protection Zone (m)	Structural Root Zone (m)	Canopy Form	Spreading	Thinning	Die-Back	Epicormic Growth	Lopped	Canopy Health	Leaning	Vines	Trunk Damage	Fire Damage	Trunk Health	Scats	Scratches	Hollows	Nest	Termite Nest	Habitat Value	Native Status	Retention	Additional Notes
432	*Eucalyptus siderophloia*	Northern Grey Ironbark	570		570	179	26.0	12.0	6.8	2.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
433	*Eucalyptus siderophloia*	Northern Grey Ironbark	650		650	204	23.0	11.0	7.8	2.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
434	*Corymbia citriodora*	Spotted Gum	110		110	35	9.0	4.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
435	*Corymbia citriodora*	Spotted Gum	140		140	44	8.0	4.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
436	*Corymbia citriodora*	Spotted Gum	130	100	164	52	9.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
437	*Corymbia citriodora*	Spotted Gum	140		140	44	7.0	5.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Subject to detailed civil design and landowner consent	-
438	*Corymbia citriodora*	Spotted Gum	110		110	35	7.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
439	*Eucalyptus siderophloia*	Northern Grey Ironbark	150		150	47	6.0	2.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
440	*Corymbia citriodora*	Spotted Gum	100		100	31	7.0	3.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
441	*Acacia disparrima*	Hickory Wattle	130		130	41	8.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
442	*Eucalyptus siderophloia*	Northern Grey Ironbark	120		120	38	6.0	4.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
443	*Corymbia citriodora*	Spotted Gum	140		140	44	7.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
444	*Eucalyptus siderophloia*	Northern Grey Ironbark	100		100	31	6.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
445	*Acacia disparrima*	Hickory Wattle	120		120	38	7.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
446	*Eucalyptus siderophloia*	Northern Grey Ironbark	100		100	31	7.0	4.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
447	*Eucalyptus siderophloia*	Northern Grey Ironbark	150	130	198	62	10.0	5.0	2.4	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
448	*Acacia concurrens*	Black Wattle	120		120	38	7.0	4.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
449	*Acacia concurrens*	Black Wattle	100	100	141	44	7.0	4.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
450	*Corymbia citriodora*	Spotted Gum	120		120	38	8.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
451	*Eucalyptus siderophloia*	Northern Grey Ironbark	190		190	60	7.0	3.0	2.3	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
452	*Eucalyptus siderophloia*	Northern Grey Ironbark	150		150	47	12.0	4.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
453	*Corymbia citriodora*	Spotted Gum	120		120	38	7.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
454	*Corymbia citriodora*	Spotted Gum	170		170	53	12.0	5.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
455	*Corymbia citriodora*	Spotted Gum	190		190	60	13.0	6.0	2.3	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
456	*Corymbia citriodora*	Spotted Gum	120		120	38	6.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
457	*Corymbia citriodora*	Spotted Gum	220		220	69	13.0	6.0	2.6	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
458	*Corymbia citriodora*	Spotted Gum	140		140	44	4.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
459	*Corymbia citriodora*	Spotted Gum	500		500	157	25.0	11.0	6.0	2.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
460	*Corymbia citriodora*	Spotted Gum	180		180	57	12.0	5.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
461	*Corymbia citriodora*	Spotted Gum	150		150	47	11.0	5.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
462	*Corymbia citriodora*	Spotted Gum	140		140	44	8.0	4.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
463	*Corymbia citriodora*	Spotted Gum	130		130	41	7.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
464	*Eucalyptus siderophloia*	Northern Grey Ironbark	160		160	50	9.0	4.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
465	*Corymbia citriodora*	Spotted Gum	200	150	250	79	12.0	5.0	3.0	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
466	*Corymbia citriodora*	Spotted Gum	110		110	35	5.0	4.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
467	*Corymbia citriodora*	Spotted Gum	220		220	69	13.0	7.0	2.6	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
468	*Corymbia citriodora*	Spotted Gum	110		110	35	4.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
469	*Corymbia citriodora*	Spotted Gum	140		140	44	6.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
470	*Corymbia citriodora*	Spotted Gum	120		120	38	7.0	4.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
471	*Corymbia citriodora*	Spotted Gum	100		100	31	8.0	3.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
472	*Acacia disparrima*	Hickory Wattle	150	100	180	57	8.0	5.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
473	*Eucalyptus siderophloia*	Northern Grey Ironbark	490		490	154	22.0	12.0	5.9	2.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
474	*Acacia disparrima*	Hickory Wattle	150		150	47	6.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
475	*Acacia disparrima*	Hickory Wattle	140		140	44	7.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
476	*Eucalyptus siderophloia*	Northern Grey Ironbark	120		120	38	7.0	4.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
477	*Eucalyptus siderophloia*	Northern Grey Ironbark	150	150	212	67	9.0	5.0	2.5	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
478	*Eucalyptus siderophloia*	Northern Grey Ironbark	420		420	132	17.0	7.0	5.0	2.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
479	*Corymbia citriodora*	Spotted Gum	130		130	41	10.0	5.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
480	*Eucalyptus siderophloia*	Northern Grey Ironbark	190		190	60	8.0	4.0	2.3	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
481	*Eucalyptus siderophloia*	Northern Grey Ironbark	430		430	135	23.0	12.0	5.2	2.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
482	*Corymbia tessellaris*	Moreton Bay Ash	110		110	35	6.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
483	*Corymbia citriodora*	Spotted Gum	410		410	129	22.0	9.0	4.9	2.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
484	*Acacia disparrima*	Hickory Wattle	100		100	31	7.0	4.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
485	*Acacia concurrens*	Black Wattle	150		150	47	8.0	4.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
486	*Eucalyptus siderophloia*	Northern Grey Ironbark	150		150	47	7.0	5.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
487	*Corymbia citriodora*	Spotted Gum	450		450	141	23.0	10.0	5.4	2.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
488	*Corymbia citriodora*	Spotted Gum	330		330	104	21.0	9.0	4.0	2.1	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
489	*Acacia disparrima*	Hickory Wattle	140		140	44	7.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
490	*Corymbia citriodora*	Spotted Gum	140		140	44	7.0	5.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
491	*Corymbia citriodora*	Spotted Gum	200		200	63	9.0	5.0	2.4	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
492	*Corymbia citriodora*	Spotted Gum	110		110	35	4.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
493	*Eucalyptus siderophloia*	Northern Grey Ironbark	110		110	35	4.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-

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Specimen Details											Canopy Condition Details							Trunk Condition Details					Fauna Details and Habitat Value						Additional Details		
Tree ID	Botanical Name	Common Name	Trunk DBH (mm)	Additional Trunks DBH (mm)	Total DBH (mm) [AS 4970-2009]	Trunk Circumference (cm) [AS 4970-2009]	Height (m)	Spread (m)	Tree Protection Zone (m)	Structural Root Zone (m)	Canopy Form	Spreading	Thinning	Die-Back	Epicormic Growth	Lopped	Canopy Health	Leaning	Vines	Trunk Damage	Fire Damage	Trunk Health	Scats	Scratches	Hollows	Nest	Termite Nest	Habitat Value	Native Status	Retention	Additional Notes
494	*Corymbia citriodora*	Spotted Gum	100		100	31	4.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
495	*Eucalyptus tereticornis*	Forest Red Gum	140		140	44	4.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
496	*Corymbia citriodora*	Spotted Gum	100		100	31	8.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
497	*Eucalyptus siderophloia*	Northern Grey Ironbark	460		460	145	22.0	11.0	5.5	2.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
498	*Eucalyptus siderophloia*	Northern Grey Ironbark	140		140	44	9.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
499	*Acacia disparrima*	Hickory Wattle	140		140	44	8.0	4.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
500	*Eucalyptus siderophloia*	Northern Grey Ironbark	140		140	44	7.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
501	*Eucalyptus siderophloia*	Northern Grey Ironbark	120		120	38	7.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
502	*Eucalyptus siderophloia*	Northern Grey Ironbark	140		140	44	7.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
503	*Eucalyptus siderophloia*	Northern Grey Ironbark	450		450	141	20.0	9.0	5.4	2.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Subject to detailed civil design and landowner consent	-
504	*Corymbia citriodora*	Spotted Gum	120		120	38	7.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
505	*Acacia disparrima*	Hickory Wattle	120		120	38	6.0	5.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
506	*Corymbia citriodora*	Spotted Gum	150		150	47	9.0	4.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
507	*Corymbia citriodora*	Spotted Gum	100		100	31	7.0	4.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
508	*Eucalyptus moluccana*	Gum-topped Box	190		190	60	8.0	5.0	2.3	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
509	*Corymbia citriodora*	Spotted Gum	170		170	53	11.0	5.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
510	*Eucalyptus siderophloia*	Northern Grey Ironbark	100		100	31	7.0	6.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
511	*Eucalyptus siderophloia*	Northern Grey Ironbark	140		140	44	12.0	5.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
512	*Corymbia citriodora*	Spotted Gum	180	80	197	62	9.0	3.0	2.4	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
513	*Acacia concurrens*	Black Wattle	160	100	189	59	7.0	6.0	2.3	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
514	*Eucalyptus siderophloia*	Northern Grey Ironbark	120		120	38	7.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
515	*Acacia disparrima*	Hickory Wattle	130		130	41	7.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
516	*Eucalyptus siderophloia*	Northern Grey Ironbark	500		500	157	24.0	12.0	6.0	2.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
517	*Eucalyptus siderophloia*	Northern Grey Ironbark	430		430	135	22.0	9.0	5.2	2.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
518	*Eucalyptus siderophloia*	Northern Grey Ironbark	540		540	170	24.0	13.0	6.5	2.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
519	*Eucalyptus moluccana*	Gum-topped Box	310		310	97	15.0	5.0	3.7	2.0	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
520	*Eucalyptus siderophloia*	Northern Grey Ironbark	110		110	35	7.0	3.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
521	*Eucalyptus siderophloia*	Northern Grey Ironbark	120		120	38	5.0	4.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
522	*Eucalyptus siderophloia*	Northern Grey Ironbark	150		150	47	9.0	4.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
523	*Acacia disparrima*	Hickory Wattle	250		250	79	10.0	5.0	3.0	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
524	*Eucalyptus moluccana*	Gum-topped Box	290		290	91	18.0	8.0	3.5	2.0	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
525	*Corymbia citriodora*	Spotted Gum	140		140	44	7.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
526	*Eucalyptus moluccana*	Gum-topped Box	320		320	101	15.0	7.0	3.8	2.1	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
527	*Eucalyptus siderophloia*	Northern Grey Ironbark	120		120	38	7.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
528	*Corymbia citriodora*	Spotted Gum	100		100	31	7.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
529	*Eucalyptus siderophloia*	Northern Grey Ironbark	120		120	38	7.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
530	*Eucalyptus siderophloia*	Northern Grey Ironbark	120		120	38	8.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
531	*Eucalyptus siderophloia*	Northern Grey Ironbark	140		140	44	7.0	5.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
532	*Eucalyptus siderophloia*	Northern Grey Ironbark	120		120	38	7.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
533	*Eucalyptus siderophloia*	Northern Grey Ironbark	180		180	57	12.0	5.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
534	*Eucalyptus siderophloia*	Northern Grey Ironbark	120		120	38	6.0	5.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
535	*Eucalyptus siderophloia*	Northern Grey Ironbark	550		550	173	20.0	9.0	6.6	2.6	Regular	-	-	-	-	-	Typical	-	-	Trunk Dmg.	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
536	*Corymbia citriodora*	Spotted Gum	180		180	57	12.0	4.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
537	*Corymbia citriodora*	Spotted Gum	470	330	574	180	22.0	13.0	6.9	2.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
538	*Eucalyptus siderophloia*	Northern Grey Ironbark	130		130	41	8.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
539	*Acacia disparrima*	Hickory Wattle	130		130	41	7.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
540	*Corymbia citriodora*	Spotted Gum	170		170	53	10.0	5.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
541	*Corymbia citriodora*	Spotted Gum	180		180	57	12.0	5.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
542	*Corymbia citriodora*	Spotted Gum	160		160	50	9.0	4.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
543	*Corymbia citriodora*	Spotted Gum	120		120	38	9.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
544	*Eucalyptus moluccana*	Gum-topped Box	210		210	66	12.0	5.0	2.5	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
545	*Eucalyptus siderophloia*	Northern Grey Ironbark	120		120	38	9.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
546	*Eucalyptus moluccana*	Gum-topped Box	220		220	69	13.0	8.0	2.6	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
547	*Acacia disparrima*	Hickory Wattle	160		160	50	8.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
548	*Acacia disparrima*	Hickory Wattle	140		140	44	7.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
549	*Corymbia citriodora*	Spotted Gum	160	120	200	63	14.0	8.0	2.4	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
550	*Corymbia citriodora*	Spotted Gum	120		120	38	9.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
551	*Corymbia citriodora*	Spotted Gum	220		220	69	16.0	7.0	2.6	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
552	*Eucalyptus siderophloia*	Northern Grey Ironbark	390		390	123	18.0	10.0	4.7	2.2	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
553	*Corymbia citriodora*	Spotted Gum	110		110	35	9.0	3.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
554	*Corymbia citriodora*	Spotted Gum	130	130	184	58	8.0	5.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
555	*Corymbia citriodora*	Spotted Gum	120		120	38	8.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-

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Specimen Details											Canopy Condition Details							Trunk Condition Details					Fauna Details and Habitat Value						Additional Details		
Tree ID	Botanical Name	Common Name	Trunk DBH (mm)	Additional Trunks DBH (mm)	Total DBH (mm) [AS 4970-2009]	Trunk Circumference (cm) [AS 4970-2009]	Height (m)	Spread (m)	Tree Protection Zone (m)	Structural Root Zone (m)	Canopy Form	Spreading	Thinning	Die-Back	Epicormic Growth	Lopped	Canopy Health	Leaning	Vines	Trunk Damage	Fire Damage	Trunk Health	Scats	Scratches	Hollows	Nest	Termite Nest	Habitat Value	Native Status	Retention	Additional Notes
556	*Eucalyptus siderophloia*	Northern Grey Ironbark	530		530	167	18.0	9.0	6.4	2.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
557	*Corymbia citriodora*	Spotted Gum	230		230	72	14.0	7.0	2.8	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
558	*Eucalyptus siderophloia*	Northern Grey Ironbark	720		720	226	23.0	14.0	8.6	2.9	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
559	*Eucalyptus moluccana*	Gum-topped Box	100		100	31	6.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
560	*Corymbia citriodora*	Spotted Gum	100		100	31	5.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
561	*Eucalyptus siderophloia*	Northern Grey Ironbark	240		240	75	10.0	5.0	2.9	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
562	*Acacia disparrima*	Hickory Wattle	120		120	38	7.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
563	*Corymbia citriodora*	Spotted Gum	140		140	44	9.0	5.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
564	*Corymbia citriodora*	Spotted Gum	140		140	44	10.0	4.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Subject to detailed civil design and landowner consent	-
565	*Corymbia citriodora*	Spotted Gum	130	100	164	52	9.0	5.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
566	*Corymbia citriodora*	Spotted Gum	240		240	75	13.0	6.0	2.9	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
567	*Corymbia citriodora*	Spotted Gum	150		150	47	7.0	4.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
568	*Corymbia citriodora*	Spotted Gum	190		190	60	12.0	5.0	2.3	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
569	*Corymbia citriodora*	Spotted Gum	140		140	44	7.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
570	*Corymbia citriodora*	Spotted Gum	140		140	44	7.0	4.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
571	*Corymbia citriodora*	Spotted Gum	130		130	41	7.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
572	*Corymbia citriodora*	Spotted Gum	310		310	97	12.0	5.0	3.7	2.0	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
573	*Acacia disparrima*	Hickory Wattle	130		130	41	7.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
574	*Acacia disparrima*	Hickory Wattle	140		140	44	5.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
575	*Eucalyptus moluccana*	Gum-topped Box	160	130	206	65	7.0	4.0	2.5	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
576	*Eucalyptus siderophloia*	Northern Grey Ironbark	180	50	187	59	8.0	4.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
577	*Corymbia citriodora*	Spotted Gum	220		220	69	11.0	4.0	2.6	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
578	*Eucalyptus moluccana*	Gum-topped Box	170		170	53	7.0	4.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
579	*Eucalyptus moluccana*	Gum-topped Box	120		120	38	7.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
580	*Acacia disparrima*	Hickory Wattle	130	130	184	58	7.0	5.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
581	*Acacia disparrima*	Hickory Wattle	150		150	47	7.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
582	*Acacia disparrima*	Hickory Wattle	130		130	41	7.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
583	*Acacia disparrima*	Hickory Wattle	140		140	44	7.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
584	*Acacia disparrima*	Hickory Wattle	130		130	41	7.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
585	*Acacia disparrima*	Hickory Wattle	120		120	38	7.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
586	*Corymbia intermedia*	Pink Bloodwood	120		120	38	4.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
587	*Corymbia citriodora*	Spotted Gum	120		120	38	7.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
588	*Eucalyptus moluccana*	Gum-topped Box	210		210	66	8.0	3.0	2.5	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
589	*Eucalyptus moluccana*	Gum-topped Box	140		140	44	9.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
590	*Eucalyptus moluccana*	Gum-topped Box	120		120	38	8.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
591	*Eucalyptus moluccana*	Gum-topped Box	100		100	31	6.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
592	*Eucalyptus moluccana*	Gum-topped Box	130		130	41	9.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
593	*Eucalyptus moluccana*	Gum-topped Box	100		100	31	2.0	3.0	2.0	1.3	Regular	-	-	-	-	Lopped	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
594	*Eucalyptus moluccana*	Gum-topped Box	140		140	44	9.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
595	*Eucalyptus moluccana*	Gum-topped Box	140		140	44	9.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Subject to detailed civil design and landowner consent	-
596	*Eucalyptus moluccana*	Gum-topped Box	100		100	31	8.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
597	*Eucalyptus moluccana*	Gum-topped Box	100		100	31	4.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Subject to detailed civil design and landowner consent	-
598	*Eucalyptus moluccana*	Gum-topped Box	100		100	31	7.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
599	*Corymbia citriodora*	Spotted Gum	100		100	31	9.0	5.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Subject to detailed civil design and landowner consent	-
600	*Eucalyptus moluccana*	Gum-topped Box	170		170	53	9.0	5.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
601	*Eucalyptus moluccana*	Gum-topped Box	190		190	60	9.0	5.0	2.3	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
602	*Corymbia citriodora*	Spotted Gum	110		110	35	7.0	3.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
603	*Eucalyptus moluccana*	Gum-topped Box	130		130	41	7.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
604	*Eucalyptus moluccana*	Gum-topped Box	150		150	47	7.0	2.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
605	*Eucalyptus moluccana*	Gum-topped Box	120		120	38	8.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
606	*Corymbia citriodora*	Spotted Gum	100		100	31	7.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
607	*Eucalyptus moluccana*	Gum-topped Box	170		170	53	9.0	5.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
608	*Eucalyptus moluccana*	Gum-topped Box	160		160	50	8.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
609	*Corymbia citriodora*	Spotted Gum	160		160	50	9.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
610	*Corymbia citriodora*	Spotted Gum	110		110	35	7.0	3.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
611	*Corymbia citriodora*	Spotted Gum	190		190	60	12.0	3.0	2.3	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
612	*Corymbia citriodora*	Spotted Gum	110		110	35	7.0	3.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
613	*Corymbia citriodora*	Spotted Gum	110		110	35	7.0	3.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
614	*Corymbia citriodora*	Spotted Gum	140	100	172	54	8.0	4.0	2.1	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Subject to detailed civil design and landowner consent	-
615	*Corymbia citriodora*	Spotted Gum	130		130	41	7.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
616	*Corymbia citriodora*	Spotted Gum	120		120	38	7.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
617	*Corymbia citriodora*	Spotted Gum	110		110	35	7.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-

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Specimen Details											Canopy Condition Details							Trunk Condition Details					Fauna Details and Habitat Value						Additional Details		
Tree ID	Botanical Name	Common Name	Trunk DBH (mm)	Additional Trunks DBH (mm)	Total DBH (mm) [AS 4970-2009]	Trunk Circumference (cm) [AS 4970-2009]	Height (m)	Spread (m)	Tree Protection Zone (m)	Structural Root Zone (m)	Canopy Form	Spreading	Thinning	Die-Back	Epicormic Growth	Lopped	Canopy Health	Leaning	Vines	Trunk Damage	Fire Damage	Trunk Health	Scats	Scratches	Hollows	Nest	Termite Nest	Habitat Value	Native Status	Retention	Additional Notes
618	*Corymbia citriodora*	Spotted Gum	140		140	44	9.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
619	*Eucalyptus moluccana*	Gum-topped Box	160		160	50	10.0	4.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
620	*Corymbia citriodora*	Spotted Gum	140		140	44	9.0	4.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
621	*Corymbia citriodora*	Spotted Gum	170		170	53	8.0	3.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
622	*Corymbia citriodora*	Spotted Gum	120		120	38	9.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
623	*Corymbia citriodora*	Spotted Gum	110		110	35	7.0	3.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
624	*Eucalyptus moluccana*	Gum-topped Box	180		180	57	10.0	4.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
625	*Corymbia citriodora*	Spotted Gum	300		300	94	15.0	7.0	3.6	2.0	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Subject to detailed civil design and landowner consent	-
626	*Corymbia citriodora*	Spotted Gum	150		150	47	9.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
627	*Corymbia citriodora*	Spotted Gum	150		150	47	7.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
628	*Corymbia citriodora*	Spotted Gum	130		130	41	7.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
629	*Corymbia citriodora*	Spotted Gum	230		230	72	10.0	3.0	2.8	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Subject to detailed civil design and landowner consent	-
630	*Corymbia citriodora*	Spotted Gum	170		170	53	9.0	3.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
631	*Corymbia citriodora*	Spotted Gum	150		150	47	9.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
632	*Corymbia citriodora*	Spotted Gum	150		150	47	8.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
633	*Corymbia citriodora*	Spotted Gum	120		120	38	7.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
634	*Corymbia citriodora*	Spotted Gum	130		130	41	8.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
635	*Corymbia citriodora*	Spotted Gum	120		120	38	7.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
636	*Corymbia citriodora*	Spotted Gum	130		130	41	8.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
637	*Corymbia citriodora*	Spotted Gum	180		180	57	11.0	3.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
638	*Corymbia citriodora*	Spotted Gum	180		180	57	11.0	4.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Subject to detailed civil design and landowner consent	-
639	*Corymbia citriodora*	Spotted Gum	140		140	44	8.0	4.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Subject to detailed civil design and landowner consent	-
640	*Corymbia citriodora*	Spotted Gum	150		150	47	9.0	4.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
641	*Corymbia citriodora*	Spotted Gum	130		130	41	8.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
642	*Corymbia citriodora*	Spotted Gum	170		170	53	9.0	4.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
643	*Acacia disparrima*	Hickory Wattle	120	1120	1126	354	7.0	4.0	13.5	3.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
644	*Acacia disparrima*	Hickory Wattle	110		110	35	6.0	3.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
645	*Acacia disparrima*	Hickory Wattle	110		110	35	8.0	3.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
646	*Eucalyptus moluccana*	Gum-topped Box	110		110	35	7.0	3.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
647	*Eucalyptus moluccana*	Gum-topped Box	180		180	57	9.0	4.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
648	*Eucalyptus moluccana*	Gum-topped Box	160		160	50	9.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
649	*Corymbia citriodora*	Spotted Gum	140		140	44	9.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
650	*Corymbia citriodora*	Spotted Gum	490		490	154	18.0	10.0	5.9	2.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
651	*Corymbia citriodora*	Spotted Gum	180		180	57	9.0	4.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
652	*Eucalyptus moluccana*	Gum-topped Box	140	140	198	62	6.0	3.0	2.4	1.7	Regular	-	-	-	-	Lopped	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
653	*Acacia concurrens*	Black Wattle	120	100	156	49	5.0	5.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
654	*Corymbia citriodora*	Spotted Gum	180		180	57	12.0	4.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
655	*Acacia disparrima*	Hickory Wattle	170		170	53	5.0	3.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
656	*Eucalyptus moluccana*	Gum-topped Box	280		280	88	10.0	5.0	3.4	1.9	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
657	*Corymbia citriodora*	Spotted Gum	200		200	63	14.0	5.0	2.4	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
658	*Eucalyptus siderophloia*	Northern Grey Ironbark	120		120	38	4.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
659	*Acacia disparrima*	Hickory Wattle	120	120	170	53	6.0	3.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Retain	-
660	*Acacia disparrima*	Hickory Wattle	123		123	39	6.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
661	*Acacia disparrima*	Hickory Wattle	160	130	206	65	7.0	4.0	2.5	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
662	*Eucalyptus siderophloia*	Northern Grey Ironbark	100		100	31	5.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
663	*Acacia disparrima*	Hickory Wattle	140		140	44	6.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
664	*Eucalyptus moluccana*	Gum-topped Box	310		310	97	11.0	5.0	3.7	2.0	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
665	*Eucalyptus moluccana*	Gum-topped Box	190		190	60	12.0	5.0	2.3	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
666	*Eucalyptus moluccana*	Gum-topped Box	220		220	69	12.0	5.0	2.6	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
667	*Eucalyptus moluccana*	Gum-topped Box	140		140	44	5.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
668	*Eucalyptus moluccana*	Gum-topped Box	170		170	53	9.0	4.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
669	*Eucalyptus moluccana*	Gum-topped Box	220		220	69	11.0	4.0	2.6	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
670	*Eucalyptus moluccana*	Gum-topped Box	130		130	41	7.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
671	*Eucalyptus moluccana*	Gum-topped Box	210		210	66	10.0	4.0	2.5	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
672	*Eucalyptus moluccana*	Gum-topped Box	140		140	44	7.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
673	*Acacia disparrima*	Hickory Wattle	120		120	38	6.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
674	*Acacia disparrima*	Hickory Wattle	160	150	219	69	9.0	4.0	2.6	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
675	*Eucalyptus moluccana*	Gum-topped Box	230	210	311	98	12.0	6.0	3.7	2.0	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
676	*Acacia disparrima*	Hickory Wattle	120		120	38	6.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
677	*Eucalyptus moluccana*	Gum-topped Box	100		100	31	6.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
678	*Eucalyptus moluccana*	Gum-topped Box	180		180	57	8.0	3.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
679	*Corymbia citriodora*	Spotted Gum	220		220	69	13.0	5.0	2.6	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-

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Specimen Details											Canopy Condition Details							Trunk Condition Details					Fauna Details and Habitat Value						Additional Details		
Tree ID	Botanical Name	Common Name	Trunk DBH (mm)	Additional Trunks DBH (mm)	Total DBH (mm) [AS 4970-2009]	Trunk Circumference (cm) [AS 4970-2009]	Height (m)	Spread (m)	Tree Protection Zone (m)	Structural Root Zone (m)	Canopy Form	Spreading	Thinning	Die-Back	Epicormic Growth	Lopped	Canopy Health	Leaning	Vines	Trunk Damage	Fire Damage	Trunk Health	Scats	Scratches	Hollows	Nest	Termite Nest	Habitat Value	Native Status	Retention	Additional Notes
680	*Corymbia citriodora*	Spotted Gum	250		250	79	14.0	6.0	3.0	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
681	*Eucalyptus moluccana*	Gum-topped Box	120		120	38	8.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
682	*Eucalyptus moluccana*	Gum-topped Box	170		170	53	9.0	4.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
683	*Eucalyptus moluccana*	Gum-topped Box	170		170	53	9.0	4.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
684	*Eucalyptus moluccana*	Gum-topped Box	300		300	94	16.0	7.0	3.6	2.0	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
685	*Brachychiton populneus*	Kurrajong	300		300	94	11.0	5.0	3.6	2.0	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
686	*Corymbia citriodora*	Spotted Gum	110		110	35	9.0	4.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
687	*Corymbia citriodora*	Spotted Gum	140		140	44	10.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
688	*Corymbia citriodora*	Spotted Gum	220		220	69	10.0	7.0	2.6	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
689	*Corymbia citriodora*	Spotted Gum	210	150	258	81	16.0	6.0	3.1	1.9	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
690	*Corymbia citriodora*	Spotted Gum	130		130	41	9.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
691	*Corymbia citriodora*	Spotted Gum	160		160	50	10.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
692	*Acacia disparrima*	Hickory Wattle	130		130	41	8.0	4.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
693	*Corymbia citriodora*	Spotted Gum	130		130	41	10.0	4.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
694	*Corymbia citriodora*	Spotted Gum	110	110 100	185	58	9.0	4.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
695	*Eucalyptus moluccana*	Gum-topped Box	230		230	72	16.0	8.0	2.8	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
696	*Eucalyptus moluccana*	Gum-topped Box	170		170	53	13.0	5.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
697	*Corymbia citriodora*	Spotted Gum	130	90	158	50	12.0	2.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
698	*Corymbia citriodora*	Spotted Gum	160	130	206	65	13.0	2.0	2.5	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
699	*Eucalyptus siderophloia*	Northern Grey Ironbark	110		110	35	7.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
700	*Corymbia citriodora*	Spotted Gum	130		130	41	9.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
701	*Corymbia citriodora*	Spotted Gum	190		190	60	11.0	4.0	2.3	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
702	*Corymbia citriodora*	Spotted Gum	130		130	41	11.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
703	*Corymbia citriodora*	Spotted Gum	140		140	44	11.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
704	*Corymbia citriodora*	Spotted Gum	140	140	198	62	13.0	3.0	2.4	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
705	*Corymbia citriodora*	Spotted Gum	170	120	208	65	13.0	4.0	2.5	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
706	*Corymbia citriodora*	Spotted Gum	130	100	164	52	9.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
707	*Eucalyptus siderophloia*	Northern Grey Ironbark	220		220	69	9.0	4.0	2.6	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
708	*Corymbia citriodora*	Spotted Gum	210		210	66	15.0	6.0	2.5	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
709	*Corymbia citriodora*	Spotted Gum	110		110	35	7.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
710	*Corymbia tessellaris*	Moreton Bay Ash	120		120	38	6.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
711	*Corymbia citriodora*	Spotted Gum	100		100	31	7.0	3.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
712	*Corymbia citriodora*	Spotted Gum	200		200	63	12.0	5.0	2.4	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
713	*Eucalyptus siderophloia*	Northern Grey Ironbark	120		120	38	5.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
714	*Corymbia citriodora*	Spotted Gum	170		170	53	9.0	4.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
715	*Corymbia citriodora*	Spotted Gum	220		220	69	12.0	5.0	2.6	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
716	*Acacia disparrima*	Hickory Wattle	130		130	41	5.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
717	*Corymbia citriodora*	Spotted Gum	180		180	57	12.0	4.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
718	*Corymbia citriodora*	Spotted Gum	190		190	60	14.0	5.0	2.3	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
719	*Corymbia citriodora*	Spotted Gum	110		110	35	7.0	3.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
720	*Eucalyptus siderophloia*	Northern Grey Ironbark	250		250	79	15.0	8.0	3.0	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
721	*Corymbia citriodora*	Spotted Gum	120		120	38	8.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
722	*Acacia disparrima*	Hickory Wattle	130		130	41	7.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
723	*Corymbia citriodora*	Spotted Gum	120		120	38	7.0	4.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
724	*Corymbia citriodora*	Spotted Gum	610		610	192	25.0	13.0	7.3	2.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Subject to detailed civil design and landowner consent	-
725	*Acacia disparrima*	Hickory Wattle	150		150	47	5.0	4.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
726	*Acacia disparrima*	Hickory Wattle	130		130	41	7.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
727	*Eucalyptus siderophloia*	Northern Grey Ironbark	510		510	160	22.0	12.0	6.1	2.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
728	*Eucalyptus siderophloia*	Northern Grey Ironbark	290		290	91	21.0	7.0	3.5	2.0	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Subject to detailed civil design and landowner consent	-
729	*Corymbia citriodora*	Spotted Gum	170		170	53	9.0	4.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
730	*Eucalyptus siderophloia*	Northern Grey Ironbark	450		450	141	22.0	9.0	5.4	2.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
731	*Acacia disparrima*	Hickory Wattle	160		160	50	7.0	4.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
732	*Acacia disparrima*	Hickory Wattle	100		100	31	7.0	3.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
733	*Corymbia citriodora*	Spotted Gum	100		100	31	7.0	3.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
734	*Eucalyptus siderophloia*	Northern Grey Ironbark	310		310	97	18.0	9.0	3.7	2.0	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
735	*Corymbia citriodora*	Spotted Gum	120		120	38	9.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
736	*Corymbia intermedia*	Pink Bloodwood	210		210	66	12.0	4.0	2.5	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
737	*Corymbia citriodora*	Spotted Gum	110		110	35	8.0	4.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
738	*Corymbia citriodora*	Spotted Gum	160		160	50	9.0	4.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
739	*Corymbia citriodora*	Spotted Gum	120		120	38	9.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
740	*Corymbia intermedia*	Pink Bloodwood	160		160	50	8.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
741	*Corymbia intermedia*	Pink Bloodwood	120		120	38	8.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-

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Specimen Details											Canopy Condition Details							Trunk Condition Details					Fauna Details and Habitat Value						Additional Details		
Tree ID	Botanical Name	Common Name	Trunk DBH (mm)	Additional Trunks DBH (mm)	Total DBH (mm) [AS 4970-2009]	Trunk Circumference (cm) [AS 4970-2009]	Height (m)	Spread (m)	Tree Protection Zone (m)	Structural Root Zone (m)	Canopy Form	Spreading	Thinning	Die-Back	Epicormic Growth	Lopped	Canopy Health	Leaning	Vines	Trunk Damage	Fire Damage	Trunk Health	Scats	Scratches	Hollows	Nest	Termite Nest	Habitat Value	Native Status	Retention	Additional Notes
742	*Corymbia citriodora*	Spotted Gum	120		120	38	9.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
743	*Acacia disparrima*	Hickory Wattle	160	140	213	67	9.0	7.0	2.6	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
744	*Corymbia citriodora*	Spotted Gum	190		190	60	12.0	4.0	2.3	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
745	*Acacia disparrima*	Hickory Wattle	110		110	35	8.0	3.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
746	*Corymbia citriodora*	Spotted Gum	170		170	53	12.0	4.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
747	*Corymbia citriodora*	Spotted Gum	160	100	189	59	11.0	6.0	2.3	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
748	*Eucalyptus moluccana*	Gum-topped Box	170		170	53	9.0	4.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
749	*Acacia disparrima*	Hickory Wattle	100		100	31	6.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
750	*Acacia disparrima*	Hickory Wattle	120	120	170	53	11.0	5.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
751	*Corymbia citriodora*	Spotted Gum	120		120	38	9.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
752	*Corymbia citriodora*	Spotted Gum	110		110	35	10.0	4.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
753	*Acacia disparrima*	Hickory Wattle	120		120	38	7.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
754	*Corymbia citriodora*	Spotted Gum	170		170	53	10.0	4.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
755	*Corymbia citriodora*	Spotted Gum	190		190	60	12.0	4.0	2.3	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
756	*Corymbia citriodora*	Spotted Gum	170		170	53	14.0	5.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
757	*Corymbia citriodora*	Spotted Gum	100		100	31	7.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
758	*Corymbia citriodora*	Spotted Gum	160		160	50	9.0	4.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
759	*Corymbia citriodora*	Spotted Gum	130		130	41	8.0	4.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
760	*Corymbia citriodora*	Spotted Gum	320		320	101	17.0	9.0	3.8	2.1	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
761	*Acacia disparrima*	Hickory Wattle	100	90 90 90	185	58	5.0	5.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
762	*Acacia disparrima*	Hickory Wattle	110	110 100 90	206	65	6.0	4.0	2.5	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
763	*Acacia disparrima*	Hickory Wattle	110	110	156	49	7.0	4.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
764	*Acacia disparrima*	Hickory Wattle	110	90 90	168	53	7.0	5.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
765	*Corymbia citriodora*	Spotted Gum	130		130	41	10.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
766	*Corymbia tessellaris*	Moreton Bay Ash	120		120	38	7.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
767	*Corymbia citriodora*	Spotted Gum	110		110	35	7.0	3.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
768	*Eucalyptus moluccana*	Gum-topped Box	280		280	88	15.0	7.0	3.4	1.9	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
769	*Eucalyptus moluccana*	Gum-topped Box	290		290	91	14.0	6.0	3.5	2.0	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
770	*Corymbia tessellaris*	Moreton Bay Ash	110		110	35	7.0	3.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
771	*Corymbia citriodora*	Spotted Gum	150		150	47	11.0	4.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
772	*Corymbia citriodora*	Spotted Gum	120		120	38	6.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
773	*Acacia disparrima*	Hickory Wattle	120		120	38	7.0	4.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
774	*Corymbia citriodora*	Spotted Gum	270		270	85	16.0	5.0	3.2	1.9	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
775	*Eucalyptus moluccana*	Gum-topped Box	270		270	85	16.0	9.0	3.2	1.9	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
776	*Eucalyptus moluccana*	Gum-topped Box	120		120	38	9.0	4.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
777	*Eucalyptus moluccana*	Gum-topped Box	150		150	47	9.0	2.0	2.0	1.5	Regular	-	-	Die-back	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
778	*Eucalyptus moluccana*	Gum-topped Box	220		220	69	12.0	5.0	2.6	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
779	*Eucalyptus moluccana*	Gum-topped Box	110		110	35	7.0	3.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
780	*Eucalyptus moluccana*	Gum-topped Box	290		290	91	13.0	6.0	3.5	2.0	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
781	*Corymbia citriodora*	Spotted Gum	240		240	75	15.0	7.0	2.9	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
782	*Eucalyptus moluccana*	Gum-topped Box	140		140	44	7.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
783	*Corymbia citriodora*	Spotted Gum	150		150	47	7.0	2.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
784	*Corymbia citriodora*	Spotted Gum	150		150	47	7.0	2.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
785	*Eucalyptus siderophloia*	Northern Grey Ironbark	690		690	217	19.0	12.0	8.3	2.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
786	*Eucalyptus siderophloia*	Northern Grey Ironbark	140		140	44	8.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
787	*Eucalyptus siderophloia*	Northern Grey Ironbark	120		120	38	6.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
788	*Corymbia citriodora*	Spotted Gum	190		190	60	10.0	3.0	2.3	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
789	*Eucalyptus siderophloia*	Northern Grey Ironbark	130		130	41	6.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
790	*Eucalyptus siderophloia*	Northern Grey Ironbark	180		180	57	7.0	3.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
791	*Corymbia citriodora*	Spotted Gum	430		430	135	13.0	8.0	5.2	2.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
792	*Corymbia citriodora*	Spotted Gum	140		140	44	8.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
793	*Corymbia citriodora*	Spotted Gum	200		200	63	8.0	3.0	2.4	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
794	*Corymbia citriodora*	Spotted Gum	200		200	63	8.0	3.0	2.4	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
795	*Corymbia intermedia*	Pink Bloodwood	140		140	44	8.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
796	*Corymbia citriodora*	Spotted Gum	110		110	35	7.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
797	*Eucalyptus siderophloia*	Northern Grey Ironbark	410		410	129	12.0	8.0	4.9	2.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Subject to detailed civil design and landowner consent	-
798	*Eucalyptus siderophloia*	Northern Grey Ironbark	210		210	66	8.0	5.0	2.5	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
799	*Eucalyptus siderophloia*	Northern Grey Ironbark	150		150	47	7.0	2.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
800	*Corymbia citriodora*	Spotted Gum	210		210	66	9.0	4.0	2.5	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
801	*Eucalyptus siderophloia*	Northern Grey Ironbark	170		170	53	8.0	3.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
802	*Eucalyptus siderophloia*	Northern Grey Ironbark	190		190	60	7.0	4.0	2.3	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
803	*Corymbia citriodora*	Spotted Gum	190		190	60	9.0	3.0	2.3	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-

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Specimen Details											Canopy Condition Details							Trunk Condition Details					Fauna Details and Habitat Value						Additional Details		
Tree ID	Botanical Name	Common Name	Trunk DBH (mm)	Additional Trunks DBH (mm)	Total DBH (mm) [AS 4970-2009]	Trunk Circumference (cm) [AS 4970-2009]	Height (m)	Spread (m)	Tree Protection Zone (m)	Structural Root Zone (m)	Canopy Form	Spreading	Thinning	Die-Back	Epicormic Growth	Lopped	Canopy Health	Leaning	Vines	Trunk Damage	Fire Damage	Trunk Health	Scats	Scratches	Hollows	Nest	Termite Nest	Habitat Value	Native Status	Retention	Additional Notes
804	*Corymbia torelliana*	Cadaghi	140	130	191	60	6.0	5.0	2.3	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Weed Tree	Remove	-
805	*Eucalyptus siderophloia*	Northern Grey Ironbark	110		110	35	4.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
806	*Acacia disparrima*	Hickory Wattle	210	160	264	83	6.0	6.0	3.2	1.9	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
807	*Acacia disparrima*	Hickory Wattle	130		130	41	6.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
808	*Eucalyptus siderophloia*	Northern Grey Ironbark	140	130	191	60	7.0	2.0	2.3	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
809	*Eucalyptus siderophloia*	Northern Grey Ironbark	510		510	160	16.0	12.0	6.1	2.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
810	*Acacia disparrima*	Hickory Wattle	120		120	38	5.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
811	*Corymbia citriodora*	Spotted Gum	180		180	57	13.0	5.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
812	*Corymbia citriodora*	Spotted Gum	220		220	69	11.0	3.0	2.6	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
813	*Corymbia citriodora*	Spotted Gum	120		120	38	9.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
814	*Corymbia citriodora*	Spotted Gum	140		140	44	8.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
815	*Corymbia citriodora*	Spotted Gum	120		120	38	5.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
816	*Corymbia citriodora*	Spotted Gum	150		150	47	8.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
817	*Corymbia citriodora*	Spotted Gum	180		180	57	8.0	2.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
818	*Corymbia citriodora*	Spotted Gum	110		110	35	8.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Subject to detailed civil design and landowner consent	-
819	*Corymbia citriodora*	Spotted Gum	180		180	57	8.0	3.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
820	*Corymbia citriodora*	Spotted Gum	130		130	41	6.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
821	*Corymbia citriodora*	Spotted Gum	180		180	57	8.0	3.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
822	*Eucalyptus siderophloia*	Northern Grey Ironbark	520		520	163	13.0	8.0	6.2	2.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
823	*Corymbia citriodora*	Spotted Gum	130		130	41	6.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
824	*Eucalyptus siderophloia*	Northern Grey Ironbark	110		110	35	5.0	1.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
825	*Eucalyptus siderophloia*	Northern Grey Ironbark	560		560	176	11.0	6.0	6.7	2.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
826	*Eucalyptus siderophloia*	Northern Grey Ironbark	130		130	41	5.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
827	*Corymbia citriodora*	Spotted Gum	190		190	60	8.0	3.0	2.3	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
828	*Acacia disparrima*	Hickory Wattle	130		130	41	5.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
829	*Eucalyptus siderophloia*	Northern Grey Ironbark	130		130	41	6.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
830	*Eucalyptus siderophloia*	Northern Grey Ironbark	120		120	38	5.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
831	*Eucalyptus siderophloia*	Northern Grey Ironbark	400		400	126	16.0	6.0	4.8	2.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
832	*Acacia disparrima*	Hickory Wattle	130		130	41	4.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
833	*Eucalyptus siderophloia*	Northern Grey Ironbark	110		110	35	5.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
834	*Eucalyptus siderophloia*	Northern Grey Ironbark	160		160	50	8.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
835	*Corymbia citriodora*	Spotted Gum	250		250	79	13.0	4.0	3.0	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
836	*Corymbia citriodora*	Spotted Gum	140		140	44	8.0	4.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
837	*Eucalyptus siderophloia*	Northern Grey Ironbark	110		110	35	4.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
838	*Eucalyptus siderophloia*	Northern Grey Ironbark	120		120	38	6.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
839	*Eucalyptus siderophloia*	Northern Grey Ironbark	130		130	41	6.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
840	*Corymbia citriodora*	Spotted Gum	220	220	311	98	9.0	5.0	3.7	2.0	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
841	*Eucalyptus siderophloia*	Northern Grey Ironbark	110		110	35	6.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
842	*Corymbia citriodora*	Spotted Gum	200		200	63	11.0	3.0	2.4	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
843	*Corymbia citriodora*	Spotted Gum	210		210	66	8.0	3.0	2.5	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
844	*Corymbia citriodora*	Spotted Gum	190		190	60	7.0	2.0	2.3	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
845	*Corymbia citriodora*	Spotted Gum	200		200	63	12.0	4.0	2.4	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
846	*Corymbia citriodora*	Spotted Gum	210		210	66	8.0	3.0	2.5	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
847	*Corymbia citriodora*	Spotted Gum	180		180	57	8.0	3.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
848	*Corymbia citriodora*	Spotted Gum	100		100	31	7.0	3.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
849	*Corymbia citriodora*	Spotted Gum	180		180	57	9.0	2.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
850	*Corymbia citriodora*	Spotted Gum	160	130	206	65	8.0	3.0	2.5	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
851	*Corymbia citriodora*	Spotted Gum	170		170	53	11.0	3.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
852	*Corymbia citriodora*	Spotted Gum	150		150	47	9.0	2.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
853	*Corymbia citriodora*	Spotted Gum	190		190	60	11.0	3.0	2.3	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
854	*Corymbia citriodora*	Spotted Gum	130		130	41	8.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
855	*Corymbia citriodora*	Spotted Gum	130		130	41	8.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
856	*Corymbia citriodora*	Spotted Gum	170		170	53	8.0	3.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
857	*Acacia disparrima*	Hickory Wattle	110		110	35	4.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
858	*Corymbia citriodora*	Spotted Gum	180		180	57	12.0	3.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
859	*Eucalyptus siderophloia*	Northern Grey Ironbark	170		170	53	7.0	3.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
860	*Eucalyptus siderophloia*	Northern Grey Ironbark	130		130	41	7.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
861	*Corymbia citriodora*	Spotted Gum	120		120	38	6.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
862	*Corymbia citriodora*	Spotted Gum	220		220	69	7.0	3.0	2.6	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
863	*Corymbia citriodora*	Spotted Gum	150		150	47	7.0	2.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
864	*Corymbia citriodora*	Spotted Gum	150		150	47	6.0	2.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
865	*Corymbia citriodora*	Spotted Gum	100		100	31	6.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-

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Specimen Details											Canopy Condition Details							Trunk Condition Details					Fauna Details and Habitat Value						Additional Details		
Tree ID	Botanical Name	Common Name	Trunk DBH (mm)	Additional Trunks DBH (mm)	Total DBH (mm) [AS 4970-2009]	Trunk Circumference (cm) [AS 4970-2009]	Height (m)	Spread (m)	Tree Protection Zone (m)	Structural Root Zone (m)	Canopy Form	Spreading	Thinning	Die-Back	Epicormic Growth	Lopped	Canopy Health	Leaning	Vines	Trunk Damage	Fire Damage	Trunk Health	Scats	Scratches	Hollows	Nest	Termite Nest	Habitat Value	Native Status	Retention	Additional Notes
866	*Eucalyptus siderophloia*	Northern Grey Ironbark	590		590	185	13.0	9.0	7.1	2.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
867	*Corymbia citriodora*	Spotted Gum	140		140	44	6.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
868	*Corymbia citriodora*	Spotted Gum	150	150 140 140	290	91	8.0	5.0	3.5	2.0	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
869	*Eucalyptus siderophloia*	Northern Grey Ironbark	420		420	132	14.0	10.0	5.0	2.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
870	*Acacia disparrima*	Hickory Wattle	130		130	41	5.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
871	*Eucalyptus siderophloia*	Northern Grey Ironbark	150		150	47	6.0	2.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
872	*Eucalyptus siderophloia*	Northern Grey Ironbark	140		140	44	6.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
873	*Corymbia citriodora*	Spotted Gum	130		130	41	5.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
874	*Eucalyptus siderophloia*	Northern Grey Ironbark	240		240	75	7.0	3.0	2.9	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
875	*Eucalyptus siderophloia*	Northern Grey Ironbark	380		380	119	9.0	6.0	4.6	2.2	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
876	*Corymbia citriodora*	Spotted Gum	210		210	66	6.0	3.0	2.5	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
877	*Corymbia citriodora*	Spotted Gum	250		250	79	10.0	5.0	3.0	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
878	*Corymbia citriodora*	Spotted Gum	110		110	35	8.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
879	*Eucalyptus moluccana*	Gum-topped Box	590		590	185	14.0	9.0	7.1	2.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
880	*Eucalyptus moluccana*	Gum-topped Box	140		140	44	7.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
881	*Acacia disparrima*	Hickory Wattle	170		170	53	5.0	4.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
882	*Corymbia intermedia*	Pink Bloodwood	140		140	44	6.0	4.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
883	*Eucalyptus siderophloia*	Northern Grey Ironbark	170		170	53	5.0	3.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
884	*Eucalyptus siderophloia*	Northern Grey Ironbark	130		130	41	6.0	4.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Subject to detailed civil design and landowner consent	-
885	*Eucalyptus siderophloia*	Northern Grey Ironbark	130		130	41	8.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
886	*Acacia disparrima*	Hickory Wattle	130		130	41	5.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
887	*Eucalyptus siderophloia*	Northern Grey Ironbark	340		340	107	12.0	5.0	4.1	2.1	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
888	*Eucalyptus siderophloia*	Northern Grey Ironbark	130		130	41	4.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
889	*Eucalyptus siderophloia*	Northern Grey Ironbark	110		110	35	5.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
890	*Eucalyptus moluccana*	Gum-topped Box	460	130	478	150	6.0	2.0	5.7	2.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
891	*Eucalyptus siderophloia*	Northern Grey Ironbark	110		110	35	5.0	1.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Subject to detailed civil design and landowner consent	-
892	*Eucalyptus siderophloia*	Northern Grey Ironbark	100		100	31	3.0	1.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
893	*Dead/Stag*		280		280	88	8.0	1.0	3.4	1.9	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Dead Tree (stag)	Remove	-
894	*Corymbia citriodora*	Spotted Gum	290		290	91	13.0	5.0	3.5	2.0	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
895	*Corymbia citriodora*	Spotted Gum	200		200	63	8.0	4.0	2.4	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
896	*Eucalyptus siderophloia*	Northern Grey Ironbark	220		220	69	7.0	3.0	2.6	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
897	*Corymbia citriodora*	Spotted Gum	410		410	129	13.0	6.0	4.9	2.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
898	*Corymbia citriodora*	Spotted Gum	100		100	31	8.0	3.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
899	*Corymbia citriodora*	Spotted Gum	490		490	154	17.0	8.0	5.9	2.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
900	*Corymbia citriodora*	Spotted Gum	400	270	483	152	14.0	7.0	5.8	2.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
901	*Corymbia citriodora*	Spotted Gum	640		640	201	16.0	11.0	7.7	2.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
902	*Eucalyptus siderophloia*	Northern Grey Ironbark	180		180	57	7.0	3.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
903	*Eucalyptus siderophloia*	Northern Grey Ironbark	130		130	41	6.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
904	*Eucalyptus siderophloia*	Northern Grey Ironbark	230		230	72	8.0	3.0	2.8	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
905	*Eucalyptus siderophloia*	Northern Grey Ironbark	110		110	35	7.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
906	*Eucalyptus siderophloia*	Northern Grey Ironbark	140		140	44	7.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
907	*Eucalyptus siderophloia*	Northern Grey Ironbark	120		120	38	5.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
908	*Acacia disparrima*	Hickory Wattle	120		120	38	6.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
909	*Eucalyptus siderophloia*	Northern Grey Ironbark	530		530	167	12.0	9.0	6.4	2.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
910	*Corymbia torelliana*	Cadaghi	180		180	57	5.0	5.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Weed Tree	Remove	-
911	*Eucalyptus siderophloia*	Northern Grey Ironbark	100		100	31	3.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
912	*Eucalyptus siderophloia*	Northern Grey Ironbark	150		150	47	4.0	2.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
913	*Eucalyptus siderophloia*	Northern Grey Ironbark	100		100	31	3.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
914	*Acacia disparrima*	Hickory Wattle	100		100	31	4.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
915	*Eucalyptus siderophloia*	Northern Grey Ironbark	370		370	116	9.0	8.0	4.4	2.2	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
916	*Corymbia intermedia*	Pink Bloodwood	110	80	136	43	4.0	1.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
917	*Eucalyptus moluccana*	Gum-topped Box	270		270	85	8.0	5.0	3.2	1.9	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
918	*Acacia disparrima*	Hickory Wattle	130		130	41	4.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
919	*Eucalyptus moluccana*	Gum-topped Box	220		220	69	12.0	3.0	2.6	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
920	*Eucalyptus moluccana*	Gum-topped Box	280		280	88	12.0	5.0	3.4	1.9	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
921	*Eucalyptus moluccana*	Gum-topped Box	210	120	242	76	5.0	3.0	2.9	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
922	*Acacia disparrima*	Hickory Wattle	130		130	41	6.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
923	*Eucalyptus moluccana*	Gum-topped Box	180		180	57	6.0	3.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
924	*Eucalyptus moluccana*	Gum-topped Box	200		200	63	12.0	4.0	2.4	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
925	*Eucalyptus moluccana*	Gum-topped Box	110		110	35	8.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
926	*Eucalyptus moluccana*	Gum-topped Box	320		320	101	13.0	5.0	3.8	2.1	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
927	*Eucalyptus moluccana*	Gum-topped Box	120		120	38	5.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-

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Specimen Details											Canopy Condition Details							Trunk Condition Details					Fauna Details and Habitat Value						Additional Details		
Tree ID	Botanical Name	Common Name	Trunk DBH (mm)	Additional Trunks DBH (mm)	Total DBH (mm) [AS 4970-2009]	Trunk Circumference (cm) [AS 4970-2009]	Height (m)	Spread (m)	Tree Protection Zone (m)	Structural Root Zone (m)	Canopy Form	Spreading	Thinning	Die-Back	Epicormic Growth	Lopped	Canopy Health	Leaning	Vines	Trunk Damage	Fire Damage	Trunk Health	Scats	Scratches	Hollows	Nest	Termite Nest	Habitat Value	Native Status	Retention	Additional Notes
928	*Eucalyptus moluccana*	Gum-topped Box	230		230	72	7.0	3.0	2.8	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
929	*Corymbia citriodora*	Spotted Gum	160		160	50	7.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
930	*Eucalyptus moluccana*	Gum-topped Box	160		160	50	7.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
931	*Eucalyptus moluccana*	Gum-topped Box	210		210	66	8.0	3.0	2.5	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
932	*Eucalyptus moluccana*	Gum-topped Box	210		210	66	8.0	3.0	2.5	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
933	*Eucalyptus moluccana*	Gum-topped Box	190		190	60	11.0	3.0	2.3	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
934	*Eucalyptus moluccana*	Gum-topped Box	150		150	47	6.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
935	*Eucalyptus moluccana*	Gum-topped Box	260		260	82	12.0	4.0	3.1	1.9	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
936	*Corymbia citriodora*	Spotted Gum	240		240	75	8.0	4.0	2.9	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
937	*Eucalyptus siderophloia*	Northern Grey Ironbark	130		130	41	6.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
938	*Eucalyptus moluccana*	Gum-topped Box	230		230	72	8.0	4.0	2.8	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
939	*Eucalyptus moluccana*	Gum-topped Box	240		240	75	8.0	4.0	2.9	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
940	*Eucalyptus siderophloia*	Northern Grey Ironbark	130		130	41	6.0	4.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
941	*Eucalyptus moluccana*	Gum-topped Box	240		240	75	8.0	4.0	2.9	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
942	*Eucalyptus moluccana*	Gum-topped Box	110		110	35	8.0	3.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
943	*Eucalyptus moluccana*	Gum-topped Box	190		190	60	8.0	4.0	2.3	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
944	*Eucalyptus moluccana*	Gum-topped Box	150		150	47	8.0	2.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
945	*Corymbia citriodora*	Spotted Gum	230		230	72	12.0	4.0	2.8	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
946	*Corymbia citriodora*	Spotted Gum	130		130	41	8.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
947	*Corymbia citriodora*	Spotted Gum	210		210	66	12.0	2.0	2.5	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
948	*Corymbia citriodora*	Spotted Gum	160		160	50	8.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
949	*Corymbia citriodora*	Spotted Gum	250		250	79	13.0	3.0	3.0	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
950	*Eucalyptus moluccana*	Gum-topped Box	210		210	66	8.0	2.0	2.5	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
951	*Corymbia citriodora*	Spotted Gum	110		110	35	9.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
952	*Corymbia citriodora*	Spotted Gum	190		190	60	9.0	3.0	2.3	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
953	*Corymbia citriodora*	Spotted Gum	130		130	41	9.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
954	*Corymbia citriodora*	Spotted Gum	180		180	57	8.0	2.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
955	*Corymbia citriodora*	Spotted Gum	150	140	205	64	7.0	3.0	2.5	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
956	*Eucalyptus siderophloia*	Northern Grey Ironbark	110		110	35	5.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
957	*Corymbia citriodora*	Spotted Gum	130		130	41	6.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
958	*Corymbia citriodora*	Spotted Gum	930		930	292	18.0	8.0	11.2	3.2	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
959	*Corymbia citriodora*	Spotted Gum	180		180	57	7.0	3.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
960	*Corymbia citriodora*	Spotted Gum	220		220	69	8.0	3.0	2.6	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
961	*Corymbia citriodora*	Spotted Gum	250		250	79	11.0	5.0	3.0	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
962	*Corymbia citriodora*	Spotted Gum	140		140	44	7.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
963	*Corymbia citriodora*	Spotted Gum	180	130 140 130	293	92	9.0	4.0	3.5	2.0	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
964	*Corymbia citriodora*	Spotted Gum	280		280	88	8.0	4.0	3.4	1.9	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Subject to detailed civil design and landowner consent	-
965	*Corymbia citriodora*	Spotted Gum	240		240	75	7.0	4.0	2.9	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
966	*Corymbia citriodora*	Spotted Gum	310		310	97	8.0	5.0	3.7	2.0	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
967	*Corymbia citriodora*	Spotted Gum	130		130	41	7.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
968	*Corymbia citriodora*	Spotted Gum	190		190	60	8.0	3.0	2.3	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
969	*Corymbia citriodora*	Spotted Gum	150		150	47	7.0	1.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
970	*Corymbia citriodora*	Spotted Gum	170		170	53	8.0	4.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Subject to detailed civil design and landowner consent	-
971	*Corymbia citriodora*	Spotted Gum	210		210	66	7.0	3.0	2.5	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
972	*Corymbia citriodora*	Spotted Gum	300		300	94	8.0	4.0	3.6	2.0	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
973	*Corymbia citriodora*	Spotted Gum	320		320	101	9.0	6.0	3.8	2.1	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
974	*Eucalyptus moluccana*	Gum-topped Box	140		140	44	6.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
975	*Acacia disparrima*	Hickory Wattle	130	90	158	50	5.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
976	*Corymbia citriodora*	Spotted Gum	650		650	204	14.0	8.0	7.8	2.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
977	*Corymbia citriodora*	Spotted Gum	200	170	262	82	5.0	3.0	3.1	1.9	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
978	*Eucalyptus moluccana*	Gum-topped Box	460		460	145	8.0	5.0	5.5	2.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
979	*Corymbia intermedia*	Pink Bloodwood	500		500	157	9.0	6.0	6.0	2.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
980	*Corymbia citriodora*	Spotted Gum	170		170	53	8.0	2.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
981	*Corymbia citriodora*	Spotted Gum	180		180	57	7.0	2.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
982	*Acacia disparrima*	Hickory Wattle	110		110	35	4.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
983	*Eucalyptus moluccana*	Gum-topped Box	100		100	31	6.0	1.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
984	*Acacia disparrima*	Hickory Wattle	160		160	50	6.0	2.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
985	*Corymbia citriodora*	Spotted Gum	170		170	53	7.0	3.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
986	*Corymbia citriodora*	Spotted Gum	130		130	41	6.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
987	*Corymbia citriodora*	Spotted Gum	140		140	44	7.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
988	*Corymbia citriodora*	Spotted Gum	250		250	79	11.0	3.0	3.0	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
989	*Acacia disparrima*	Hickory Wattle	120		120	38	6.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-

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Specimen Details											Canopy Condition Details							Trunk Condition Details					Fauna Details and Habitat Value						Additional Details		
Tree ID	Botanical Name	Common Name	Trunk DBH (mm)	Additional Trunks DBH (mm)	Total DBH (mm) [AS 4970-2009]	Trunk Circumference (cm) [AS 4970-2009]	Height (m)	Spread (m)	Tree Protection Zone (m)	Structural Root Zone (m)	Canopy Form	Spreading	Thinning	Die-Back	Epicormic Growth	Lopped	Canopy Health	Leaning	Vines	Trunk Damage	Fire Damage	Trunk Health	Scats	Scratches	Hollows	Nest	Termite Nest	Habitat Value	Native Status	Retention	Additional Notes
990	*Corymbia citriodora*	Spotted Gum	130		130	41	7.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
991	*Corymbia citriodora*	Spotted Gum	170		170	53	8.0	3.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
992	*Corymbia citriodora*	Spotted Gum	130		130	41	6.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
993	*Corymbia citriodora*	Spotted Gum	180		180	57	8.0	2.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
994	*Corymbia citriodora*	Spotted Gum	110		110	35	6.0	1.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
995	*Corymbia citriodora*	Spotted Gum	280		280	88	8.0	3.0	3.4	1.9	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
996	*Corymbia citriodora*	Spotted Gum	230		230	72	8.0	3.0	2.8	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
997	*Corymbia citriodora*	Spotted Gum	200		200	63	8.0	3.0	2.4	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
998	*Corymbia citriodora*	Spotted Gum	290		290	91	9.0	4.0	3.5	2.0	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
999	*Corymbia citriodora*	Spotted Gum	100		100	31	3.0	1.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1000	*Corymbia citriodora*	Spotted Gum	120		120	38	8.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1001	*Eucalyptus moluccana*	Gum-topped Box	190		190	60	10.0	2.0	2.3	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1002	*Corymbia citriodora*	Spotted Gum	210		210	66	8.0	2.0	2.5	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1003	*Corymbia citriodora*	Spotted Gum	150	130	198	62	8.0	2.0	2.4	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1004	*Acacia disparrima*	Hickory Wattle	110	80	136	43	4.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
1005	*Corymbia citriodora*	Spotted Gum	230		230	72	11.0	3.0	2.8	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1006	*Corymbia citriodora*	Spotted Gum	130		130	41	7.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1007	*Corymbia citriodora*	Spotted Gum	140		140	44	7.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1008	*Corymbia citriodora*	Spotted Gum	110		110	35	7.0	1.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1009	*Corymbia citriodora*	Spotted Gum	110		110	35	6.0	3.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1010	*Corymbia citriodora*	Spotted Gum	150		150	47	9.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1011	*Corymbia citriodora*	Spotted Gum	110		110	35	8.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1012	*Corymbia citriodora*	Spotted Gum	170		170	53	12.0	2.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1013	*Corymbia citriodora*	Spotted Gum	120		120	38	8.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1014	*Corymbia citriodora*	Spotted Gum	150		150	47	8.0	2.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1015	*Corymbia citriodora*	Spotted Gum	160		160	50	9.0	2.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1016	*Corymbia citriodora*	Spotted Gum	130	120	177	56	8.0	3.0	2.1	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1017	*Corymbia citriodora*	Spotted Gum	130		130	41	8.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1018	*Corymbia citriodora*	Spotted Gum	180		180	57	12.0	3.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1019	*Corymbia citriodora*	Spotted Gum	100		100	31	7.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1020	*Corymbia citriodora*	Spotted Gum	140		140	44	10.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1021	*Corymbia citriodora*	Spotted Gum	130	120	177	56	8.0	3.0	2.1	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1022	*Corymbia citriodora*	Spotted Gum	430		430	135	17.0	10.0	5.2	2.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1023	*Corymbia citriodora*	Spotted Gum	150	70	166	52	7.0	3.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
1024	*Acacia disparrima*	Hickory Wattle	130		130	41	6.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
1025	*Eucalyptus moluccana*	Gum-topped Box	210		210	66	8.0	3.0	2.5	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1026	*Corymbia citriodora*	Spotted Gum	150		150	47	7.0	2.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1027	*Eucalyptus moluccana*	Gum-topped Box	120		120	38	6.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1028	*Eucalyptus moluccana*	Gum-topped Box	190		190	60	7.0	3.0	2.3	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
1029	*Acacia disparrima*	Hickory Wattle	140		140	44	4.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
1030	*Acacia disparrima*	Hickory Wattle	210		210	66	4.0	3.0	2.5	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
1031	*Acacia disparrima*	Hickory Wattle	150		150	47	6.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
1032	*Acacia disparrima*	Hickory Wattle	120	110	163	51	4.0	2.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
1033	*Acacia disparrima*	Hickory Wattle	120	120	170	53	5.0	3.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
1034	*Acacia disparrima*	Hickory Wattle	100		100	31	4.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
1035	*Acacia disparrima*	Hickory Wattle	170		170	53	6.0	2.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
1036	*Acacia disparrima*	Hickory Wattle	130	70	148	46	5.0	4.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
1037	*Acacia disparrima*	Hickory Wattle	170		170	53	5.0	2.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
1038	*Acacia disparrima*	Hickory Wattle	120		120	38	4.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
1039	*Acacia disparrima*	Hickory Wattle	130	120 90	198	62	5.0	3.0	2.4	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
1040	*Acacia disparrima*	Hickory Wattle	100		100	31	5.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
1041	*Acacia disparrima*	Hickory Wattle	100	60	117	37	4.0	3.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
1042	*Eucalyptus siderophloia*	Northern Grey Ironbark	140		140	44	5.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1043	*Eucalyptus siderophloia*	Northern Grey Ironbark	110		110	35	5.0	3.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1044	*Acacia disparrima*	Hickory Wattle	110	100	149	47	5.0	4.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
1045	*Acacia disparrima*	Hickory Wattle	120	120	170	53	4.0	2.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
1046	*Eucalyptus moluccana*	Gum-topped Box	190	180	262	82	6.0	4.0	3.1	1.9	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1047	*Eucalyptus moluccana*	Gum-topped Box	120		120	38	5.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1048	*Corymbia citriodora*	Spotted Gum	140		140	44	9.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1049	*Eucalyptus moluccana*	Gum-topped Box	120		120	38	7.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1050	*Corymbia citriodora*	Spotted Gum	120		120	38	7.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1051	*Eucalyptus moluccana*	Gum-topped Box	180		180	57	8.0	3.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-

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Specimen Details											Canopy Condition Details							Trunk Condition Details					Fauna Details and Habitat Value						Additional Details		
Tree ID	Botanical Name	Common Name	Trunk DBH (mm)	Additional Trunks DBH (mm)	Total DBH (mm) [AS 4970-2009]	Trunk Circumference (cm) [AS 4970-2009]	Height (m)	Spread (m)	Tree Protection Zone (m)	Structural Root Zone (m)	Canopy Form	Spreading	Thinning	Die-Back	Epicormic Growth	Lopped	Canopy Health	Leaning	Vines	Trunk Damage	Fire Damage	Trunk Health	Scats	Scratches	Hollows	Nest	Termite Nest	Habitat Value	Native Status	Retention	Additional Notes
1052	*Corymbia citriodora*	Spotted Gum	170		170	53	10.0	4.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1053	*Eucalyptus moluccana*	Gum-topped Box	110		110	35	6.0	3.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1054	*Eucalyptus moluccana*	Gum-topped Box	100		100	31	6.0	3.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1055	*Eucalyptus moluccana*	Gum-topped Box	120	120	170	53	5.0	3.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1056	*Corymbia citriodora*	Spotted Gum	120		120	38	9.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1057	*Eucalyptus moluccana*	Gum-topped Box	150		150	47	7.0	2.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1058	*Corymbia citriodora*	Spotted Gum	120		120	38	7.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1059	*Eucalyptus moluccana*	Gum-topped Box	150		150	47	7.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1060	*Eucalyptus moluccana*	Gum-topped Box	200		200	63	9.0	4.0	2.4	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1061	*Eucalyptus moluccana*	Gum-topped Box	220		220	69	9.0	4.0	2.6	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1062	*Eucalyptus moluccana*	Gum-topped Box	210		210	66	9.0	3.0	2.5	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1063	*Eucalyptus moluccana*	Gum-topped Box	120		120	38	7.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1064	*Eucalyptus moluccana*	Gum-topped Box	100		100	31	6.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1065	*Eucalyptus moluccana*	Gum-topped Box	150		150	47	8.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1066	*Eucalyptus moluccana*	Gum-topped Box	130		130	41	7.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1067	*Eucalyptus moluccana*	Gum-topped Box	120		120	38	7.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1068	*Eucalyptus moluccana*	Gum-topped Box	150		150	47	7.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1069	*Corymbia citriodora*	Spotted Gum	130		130	41	7.0	1.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1070	*Eucalyptus moluccana*	Gum-topped Box	110		110	35	7.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1071	*Corymbia citriodora*	Spotted Gum	180		180	57	11.0	3.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1072	*Corymbia citriodora*	Spotted Gum	120		120	38	8.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1073	*Corymbia citriodora*	Spotted Gum	140		140	44	8.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1074	*Corymbia citriodora*	Spotted Gum	110		110	35	7.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1075	*Corymbia citriodora*	Spotted Gum	110		110	35	8.0	1.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1076	*Corymbia citriodora*	Spotted Gum	160		160	50	8.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1077	*Corymbia citriodora*	Spotted Gum	110		110	35	8.0	3.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1078	*Corymbia citriodora*	Spotted Gum	150		150	47	9.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1079	*Corymbia citriodora*	Spotted Gum	130		130	41	8.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1080	*Corymbia citriodora*	Spotted Gum	150		150	47	8.0	2.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1081	*Corymbia citriodora*	Spotted Gum	130		130	41	9.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1082	*Corymbia citriodora*	Spotted Gum	140	100 70	186	58	8.0	3.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1083	*Corymbia citriodora*	Spotted Gum	120		120	38	7.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1084	*Corymbia citriodora*	Spotted Gum	160		160	50	7.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1085	*Eucalyptus siderophloia*	Northern Grey Ironbark	120		120	38	5.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1086	*Corymbia citriodora*	Spotted Gum	180		180	57	7.0	3.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1087	*Corymbia citriodora*	Spotted Gum	150	100	180	57	8.0	3.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
1088	*Corymbia citriodora*	Spotted Gum	150		150	47	7.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
1089	*Corymbia citriodora*	Spotted Gum	110		110	35	8.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
1090	*Corymbia citriodora*	Spotted Gum	140		140	44	8.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
1091	*Eucalyptus crebra*	Narrow-leaved Ironbark	410		410	129	13.0	5.0	4.9	2.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Subject to detailed civil design and landowner consent	-
1092	*Eucalyptus crebra*	Narrow-leaved Ironbark	330		330	104	17.0	4.0	4.0	2.1	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
1093	*Corymbia citriodora*	Spotted Gum	210		210	66	11.0	4.0	2.5	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
1094	*Corymbia citriodora*	Spotted Gum	200	120	233	73	11.0	4.0	2.8	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1095	*Corymbia citriodora*	Spotted Gum	190		190	60	8.0	4.0	2.3	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Retain	-
1096	*Corymbia citriodora*	Spotted Gum	150		150	47	7.0	2.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1097	*Corymbia citriodora*	Spotted Gum	160	130 110 110	258	81	8.0	3.0	3.1	1.9	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Subject to detailed civil design and landowner consent	-
1098	*Corymbia citriodora*	Spotted Gum	150		150	47	7.0	2.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Subject to detailed civil design and landowner consent	-
1099	*Corymbia citriodora*	Spotted Gum	220		220	69	8.0	4.0	2.6	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1100	*Corymbia citriodora*	Spotted Gum	110		110	35	7.0	3.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1101	*Acacia disparrima*	Hickory Wattle	110		110	35	4.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
1102	*Acacia disparrima*	Hickory Wattle	150		150	47	6.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
1103	*Eucalyptus siderophloia*	Northern Grey Ironbark	100		100	31	4.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1104	*Dead/Stag*		270		270	85	4.0	1.0	3.2	1.9	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	Yes	-	-	-	Dead Tree (stag)	Remove	-
1105	*Acacia disparrima*	Hickory Wattle	130		130	41	6.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
1106	*Eucalyptus moluccana*	Gum-topped Box	180		180	57	7.0	3.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1107	*Eucalyptus moluccana*	Gum-topped Box	130		130	41	6.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1108	*Corymbia citriodora*	Spotted Gum	190	110	220	69	8.0	4.0	2.6	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1109	*Corymbia citriodora*	Spotted Gum	130		130	41	7.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1110	*Eucalyptus moluccana*	Gum-topped Box	140		140	44	7.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1111	*Corymbia citriodora*	Spotted Gum	230		230	72	9.0	3.0	2.8	1.8	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1112	*Corymbia citriodora*	Spotted Gum	190	50	196	62	8.0	3.0	2.4	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1113	*Eucalyptus moluccana*	Gum-topped Box	190	90	210	66	8.0	4.0	2.5	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Subject to detailed civil design and landowner consent	-

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Specimen Details											Canopy Condition Details							Trunk Condition Details					Fauna Details and Habitat Value						Additional Details		
Tree ID	Botanical Name	Common Name	Trunk DBH (mm)	Additional Trunks DBH (mm)	Total DBH (mm) [AS 4970-2009]	Trunk Circumference (cm) [AS 4970-2009]	Height (m)	Spread (m)	Tree Protection Zone (m)	Structural Root Zone (m)	Canopy Form	Spreading	Thinning	Die-Back	Epicormic Growth	Lopped	Canopy Health	Leaning	Vines	Trunk Damage	Fire Damage	Trunk Health	Scats	Scratches	Hollows	Nest	Termite Nest	Habitat Value	Native Status	Retention	Additional Notes
1114	*Corymbia citriodora*	Spotted Gum	180		180	57	9.0	2.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Subject to detailed civil design and landowner consent	-
1115	*Corymbia citriodora*	Spotted Gum	160	130	206	65	7.0	3.0	2.5	1.7	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Subject to detailed civil design and landowner consent	-
1116	*Corymbia citriodora*	Spotted Gum	120		120	38	8.0	1.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1117	*Corymbia citriodora*	Spotted Gum	120		120	38	7.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1118	*Corymbia citriodora*	Spotted Gum	120		120	38	8.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1119	*Corymbia citriodora*	Spotted Gum	190		190	60	8.0	3.0	2.3	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1120	*Corymbia citriodora*	Spotted Gum	160		160	50	8.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1121	*Corymbia citriodora*	Spotted Gum	120		120	38	6.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1122	*Corymbia citriodora*	Spotted Gum	160	0	160	50	7.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1123	*Corymbia citriodora*	Spotted Gum	170		170	53	8.0	2.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1124	*Corymbia citriodora*	Spotted Gum	170		170	53	8.0	3.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1125	*Acacia disparrima*	Hickory Wattle	140		140	44	5.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Native Tree	Remove	-
1126	*Corymbia citriodora*	Spotted Gum	170		170	53	8.0	3.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1127	*Corymbia citriodora*	Spotted Gum	130		130	41	7.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1128	*Corymbia citriodora*	Spotted Gum	170		170	53	9.0	3.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Subject to detailed civil design and landowner consent	-
1129	*Corymbia citriodora*	Spotted Gum	160		160	50	8.0	2.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Subject to detailed civil design and landowner consent	-
1130	*Corymbia citriodora*	Spotted Gum	150		150	47	7.0	2.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Subject to detailed civil design and landowner consent	-
1131	*Corymbia citriodora*	Spotted Gum	140		140	44	8.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1132	*Corymbia citriodora*	Spotted Gum	430		430	135	15.0	7.0	5.2	2.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1133	*Corymbia citriodora*	Spotted Gum	170		170	53	11.0	3.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1134	*Eucalyptus moluccana*	Gum-topped Box	150		150	47	7.0	3.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1135	*Eucalyptus moluccana*	Gum-topped Box	140		140	44	7.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1136	*Corymbia citriodora*	Spotted Gum	130		130	41	8.0	2.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1137	*Eucalyptus moluccana*	Gum-topped Box	260		260	82	9.0	4.0	3.1	1.9	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Subject to detailed civil design and landowner consent	-
1138	*Eucalyptus moluccana*	Gum-topped Box	180		180	57	8.0	3.0	2.2	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1139	*Eucalyptus moluccana*	Gum-topped Box	170		170	53	7.0	3.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1140	*Corymbia citriodora*	Spotted Gum	110		110	35	6.0	2.0	2.0	1.3	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1141	*Eucalyptus moluccana*	Gum-topped Box	140		140	44	8.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1142	*Corymbia citriodora*	Spotted Gum	170		170	53	8.0	3.0	2.0	1.6	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1143	*Corymbia citriodora*	Spotted Gum	150		150	47	9.0	2.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1144	*Eucalyptus siderophloia*	Northern Grey Ironbark	150		150	47	5.0	2.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1145	*Corymbia citriodora*	Spotted Gum	150		150	47	8.0	2.0	2.0	1.5	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-
1146	*Eucalyptus moluccana*	Gum-topped Box	120		120	38	7.0	3.0	2.0	1.4	Regular	-	-	-	-	-	Typical	-	-	-	-	Typical	-	-	-	-	-	-	Non-juvenile Koala Habitat Tree	Remove	-

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Appendix F

SAT Survey Results

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■ Report type

Spot Assessment Technique (SAT)				
Date:	08.08.2022	**10966**	**SAT ID:**	1
Tree No.	**Scientific Name**	**Common Name**	**DBH**	**Scats**
1	*Corymbia citriodora*	Spotted Gum	120	N
2	*Corymbia citriodora*	Spotted Gum	145	N
3	*Corymbia citriodora*	Spotted Gum	110	N
4	*Corymbia citriodora*	Spotted Gum	150, 140	N
5	*Corymbia citriodora*	Spotted Gum	120	N
6	*Eucalyptus siderophloia*	Grey Ironbark	390	N
7	*Corymbia citriodora*	Spotted Gum	105	N
8	*Corymbia citriodora*	Spotted Gum	155	N
9	*Corymbia citriodora*	Spotted Gum	125, 395	N
10	*Corymbia citriodora*	Spotted Gum	110	N
11	*Eucalyptus moluccana*	Gum-topped Box	150	N
12	*Eucalyptus moluccana*	Gum-topped Box	170	N
13	*Corymbia citriodora*	Spotted Gum	170	N
14	*Eucalyptus moluccana*	Gum-topped Box	100	N
15	*Corymbia citriodora*	Spotted Gum	125	N
16	*Corymbia citriodora*	Spotted Gum	160	N
17	*Corymbia citriodora*	Spotted Gum	140	N
18	*Corymbia citriodora*	Spotted Gum	140	N
19	*Corymbia citriodora*	Spotted Gum	100	N
20	*Corymbia citriodora*	Spotted Gum	110	N
21	*Corymbia citriodora*	Spotted Gum	210	N
22	*Corymbia citriodora*	Spotted Gum	200	N
23	*Corymbia tessellaris*	Spotted Gum	190	N
24	*Corymbia citriodora*	Spotted Gum	180	N
25	*Corymbia citriodora*	Spotted Gum	130	N
26	*Corymbia citriodora*	Spotted Gum	230	N
27	*Corymbia citriodora*	Spotted Gum	120	N
28	*Corymbia citriodora*	Spotted Gum	160	N
29	*Corymbia citriodora*	Spotted Gum	120	N
30	*Corymbia citriodora*	Spotted Gum	140	N
		Total Scats	0	
		Percentage	0.00	
		East Coast (med-high) Activity Category	Low	

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■ Report type

Spot Assessment Technique (SAT)				
Date:	08.08.2022	**10966**	**SAT ID:**	1
Tree No.	**Scientific Name**	**Common Name**	**DBH**	**Scats**
1	*Corymbia citriodora*	Spotted Gum	125	N
2	*Corymbia citriodora*	Spotted Gum	160	N
3	*Corymbia citriodora*	Spotted Gum	165, 120	N
4	*Corymbia citriodora*	Spotted Gum	190	N
5	*Corymbia citriodora*	Spotted Gum	200	N
6	*Corymbia citriodora*	Spotted Gum	100	N
7	*Corymbia citriodora*	Spotted Gum	160	N
8	*Corymbia citriodora*	Spotted Gum	450	N
9	*Eucalyptus siderophloia*	Grey Ironbark	150	N
10	*Corymbia citriodora*	Spotted Gum	145	N
11	*Corymbia citriodora*	Spotted Gum	220	N
12	*Corymbia citriodora*	Spotted Gum	120	N
13	*Eucalyptus siderophloia*	Grey Ironbark	140	N
14	*Corymbia citriodora*	Spotted Gum	160	N
15	*Corymbia citriodora*	Spotted Gum	190	N
16	*Corymbia citriodora*	Spotted Gum	140	N
17	*Eucalyptus siderophloia*	Grey Ironbark	720	N
18	*Eucalyptus siderophloia*	Grey Ironbark	440	N
19	*Corymbia citriodora*	Spotted Gum	190	N
20	*Eucalyptus siderophloia*	Grey Ironbark	420	N
21	*Eucalyptus siderophloia*	Grey Ironbark	110	N
22	*Corymbia citriodora*	Spotted Gum	160	N
23	*Eucalyptus siderophloia*	Grey Ironbark	210	N
24	*Eucalyptus siderophloia*	Grey Ironbark	750	N
25	*Corymbia citriodora*	Spotted Gum	270	N
26	*Corymbia citriodora*	Spotted Gum	170	N
27	*Corymbia citriodora*	Spotted Gum	200	N
28	*Corymbia citriodora*	Spotted Gum	180	N
29	*Corymbia citriodora*	Spotted Gum	180	N
30	*Corymbia citriodora*	Spotted Gum	170	N
		Total Scats	0	
		Percentage	0.00	
		East Coast (med-high) Activity Category	Low	

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■ Report type

Spot Assessment Technique (SAT)				
Date:	03.09.2024	**10966**	**SAT ID:**	1
Tree No.	**Scientific Name**	**Common Name**	**DBH**	**Scats**
1	*Corymbia citriodora*	Spotted Gum	130	N
2	*Corymbia citriodora*	Spotted Gum	120	N
3	*Corymbia citriodora*	Spotted Gum	130	N
4	*Corymbia citriodora*	Spotted Gum	160	N
5	*Corymbia citriodora*	Spotted Gum	180	N
6	*Corymbia citriodora*	Spotted Gum	170	N
7	*Corymbia citriodora*	Spotted Gum	160	N
8	*Corymbia citriodora*	Spotted Gum	160	N
9	*Corymbia citriodora*	Spotted Gum	210	N
10	*Corymbia citriodora*	Spotted Gum	120	N
11	*Corymbia citriodora*	Spotted Gum	230	N
12	*Corymbia citriodora*	Spotted Gum	190	N
13	*Corymbia citriodora*	Spotted Gum	140	N
14	*Corymbia citriodora*	Spotted Gum	190	N
15	*Corymbia citriodora*	Spotted Gum	220	N
16	*Corymbia citriodora*	Spotted Gum	190	N
17	*Corymbia citriodora*	Spotted Gum	190	N
18	*Eucalyptus moluccana*	Gum-topped Box	200	N
19	*Eucalyptus moluccana*	Gum-topped Box	250	N
20	*Corymbia citriodora*	Spotted Gum	150	N
21	*Corymbia citriodora*	Spotted Gum	170	N
22	*Corymbia citriodora*	Spotted Gum	160	N
23	*Corymbia citriodora*	Spotted Gum	120	N
24	*Corymbia citriodora*	Spotted Gum	180	N
25	*Corymbia citriodora*	Spotted Gum	160	N
26	*Corymbia citriodora*	Spotted Gum	140	N
27	*Corymbia citriodora*	Spotted Gum	150	N
28	*Corymbia citriodora*	Spotted Gum	170	N
29	*Corymbia citriodora*	Spotted Gum	120	N
30	*Corymbia citriodora*	Spotted Gum	110	N
		Total Scats	0	
		Percentage	0.00	
		East Coast (med-high) Activity Category	Low	

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■ Report type

Spot Assessment Technique (SAT)				
Date:	03.09.2024	**Site: 10966**	**SAT ID:**	2
Tree No.	**Scientific Name**	**Common Name**	**DBH**	**Scats**
1	*Eucalyptus siderophloia*	Grey Ironbark	100	N
2	*Corymbia citriodora*	Spotted Gum	120	N
3	*Corymbia citriodora*	Spotted Gum	130	N
4	*Corymbia citriodora*	Spotted Gum	170	N
5	*Eucalyptus siderophloia*	Grey Ironbark	100	N
6	*Corymbia citriodora*	Spotted Gum	160	N
7	*Corymbia citriodora*	Spotted Gum	140	N
8	*Eucalyptus siderophloia*	Grey Ironbark	150	N
9	*Corymbia citriodora*	Spotted Gum	230	N
10	*Corymbia citriodora*	Spotted Gum	100	N
11	*Corymbia citriodora*	Spotted Gum	500	N
12	*Corymbia citriodora*	Spotted Gum	200	N
13	*Corymbia citriodora*	Spotted Gum	200	N
14	*Corymbia citriodora*	Spotted Gum	190	N
15	*Corymbia citriodora*	Spotted Gum	180	N
16	*Corymbia citriodora*	Spotted Gum	100	N
17	*Corymbia citriodora*	Spotted Gum	210	N
18	*Corymbia citriodora*	Spotted Gum	200	N
19	*Corymbia citriodora*	Spotted Gum	220	N
20	*Corymbia citriodora*	Spotted Gum	150	N
21	*Corymbia citriodora*	Spotted Gum	130	N
22	*Eucalyptus siderophloia*	Grey Ironbark	340	N
23	*Corymbia citriodora*	Spotted Gum	130	N
24	*Corymbia citriodora*	Spotted Gum	180	N
25	*Eucalyptus siderophloia*	Grey Ironbark	340	N
26	*Corymbia citriodora*	Spotted Gum	130	N
27	*Eucalyptus siderophloia*	Grey Ironbark	380	N
28	*Eucalyptus siderophloia*	Grey Ironbark	200	N
29	*Corymbia citriodora*	Spotted Gum	160	N
30	*Eucalyptus siderophloia*	Grey Ironbark	120	N
		Total Scats	0	
		Percentage	0.00	
		East Coast (med-high) Activity Category	Low	

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Appendix G

SRRC Environmental Significance Overlay Code Response

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Performance Outcomes	Acceptable Outcomes	Applicant Comments	Assessment Officer
Protection of Matters of State and Local Environmental Significance identified on: **(1) Environmental Significance Overlay Map – Biodiversity OM-04-A; or** **(2) Environmental Significance Overlay Map – Local Biodiversity OM-04-B** **(3) Environmental Significance Overlay Map – Priority Species OM-04-C; or** **(4) Environmental Significance Overlay Map – Wetlands and Waterways OM-04-D; or** **(5) Environmental Significance Overlay Map – Local Watercourses OM-04-E**			
PO1 Development protects and avoids impact on Matters of State and/or Local Environmental Significance. ***Note** - Compliance with this Performance Outcome must be demonstrated by an Ecological Assessment Report prepared in accordance with **Planning Scheme Policy 5 - Ecological Assessments**.*	**AO1.1** Development has no impact on the relevant environmental values of Matters of State and/or Local Environmental Significance. **OR** **AO1.2** An Ecological Assessment Report prepared in accordance with **Planning Scheme Policy 5 - Ecological Assessments** demonstrates that the development site does not contain any Matters of State and/or Local Environmental Significance. **OR** **AO1.3** An Ecological Assessment Report prepared in accordance with **Planning Scheme Policy 5 - Ecological Assessments** demonstrates that development is located, designed and operated to mitigate adverse impacts on the relevant environmental values of Matters of State and/or Local Environmental Significance.	**Development complies with AO1.3** An Ecological Assessment Report has been prepared and submitted with this application. The submitted EAR demonstrates that the ecological values of the site have been assessed and that the development has been located, designed, and operated to avoid and mitigate adverse impacts on environmental values. The provided impact plan (**EAR – Plan 3**) demonstrates that the proposed impacts to mapped SRRC Environmental Significance Overlay Map values is limited to 223.8m2 of Regulated Vegetation and MLES Node Corridor area.	

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Performance Outcomes	Acceptable Outcomes	Applicant Comments	Assessment Officer
PO2 Development is designed and constructed to: (1) avoid significant adverse impact on Matters of State and/or Local Environmental Significance; and (2) protect and enhance *ecological connectivity* and habitat extent between areas of State and/or Local Environmental Significance.	**AO2** The design and layout of development minimises adverse impacts on Matters of State and/or Local Environmental Significance by: (1) focusing development in non-vegetated areas to protect existing habitat; (2) using urban design to consolidate density and preserve existing habitat and *native vegetation*; (3) aligning property boundaries to maintain ecologically important areas; (4) ensuring that alterations to natural landforms, hydrology and drainage patterns on the development site do not negatively affect ecologically important areas; (5) avoiding impacts on flora and fauna and their habitat as identified in the *Nature Conservation Act 1992* and locally significant species; (6) ensuring that significant fauna and flora and their habitats are protected in their environmental context and incorporate measures that allow for the safe movement of fauna through the site; (7) ensuring the clearing of *native vegetation* is minimised; (8) ensuring development does not isolate areas identified as Matters of State and/or Local Environmental Significance; (9) ensuring development retains *native vegetation* in areas large enough to maintain ecological values, functions and processes; and (10) ensuring development is operated and	**Complies with A02** An Ecological Assessment Report has been prepared and submitted with this application. The submitted EAR demonstrates that the ecological values of the site have been assessed and that the development has been located, designed, and operated to avoid and mitigate adverse impacts on environmental values. The provided impact plan (**EAR – Plan 3**) that the proposed impacts to mapped SRRC Environmental Significance Overlay Map values is limited to 223.8m2 of Regulated Vegetation and MLES Node Corridor area.	

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Performance Outcomes	Acceptable Outcomes	Applicant Comments	Assessment Officer
	managed in a manner to ensure long term viability of the matter of environmental significance. ***Note -*** *Development should ensure that the ecological connectivity between habitats (whether it is the same or different environmental value) is not affected to the extent that migration or normal movement of significant species between habitats or normal gene flow between populations is inhibited. Maintaining vegetation in patches of the greatest possible size and with the minimal edge-to-area ratio, for example, can help to achieve this.*		
PO3 Buffers are provided and maintained that protect the long term viability of Matters of State and/or Local Environmental Significance. ***Note*** *- Compliance with this Performance Outcome must be demonstrated by an Ecological Assessment Report prepared in accordance with* ***Planning Scheme Policy 5 - Ecological Assessments****.*	**AO3.1** Development provides and maintains a buffer to Matters of State and/or Local Environmental Significance, the width of which is supported by an evaluation of the *environmental values* prepared in accordance with **Planning Scheme Policy 5 - Ecological Assessments.** **OR** **AO3.2** Where involving a wetland or watercourse, development provides a buffer from an area identified as High Ecological Value Waters (Watercourse), High Ecological Value Waters (Wetland) and High Ecological Significance Wetlands which has a minimum width of: (1) 100m where the area is located outside an urban area; or (2) 50m where the area is located within an	**Development complies with PO3** An Ecological Assessment Report has been prepared and submitted with this application. The submitted EAR demonstrates that the ecological values of the site have been assessed and that the development has been located, designed, and operated to avoid and mitigate adverse impacts on environmental values to ensure their long term viability.	

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Performance Outcomes	Acceptable Outcomes	Applicant Comments	Assessment Officer
	urban area. ***Note*** *- Use the Queensland Wetlands Buffer Guideline http://wetlandinfo.ehp.qld.gov.au/resources/static/pdf/resources/reports/buffer-guide/wetland-buffer-guideline-14-04-13.pdf and/or the setback buffer distances for wetlands and watercourses http://dilgp.qld.gov.au/resources/policy/sdap/sdap-module-8-v-1-7.pdf under the native vegetation clearing (Module 8) of the State Development Assessment Provisions for guidance on buffers.*		
PO4 The ongoing management, operation and tenure of Matters of State and/or Local Environmental Significance, ensures impacts on biodiversity values and ecological processes are avoided or minimised.	**AO4.1** No ongoing impacts occur from the operation of the development. **OR** **AO4.2** Where impacts are ongoing: (1) they are mitigated by appropriate management, tenure or monitoring and reporting; and (2) relevant management plans and reporting are provided for assessment and approval. ***Note*** *- Appropriate management arrangements could include conservation tenures such as conservation covenants, conservation envelopes, nature refuges, protected areas or parks.*	**Development complies with PO4** An Ecological Assessment Report has been prepared and submitted with this application. The submitted EAR demonstrates that the ecological values of the site have been assessed and that the development has been located, designed, and operated to avoid and mitigate adverse impacts on environmental values. During construction activities, appropriate management and mitigation measures will be implemented to reduce potential impacts. These measures include preparation of a Vegetation Clearing and Fauna Management Plans, use of fauna spotter catchers during clearing, and proposed rehabilitation of the proposed conservation area corridor. Control measures will be adequately and regularly maintained throughout the construction phase and conducted according to best practice and relevant industry standards.	

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Performance Outcomes	Acceptable Outcomes	Applicant Comments	Assessment Officer
PO5 Disturbed or cleared or degraded areas are rehabilitated.	**AO5.1** Development provides for cleared, degraded or disturbed areas to be rehabilitated or allowed to regenerate naturally, where development is located in areas identified as: (1) Protected Areas; (2) Regulated Vegetation (as defined in the SPP); (3) mapped areas of Local Environmental Significance; or (4) other Matters of State and/or Local Environmental Significance identified within an Ecological Assessment Report as requiring rehabilitation.	**Development complies with PO5** An Ecological Assessment Report has been prepared and submitted with this application. The submitted EAR demonstrates that the ecological values of the site have been assessed and that the development has been located, designed, and operated to avoid and mitigate adverse impacts on environmental values. The area of retained habitat on the site is self-sustaining and does not require additional rehabilitation measures.	
	AO5.2 Development provides for *locally significant species* to be predominantly used in revegetation and landscape planting on the site.		
PO6 Where *habitat* or *vegetation* is proposed to be damaged, management strategies are implemented to ensure the protection and safety of wildlife and the protection of nearby *habitat* in areas identified as either Matters of State and/or Local Environmental Significance.	**AO6** Development ensures that: (1) the native fauna is safely relocated to an area of similar *habitat*; (2) the sequence of *habitat* disturbance ensures that fauna is not isolated from adjoining areas of *habitat*; (3) fauna relocation occurs immediately prior to *habitat* disturbance; (4) qualified fauna spotter catchers, licenced by the Queensland Parks and Wildlife Service, are present on the site at the time of the damage, to direct and undertake the removal and relocation of fauna;	**Development complies with AO6** A Vegetation Management Plan (VMP) and Fauna Management Plan (FMP) will be prepared at Operational Works stage. These plans will outline trees marked for removal; all civil works likely to impact existing vegetation; temporary and permanent exclusion and protection fencing; roles and responsibilities for site contractors, the developer and the consultant group, stockpiling, and site access locations; a clearing sequence plan showing the	

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Performance Outcomes	Acceptable Outcomes	Applicant Comments	Assessment Officer
	(5) where possible, damaged *habitat* and nesting sites are rehabilitated outside of development areas; (6) *vegetation* planned for retention is protected from damage, in accordance with AS4970. (7) *vegetation* is cleared in accordance with *Policy 6 of the Department of Environment and Heritage Protection's: Koala-Sensitive Design Guideline*.	commencement of clearing and direction of removal (this should be in conjunction with the Fauna Management Plan (FMP) to allow for the appropriate flushing of fauna towards safe havens and/or the application of an appropriate relocation program); links to weed management and revegetation proposals; and stock piling and reuse of cleared vegetation; management and mitigation measures – i.e. temporary use of fauna exclusion fencing; description of fauna spotter role, contacts and certification; and specific fauna management procedures for potential or known habitat trees.	
PO7 Development design and location provides for the safe movement of native fauna through the site.	**AO7** Where infrastructure crosses native fauna movement paths, the design of new development incorporates fauna friendly movement solutions. ***Editor's note*** *- Fauna friendly movement solutions developed in accordance with the Queensland Government Fauna Sensitive Road Design Manual Volume2: Preferred Practices; and the Department of Environment and Heritage Protection's: Koala-Sensitive Design Guideline are Council's preferred method for addressing this outcome.*	**Development complies with AO7** An Ecological Assessment Report has been prepared and submitted with this application. The submitted EAR demonstrates that the ecological values of the site have been assessed and that the development has been located, designed, and operated to avoid and mitigate adverse impacts on environmental values. Due to the design of the development, infrastructure will not cross fauna movement paths, as fauna movement will be limited to the adjacent areas outside the development site, or within the patch of retained habitat in the east of the site, that is not impacted by development.	

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Performance Outcomes	Acceptable Outcomes	Applicant Comments	Assessment Officer
Local Vegetation Clearing – Offsets			
PO8 Where significant residual impacts resulting from damage to *vegetation* in areas identified as Matters of Local Environmental Significance (and where not identified as Matters of State Environmental Significance) cannot be avoided or mitigated, the impacts are offset so that the *environmental value* proposed to be removed from the site is maintained. ***Note** - Compliance with this performance outcome is to be demonstrated by an Ecological Assessment Report.*	**AO8** No Acceptable Outcome is prescribed.	**Development complies with PO8** An Ecological Assessment Report has been prepared and submitted with this application. The submitted EAR demonstrates that the ecological values of the site have been assessed and that the development has been located, designed, and operated to avoid and mitigate adverse impacts on environmental values. The provided impact plan (**EAR – Plan 3**) demonstrates that the proposed impacts to mapped SRRC Environmental Significance Overlay Map values is limited to 223.8m2 of Regulated Vegetation and MLES Node Corridor area. Therefore, no significance residual impact to matters of environmental significance is proposed by this ROL, and no environmental offset is required.	
Water Quality - Waterways and Wetlands			
PO9 Development located in areas identified on **Environmental Significance Overlay Map - Wetlands and Waterways OM-04-D**:	**AO9.1** Development, including any associated filling or excavation (other than rehabilitation or restorative works) does not occur within a High Ecological Value Waters (Watercourse), High Ecological Value	**Development complies with AO9.1** The proposed development will not impact areas within a High Ecological Value Waters (Watercourse), High Ecological Value Waters (Wetland), High Ecological Significance	

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Performance Outcomes	Acceptable Outcomes	Applicant Comments	Assessment Officer
(1) protects or enhances habitat values (including maintenance of fish passage), ecological connectivity and other ecological functions and values; (2) protects water quality and aquatic conditions; (3) maintains natural micro-climatic conditions; (4) maintains natural hydrological processes; (5) prevents mass soil movement, gully erosion, rill erosion, sheet erosion, tunnel erosion, stream bank erosion, wind erosion, or scalding; and (6) avoids loss or modification of chemical, physical or biological properties or functions of soil.	Waters (Wetland), High Ecological Significance Wetlands and Waterways and Wetlands Buffer Area.	Wetlands and Waterways and Wetlands Buffer Area.	
	AO9.2 Development provides a buffer from an area identified as High Ecological Value Waters (Watercourse), High Ecological Value Waters (Wetland), and High Ecological Significance Wetlands which has a minimum width of: (1) 100m where the area is located outside an *urban area*; or (2) 50m where the area is located within an *urban area*; or (3) the buffer width of which is supported by an evaluation of the *environmental values* (identified by a *suitably qualified person*), including the function and threats. ***Note** - Use the Queensland Wetlands Buffer Guideline http://wetlandinfo.ehp.qld.gov.au/resources/static/pdf/resources/reports/buffer-guide/wetland-buffer-guideline-14-04-13.pdf and/or the setback buffer distances for wetlands and watercourses http://dilgp.qld.gov.au/resources/policy/sdap/sdap-module-8-v-1-7.pdf under the native vegetation clearing (Module 8) of the State Development Assessment Provisions for guidance on buffers.* ***Editor's note** - Buffer Areas to Matters of State Environmental Significance Waterways and Wetlands have been mapped based on 100m either side of the centre line of the receiving waters or 100m from wetlands.*	**Development complies with AO9.2** The proposed development will not impact areas within a High Ecological Value Waters (Watercourse), High Ecological Value Waters (Wetland), High Ecological Significance Wetlands and Waterways and Wetlands Buffer Area.	

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Performance Outcomes	Acceptable Outcomes	Applicant Comments	Assessment Officer
PO10 Development within a Watercourse Buffer Area (A, B or C) shown on **Environmental Significance Overlay Map - Local Watercourse OM-04-E** has no adverse impact on: (1) *native vegetation*; (2) terrestrial and aquatic habitat; (3) ecological functions; and (4) nature conservation functions	**AO10** The *development footprint* is not located within: (1) 10m from the high or outer bank of the watercourse located in Watercourse Buffer Area A; (2) 25m from the high or outer bank of the watercourse located in Watercourse Buffer Area B; (3) 50m from the high or outer bank of the watercourse located in Watercourse Buffer Area C.	**Development complies with AO10** The proposed development will not impact Watercourse Buffer Areas A,B or C.	
Water Quality - All Waterways and Wetlands and Local Watercourses			
PO11 Development appropriately manages stormwater quality to: (1) protect natural ecosystems; (2) protect water quality; (3) reduce runoff and peak flows; and (4) meet the water quality objectives and environmental values for Queensland waters. ***Note** - Development is designed to achieve the prescribed water quality objectives for Waterways in accordance with the Environmental Protection (Water) Policy 2009 for both State and Local wetlands, waterways, and watercourses.*	**AO11** A site-based stormwater quality management plan (SQMP) is prepared by a *suitably qualified person* that demonstrates that the stormwater quality treatment measures meet the design objectives identified in **Table 8.2.4.3.2 - Stormwater Management Design Objectives**.	**Development complies with AO11** Refer to documentation provided by Colliers as part of application package.	
PO12 Stormwater quantity management outcomes demonstrate no adverse	**AO12.1** A site-based stormwater quantity management plan (SQMP) is prepared by a	**Development complies with AO12.1** Refer to documentation provided by Colliers as part of application package.	

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Performance Outcomes	Acceptable Outcomes	Applicant Comments	Assessment Officer
impact on stormwater flooding or the drainage of properties external to the subject site.	*suitably qualified person*: (1) that demonstrates achievable stormwater quantity control measures for discharge during both the construction and operational phases of development; and (2) is designed in accordance with the *Queensland Urban Drainage Manual (QUDM)*.		
	AO12.2 Stormwater flows discharged from development are either within the capacity of the downstream drainage system such that non-worsening occurs, or are mitigated to pre-development characteristics.	**Development complies with AO12.2** Refer to documentation provided by Colliers as part of application package.	
PO13 Development does not discharge wastewater to a waterway or wetland off-site unless demonstrated to be best practice environmental management for that site and addresses the: (1) applicable water quality objectives for the receiving waters; and (2) the potential adverse impact on ecosystem health of receiving waters.	**AO13.1** Where the development involves the discharge of wastewater, a site-based Wastewater Management Plan is prepared by a *suitably qualified person* and addresses: (1) wastewater type; (2) climatic conditions; (3) water quality design objectives; and (4) best-practice environmental management.	**Development complies with AO13.1** Refer to documentation provided by Colliers as part of application package.	
Note - Development is designed to achieve the prescribed water quality objectives for Waterways in accordance with the Environmental Protection (Water) Policy 2009 for both State and Local wetlands, waterways, and watercourses.	**AO13.2** The site-based Wastewater Management Plan required in **AO13.1** provides that wastewater is managed in accordance with a waste management hierarchy that: (1) avoids wastewater discharges to	**Development complies with AO13.2** Refer to documentation provided by Colliers as part of application package.	

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	waterways, wetlands and watercourses; and (2) if wastewater discharge to waterways, wetlands or watercourses cannot practicably be avoided, minimises wastewater discharge to waterways, wetlands or watercourses by re-use, recycling, recovery and treatment for disposal to sewer, surface water and groundwater.		
PO14 The *environmental value* of receiving waters and the functionality of stormwater infrastructure are protected from the impacts of erosion, turbidity and sedimentation. ***Note** - Development is designed to achieve the prescribed water quality objectives for Waterways in accordance with the Environmental Protection (Water) Policy 2009 for both State and Local wetlands, waterways, and watercourses.*	**AO14** An erosion and sediment control plan is prepared by a *suitably qualified person* that achieves the design objectives in **Table 8.2.4.3.2 - Stormwater Management Design Objectives**.	**Development complies with AO14** ESCP to be prepared and implemented during construction in accordance with Council requirements.	
PO15 Development does not cause land degradation in areas identified as Matters of State Environmental Significance Waterways and Wetlands (identified on **Environmental Significance Overlay Map - Wetlands and Waterways OM-04-D**) or Matters of Local Environmental Significance Local Watercourses (identified on **Environmental Significance Overlay Map - Local**	**AO15** Development does not change the natural surface water or groundwater hydrologic regime, including through channelization, redirection or interruption of flow, where located in areas identified as: (1) Matters of State Environmental Significance Waterways and Wetlands (identified on **Environmental Significance Overlay Map - Wetlands and Waterways OM-04-D**); or (2) Matters of Local Environmental Significance Local Watercourses	**Development complies with AO15** The proposed development will not change the natural surface water or groundwater hydrological regime within areas identified as Matters of State Environmental Significance Waterways and Wetlands identified on *Environmental Significance Overlay Map - Wetlands and Waterways OM-04-D) or Matters of Local Environmental Significance Local Watercourses (identified on Environmental Significance Overlay Map - Local*	

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Performance Outcomes	Acceptable Outcomes	Applicant Comments	Assessment Officer
Watercourses OM-04-E), including: (1) mass soil movement, gully erosion, rill erosion, sheet erosion, tunnel erosion, stream bank erosion, wind erosion, or scalding; and (2) loss or modification of chemical, physical or biological properties or functions of soil.	(identified on **Environmental Significance Overlay Map - Local Watercourses OM-04-E**).	*Watercourses OM-04-E*).	
Reconfiguring a Lot			
PO16 Where the site is identified as having Matters of State and/or Local Environmental Significance the ecological function and biodiversity values of existing habitat are maintained by ensuring that reconfiguring a lot does not result in the: (1) fragmentation of habitat; (2) loss of habitat; and (3) loss of *environmental values*.	**AO16.1** Where required, areas that are mapped as containing Matters of State and/or Local Environmental Significance are dedicated as public open space for purposes consistent with the ecological values and functions of the area.	**N/A** The proposed development is not for Reconfiguring a Lot.	
	AO16.2 The design, location and shape of the development does not impact on Matters of State and/or Local Environmental Significance by: (1) ensuring the boundaries do not result in the clearing of Matters of State and/or Local Environmental Significance. (2) the shape size and location of lots and there boundaries minimise the impact of Matters of State and/or Local Environmental Significance. (3) dedicated Matters of State and/or Local Environmental Significance as conservation area in a private property conservation mechanism.	**N/A** The proposed development is not for Reconfiguring a Lot.	

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Performance Outcomes	Acceptable Outcomes	Applicant Comments	Assessment Officer
	AO16.3 Where required, open space is provided adjacent to waterway buffers with roads servicing linear parkland and lots located on the opposite side of the road.	**N/A** The proposed development is not for Reconfiguring a Lot.	
	AO16.4 Where required, open space for conservation purposes is consolidated with existing conservation areas to allow for a connected movement corridor.	**N/A** The proposed development is not for Reconfiguring a Lot.	
Development in a Vegetation Management Area on Environmental Significance Overlay Map - Vegetation Management Area OM-04-F			
PO17 Development in the Vegetation Management Area maximises the retention of *significant trees* to maintain and protect the visual amenity of the local area.	**AO17** Development is located in an existing cleared area.	**N/A** The subject site is not located within a Vegetation Management Area. Therefore, PO17 is not relevant.	
PO18 Development in the Vegetation Management Area maintains and enhances a predominantly forested character when viewed from a road.	**AO18** No Acceptable Outcome is prescribed.	**N/A** The subject site is not located within a Vegetation Management Area. Therefore, PO18 is not relevant.	
PO19 Development in the Vegetation Management Area protects and enhances *significant trees* on ridgelines which contributes to the character and visual amenity of the local area.	**AO19** No Acceptable Outcome is prescribed.	**N/A** The subject site is not located within a Vegetation Management Area. Therefore, PO19 is not relevant.	

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Performance Outcomes	Acceptable Outcomes	Applicant Comments	Assessment Officer
PO20 Development in the Vegetation Management Area avoids or minimises disturbance to *significant trees* on steep slopes to prevent erosion and slippage.	**AO20** No Acceptable Outcome is prescribed.	**N/A** The subject site is not located within a Vegetation Management Area. Therefore, PO20 is not relevant.	
PO21 Development in the Vegetation Management Area protects and enhances a *significant tree* which: (1) is of significant historical, cultural, educational and aesthetic value; or (2) is an uncommon species in the locality; or (3) positively contributes to the character and visual amenity of the local area; or (4) is of a great height, trunk circumference or canopy spread; or (5) contains a hollow or is a nesting tree for native fauna.	**AO21** No Acceptable Outcome is prescribed.	**N/A** The subject site is not located within a Vegetation Management Area. Therefore, PO21 is not relevant.	
PO22 Development in the Vegetation Management Area contributes towards the maintenance of biodiversity by providing for the linking of and expansion of areas of local and state biodiversity significance.	**AO22** Development retains and replants vegetation that: (1) links areas of forest; (2) provides for the expansion of area of forest; (3) where location would support areas of state biodiversity significance, provides for the reestablishment of forest; and (4) provides for such areas to be included in a conservation envelope or retained in public ownership.	**N/A** The subject site is not located within a Vegetation Management Area. Therefore, PO22 is not relevant.	

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■ Ecological Assessment Report

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Pacific Geotech
Consulting Geotechnical Engineers

GEOTECHNICAL REPORT: Slope Stability Assessment for Proposed Retirement Facility Development

Millers Glen, 27 Oakland Way

Beaudesert

Ingenia Communities

March 2025

PG-11215

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2nd April, 2025

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SLOPE STABILITY ASSESSMENT FOR PROPOSED RETIREMENT FACILITY DEVELOPMENT
MILLERS GLEN, 27 OAKLAND WAY, BEAUDESERT

Enclosed is a copy of our report for the above project dated March 2025. An electronic copy of the report has been issued.

Should you have any queries regarding this report, please do not hesitate to contact Leigh Bexley or Ben Elsmore at this office.

Yours faithfully,

B. ELSMORE (RPEQ 19656)

For and on behalf of
PACIFIC GEOTECH PTY LTD

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Appendices

Appendix A
Notes Relating to this Report

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1.0 INTRODUCTION

This report presents the results of a slope stability assessment for a proposed retirement facility Development at 27 Oakland Way, Beaudesert.

From the information supplied by the Client, it is understood that the proposed development is to comprise the construction of 324 Retirement Facility Lots with associated access roads, community facilities and bio-retention basins. Of the 324 retirement facility Lots, 113 are currently existing homes or Lots under construction which are located at the far southern end of the site and are excluded from this assessment.

Earthworks have previously been carried out in the far southern end of the site where the existing homes or Lots under construction are located. No major earthworks have been carried out at this stage within the remainder of the site forming the assessment area. Earthworks within the assessment area are expected to comprise minor cuts to fill to form flat pads for the proposed development.

Due to the presence of sloping terrain, a slope stability assessment of the development area is required.

The slope stability assessment was confined to a broadscale stability evaluation of the proposed development area, identifying any major geotechnical constraints or issues which would impact on the proposed development. A Landslide Risk Rating has also been assigned to the proposed development area and recommendations to maintain or improve stability have been provided.

The slope stability assessment methodology has been carried out in accordance with Appendix C of Australian Geomechanics Society (AGS) "Practice Note Guidelines for Landslide Risk Management ", March, 2007. This approach for risk assessment is qualitative or semi-quantitative, suiting sites where historic instability data are not available and combines the likelihood of an instability event with the consequences to property to derive an assessment of risk. The process is inherently subjective.

A geotechnical investigation for the proposed subdivision development including a site classification in accordance with AS.2870 “Residential Slabs and Footings” was previously carried out by Pacific Geotech as part of the original investigation and is beyond the scope of this investigation.

This report particularly excludes an assessment of any proposed earthworks at the site including cut/fill batters or retaining walls which may be constructed at the site as part of the proposed development. This can be provided at a later stage when earthworks designs have been finalised.

A plan of the proposed subdivision development is shown below.

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PROPOSED DEVELOPMENT

2.0 METHODOLOGY

A desk study of the Moreton 1:500,000 Geological Map as well as aerial photographs, contour plans and design drawings were initially carried out to identify the site geology, sloping terrain and areas of potential instability at the site.

Following the desk study, a walkover survey of the site was performed by a Principal Engineering Geologist from Pacific Geotech. This involved mapping and measuring features of significance to slope stability such as slope angles and direction, erosion features, surface and subsurface drainage, wet zones, vegetation density, cut and fill areas and the presence of any irregular surface features such as curved trees, slips, slumps, debris slides or any associated features.

To assess the subsurface conditions at the site, twenty (20) boreholes (BH01 to BH20) were drilled at the site as part of a previous geotechnical investigation by Pacific Geotech. The boreholes were drilled using a combination of a Digga PDT 1 drilling rig and a Compac 018 drilling rig and 100mm solid flight augers across the proposed development areas and extended to depths ranging between 2.0m and 3.0m. Dynamic Cone Penetrometer (DCP) testing was conducted adjacent to the boreholes.

The results of the borehole drilling and DCP testing were used to assess the subsurface profiles and to assist with the slope stability assessment.

The soil classification descriptions and field tests were carried out in general accordance with Australian Standards.

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AS 1726	Geotechnical Site Investigations
AS 1289	Methods of Testing Soils for Engineering Purposes

Site photographs are shown in the site description below. The logs of the boreholes including the DCP test results are presented in Appendix B. The Guidelines for Hillside Construction are presented in Appendix C. A Site Plan showing the building footprint and location of the boreholes is attached in Appendix D to this report.

3.0 SITE DESCRIPTION

The site is located at Millers Glen, 27 Oakland Way, Beaudesert with the proposed development area for the proposed new subdivision development forming an L-Shaped area being approximately 550m long north to south and ranging between 150m and 450m in width, east to west.

The proposed development is to be located within undulating mild sloping terrain ranging between approximately 5^{o} and 15^{o} in slope gradient, typically sloping downwards towards the south. Several drainage features are also located throughout the mild sloping terrain and are proposed to be filled as part of the proposed development. These drainage features are typically wide and open with mild sloping banks which display no signs of major instability.

An existing manmade drainage feature is also evident aligning in an east to west lineation across the southern end of the proposed development area. The manmade drainage feature typically divides the existing development to the south from the proposed development to the north. This existing manmade drainage feature collects surface water from the proposed development area and directs the water away from the existing development area to the south. This drainage features display evidence of erosion within the banks. The manmade drainage feature is proposed to be filled as part of the proposed development.

Drainage at the site was considered to be fair with most surface water expected to flow as sheet flows over the surface and into the existing drainage features as well as the manmade drainage feature aligning at the southern boundary of the proposed development area.

A stockpile of fill material was evident within the cleared southwestern corner of the proposed development area adjacent to Oakland Way. The fill stockpile is approximately 100m long and 10m to 15m wide and approximately 2m to 3m high.

The proposed development area supports a cover of sparse native tree vegetation with localised densely vegetated areas as well as cleared areas. The vegetation has been cleared along the western boundary of the proposed development area in the south western corner adjacent to Oaklands Way.

Refer following aerial and site photographs for typical site conditions.

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AERIAL IMAGE

SITE PHOTOGRAPHS

Plate 1 – Mild sloping terrain within proposed development area at far northern end of site.

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Plate 2 – Back slant on tree within mild sloping terrain indicating minor creep movement at the surface.

Plate 3 – Gully comprising mild sloping terrain with no major instability.

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Plate 4 – Wide open drainage gully within mild sloping terrain.

Plate 5 – Man made drainage feature with existing homes/Lots in distance.

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Plate 6 – Man made drainage feature dividing the proposed development area on right from the existing development area on left. Bank displays evidence of erosion.

Plate 7 – Stockpile of fill material adjacent to Oaklands Way.

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4.0 GEOTECHNICAL MODEL

4.1 Regional Geology

The regional geology of the area forms part of the Walloon Coal Measures which is thought to have been formed in the Jurassic Geological Time Period. It comprises shale, siltstone, sandstone, coal, mudstone and limestone (Morton Geology 1:500,000 Geological Survey of Queensland, 1980).

4.2 Local Subsurface Geology

The subsurface profile encountered in the boreholes typically consisted of surficial granular/clay fill material and minor surficial sand and clay topsoil material at the ground surface, overlying natural stiff to hard clays of medium and high plasticity extending to the borehole termination depths.

The exception was boreholes BH06 and BH07 only, which encountered extremely weathered (XW) and highly weathered (HW) siltstone above the natural clay which extended to the borehole termination depths.

Table 1 presents a summary of the encountered subsurface profile. Detailed borehole record sheets are appended to this report.

TABLE 1 - SUBSURFACE PROFILE SUMMARY

BH No.	FILL/TOPSOIL	NATURAL			BH TD
		Clay		Siltstone	
		Stiff	Very Stiff/Hard	XW/HW	
BH01	0.0-0.7	NE	0.7-TD	NE	3.0
BH02	0.0-0.2	1.6-TD	0.2-1.6	NE	3.0
BH03	0.0-0.05	NE	0.05-TD	NE	3.0
BH04	0.0-0.07	NE	0.07-TD	NE	3.0
BH05	0.0-0.1	NE	0.1-TD	NE	3.0
BH06	0.0-0.1	NE	0.1-1.2	1.2-TD	2.0*
BH07	0.0-0.1	NE	0.1-2.3	2.3-TD	3.0
BH08	0.0-0.5	0.5-1.0	1.0-TD	NE	3.0
BH09	0.0-0.1	NE	0.1-TD	NE	3.0
BH10	0.0-0.1	0.4-0.9	0.1-0.4 0.9-TD	NE	3.0
BH11	0.0-0.05	NE	0.05-TD	NE	3.0
BH12	0.0-0.1	0.1-0.9	0.9-TD	NE	3.0
BH13	0.0-0.1	NE	0.1-TD	NE	3.0
BH14	0.0-0.1	NE	0.1-TD	NE	3.0
BH15	0.0-0.1	NE	0.1-TD	NE	3.0
BH16	0.0-0.1	NE	0.1-TD	NE	3.0
BH17	0.0-0.1	0.1-1.1	1.1-TD	NE	3.0
BH18	0.0-0.1	0.1-1.8	1.8-TD	NE	3.0
BH19	0.0-0.1	NE	0.1-TD	NE	3.0
BH20	0.0-0.2	NE	0.2-TD[3)]	NE	3.0

Notes:
1. All depths in metres below ground level at time of investigation.
2. NE - Not Encountered; TD - Termination Depth; *- Drilling refusal.
3. Gravel layer encountered from 2.1m to 2.3m.

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Subsurface seepage was encountered in boreholes BH01 and BH15 at depths of 0.3m (BH01) and 0.7m (BH15) at the time of drilling. Seepage could be expected through the surficial soils and along the fill/natural soil and natural soil/rock interface following periods of rainfall.

5.0 SLOPE STABILITY ASSESSMENT

There is no evidence of existing or recent past slope instability involving small scale or large scale movements of significant quantities of soil or rock in a short duration event such as a slip or landslide within the proposed development area. There is, however, evidence of creep movement at the surface as well as some natural and manmade drainage features throughout the natural mild sloping terrain.

Slow movement or creep of the surficial soil appears to be occurring in localised areas of the mild sloping terrain at the site. The creep movement appears to involve movement within the surficial soils (i.e. estimated to be approximately 0.4m) and is evident by the presence of back slants of trees throughout the site. This creep movement is mainly evident where the sloping terrain exceeds 10^{o} in slope angle. This movement of the surficial soil is not expected to impact on the proposed development providing the recommendations outlined in this report are followed and the foundations suitably designed taking this into consideration.

Several drainage features are evident throughout the natural mild sloping terrain within the proposed development area at the site. There is also a manmade drainage feature evident aligning in an east to west lineation across the southern end of the proposed development area. The natural and manmade drainage features are proposed to be filled as part of the proposed development. Recommendations for filling within these drainage features are outlined in this report.

The likelihood of slope movement in the form of deep seated failures through the natural soils and rock mass within the proposed development area is considered to be low, due to the estimated friction angle of the natural soil and rock being higher than the angle of the slope.

Due to the presence of mild sloping terrain, creep movement and drainage features, precautions must be taken during development in relation to earthworks, foundations and drainage to reduce the potential for instability and erosion. This includes implementing and maintaining properly designed and constructed drainage structures upslope and around the proposed development areas and extending the foundations into the natural clay soil or bedrock.

5.1 Landslide Hazard Risk Rating

The slope stability assessment methodology adopted for this assessment is in accordance with the Australian Geomechanics Society (AGS) “Practice Note Guidelines For Landslide Risk Management” March 2007. These guidelines have broadly been applied to the proposed development area in its existing condition.

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On this basis, it can be expected that some areas of the proposed development area may contain higher Levels of Risk to Property than the overall assigned rating for the proposed development area (ie drainage features which are proposed to be filled).

The subsurface conditions at the site have been obtained from borehole drilling at the site.

The proposed development area has been assigned a broadscale Landslide Risk Rating based on:-

- Ground surface slope angle and shape
- Geology
- Typical depth of soil cover
- Presence of erosion features, uncontrolled fill, cuts, landslips, drainage features or surface irregularities
- Seepage and drainage conditions as assessed during the walkover survey carried out for this study

The results of the AGS slope stability assessment is presented in Table 2 below.

TABLE 2 – LANDSLIDE HAZARD RISK RATING

Proposed Development Area	Likelihood	Consequences to Property	Assessed Hazard Risk Rating	Required Works to Maintain Risk Rating to Low
27 Oaklands Way	Unlikely	Minor	Low	Sections 7.0 to 9.0 as reported herein

The risk to property can be assessed as "Low" under present conditions for the proposed development area providing the recommendations outlined in Sections 7.0 to 9.0 below are followed. This includes recommendations for development within the drainage features which are proposed to be filled at the site.

5.2 Implications of Hazard Classifications

The risk level implications of the Risk to Property are presented in the AGS publication "Practice Note Guidelines for Landslide Risk Management" March 2007 and reproduced in Table 3.

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TABLE 3 – RISK LEVEL IMPLICATIONS (AGS PUBLICATION)

Risk Level	Implications
VH (Very High)	Unacceptable without treatment. Extensive detailed investigation and research, planning and implementation of treatment options essential to reduce risk to Low.
H (High)	Unacceptable without treatment. Detailed investigation, planning and implementation of treatment options required to reduce risk to Low.
M (Moderate)	May be tolerated in certain circumstances but requires investigation, planning and implementation of treatment options to reduce risk to Low.
L (Low)	Usually acceptable to regulators. Where treatment has been required to reduce the risk to this level, on going maintenance is required.
VL (Very Low)	Acceptable. Managed by normal slope maintenance procedures.

6.0 GEOTECHNICAL ISSUES OR CONSTRAINTS FOR DEVELOPMENT

The site in its existing condition contains several minor geotechnical issues or constraints which need to be addressed prior to the proposed development.

These main geotechnical issues which must be addressed prior to development are (but not restricted to) as follows:-

- Mild sloping terrain.
- Natural and manmade drainage features which are to be filled.
- Erosion within cut batters along manmade drainage features as well as the base of the natural drainage features which are to be filled.
- The presence of stockpiles of uncontrolled fill.
- Drainage issues.

Recommendations to overcome or manage these geotechnical issues and to maintain the Landslide Risk Rating to a level of “Low” or better are described in the following Sections.

7.0 RECOMMENDATIONS TO MAINTAIN LANDSLIDE RISK RATING TO LOW

The following risk maintenance strategies are required to maintain the Level of Risk to Property to a “Low” level of risk.

- In areas where natural and manmade drainage features are to be filled, all wet loose/soft material must be removed from the base of the drainage feature to expose a competent base. Subsurface drainage can then be installed at the base of the fills, if required (to be determined onsite by Pacific Geotech) and the drainage feature filled under Level 1 supervision. All surface water from upslope must be intercepted and redirected around the lots and into dedicated drainage easements. The road drainage system may be appropriate for most areas.
- In areas where the sloping terrain is less than 10^{o} in slope angle, a high level foundation system can be adopted for the proposed residential development

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founding into controlled structural fill, natural stiff or better clay or weathered rock.

- In areas where the sloping terrain exceeds 10° in slope angle or uncontrolled filling is evident, a deep foundation system will need to be adopted extending through the existing fill material to socket a minimum 2m into the natural stiff or better clay or weathered rock or as recommended by Pacific Geotech onsite.
- No additional earthworks should be carried out at the site unless the proposed design is approved by Pacific Geotech as satisfactory. Minor filling may be carried out behind structurally designed retaining walls subject to the detailed design constraints of the site and structure.
- Upslope surficial water flows should be intercepted and directed away from the buildings as well as any future cut and fill batters and retaining walls limiting the ingress of water into the fill platforms.
- All building pad runoff and roof water should be discharged into stormwater systems via a system of pipe conduits clear of the site to minimise water infiltration into the slopes and fill platforms. Alternatively, roof water can be discharged into roof water tanks for storage.
- Water storage tanks must be located to the side or downslope of the proposed development areas with the over flow water piped into the stormwater system or dedicated stormwater management feature downslope of the development. Uncontrolled discharge onto the site is not permitted.
- The recommendations outlined in Sections 7.0 to 9.0 of this report must be followed which includes recommendations for foundations, drainage, earthworks and general recommendations for residential development.

8.0 EARTHWORKS RECOMMENDATIONS

All cuts and filling should be suitably retained with structurally designed retaining walls or battered to appropriate angles provided below. All proposed retaining walls should be assessed by Pacific Geotech as part of the design process.

It is recommended that the following site preparation and earthworks procedures be carried out as part of the earthworks procedures during development.

- All earthworks operations should be carried out under Pacific Geotech's supervision and in general accordance with AS 3798-2007 "Guidelines on Earthworks for Commercial and Residential Developments".
- No additional filling or development should take place within any surface irregularities such as slips, washouts, hummocky terrain, seepage zones, uncontrolled fill or erosion features without detailed assessment by Pacific Geotech. If filling or development is to occur in these areas, surface irregularities must be removed prior to development and appropriate drainage provisions must be implemented as described in Section 7.0 above.

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- No major additional filling should be carried out, however if minor filling is required all trees, grass, topsoil, uncontrolled fill, soils containing deleterious matter and surface irregularities are to be removed from the existing ground surface.
- Following stripping, the stripped surface should be proof rolled under Pacific Geotech's supervision, to identify areas of weak surficial soils and to compact the upper level material.
- Where the ground surface slopes, the foundation is benched prior to filling and the fill supported by engineered retaining walls or battered to a slope angle of no steeper than 2(H):1(V).
- The majority of the soils on site will be suitable for re-use as structural fill, provided the material is free of organic matter, cobbles, boulders and deleterious material. It is likely that the soils will require moisture conditioning to bring them to optimum moisture content. If the clays are overly moist, difficulty in achieving compaction of the materials will be encountered and moisture conditioning will be required.
- Imported fill should be of fair to good quality with a minimum Soaked CBR value of 10%, a maximum lss=1.0% and a maximum particle size of 75mm.
- All filling should be undertaken in layer thicknesses of approximately 250mm (or as appropriate for the compaction equipment being used). Fill should be compacted to at least 95% Standard Maximum Dry Density at a placement moisture content of +/-2% of Optimum Moisture Content (OMC) and be "Controlled Fill" in accordance with A.S. 2870 (Clause 6.4.2 (a)) – "Residential Slabs and Footings" and A.S. 3798.
- Natural soil batters should be battered to an angle of no steeper than 2(H):1(V) or 26o whilst cut batters in weathered rock should be no steeper than 1(H):1(V) and incorporating a 1.0m wide flat bench at every 2.5m height interval (unless otherwise assessed by Pacific Geotech).
- Fill slopes should be over-filled and trimmed back to ensure fill compaction of the batter is achieved.
- Batters are to be stabilised using techniques such as vegetation and mulching or similar to minimise erosion. Properly maintained vegetation should reduce the occurrence of surface erosion by impingent rainfall.
- If filling is to be carried out, field density testing should be undertaken to check the standard of compaction achieved and the placement moisture content. The frequency and extent of testing should be as per guidelines in AS.3798-2007.
- Trafficability across the site at the time of the investigation was assessed to be fair. If significant rainfall events occur during the earthworks operation, difficulties could be experienced in trafficking the exposed surface. Site trafficability may be improved by constructing haulage tracks into and on the site or placing rock along high traffic areas.

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- On the basis of the field investigation undertaken, excavations to the borehole termination depths should be able to be achieved with a small to medium size Dozer (say Cat D4) or a medium excavator (say >12tonne).
- Excavations into the slope must not undermine the stability of the upslope or adjacent structures. Ie. all footings from adjacent buildings or structures must be founded at least 200mm below a line drawn up at 45 degrees from the base of any excavation. This should be confirmed by Pacific Geotech during the bulk earthworks.

9.0 GENERAL RECOMMENDATIONS FOR DEVELOPMENT

To maintain the long term performance of the proposed development, good management of the soil conditions and the development is vital throughout the life of the development.

The following are some specific comments with respect to site management and general development at the site:

- The ground surface around the perimeter of the buildings should slope away from the structure and fall to the stormwater system. Water should not be allowed to pond adjacent to the building.
- Founding soils should not be allowed to become saturated. Saturation of the on-site material will result in an increase in potential ground surface movements.
- Service trenches under the buildings should be kept to a minimum.
- Footings should be poured immediately after excavation. If footings cannot be poured on the same day as excavation, a blinding layer of 50mm thickness is recommended.
- Trees, garden beds and other vegetation should be planted at a distance at least equivalent to three quarters of their mature height away from the structures. This will assist in minimising shrinkage movements in the potentially expansive onsite soils.
- All permanent batters exceeding 1.0m must be supported by engineered retaining walls incorporating drainage or be battered at appropriate angles.
- All retaining walls must be individually designed to have a factor of safety of at least 1.5 with respect to internal stability, including sliding and overturning. This is the responsibility of the retaining wall designer. The global stability of the wall profiles should be assessed by Pacific Geotech when the wall profile has been determined.
- When earthworks have been finalised, a global stability assessment must be carried out for retaining walls or batters to confirm that a long term factor of safety in excess of 1.5 against geotechnical instability can be achieved for all proposed earthworks including all cut and fill batters and retaining structures.

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- The residential development must be designed, constructed and maintained in accordance with the attached Guidelines for Hillside Construction and the development examples of good and poor hillside practice.
- Revegetation must commence immediately after the completion of any potential earthworks to minimise future erosion.

10.0 LIMITATIONS

We have prepared this report for the Slope Stability Assessment for Proposed Retirement Facility Development at Millers Glen, 27 Oakland Way, Beaudesert. The report is provided for the exclusive use of Ingenia Communities, for this project only and for the purposes outlined in the report. It should not be used by, or relied upon, for other projects on the same or different sites or by a third party. In preparing this report, we have relied upon information provided by the client or their agents.

The results are indicative of the subsurface conditions on site only at the specific testing locations. Subsurface conditions can change between test locations and the design and construction should take the spacing of the testing and testing methods adopted and the potential for variation between the test locations.

It is recommended that Pacific Geotech be engaged to provide advice and ensure the development is undertaken in accordance with the assumptions made in writing this report.

This is not to reduce the level of responsibility accepted by Pacific Geotech, but rather to ensure that the parties who may rely on the information contained in this report are aware of the responsibilities they assume in doing so.

L. BEXLEY **B. ELSMORE (RPEQ 19656)**

For and on behalf of
PACIFIC GEOTECH PTY LTD

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APPENDICES

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APPENDIX A

NOTES RELATING TO THIS REPORT

Pacific Geotech
Consulting Geotechnical Engineers
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Pacific Geotech
Consulting Geotechnical Engineers

Notes Relating to this Report

Reports

The report has been prepared by qualified personnel, is based on the information obtained from field and laboratory testing, and has been undertaken to current engineering standards of interpretation and analysis.

Every care has been taken with the report as it relates to interpretation of subsurface conditions, discussion of geotechnical conditions and contains recommendations or suggestions for design and construction. However, unexpected variations in ground conditions will occur. The potential for this will depend partly on testing, spacing and sampling frequency.

If variations are identified, Pacific Geotech would be pleased to assist with additional investigations or advice to resolve the matter.

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This report is the property of Pacific Geotech Pty Ltd. The report may only be used for the purpose for which it was commissioned and in accordance with the Terms of Engagement of proposal. Unauthorised use of this report is prohibited.

Borehole and Test Pit Logs

The borehole and test pit logs presented in this report are an engineering and/or geological interpretation of the subsurface conditions, and their reliability will depend to some extent on frequency of sampling and the method of drilling or excavation.

Interpretation of the information and its application to design and construction should therefore take into account the spacing of boreholes or pits, the frequency of sampling, and the possibility of other than 'straight line' variations between the test locations.

Description and Classification Methods

The description and classification of soils and rocks used in this report are based on AS 1726.

Soil types are described according to the predominating particle size and behaviour as set out in the attached Unified Soil Classification Table qualified by the percent of other particles present (e.g. sandy clay) as set out below:

Soil Classification	Particle Size
Clay	less than 0.002mm
Silty	0.002 to 0.06mm
Sand	0.06 to 2mm
Gravel	2 to 60mm

Non-cohesive soils are classified on the basis of relative density which can be correlated from the results of Standard Penetration Test (SPT) as below:

Relative Density	SPT 'N' Value (blows/300mm)
Very Loose	less than 4
Loose	4 – 10
Medium Dense	10 – 30
Dense	30 – 50
Very Dense	greater than 50

Cohesive soils are classified on the basis of strength (consistency) and can be quantified by the Pocket Penetrometer test, Vane Shear test, laboratory testing or engineering examination. The strength terms are defined as follows:

Classification	Unconfined Compressive Strength kPa
Very Soft	less than 25
Soft	25 - 50
Firm	50 – 100
Stiff	100 – 200
Very Stiff	200 - 400
Hard	greater than 400
Friable	strength not attainable – soil crumbles

Rock types are classified by their geological names, together with descriptive terms regarding weathering, strength, defects, etc.

Planarity	
CU	Curved
DIS	Discontinuous
IR	Irregular
PR	Planar
ST	Stepped
UN	Undulose

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Roughness	
POL	Polished
RJ	Rough
S	Smooth
SL	Slickened
VR	Very Rough

Defects	Type
BP	Bedding Parting
CL	Cleavage
CO	Contact
CS	Crushed Seam
CZ	Crushed Zone
DB	Drilling Break
DK	Dyke
DL	Drill Lift
DZ	Decomposed Zone
FC	Fracture
FL	Foliation
FZ	Fracture Zone
HB	Handling Break
IS	Infilled Seam
JT	Joint
H	Schistosity
SI	Sill
SM	Seam
SS	Shear Seam
SZ	Shear Zone
VN	Vein
VO	Void

Sampling

Sampling is undertaken during the fieldwork to allow examination of the soil or rock and to allow laboratory testing to be undertaken.

Disturbed samples taken during drilling provide information on plasticity, grain size, colour, moisture content and minor constituents. Bulk samples are similar but of greater volume required for some test procedures such as CBR testing.

Undisturbed samples are taken by pushing a thin-walled sample tube, usually 50mm diameter (known as a U50), into the soil and collecting a sample of the soil contained in a relatively undisturbed state. Such samples yield information on structure and strength, and are necessary for laboratory determination of shear strength and compressibility. Undisturbed sampling is generally effective only in cohesive soils.

Details of the type and method of sampling used are given on the attached logs.

Investigation Methods

Test Pits: These are typically undertaken with a backhoe or a tracked excavator, allowing examination of the insitu soils. Limitations of test pits are the problems associated with collapse of the pits, disturbance and difficulty of reinstatement and the consequent effects on close-by structures. Care must be taken if construction is to be carried out near test pit locations to either properly recompact the backfill during construction or to design and construct the structure so as not to be adversely affected by poorly compacted backfill at the test pit location.

Hand Auger Drilling: A borehole of typical diameter of between 50mm to 75mm advance manually operated equipment. Premature refusal of the hand augers can occur on a variety of materials such as fill, gravel, hard clays and collapse of the borehole (typically in non-cohesive soil).

Continuous Spiral flight Augers: The borehole is advanced using 65mm to 100mm diameter continuous spiral flight augers, which are withdrawn at intervals to allow sampling and insitu testing. Augers of up to 300mm in diameter are used to recover larger volumes of sample. Samples are returned to the surface by the flights or may be collected after withdrawal of the auger flights. Samples can be disturbed and layers may become mixed. Augering below the groundwater table can be less reliable than augering above the water table.

A Tungsten Carbide (TC) bit for auger drilling into rock can be used to indicate rock strength and continuity by variation in drilling resistance and from examination of recovered rock fragments but provides only an indication of the likely rock strength. Where rock strengths may have a significant impact on construction feasibility or costs, then further investigation by means of cored boreholes may be warranted.

Wash Boring: The borehole is advanced by a bit attached to the end of a hollow rod string, with water being pumped down the drill rods and returned up the annulus of the borehole, carrying the drill cuttings. Changes in stratification can be determined from the return, together with information from "feel" and rate of penetration.

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The borehole can be stabilised through the use of drilling mud as a circulating fluid. The term 'mud' encompasses a range of products ranging from bentonite to polymers such as Revert or Biogel.

Continuous Core Drilling: A continuous core sample is obtained using a diamond tipped core barrel. This technique provides a reliable (but relatively expensive) method of investigation. In rocks, an NMLC triple tube core barrel is used, which gives a core of about 50mm diameter. The length of core recovered is compared to the length drilled and any length not recovered is shown as CORE LOSS.

Standard Penetration Tests: Standard Penetration Tests (SPT) are used mainly in non-cohesive soils, but can also be used in cohesive soils as a means of indicating density or strength and also of obtaining a disturbed sample. The test procedure is described in Australian Standard 1289, "Methods of Testing Soils for Engineering Purposed", Test 6.3.1.

The test is carried out in a borehole by driving a 50mm diameter split sample tube with a tapered shoe, under the impact of a 63kg hammer, with a free fall of 760mm. The sample is driven in three successive 150mm increments and the 'N' value is taken as the number of blows for the last 300mm. In dense soils, hard clays or weak rock, the full 450mm penetration may not be practicable and the test is discontinued.

The test results are reported in the following form:

- In the case where full penetration is obtained with successive blow counts for each 150mm of , say, 4, 6 and 7 blows, as
  N = 13
  4, 6, 7
- In a case where the test is discontinued short of full penetration, say after 15 blows for the first 150mm and 30 blows for the next 40mm, as
  N > 30
  15, 30/40mm

Cone Penetrometer Testing (CPT): Cone Penetrometer Testing with or without pore pressure measurement (CPTu) is carried out using a Cone Penetrometer in general accordance with AS 1289 6.5.1, 1999.

In the tests, a 36mm diameter rod with a conical tip is pushed continuously into the soil, the reaction being provided by a hydraulic ram system. Measurements are made of the end bearing resistance on the cone and the fractional resistance on a separate 135mm long sleeve, immediately behind the cone. Pore Pressure is recovered through a pore ring located either within, or more usually immediately behind the cone/tip.

As penetration occurs (at a rate of approximately 20mm per second) and data is recorded every 20mm of penetration, the results are presented graphically.

The information provided on the plot comprises:

- Cone resistance – expressed in mPa
- Sleeve friction – expressed in kPa
- Friction ratio – the ratio of sleeve friction to cone resistance expressed as a percentage.
- Pore pressure in kPa
- Tilt of probe (in degrees).

The ratios of the sleeve resistance to cone resistance will vary with the type of soil encountered, with higher relative friction in clays than in sands. Friction ratios of 1% to 2% are commonly encountered in sands and rising to 2% to as high as 8%, and higher in organic soils. Soil descriptions based on cone resistance and friction ratios are only inferred and must not be considered as exact.

Stratification can be inferred from the cone and friction traces and from experience and information from nearby boreholes, etc. Where shown, this information is presented for general guidance, but must be regarded as interpretive.

Dynamic Cone Penetrometers:

Dynamic Cone Penetrometer (DCP) tests are carried out by driving a 16mm diameter rod into the ground with a 9kg sliding hammer dropping 510mm and counting the blows for successive 100mm increments of penetration.

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Logs

The borehole or test pit logs are an interpretation of the subsurface conditions, and their reliability will depend to some extent on the frequency of sampling and the method of drilling or excavation.

Interpretation of the information shown on the logs, and its application to design and construction, should therefore take into account the spacing of the boreholes or test pits, the method of drilling or excavation, the frequency of sampling and testing and the possibility of other than "straight line" variations between the boreholes or test pits. Subsurface conditions between boreholes or test pits may vary significantly from conditions encountered at the borehole or test pit locations.

Groundwater

Where groundwater levels are measured in boreholes, there are several potential problems:

- Although groundwater may be present, in low permeability soils it may enter the hole slowly or perhaps not at all during the time it is left open.
- A localised perched water table may lead to an erroneous indication of the true water table.
- Water table levels will vary from time to time with seasons or recent weather changes and may not be the same at the time of construction.
- The use of water or mud as a drilling fluid will mask any groundwater inflow. Water has to be flushed from the hole and drilling mud must be washed out of the hole or 'reverted' chemically if water observations are to be made.

More reliable measurements can be made by installing standpipes from which ongoing monitoring can be undertaken.

Fill

The present of fill materials can often be determined only by the inclusion of foreign objects (e.g. bricks, steel ,etc.) or by distinctly unusual colour, texture or fabric. Identification of the extent of fill materials will also depend on investigation methods and frequency. Where natural soils similar to those at the site are used for fill, it may be difficult to reliably determine the extent of the fill.

Laboratory Testing

Laboratory testing is carried out in general accordance with Australian Standard 1289 'Methods of Testing Soil for Engineering Purposes'.

Site Anomalies

In the event that conditions encountered on site during construction appear to vary from those which were expected from the information contained in the report, the company requests that it immediately be notified. Most problems are much more readily resolved when conditions are exposed than at some later stage.

Review of Design

Where major civil or structural developments are proposed or where only a limited investigation has been completed or where the geotechnical conditions/constraints are quite complex, it is prudent to have a design review.

Site Inspection

Pacific Geotech would be pleased to provide engineering inspection services for geotechnical aspects of work to which this report is related:

Requirements could range from:

i. a site visit to confirm that conditions exposed are no worse than those interpreted, to
ii. a visit to assist the contractor or other site personnel in identifying various soil/rock types such as appropriate footing or pier founding depths, or
iii. full time engineering present on site.

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APPENDIX B

BOREHOLE RECORD SHEETS

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Borehole No.
BH01
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Project No.: PG-11215

Client:	Ingenia Communities	Commenced:	12/03/2024
Project Name:	Proposed Retirement Facility Development	Logged By:	EA
Hole Location:	Millers Glen, 27 Oaklands Way, Beaudesert	Checked By:	
Hole Position:			
Drill Model and Mounting:	Digga PDT 1	RL Surface:	No survey
Hole Diameter:		Datum:	AHD Operator: EA

Drilling Information							Soil Description			DCP
Method	Casing	Water	Samples Tests Remarks	Recovery	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description Fraction, Colour, Structure, Bedding, Plasticity, Sensitivity, Additional	DCP TEST (AS 1289.6.3.2-1997) Blows per 100 mm
AD/T						0.30		CI	FILL Sandy CLAY (CI) Stiff, medium plasticity, grey-brown, fine to medium grained sand, trace fine sized gravel, moist (with organics).	
						0.5		CI	FILL Sandy CLAY (CI) Firm to stiff, medium plasticity, grey, fine to medium grained sand, trace fine sized gravel, moist (seepage noted).	
						0.70		CI	NATURAL Sandy CLAY (CI) Very stiff, medium plasticity, brown mottled dark grey, fine to medium grained sand, moist.	
						1.00		CI	Sandy CLAY (CI) Hard, medium plasticity, grey mottled light brown light orange brown, fine to medium grained sand, moist.	
						1.0				
						1.5				
						1.60		CI	Sandy CLAY (CI) Hard, medium plasticity, grey mottled grey-brown, fine to medium grained sand, moist.	
						2.0				
						2.10		CI	Sandy CLAY (CI) Hard, medium plasticity, grey, fine grained sand, moist.	
						2.5				
						3.00			Hole Terminated at 3.00 m	

0 5 10 15 20 25

Method
AS - Auger
RR - Rock Roller
WB - Washbore

Support
C - Casing

Water
Level (Date)
Inflow

Samples and Tests
U - Undisturbed Sample
D - Disturbed Sample
SPT - Standard Penetration Test
B - Bulk Sample

Classification Symbols and Soil Descriptions
Based on Unified Soil Classification System

Remarks
1. Seepage noted at 0.30m.

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Borehole No.
BH02
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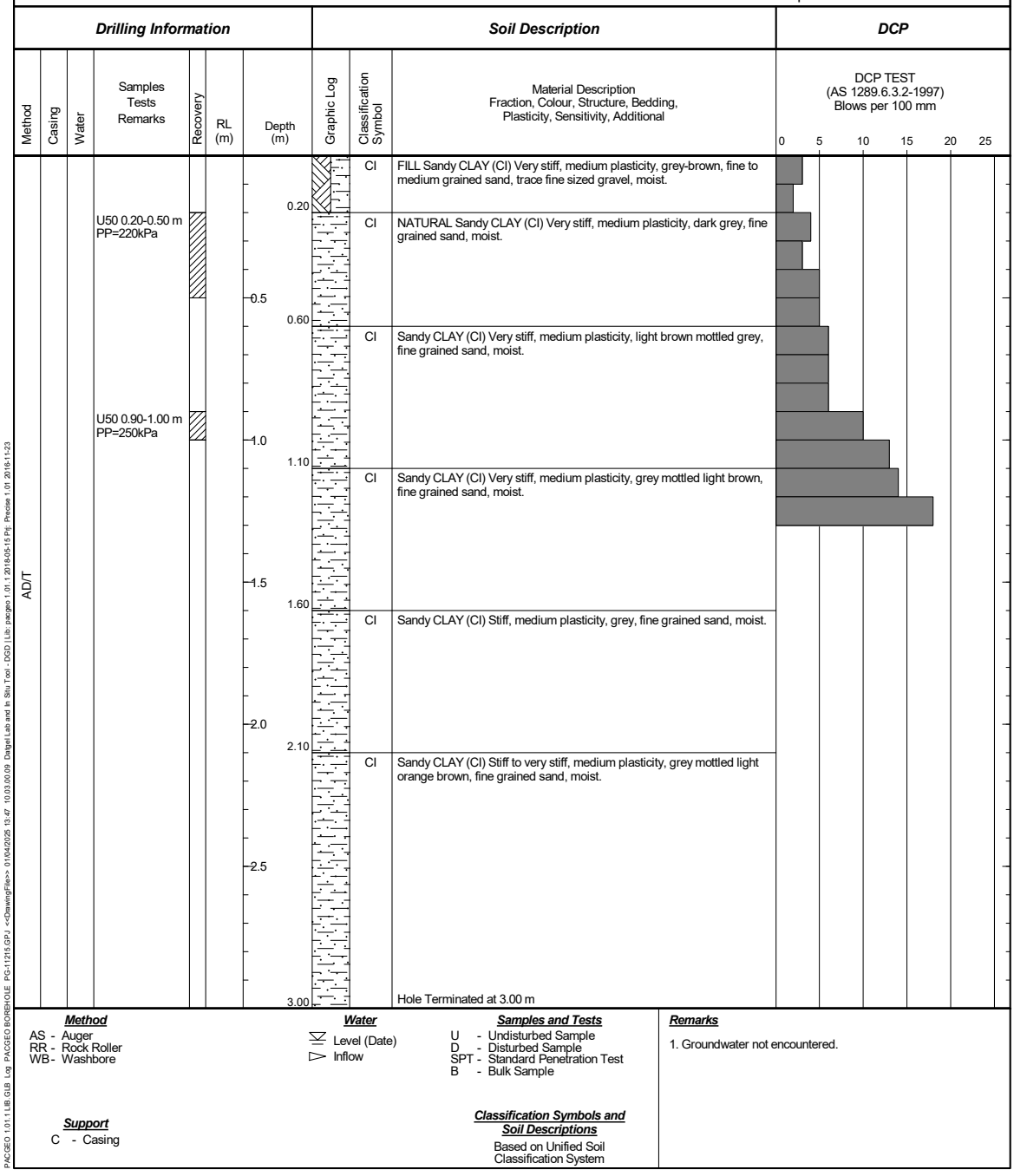
Project No.: PG-11215

Client:	Ingenia Communities	Commenced:	12/03/2024
Project Name:	Proposed Retirement Facility Development	Logged By:	EA
Hole Location:	Millers Glen, 27 Oaklands Way, Beaudesert	Checked By:	
Hole Position:			
Drill Model and Mounting:	Digga PDT 1	RL Surface:	No survey
Hole Diameter:		Datum:	AHD
		Operator:	EA



Method
AS - Auger
RR - Rock Roller
WB - Washbore

Water
Level (Date)
Inflow

Samples and Tests
U - Undisturbed Sample
D - Disturbed Sample
SPT - Standard Penetration Test
B - Bulk Sample

Remarks
1. Groundwater not encountered.

Support
C - Casing

Classification Symbols and Soil Descriptions
Based on Unified Soil Classification System

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Borehole No.
BH03
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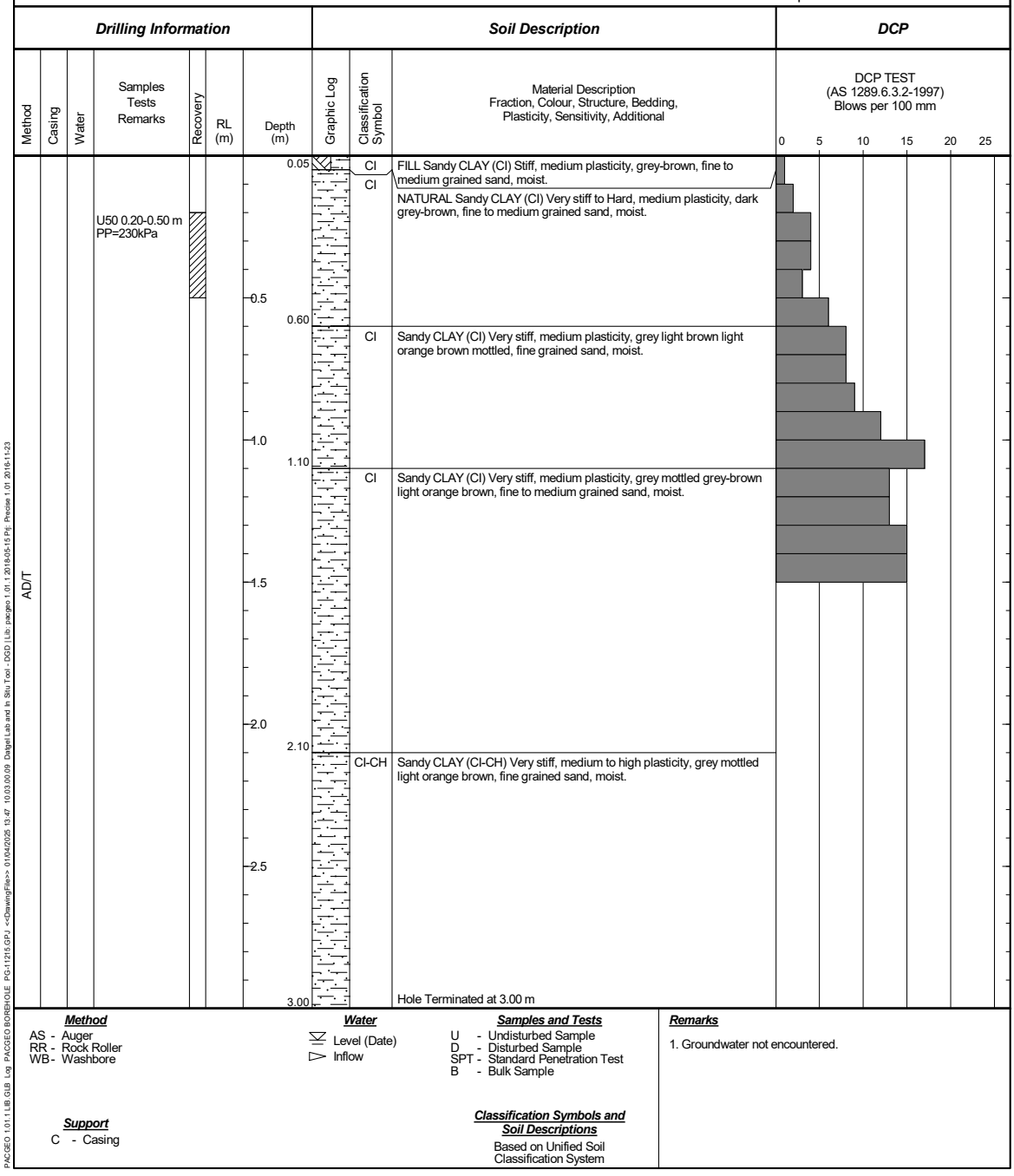
Project No.: PG-11215

Client:	Ingenia Communities	Commenced:	12/03/2024
Project Name:	Proposed Retirement Facility Development	Logged By:	EA
Hole Location:	Millers Glen, 27 Oaklands Way, Beaudesert	Checked By:	
Hole Position:			
Drill Model and Mounting:	Digga PDT 1	RL Surface:	No survey
Hole Diameter:		Datum:	AHD Operator: EA



Method
AS - Auger
RR - Rock Roller
WB - Washbore

Support
C - Casing

Water
Level (Date)
Inflow

Samples and Tests
U - Undisturbed Sample
D - Disturbed Sample
SPT - Standard Penetration Test
B - Bulk Sample

Classification Symbols and Soil Descriptions
Based on Unified Soil Classification System

Remarks
1. Groundwater not encountered.

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Borehole No.
BH04
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Project No.: PG-11215

Client:	Ingenia Communities	Commenced:	12/03/2024
Project Name:	Proposed Retirement Facility Development	Logged By:	EA
Hole Location:	Millers Glen, 27 Oaklands Way, Beaudesert	Checked By:	
Hole Position:			
Drill Model and Mounting:	Digga PDT 1	RL Surface:	No survey
Hole Diameter:		Datum:	AHD Operator: EA

Drilling Information							Soil Description			DCP
Method	Casing	Water	Samples Tests Remarks	Recovery	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description Fraction, Colour, Structure, Bedding, Plasticity, Sensitivity, Additional	DCP TEST (AS 1289.6.3.2-1997) Blows per 100 mm
AD/T			U50 0.20-0.50 m PP=>600kPa			0.07		CI	FILL Sandy CLAY (CI) Stiff, medium plasticity, grey-brown, fine to medium grained sand, moist.	0 5 10 15 20 25
								CL-CI	NATURAL Sandy CLAY (CL-CI) Hard, low to medium plasticity, dark grey-brown, fine grained sand, moist.	
						0.5				
						0.60		CI	Sandy CLAY (CI) Hard, medium plasticity, dark grey-brown grey brown mottled, fine to medium grained sand, moist.	
						1.0				
						1.5				
						1.60		CI	Sandy CLAY (CI) Hard, medium plasticity, grey mottled grey-brown light orange brown, fine to medium grained sand, moist.	
						2.0				
						2.10		CI	Sandy CLAY (CI) Very stiff to hard, medium plasticity, grey-brown mottled grey light orange brown, fine to medium grained sand, moist.	
						2.5				
						2.60		CI	Sandy CLAY (CI) Very stiff to hard, medium plasticity, grey-brown mottled grey, fine to medium grained sand, moist.	
						3.00			Hole Terminated at 3.00 m	

Method
AS - Auger
RR - Rock Roller
WB - Washbore

Water
Level (Date)
Inflow

Samples and Tests
U - Undisturbed Sample
D - Disturbed Sample
SPT - Standard Penetration Test
B - Bulk Sample

Remarks
1. Groundwater not encountered.

Support
C - Casing

Classification Symbols and Soil Descriptions
Based on Unified Soil Classification System

PACGEO 1.01.1.LIB GLB Log PACGEO BOREHOLE PG-11215.GPJ <<DrawingFile>> 01/04/2025 13:47 10.03.00.09 Datgel Lab and In Situ Tool - DGD | Lib: pacgeo 1.01.1 2018-05-15 Plt: Precise 1.01 2016-11-23

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Borehole No.
BH05
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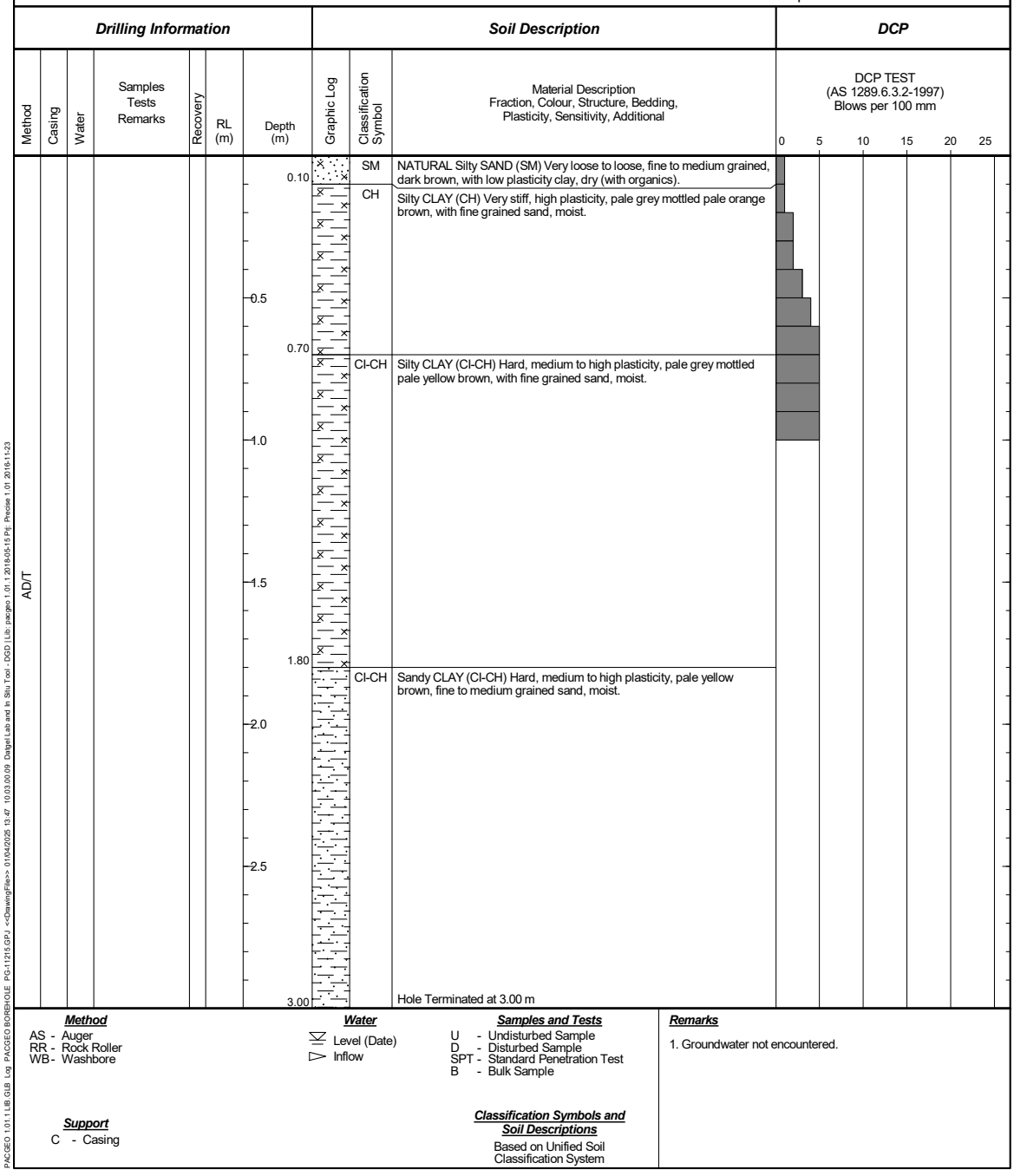
Project No.: PG-11215

Client:	Ingenia Communities	Commenced:	13/03/2024
Project Name:	Proposed Retirement Facility Development	Logged By:	RR
Hole Location:	Millers Glen, 27 Oaklands Way, Beaudesert	Checked By:	
Hole Position:			
Drill Model and Mounting:	Compac 018	RL Surface:	No survey
Hole Diameter:		Datum:	AHD Operator: RR



Method
AS - Auger
RR - Rock Roller
WB - Washbore

Support
C - Casing

Water
Level (Date)
Inflow

Samples and Tests
U - Undisturbed Sample
D - Disturbed Sample
SPT - Standard Penetration Test
B - Bulk Sample

Classification Symbols and Soil Descriptions
Based on Unified Soil Classification System

Remarks
1. Groundwater not encountered.

PACGEO 1.01.1.LIB GLB Log PACGEO BOREHOLE PG-11215.GPJ <<DrawingFile>> 01/04/2026 13:47 10.03.00.09 Datgel Lab and In Situ Tool - DGD | Lib: pacgeo 1.01.1 2018-05-15 Plt: Precise 1.01 2016-11-23

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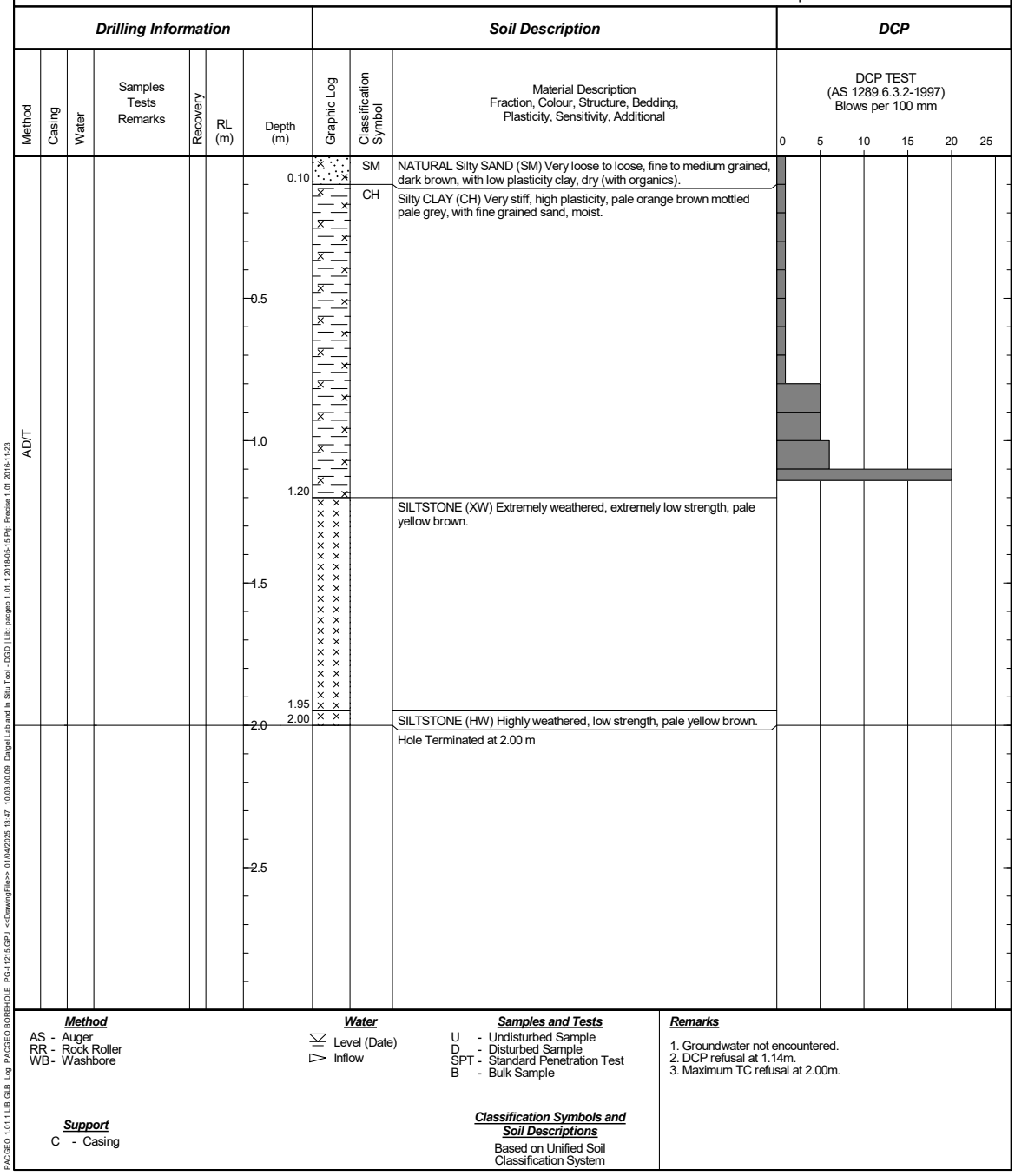
Borehole No.
BH06
Page 1 of 1

Project No.: PG-11215

Client:	Ingenia Communities	Commenced:	13/03/2024
Project Name:	Proposed Retirement Facility Development	Logged By:	RR
Hole Location:	Millers Glen, 27 Oaklands Way, Beaudesert	Checked By:	
Hole Position:			
Drill Model and Mounting:	Compac 018	RL Surface:	No survey
Hole Diameter:		Datum:	AHD Operator: RR



Method
AS - Auger
RR - Rock Roller
WB - Washbore

Support
C - Casing

Water
Level (Date)
Inflow

Samples and Tests
U - Undisturbed Sample
D - Disturbed Sample
SPT - Standard Penetration Test
B - Bulk Sample

Classification Symbols and Soil Descriptions
Based on Unified Soil Classification System

Remarks
1. Groundwater not encountered.
2. DCP refusal at 1.14m.
3. Maximum TC refusal at 2.00m.

PACGEO 1.01.1.LIB GLB Log PACGEO BOREHOLE PG-11215.GPJ <<DrawingFiles>> 01/04/2025 13:47 10.03.00.09 Datgel Lab and In Situ Tool - DGD | Lib: pacgeo 1.01.1 2018-05-15 Plt: Precise 1.01 2016-11-23

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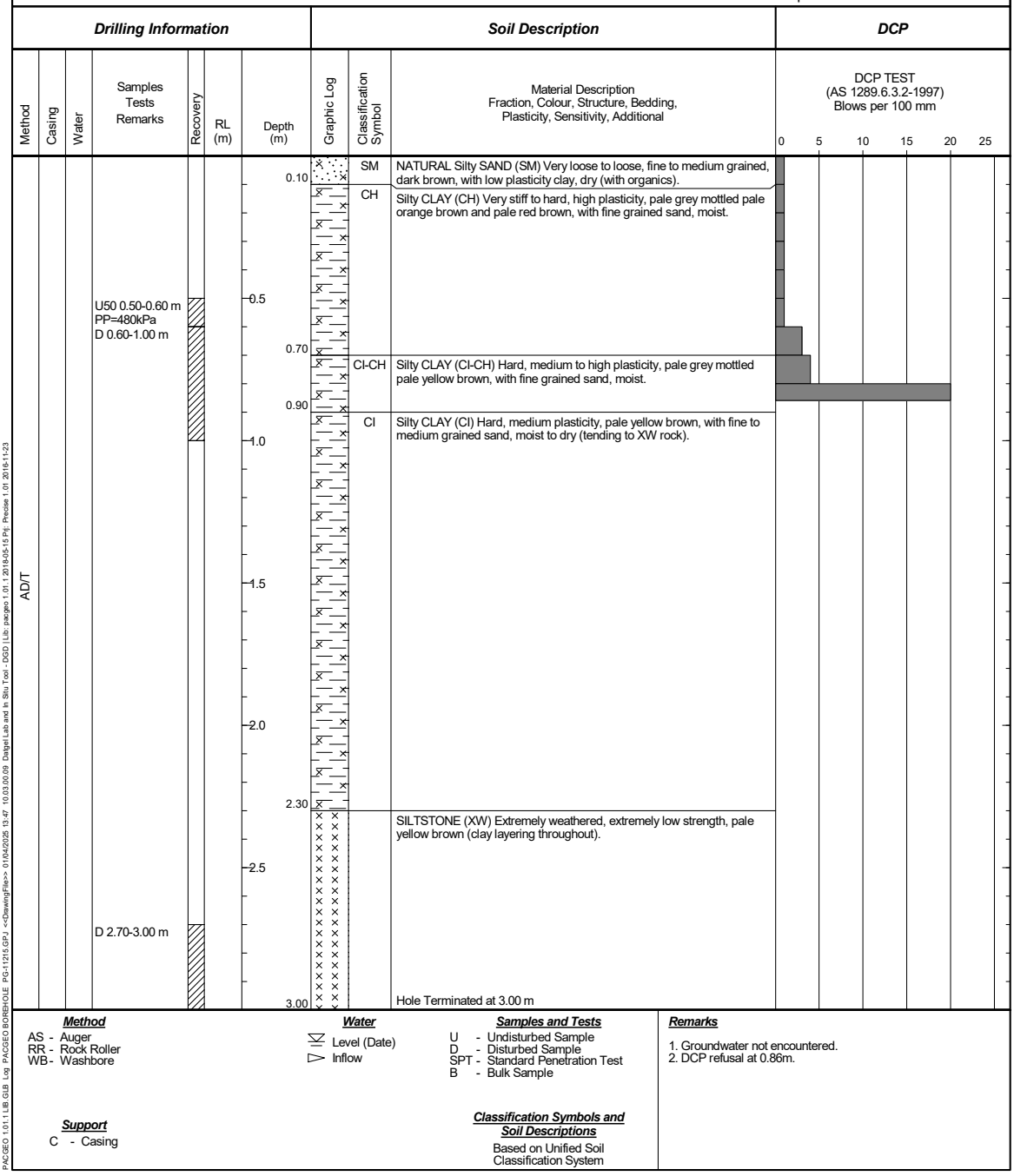
Borehole No.
BH07
Page 1 of 1

Project No.: PG-11215

Client:	Ingenia Communities	Commenced:	13/03/2024
Project Name:	Proposed Retirement Facility Development	Logged By:	RR
Hole Location:	Millers Glen, 27 Oaklands Way, Beaudesert	Checked By:	
Hole Position:			
Drill Model and Mounting:	Compac 018	RL Surface:	No survey
Hole Diameter:		Datum:	AHD Operator: RR



Method
AS - Auger
RR - Rock Roller
WB - Washbore

Support
C - Casing

Water
Level (Date)
Inflow

Samples and Tests
U - Undisturbed Sample
D - Disturbed Sample
SPT - Standard Penetration Test
B - Bulk Sample

Classification Symbols and Soil Descriptions
Based on Unified Soil Classification System

Remarks
1. Groundwater not encountered.
2. DCP refusal at 0.86m.

PACGEO 1.01.1.LIB GLB Log PACGEO BOREHOLE PG-11215.GPJ <<DrawingFiles>> 01/04/2026 13:47 10.03.00.09 Datgel Lab and In Situ Tool - DGD | Lib: pacgeo 1.01.1 2018-05-15 Plt: Precise 1.01 2016-11-23

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Borehole No.
BH08
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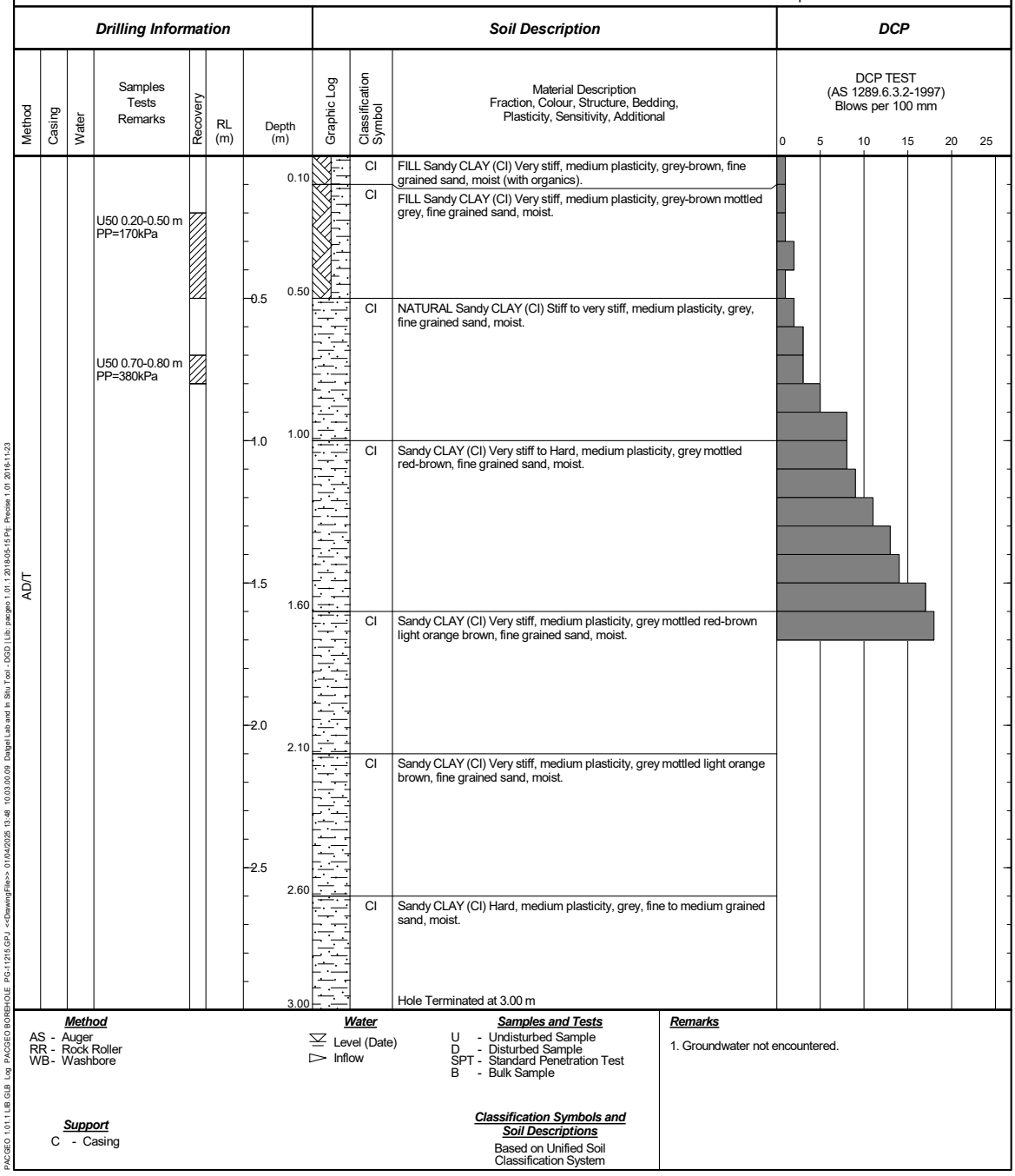
Project No.: PG-11215

Client:	Ingenia Communities	Commenced:	12/03/2024
Project Name:	Proposed Retirement Facility Development	Logged By:	EA
Hole Location:	Millers Glen, 27 Oaklands Way, Beaudesert	Checked By:	
Hole Position:			
Drill Model and Mounting:	Digga PDT 1	RL Surface:	No survey
Hole Diameter:		Datum:	AHD Operator: EA



PACGEO 1.01.1.LIB GLB Log PACGEO BOREHOLE PG-11215.GPJ <<DrawingFiles>> 01/04/2025 13:48 10.03.00.09 Datgel Lab and In Situ Tool - DGD | Lib: pacgeo 1.01.1 2018-05-15 Plt: Precise 1.01 2016-11-23

Method
AS - Auger
RR - Rock Roller
WB - Washbore

Water
Level (Date)
Inflow

Samples and Tests
U - Undisturbed Sample
D - Disturbed Sample
SPT - Standard Penetration Test
B - Bulk Sample

Remarks
1. Groundwater not encountered.

Support
C - Casing

Classification Symbols and Soil Descriptions
Based on Unified Soil Classification System

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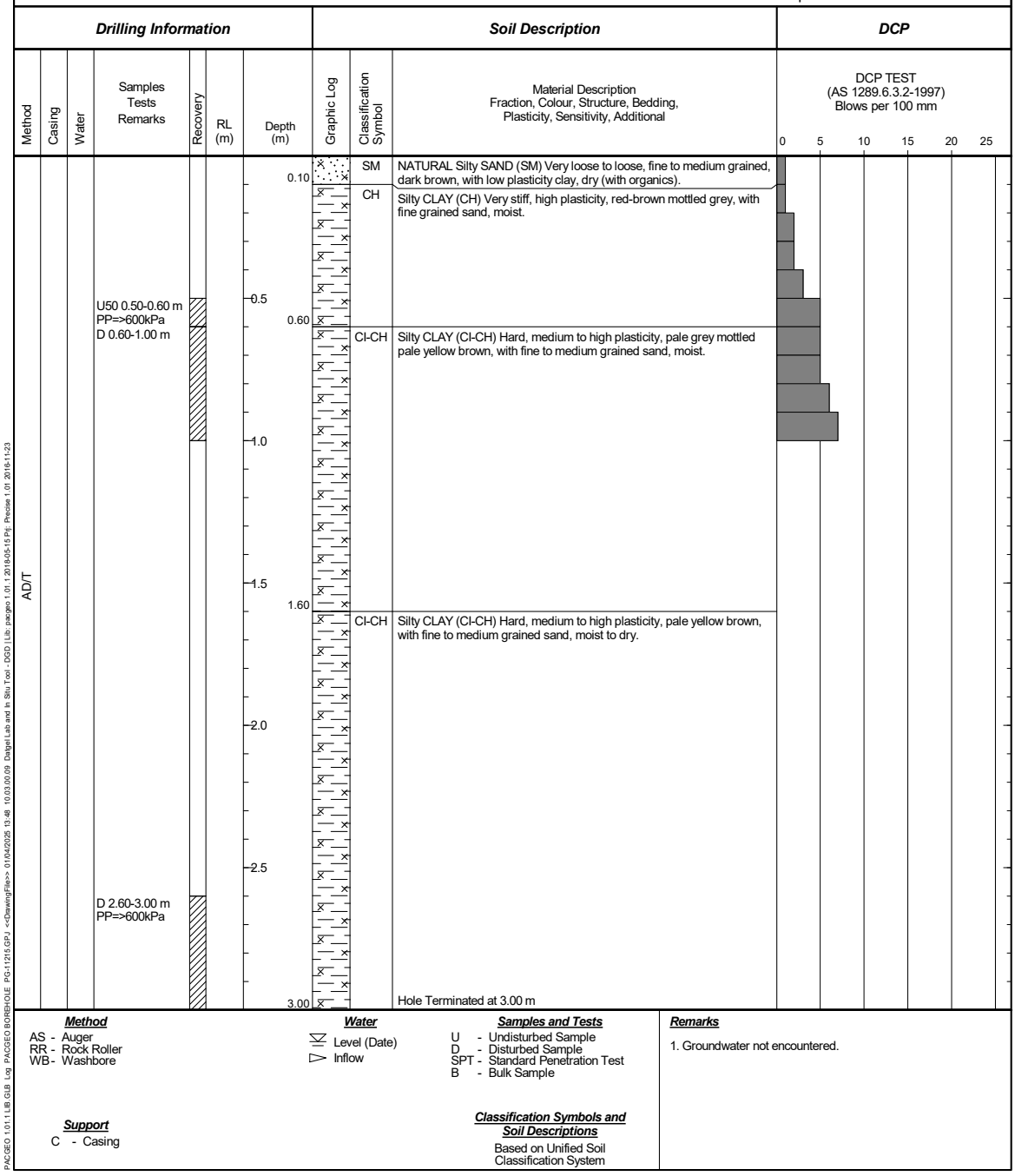
Borehole No.
BH09
Page 1 of 1

Project No.: PG-11215

Client:	Ingenia Communities	Commenced:	13/03/2024
Project Name:	Proposed Retirement Facility Development	Logged By:	RR
Hole Location:	Millers Glen, 27 Oaklands Way, Beaudesert	Checked By:	
Hole Position:			
Drill Model and Mounting:	Compac 018	RL Surface:	No survey
Hole Diameter:		Datum:	AHD Operator: RR



Method
AS - Auger
RR - Rock Roller
WB - Washbore

Support
C - Casing

Water
Level (Date)
Inflow

Samples and Tests
U - Undisturbed Sample
D - Disturbed Sample
SPT - Standard Penetration Test
B - Bulk Sample

Classification Symbols and Soil Descriptions
Based on Unified Soil Classification System

Remarks
1. Groundwater not encountered.

PAC/GEO 1.01.1.LIB GLB Log PACGEO BOREHOLE PG-11215.GPJ <<DrawingFile>> 01/04/2026 13:48 10.03.00.09 Datgel Lab and In Situ Tool - DGD | Lib: pacgeo 1.01.1 2018-05-15 Pit: Precise 1.01 2016-11-23

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Borehole No.
BH10
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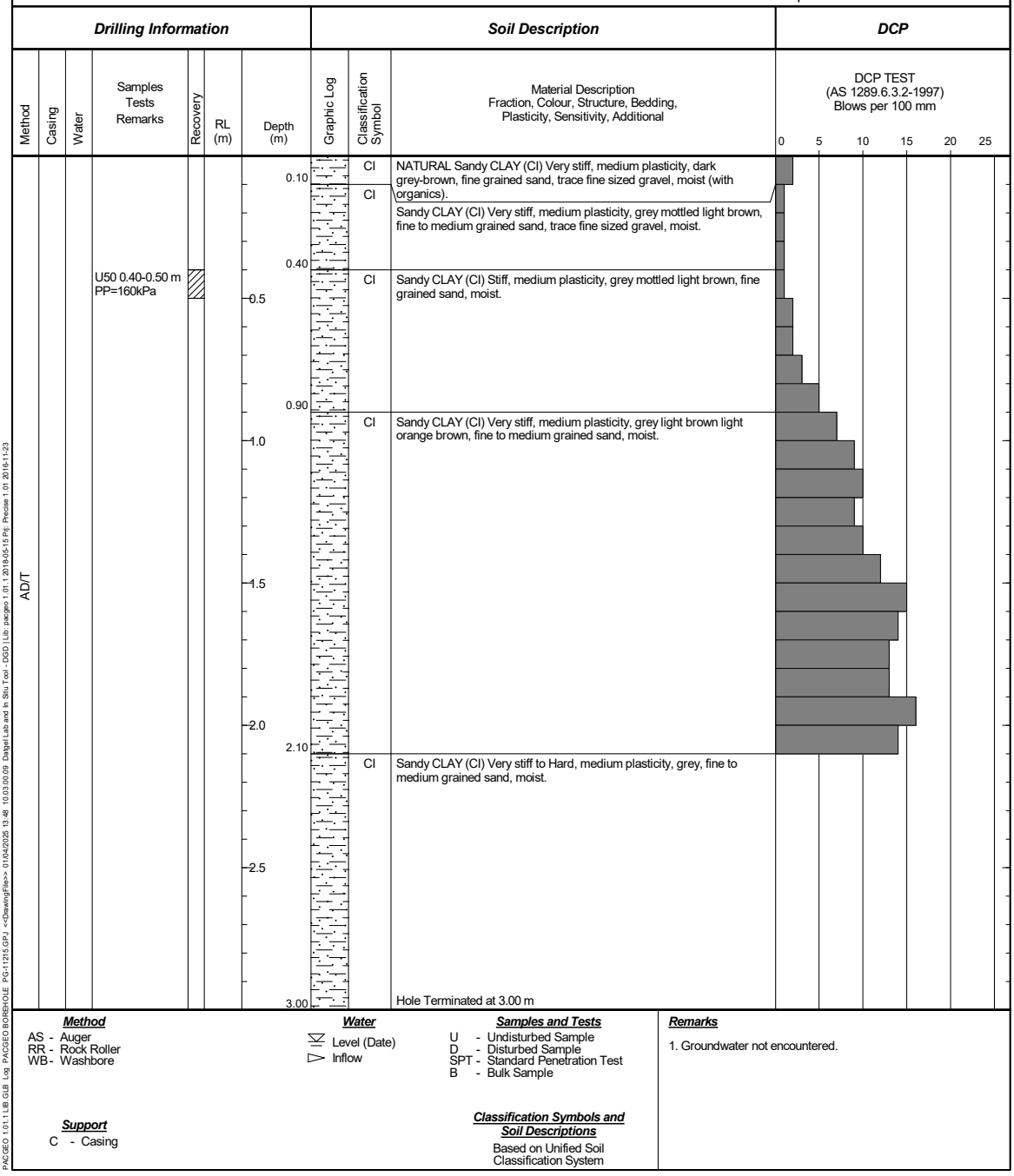
Project No.: PG-11215

Client:	Ingenia Communities	Commenced:	12/03/2024
Project Name:	Proposed Retirement Facility Development	Logged By:	EA
Hole Location:	Millers Glen, 27 Oaklands Way, Beaudesert	Checked By:	
Hole Position:			
Drill Model and Mounting:	Digga PDT 1	RL Surface:	No survey
Hole Diameter:		Datum:	AHD Operator: EA



Method
AS - Auger
RR - Rock Roller
WB - Washbore

Support
C - Casing

Water
Level (Date)
Inflow

Samples and Tests
U - Undisturbed Sample
D - Disturbed Sample
SPT - Standard Penetration Test
B - Bulk Sample

Classification Symbols and Soil Descriptions
Based on Unified Soil Classification System

Remarks
1. Groundwater not encountered.

PAC/GEO 1.01.1.LIB GLB Log PACGEO BOREHOLE PG-11215.GPJ <<DrawingFile>> 01/04/2026 13:48 10.03.00.09 Datgel Lab and In Situ Tool - DGD | Lib: pacgeo 1.01.1 2018-05-15 Plt: Precise 1.01 2016-11-23

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Borehole No.
BH11
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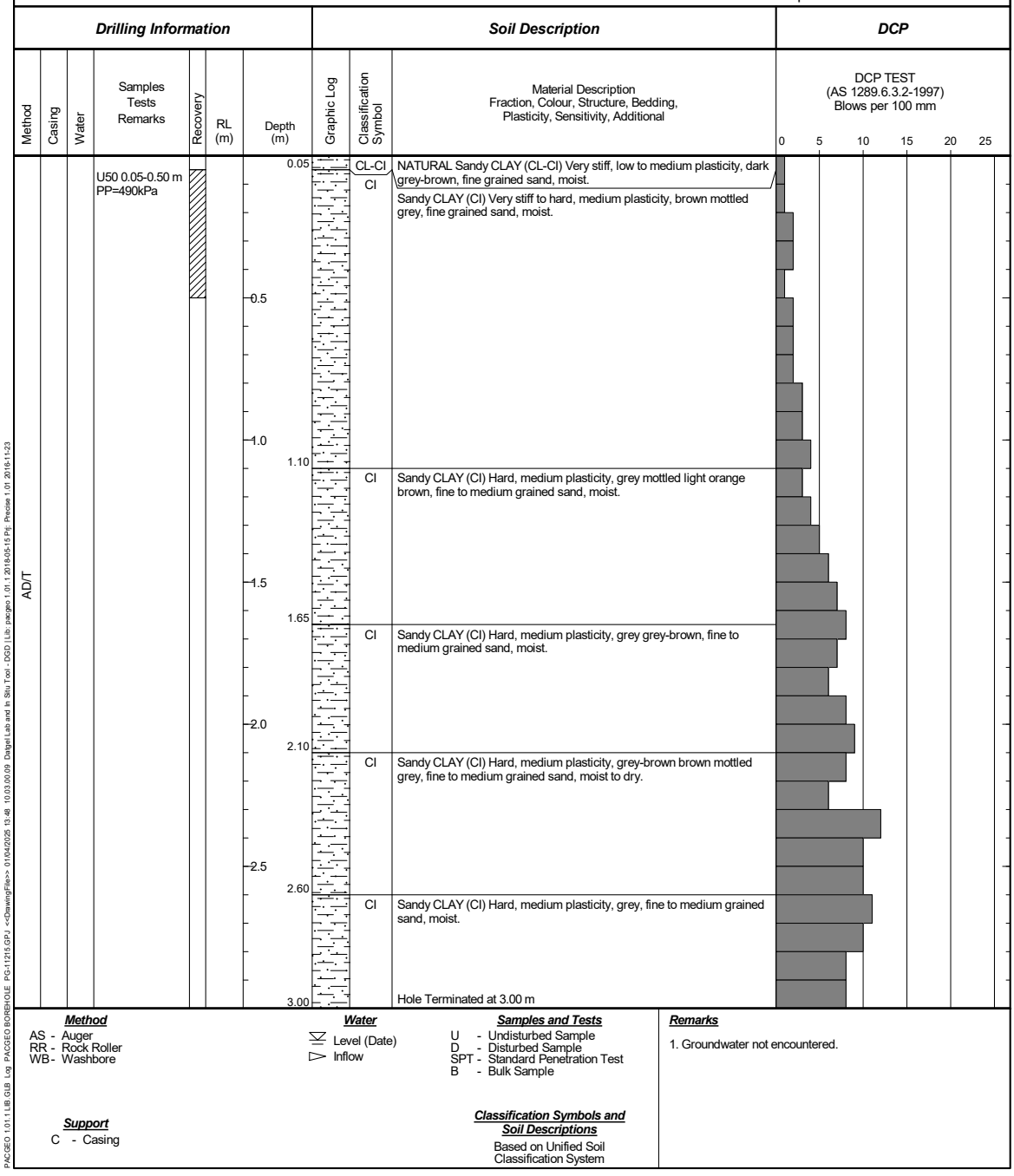
Project No.: PG-11215

Client:	Ingenia Communities	Commenced:	12/03/2024
Project Name:	Proposed Retirement Facility Development	Logged By:	EA
Hole Location:	Millers Glen, 27 Oaklands Way, Beaudesert	Checked By:	
Hole Position:			
Drill Model and Mounting:	Digga PDT 1	RL Surface:	No survey
Hole Diameter:		Datum:	AHD Operator: EA



Method
AS - Auger
RR - Rock Roller
WB - Washbore

Water
Level (Date)
Inflow

Samples and Tests
U - Undisturbed Sample
D - Disturbed Sample
SPT - Standard Penetration Test
B - Bulk Sample

Remarks
1. Groundwater not encountered.

Support
C - Casing

Classification Symbols and Soil Descriptions
Based on Unified Soil Classification System

PACGEO 1.01.1.LIB GLB Log PACGEO BOREHOLE PG-11215.GPJ <<DrawingFiles>> 01/04/2026 13:48 10.03.00.09 Datgel Lab and In Situ Tool - DGD | Lib: pacgeo 1.01.1.2018-05-15 Plt: Precise 1.01 2016-11-23

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Borehole No.
BH12
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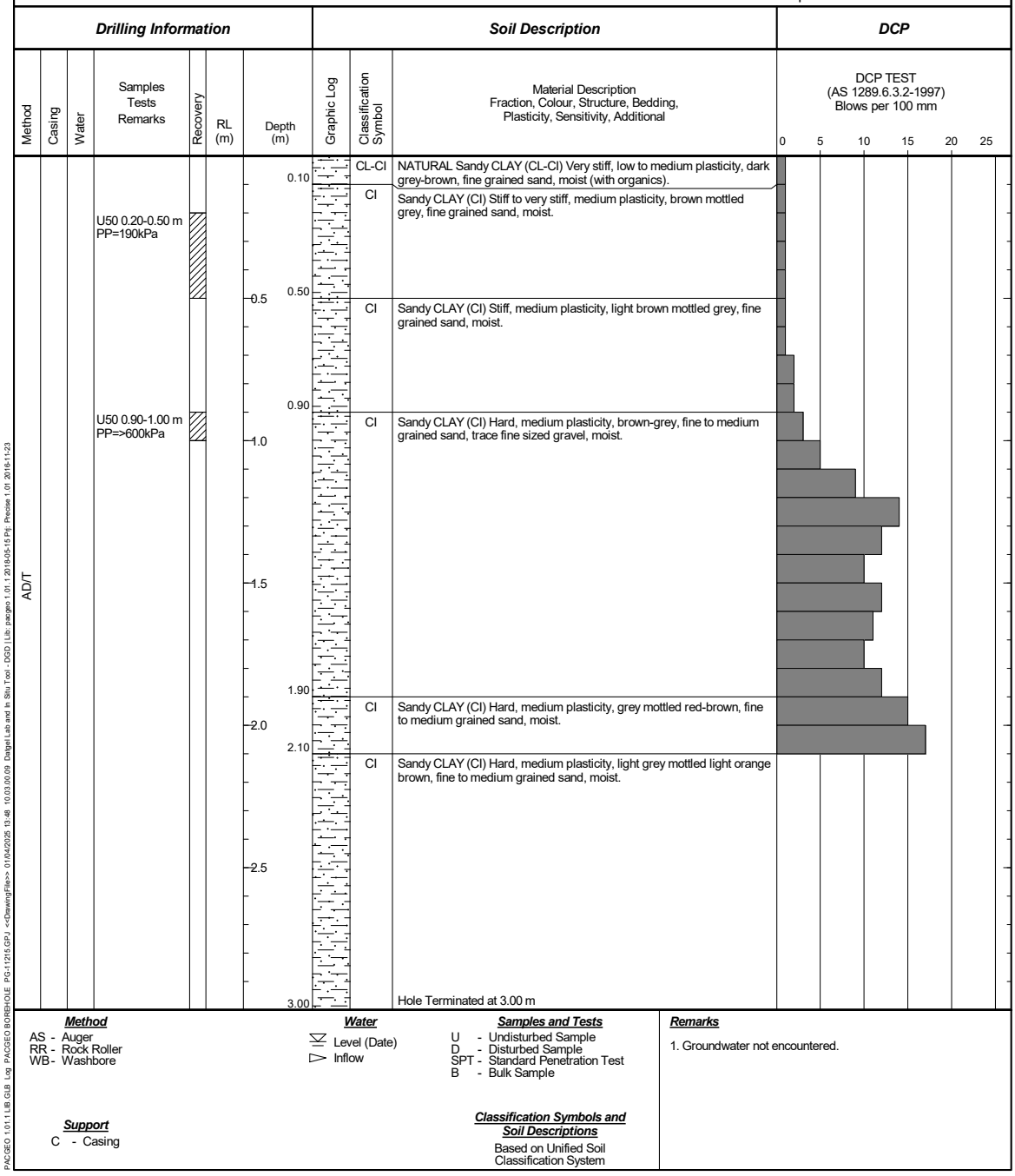
Project No.: PG-11215

Client:	Ingenia Communities	Commenced:	12/03/2024
Project Name:	Proposed Retirement Facility Development	Logged By:	EA
Hole Location:	Millers Glen, 27 Oaklands Way, Beaudesert	Checked By:	
Hole Position:			
Drill Model and Mounting:	Digga PDT 1	RL Surface:	No survey
Hole Diameter:		Datum:	AHD Operator: EA



Method
AS - Auger
RR - Rock Roller
WB - Washbore

Support
C - Casing

Water
Level (Date)
Inflow

Samples and Tests
U - Undisturbed Sample
D - Disturbed Sample
SPT - Standard Penetration Test
B - Bulk Sample

Classification Symbols and Soil Descriptions
Based on Unified Soil Classification System

Remarks
1. Groundwater not encountered.

PACGEO 1.01.1.LIB GLB Log PACGEO BOREHOLE PG-11215.GPJ <<DrawingFile>> 01/04/2025 13:48 10.03.00.09 Datgel Lab and In Situ Tool - DGD | Lib: pacgeo 1.01.1 2018-05-15 Pit: Precise 1.01 2016-11-23

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Borehole No.
BH13
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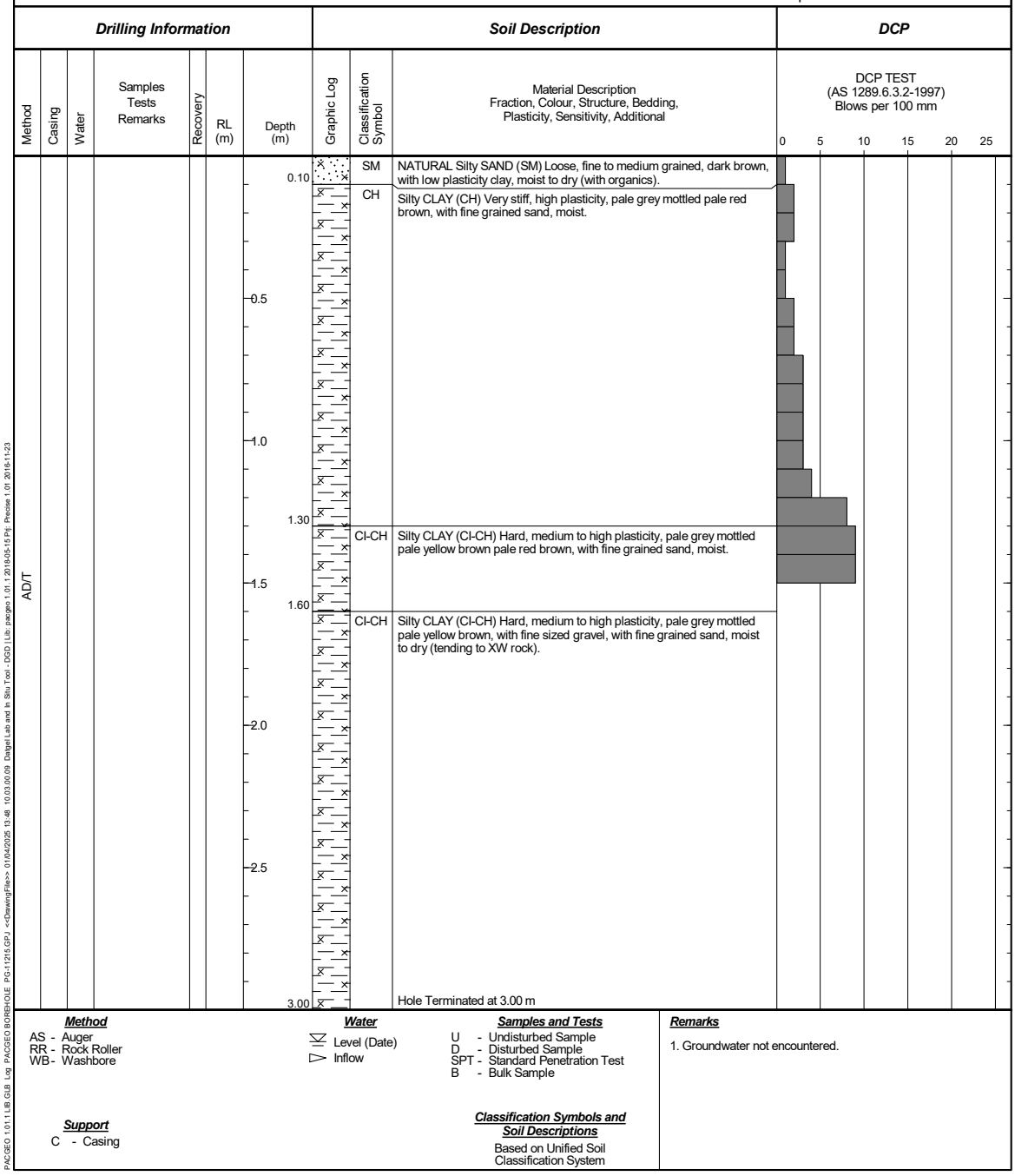
Project No.: PG-11215

Client:	Ingenia Communities	Commenced:	13/03/2024
Project Name:	Proposed Retirement Facility Development	Logged By:	RR
Hole Location:	Millers Glen, 27 Oaklands Way, Beaudesert	Checked By:	
Hole Position:			
Drill Model and Mounting:	Compac 018	RL Surface:	No survey
Hole Diameter:		Datum:	AHD Operator: RR



Method
AS - Auger
RR - Rock Roller
WB - Washbore

Support
C - Casing

Water
Level (Date)
Inflow

Samples and Tests
U - Undisturbed Sample
D - Disturbed Sample
SPT - Standard Penetration Test
B - Bulk Sample

Classification Symbols and Soil Descriptions
Based on Unified Soil Classification System

Remarks
1. Groundwater not encountered.

PACGEO 1.01.1.LIB GLB Log PACGEO BOREHOLE PG-11215.GPJ <<DrawingFile>> 01/04/2026 13:48 10.03.00.09 Datgel Lab and In Situ Tool - DGD | Lib: pacgeo 1.01.1 2018-05-15 Pit: Precise 1.01 2016-11-23

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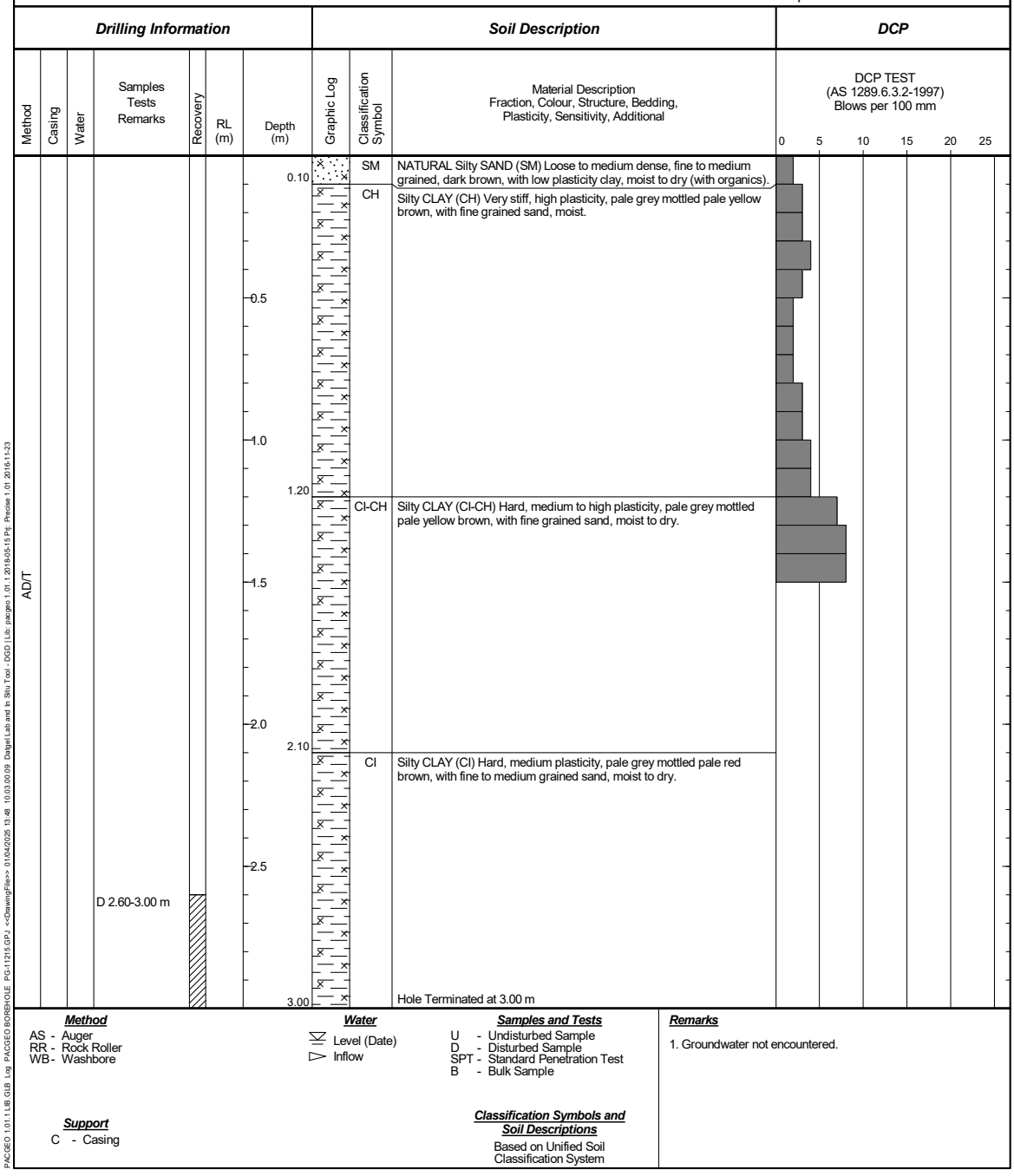
Borehole No.
BH14
Page 1 of 1

Project No.: PG-11215

Client:	Ingenia Communities	Commenced:	13/03/2024
Project Name:	Proposed Retirement Facility Development	Logged By:	RR
Hole Location:	Millers Glen, 27 Oaklands Way, Beaudesert	Checked By:	
Hole Position:			
Drill Model and Mounting:	Compac 018	RL Surface:	No survey
Hole Diameter:		Datum:	AHD Operator: RR



Method
AS - Auger
RR - Rock Roller
WB - Washbore

Water
Level (Date)
Inflow

Samples and Tests
U - Undisturbed Sample
D - Disturbed Sample
SPT - Standard Penetration Test
B - Bulk Sample

Remarks
1. Groundwater not encountered.

Support
C - Casing

Classification Symbols and Soil Descriptions
Based on Unified Soil Classification System

PACGEO 1.01.1.LIB GLB Log PACGEO BOREHOLE PG-11215.GPJ <<DrawingFile>> 01/04/2026 13:48 10.03.00.09 Datgel Lab and In Situ Tool - DGD | Lib: pacgeo 1.01.1.2018-05-15 Plt: Precise 1.01 2016-11-23

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Consulting Geotechnical Engineers

Borehole No.
BH15
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Project No.: PG-11215

Client:	Ingenia Communities	Commenced:	12/03/2024
Project Name:	Proposed Retirement Facility Development	Logged By:	EA
Hole Location:	Millers Glen, 27 Oaklands Way, Beaudesert	Checked By:	
Hole Position:			
Drill Model and Mounting:	Digga PDT 1	RL Surface:	No survey
Hole Diameter:		Datum:	AHD Operator: EA

Drilling Information							Soil Description			DCP
Method	Casing	Water	Samples Tests Remarks	Recovery	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description Fraction, Colour, Structure, Bedding, Plasticity, Sensitivity, Additional	DCP TEST (AS 1289.6.3.2-1997) Blows per 100 mm
AD/T			U50 0.35-0.50 m PP=510kPa			0.10		SM	NATURAL Silty SAND (SM) Very loose to loose, fine to medium grained, dark brown, with low plasticity clay, dry (with organics).	
								Cl	Sandy CLAY (Cl) Hard, medium plasticity, grey, fine to medium grained sand, moist to dry.	
						0.40		Cl	Silty Sandy CLAY (Cl) Very stiff, medium plasticity, grey mottled light brown light orange brown, fine grained sand, moist.	
						0.5				
						0.70		Cl	Sandy CLAY (Cl) Very stiff, medium plasticity, grey, fine grained sand, moist (seepage noted).	
						1.0				
						1.10		Cl	Sandy CLAY (Cl) Hard, medium plasticity, grey mottled light orange brown, fine to medium grained sand, moist.	
						1.5				
						1.60		Cl	Sandy CLAY (Cl) Hard, medium plasticity, grey, fine to medium grained sand, moist to dry.	
						2.0				
						2.10		Cl	Sandy CLAY (Cl) Hard, medium plasticity, brown mottled grey, fine to medium grained sand, moist to dry.	
						2.5				
						2.60		Cl	Sandy CLAY (Cl) Hard, medium plasticity, grey-brown, fine to medium grained sand, moist to dry.	
						3.00			Hole Terminated at 3.00 m	

DCP TEST (AS 1289.6.3.2-1997) Blows per 100 mm: 0 5 10 15 20 25

Method
AS - Auger
RR - Rock Roller
WB - Washbore

Water
Level (Date)
Inflow

Samples and Tests
U - Undisturbed Sample
D - Disturbed Sample
SPT - Standard Penetration Test
B - Bulk Sample

Support
C - Casing

Classification Symbols and Soil Descriptions
Based on Unified Soil Classification System

Remarks
1. Seepage noted at 0.70m.

PACGEO 1.01.1.LIB GLB Log PACGEO BOREHOLE PG-11215.GPJ <<DrawingFile>> 01/04/2026 13:49 10.03.00.09 Datgel Lab and In Situ Tool - DGD | Lib: pacgeo 1.01.1 2018-05-15 Plt: Precise 1.01 2016-11-23

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Borehole No.
BH16
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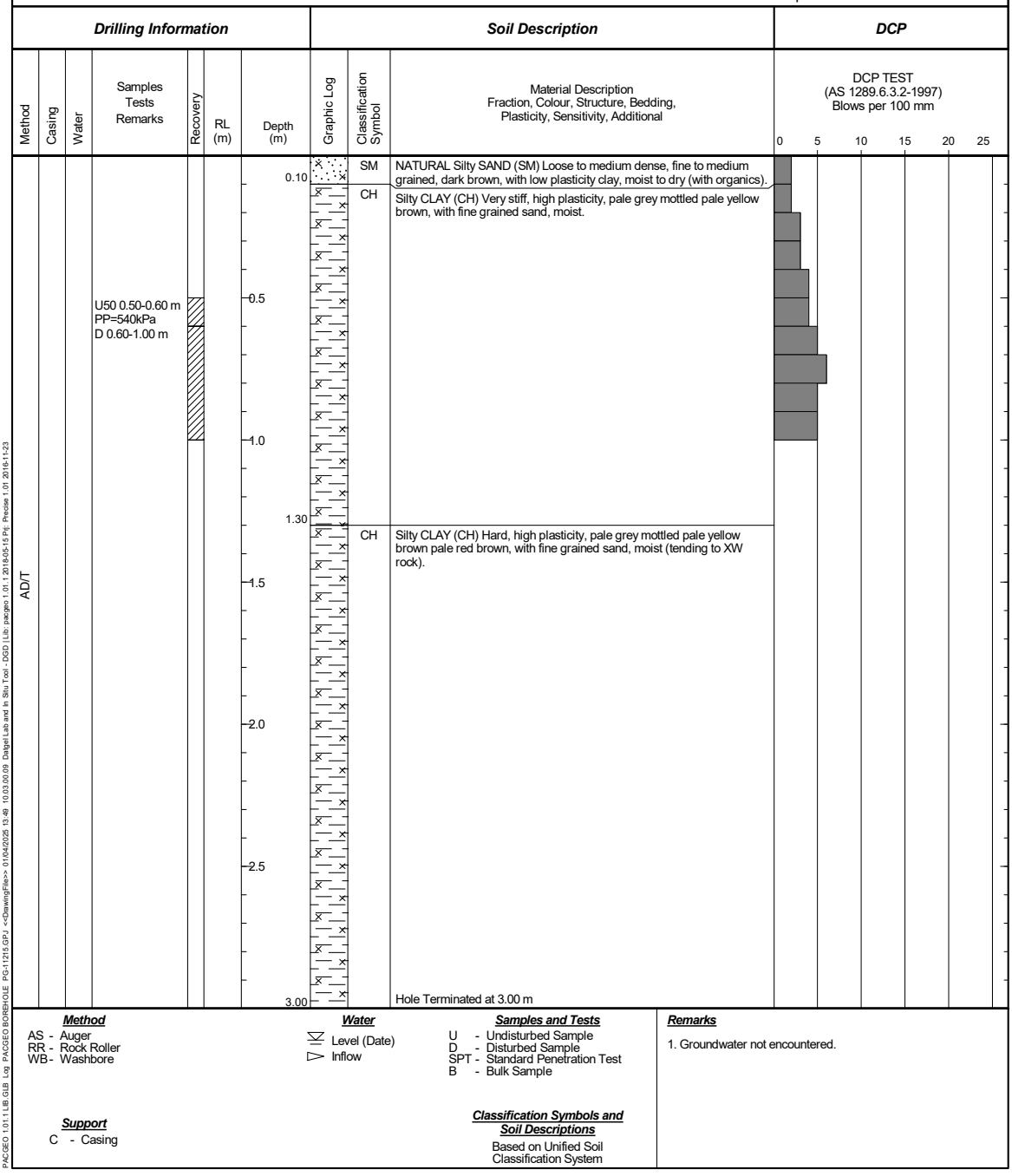
Project No.: PG-11215

Client:	Ingenia Communities	Commenced:	13/03/2024
Project Name:	Proposed Retirement Facility Development	Logged By:	RR
Hole Location:	Millers Glen, 27 Oaklands Way, Beaudesert	Checked By:	
Hole Position:			
Drill Model and Mounting:	Compac 018	RL Surface:	No survey
Hole Diameter:		Datum:	AHD Operator: RR



Method
AS - Auger
RR - Rock Roller
WB - Washbore

Support
C - Casing

Water
Level (Date)
Inflow

Samples and Tests
U - Undisturbed Sample
D - Disturbed Sample
SPT - Standard Penetration Test
B - Bulk Sample

Classification Symbols and Soil Descriptions
Based on Unified Soil Classification System

Remarks
1. Groundwater not encountered.

PACGEO 1.01.1.LIB GLB Log PACGEO BOREHOLE PG-11215.GPJ <<DrawingFiles>> 01/04/2026 13:49 10.03.00.09 Datgel Lab and In Situ Tool - DGD | Lib: pacgeo 1.01.1 2018-05-15 Plt: Precise 1.01 2016-11-23

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Borehole No.
BH17
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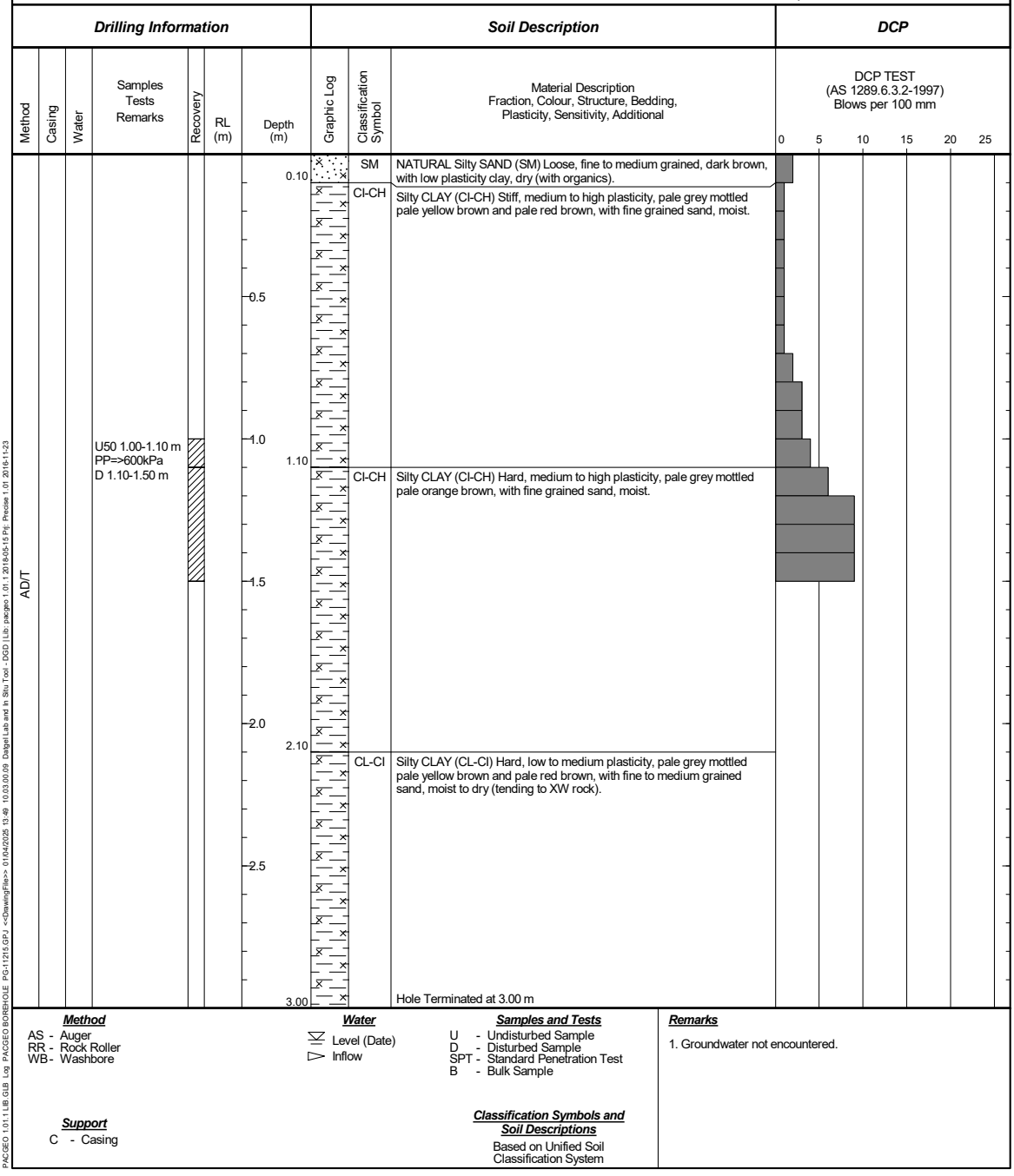
Project No.: PG-11215

Client:	Ingenia Communities	Commenced:	13/03/2024
Project Name:	Proposed Retirement Facility Development	Logged By:	RR
Hole Location:	Millers Glen, 27 Oaklands Way, Beaudesert	Checked By:	
Hole Position:			
Drill Model and Mounting:	Compac 018	RL Surface:	No survey
Hole Diameter:		Datum:	AHD Operator: RR



Method
AS - Auger
RR - Rock Roller
WB - Washbore

Water
Level (Date)
Inflow

Samples and Tests
U - Undisturbed Sample
D - Disturbed Sample
SPT - Standard Penetration Test
B - Bulk Sample

Support
C - Casing

Classification Symbols and Soil Descriptions
Based on Unified Soil Classification System

Remarks
1. Groundwater not encountered.

PACGEO 1.01.1.LIB GLB Log PACGEO BOREHOLE PG-11215.GPJ <<DrawingFiles>> 01/04/2026 13:49 10.03.00.09 Datgel Lab and In Situ Tool - DGD | Lib: pacgeo 1.01.1.2018-05-15 Plt: Precise 1.01 2016-11-23

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Borehole No.
BH18
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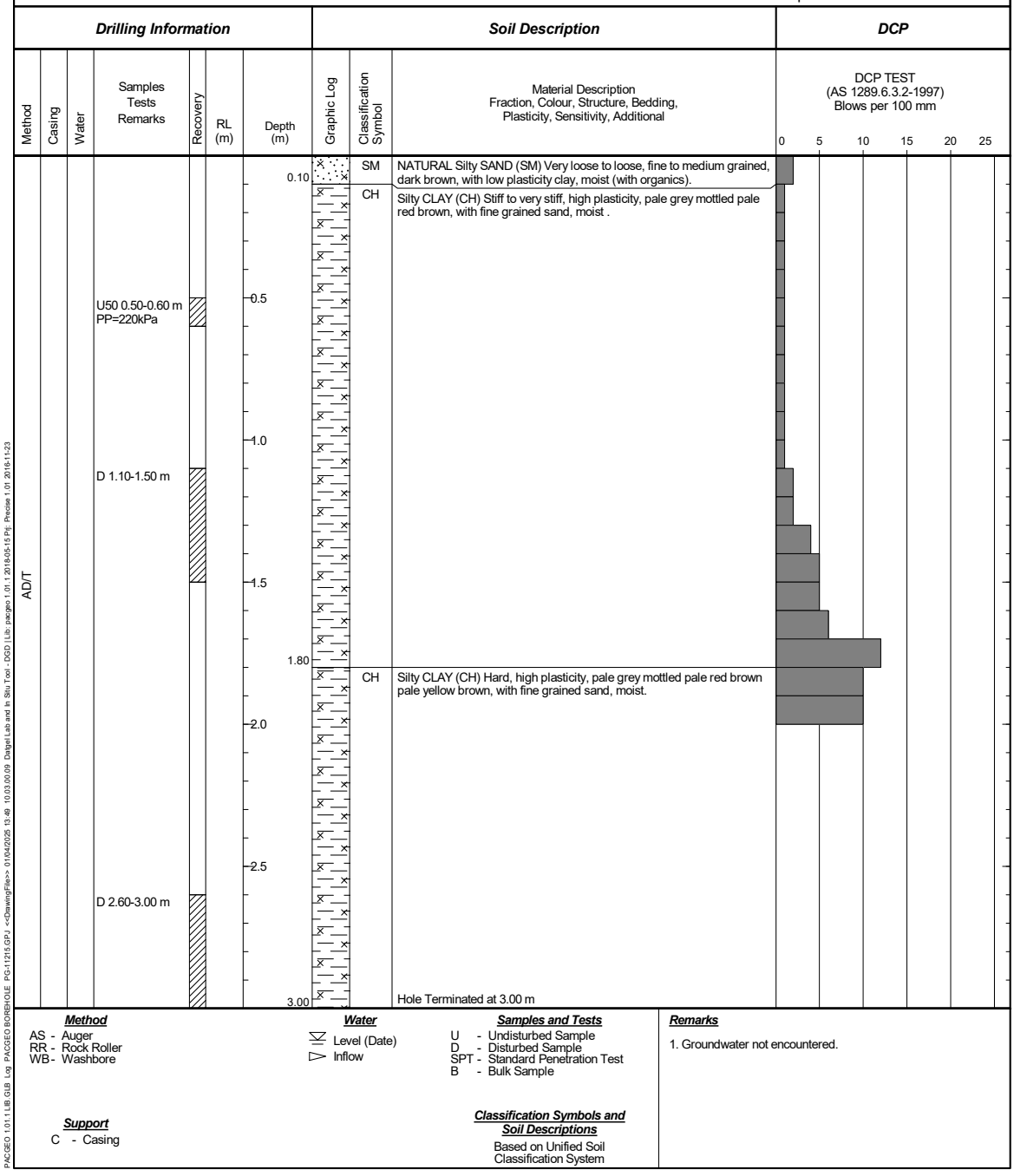
Project No.: PG-11215

Client:	Ingenia Communities	Commenced:	13/03/2024
Project Name:	Proposed Retirement Facility Development	Logged By:	RR
Hole Location:	Millers Glen, 27 Oaklands Way, Beaudesert	Checked By:	
Hole Position:			
Drill Model and Mounting:	Compac 018	RL Surface:	No survey
Hole Diameter:		Datum:	AHD Operator: RR



Method
AS - Auger
RR - Rock Roller
WB - Washbore

Water
Level (Date)
Inflow

Samples and Tests
U - Undisturbed Sample
D - Disturbed Sample
SPT - Standard Penetration Test
B - Bulk Sample

Remarks
1. Groundwater not encountered.

Support
C - Casing

Classification Symbols and Soil Descriptions
Based on Unified Soil Classification System

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Borehole No.
BH19
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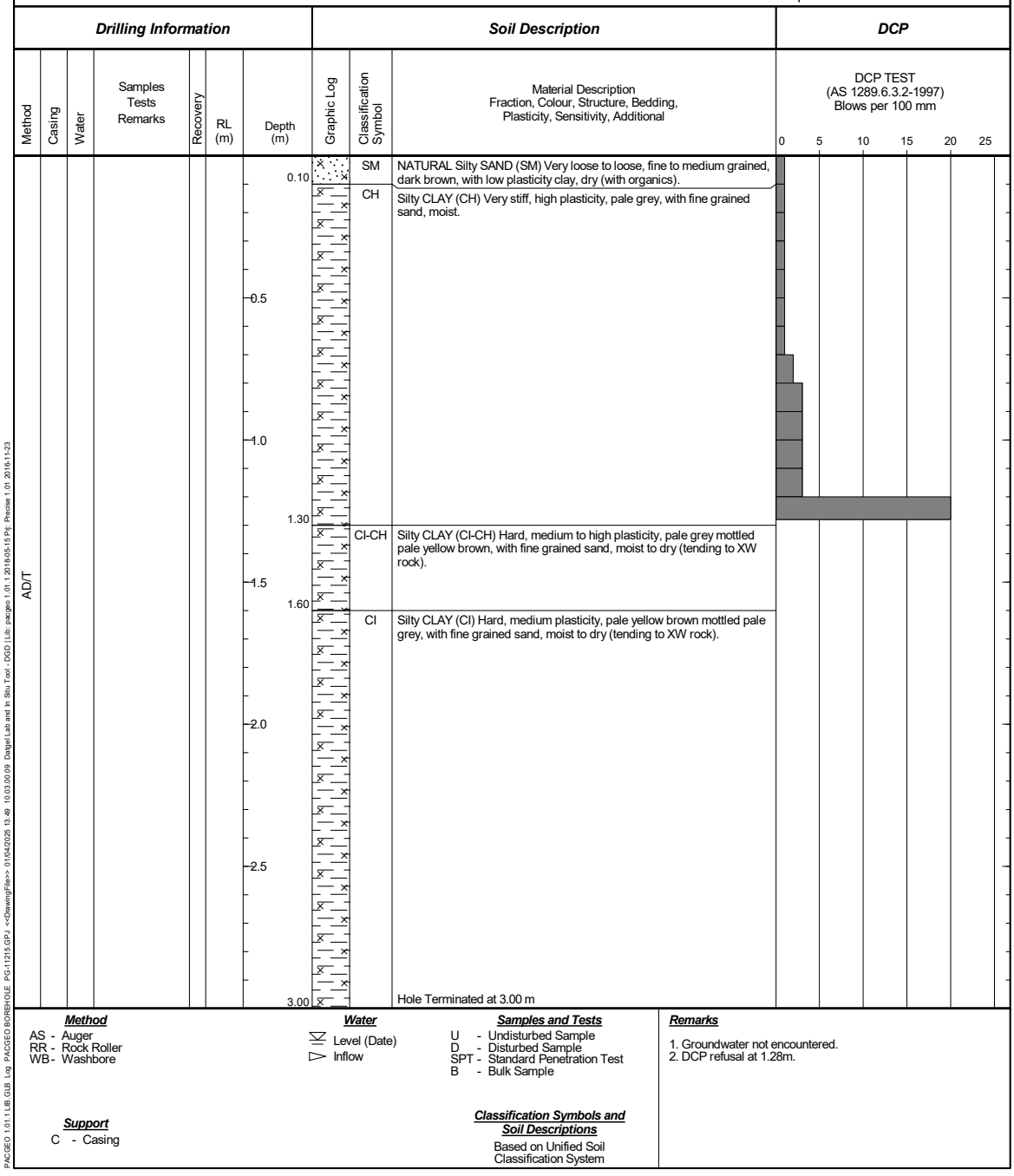
Project No.: PG-11215

Client:	Ingenia Communities	Commenced:	13/03/2024
Project Name:	Proposed Retirement Facility Development	Logged By:	RR
Hole Location:	Millers Glen, 27 Oaklands Way, Beaudesert	Checked By:	
Hole Position:			
Drill Model and Mounting:	Compac 018	RL Surface:	No survey
Hole Diameter:		Datum:	AHD Operator: RR



Method
AS - Auger
RR - Rock Roller
WB - Washbore

Support
C - Casing

Water
Level (Date)
Inflow

Samples and Tests
U - Undisturbed Sample
D - Disturbed Sample
SPT - Standard Penetration Test
B - Bulk Sample

Classification Symbols and Soil Descriptions
Based on Unified Soil Classification System

Remarks
1. Groundwater not encountered.
2. DCP refusal at 1.28m.

PACGEO 1.01.1.LIB GLB Log PACGEO BOREHOLE PG-11215.GPJ <<DrawingFiles>> 01/04/2026 13:49 10.03.00.09 Datgel Lab and In Situ Tool - DGD | Lib: pacgeo 1.01.1 2018-05-15 Plt: Precise 1.01 2016-11-23

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Borehole No.
BH20
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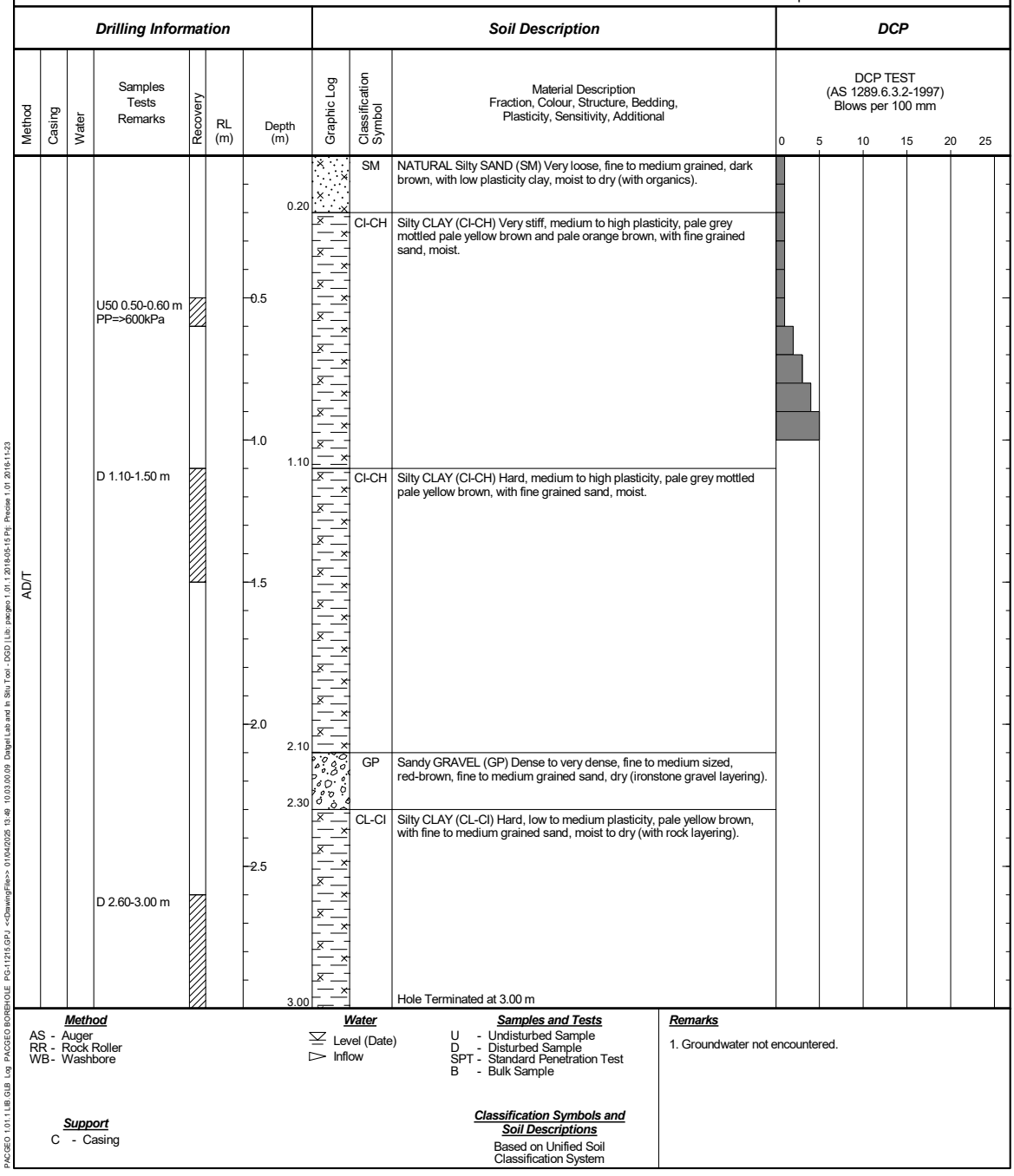
Project No.: PG-11215

Client:	Ingenia Communities	Commenced:	13/03/2024
Project Name:	Proposed Retirement Facility Development	Logged By:	RR
Hole Location:	Millers Glen, 27 Oaklands Way, Beaudesert	Checked By:	
Hole Position:			
Drill Model and Mounting:	Compac 018	RL Surface:	No survey
Hole Diameter:		Datum:	AHD Operator: RR



Method
AS - Auger
RR - Rock Roller
WB - Washbore

Water
Level (Date)
Inflow

Samples and Tests
U - Undisturbed Sample
D - Disturbed Sample
SPT - Standard Penetration Test
B - Bulk Sample

Remarks
1. Groundwater not encountered.

Support
C - Casing

Classification Symbols and Soil Descriptions
Based on Unified Soil Classification System

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APPENDIX C

GUIDELINES FOR HILLSIDE CONSTRUCTION

Document Set ID: 13102750
Version: 1, Version Date: 27/05/2025

PRACTICE NOTE GUIDELINES FOR LANDSLIDE RISK MANAGEMENT 2007

APPENDIX G - SOME GUIDELINES FOR HILLSIDE CONSTRUCTION

	GOOD ENGINEERING PRACTICE	*POOR ENGINEERING PRACTICE*
ADVICE		
GEOTECHNICAL ASSESSMENT	Obtain advice from a qualified, experienced geotechnical practitioner at early stage of planning and before site works.	Prepare detailed plan and start site works before geotechnical advice.
PLANNING		
SITE PLANNING	Having obtained geotechnical advice, plan the development with the risk arising from the identified hazards and consequences in mind.	Plan development without regard for the Risk.
DESIGN AND CONSTRUCTION		
HOUSE DESIGN	Use flexible structures which incorporate properly designed brickwork, timber or steel frames, timber or panel cladding. Consider use of split levels. Use decks for recreational areas where appropriate.	Floor plans which require extensive cutting and filling. Movement intolerant structures.
SITE CLEARING	Retain natural vegetation wherever practicable.	Indiscriminately clear the site.
ACCESS & DRIVEWAYS	Satisfy requirements below for cuts, fills, retaining walls and drainage. Council specifications for grades may need to be modified. Driveways and parking areas may need to be fully supported on piers.	Excavate and fill for site access before geotechnical advice.
EARTHWORKS	Retain natural contours wherever possible.	Indiscriminatory bulk earthworks.
CUTS	Minimise depth. Support with engineered retaining walls or batter to appropriate slope. Provide drainage measures and erosion control.	Large scale cuts and benching. Unsupported cuts. Ignore drainage requirements
FILLS	Minimise height. Strip vegetation and topsoil and key into natural slopes prior to filling. Use clean fill materials and compact to engineering standards. Batter to appropriate slope or support with engineered retaining wall. Provide surface drainage and appropriate subsurface drainage.	Loose or poorly compacted fill, which if it fails, may flow a considerable distance including onto property below. Block natural drainage lines. Fill over existing vegetation and topsoil. Include stumps, trees, vegetation, topsoil, boulders, building rubble etc in fill.
ROCK OUTCROPS & BOULDERS	Remove or stabilise boulders which may have unacceptable risk. Support rock faces where necessary.	Disturb or undercut detached blocks or boulders.
RETAINING WALLS	Engineer design to resist applied soil and water forces. Found on rock where practicable. Provide subsurface drainage within wall backfill and surface drainage on slope above. Construct wall as soon as possible after cut/fill operation.	Construct a structurally inadequate wall such as sandstone flagging, brick or unreinforced blockwork. Lack of subsurface drains and weepholes.
FOOTINGS	Found within rock where practicable. Use rows of piers or strip footings oriented up and down slope. Design for lateral creep pressures if necessary. Backfill footing excavations to exclude ingress of surface water.	Found on topsoil, loose fill, detached boulders or undercut cliffs.
SWIMMING POOLS	Engineer designed. Support on piers to rock where practicable. Provide with under-drainage and gravity drain outlet where practicable. Design for high soil pressures which may develop on uphill side whilst there may be little or no lateral support on downhill side.	
DRAINAGE SURFACE	Provide at tops of cut and fill slopes. Discharge to street drainage or natural water courses. Provide general falls to prevent blockage by siltation and incorporate silt traps. Line to minimise infiltration and make flexible where possible. Special structures to dissipate energy at changes of slope and/or direction.	Discharge at top of fills and cuts. Allow water to pond on bench areas.
SUBSURFACE	Provide filter around subsurface drain. Provide drain behind retaining walls. Use flexible pipelines with access for maintenance. Prevent inflow of surface water.	Discharge roof runoff into absorption trenches.
SEPTIC & SULLAGE	Usually requires pump-out or mains sewer systems; absorption trenches may be possible in some areas if risk is acceptable. Storage tanks should be water-tight and adequately founded.	Discharge sullage directly onto and into slopes. Use absorption trenches without consideration of landslide risk.
EROSION CONTROL & LANDSCAPING	Control erosion as this may lead to instability. Revegetate cleared area.	Failure to observe earthworks and drainage recommendations when landscaping.
DRAWINGS AND SITE VISITS DURING CONSTRUCTION		
DRAWINGS	Building Application drawings should be viewed by geotechnical consultant	
SITE VISITS	Site Visits by consultant may be appropriate during construction/	
INSPECTION AND MAINTENANCE BY OWNER		
OWNER'S RESPONSIBILITY	Clean drainage systems; repair broken joints in drains and leaks in supply pipes. Where structural distress is evident see advice. If seepage observed, determine causes or seek advice on consequences.	

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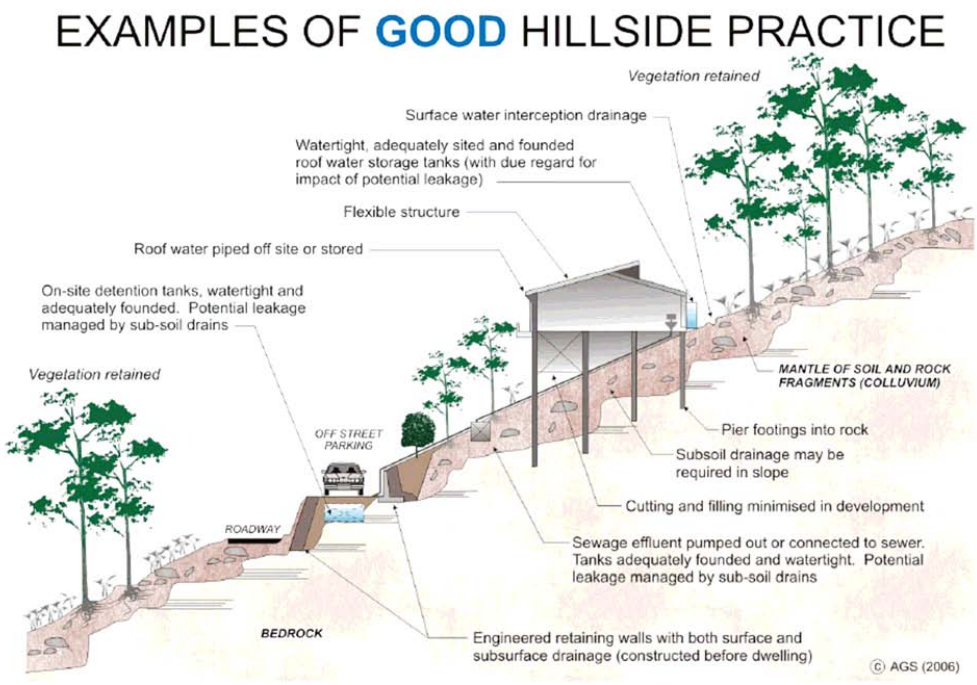
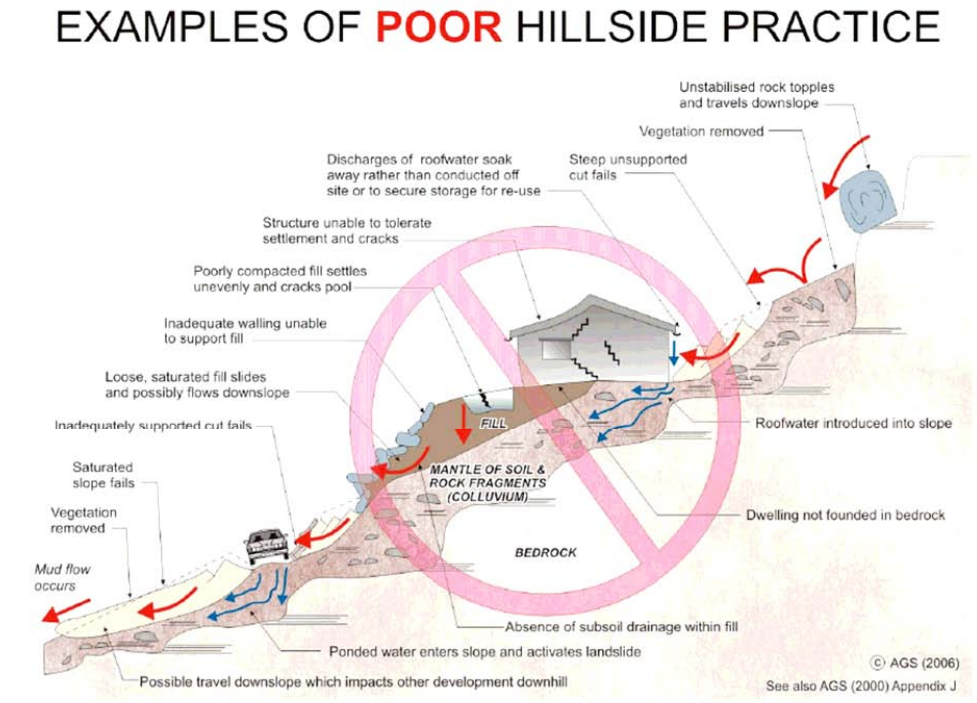
PRACTICE NOTE GUIDELINES FOR LANDSLIDE RISK MANAGEMENT 2007





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APPENDIX D

SITE PLAN

Document Set ID: 13102750
Version: 1, Version Date: 27/05/2025

Pacific Geotech
Consulting Geotechnical Engineers

Drawn ER	Project:	Proposed Retirement Facility Development	Drawing No. PG-11215-01	A4
Date MAR-24	Location:	Millers Glen, 27 Oaklands Way, Beaudesert		
Checked	Client:	Ingenia Communities		

Document Set ID: 13102750
Version: 1, Version Date: 27/05/2025

QUEENSLAND BUSHFIRE PLANNING

BUSHFIRE MANAGEMENT PLAN (BMP)

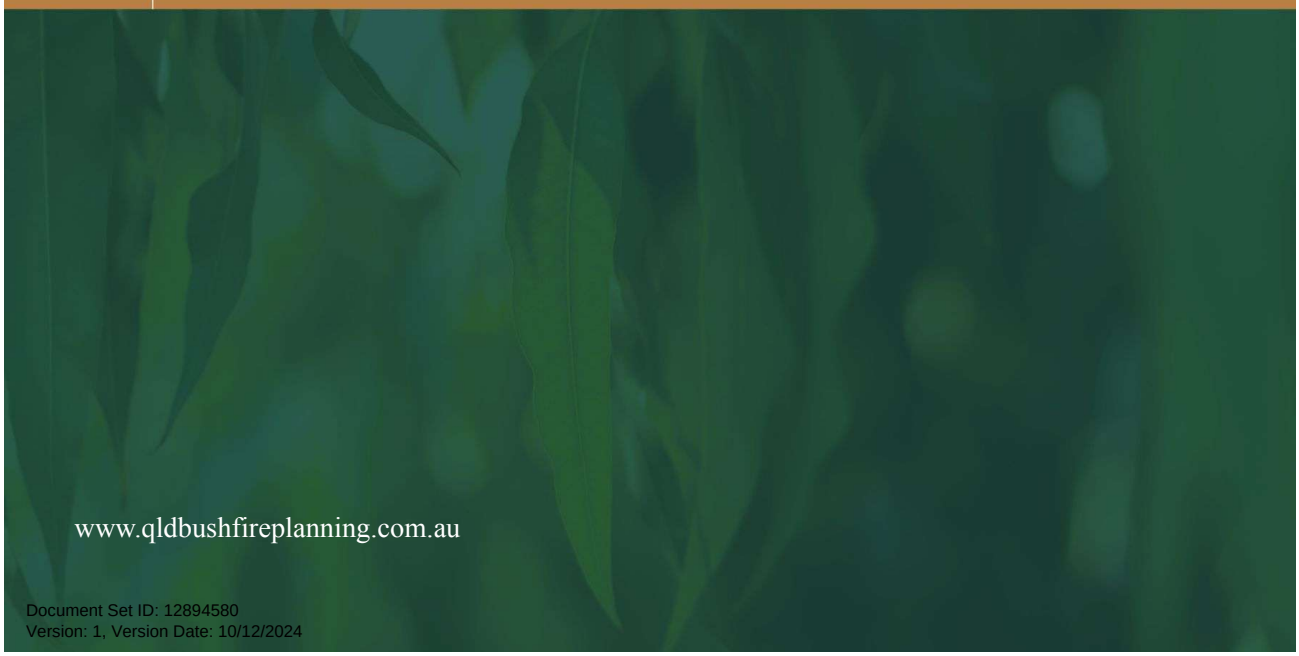
Property

Oakland Way, Beaudesert

Lot 4 on SP314720 and Lot 802 SP342853

Prepared for: Ingenia Communities

November 2024 V2



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Document Set ID: 12894580
Version: 1, Version Date: 10/12/2024

Disclaimer

This document has been prepared for the benefit of Ingenia Communities. This report is prepared for the benefit of the named client only. No third party may rely upon any advice or work done by Queensland Bushfire Planning (QBP) in relation to the services, including this report, except to the extent expressly agreed to in writing by QBP.

It is acknowledged and agreed that the site may be subject to a degree of bushfire hazard. The client acknowledges and agrees that QBP has not created or contributed to the creation of this hazard and the client indemnifies QBP for claims arising out of or result from a bushfire event except to the extent attributable to the negligence of QBP.

The client agrees that QBP shall have no liability in respect of any damage or loss incurred as a result of bushfire. Compliance with this report shall be the responsibility of the client and/or the land-owners. This disclaimer shall apply notwithstanding the report may be made available to the relevant Local Government Authority and other persons for an application for permission or approval to fulfill a legal requirement.

Document Set ID: 12894580
Version: 1, Version Date: 10/12/2024

GLOSSARY OF TERMS AND ABBREVIATIONS

4WD	Four wheel drive
APZ	Asset Protection Zone - An area between an asset and a bushfire hazard where the bushfire fuel hazard has been reduced significantly to reduce the likely intensity of the any bushfire attack so that fire suppression and asset protection activities may be carried out.
AS3959	Australian Standard 3959-2018 - Construction of Buildings in Bushfire-prone Areas
Asset	Anything valued by the community that may be at risk of harm from bushfire, including people, house, crops, heritage buildings and places, infrastructure, the environment, businesses and forest resources.
BAL	Bushfire Attack Level as defined in AS3959 - A means of measuring the severity of a building's potential exposure to ember attack, radiant heat and direct flame contact, using increments of radiant heat expressed in kilowatts per metre squared and the basis for establishing the requirements for construction to improve protection of building elements from attack by bushfire.
Bushfire attack	Attack by burning debris, radiant heat or flame generated by bushfire which might result in ignition and subsequent destruction of the building.
Bushfire catchment	The geographical area surrounding a community which a bushfire ignition is likely to impact on assets valued by the community.
Bushfire hazard area	An area where the combination of fuel load, fuel arrangement and topography under particular climatic and weather conditions has the potential to sustain a bushfire of sufficient severity to pose a risk to people, property or the environment. Bushfire hazards are variable in their severity with severity levels usually measured in terms of fire intensity (kW/m2) arising from the hazard.
Bushfire management	All activities directed to the prevention, detection, damage mitigation and suppression of bushfires and recovery after bushfire events. It includes bushfire policy, administration, law enforcement, community education, training of fire fighters, planning, communication systems, equipment, research, and the multitude of field operations undertaken by land managers and emergency service personnel relating to bushfire control and use of fire to meet land management goals and objectives.

Bushfire-prone area	An area that can support bushfire or is likely to be subject to bushfire attack due to its proximity to a bushfire hazard area.
Ember attack	Attack by smouldering or flaming windborne debris that is capable of entering or accumulating around a building and may ignite the building and other combustible materials and debris (eg garden mulch, pine fencing).
Emergency warning	An emergency warning is a message signalling an imminent hazard, which may include advice on protective measures. Emergency warnings in relation to bushfires are issued by QFES and are used to inform residents of threat to properties, time to impact, the direction and strength of the fire and of the steps residents must to take to survive. There are three National bushfire warning levels defined as follows: • ADVICE: indicates a fire or other emergency has started, however there is no immediate threat. • WATCH AND ACT: there is a heightened level of threat, you need to be aware of your situation and take action to be prepared and protect yourself and your family. • EMERGENCY WARNING: you are in danger.
Environment	The term environment includes: • Ecosystems and their constituent parts, including people and communities. • Natural and physical resources. • The qualities and characteristics of locations, places and areas. • Heritage value of places. • The social, economic and cultural aspects of a thing mentioned above.
FFDI	Forest Fire Danger Index (see also FDR) - A relative number denoting an evaluation if the fire rate of spread, or suppression difficulty for specific combinations of temperature, relative humidity, drought effects and wind speed. The numbers range from 1 to 100.
FDR	Fire Danger Rating - A relative class denoting an evaluation of rate of spread, or suppression difficulty for specific combinations of temperature, relative humidity, drought effects and wind speed indicating the relative evaluation of the fire danger. Ratings are low-moderate (FDI 0-11), high (FDI 12-24), very high (FDI 25-49), severe (FDI 50-74), extreme (FDI 75-99), catastrophic (FDI 100+).
Fine fuel	Fuels such as grass, leaves, bark and twigs (dead plant material less than 6mm and live plant material less than 3mm in diameter) that ignite readily and are burnt readily when dry.

Fire control line	A natural (such as a creek line) or constructed barrier (such as trail or mineral earth break), or treated fire edge used in fire suppression and prescribed burning to limit the spread of the fire.
Fire regime	The history of fire in a particular vegetation type or area including the frequency, intensity and season of burning. It may also include proposals for the use of fire in a given area.
Fuel	Any material such as grass, leaf litter, and live vegetation which can be ignited and sustains a bushfire. Fuel is usually measured in tonnes per hectare.
Fuel layer	The layering of fuels will influence fire behaviour.The five main fuel layers consist of surface fuel, near surface fuel, elevated fuel, bark fuel and canopy fuel.
GIS	Geographic Information System
LGA	Local Government Area
QFES	Queensland Fire and Emergency Services
Regional ecosystem	A grouping of vegetation classes with common ecological requirements for fire and common fire behaviour characteristics.
Residual Risk	The risk of adverse impacts from a bushfire after implementation of risk mitigation/management measures.
Risk	The likelihood of a bushfire igniting and developing to the point that it will threaten an asset and the resultant nature and magnitude of the social, economic and environmental consequences to the community or the assets they value.
Risk mitigation/management	A systematic process that provides a range of treatments which are designed to reduce bushfire risk and thereby contribute to the wellbeing of communities and the environment which may suffer the adverse impacts of bushfire.
ROS	Rate Of Spread
SPP Interactive Mapping System	The State Planning Policy (SPP) Interactive Mapping System, as amended from time to time, published by DLGIP and located at https://spp.dsdip.esriaustraliaonline.com.au/geoviewer/map/planmaking
Unacceptable risk	A situation where people or property are exposed to a predictable hazard event that may result in serious injury to, loss of life, failure of community infrastructure, or property damage that would make a dwelling unfit for habitation.

VHC	Vegetation Hazard Class (VHC) - based on the available bushfire fuel load typically associated with a particular vegetation type.
Water point	Any natural or constructed supply of water that is readily available for fire control operations.
Wildfire	Another term for a bushfire.

EXECUTIVE SUMMARY

Queensland Bushfire Planning has been engaged on behalf of Ingenia Communities to develop a site-based Bushfire Hazard Assessment and Bushfire Management Plan in relation to a residential development at Oakland Way, Beaudesert, Lot 4 on SP314720 and Lot 802 SP342853. The site is captured by the State Planning Policy Natural Hazards and Resilience - *Bushfire Prone Area* mapping and in accordance with the provisions of the Scenic Rim Planning Scheme 2020 - Bushfire Hazard Overlay Code, a detailed Bushfire Management Plan has been prepared. This report includes a number of recommendations regarding bushfire risk mitigation in accordance with AS3959-2018 and Scenic Rim Planning Scheme 2020.

As detailed in Section 5 the bushfire hazard and risk management measures that have been incorporated into the design of the proposed development at Oakland Way, Beaudesert, Lot 4 on SP314720 and Lot 802 SP342853, combined with the implementation of the additional recommended measures during the construction and occupational phase of the development should ensure compliance with the Scenic Rim Planning Scheme 2020 - Bushfire Hazard Overlay Code.

In conclusion, the residential development at Oakland Way, Beaudesert, Lot 4 on SP314720 and Lot 802 SP342853 is a residential development associated with an acceptable level of risk with regards to people or property being exposed to harm in the event of a bushfire.

Recommendation
1. Ingress and egress for residents and emergency services will be direct to Oakland Way via constructed roads away from the hazardous vegetation.
2. Reticulated water will be provided to the reconfiguration.
3. Proposed buildings will be constructed to meet the requirements of the Australian Standard AS3959- 2018 - *Construction of buildings in bushfire prone areas.*
4. The vegetation on Oakland Way, Beaudesert will be managed to achieve APZ requirements and will be maintained in managed low hazard state.
5. Fencing on Oakland Way, Beaudesert will be constructed of non – combustible materials.
6. A bushfire information kit will be provided to residents to inform them of the bushfire risks and their roles and responsibilities for prevention, preparedness and response to any fire event.

GLOSSARY OF TERMS AND ABBREVIATIONS

EXECUTIVE SUMMARY

1. INTRODUCTION

1.1 Bushfire Regulatory Framework

1.1.1 State Planning Policy (SPP)

1.1.2 Scenic Rim Planning Scheme 2020

1.1.3 AS3959:2018 Construction of Buildings in Bushfire Prone Area

2. SITE DESCRIPTION AND DETAILS

2.1 Overview

2.2 Proposed Development

3. BUSHFIRE HAZARD AND RISK ASSESSMENT

3.1 Overview

3.2 Bushfire Hazard Assessment

3.2.1 Scenic Rim Planning Scheme Bushfire Risk Map

3.2.2 SPP Natural Hazard Mapping

3.3 Site Assessment

3.3.1 Pre Development Vegetation

3.3.2 Classified Vegetation

3.3.3 Forest Fire Danger Index

3.3.4 Slope Assessment

3.4 Bushfire Risk Assessment

3.4.1 Risk Classification

3.4.2 Bushfire Behaviour and Risk Exposure Modelling

3.4.3 Assessment of Bushfire Hazard

4. BUSHFIRE HAZARD AND RISK MITIGATION

4.1 Access and Evacuation

4.2 Water Supply

4.3 Building Design and Construction

4.4 Vegetation Management

4.5 Residential Landscape Design

4.5 Fencing

4.6 Community Awareness

5. COMPLIANCE ASSESSMENT

APPENDIX 1

POTENTIAL BUSHFIRE ATTACK LEVEL

APPENDIX 2

Document Set ID: 12894580
Version: 1, Version Date: 10/12/2024

1. INTRODUCTION

This Bushfire Management Plan has been prepared on behalf of Ingenia Communities for a residential development at Oakland Way, Beaudesert, Lot 4 on SP314720 and Lot 802 SP342853. The focus of this Report refers to the statutory planning and building requirements as they may apply, pursuant to all relevant policies, standards and regulation, along with end-user consideration. In addition, this report seeks to ensure fire risk and evacuation for adjoining and nearby properties is not inadvertently adversely impacted. This assessment report aims to mitigate the risk to life and property from bushfire threat and the impact of bushfire attack which includes:

- Direct flame contact;
- Ember and firebrand attack;
- Radiant heat; and
- Fire-driven wind.

This Report provides:

- In Section 2 a description of the residential development.
- In Section 3 an assessment of the bushfire hazards and risks that will be present within the residential development pre and post completion.
- In Section 4 details concerning the bushfire hazard and risk management measures that have been incorporated into the residential development and additional measures that are recommended for implementation during the construction and occupational phases of the development.
- In Section 5 assessment of the level of compliance of residential development against the requirements of the Scenic Rim Planning Scheme 2020 - Bushfire Hazard Overlay Code.

This assessment does not seek to remove the threat of any bushfire risk, but provide detailed siting, layout, building and/or servicing information to assist the ability of the owner(s) to manage the potential threat of this risk. This assessment report is prepared in accordance with best practice industry standards as applicable in Queensland and pursuant to both State and local government bushfire hazard policies and guidelines.

1.1 Bushfire Regulatory Framework

1.1.1 State Planning Policy (SPP)

The SPP identifies the Queensland Government's policies about matters of state interest in land use planning and development (DILGP, July 2017). The SPP is a broad and comprehensive statutory planning instrument. It sits above regional plans, standard planning scheme provisions and local government planning schemes within the hierarchy of planning instruments outlined in the Planning Act 2016.

The SPP is supported by the following guidance material:

- The SPP state interest guidance material - Natural hazards, risk and resilience – Bushfire ('SPP guidance') (DSDMIP, 2019), which provides further context to the SPP and explains how the SPP policies can be applied, in particular for local government when making or amending local planning instruments. The SPP guidance is also intended to assist assessment managers and practitioners in applying the SPP assessment benchmarks when state interests have not been integrated into the local planning scheme (where applicable).
- The 'Bushfire Resilient Communities – Technical Reference Guide for the State Planning Policy State Interest - Natural Hazards, Risk and Resilience – Bushfire ('BRC technical document') (QFES, 2019), which provides technical guidance and policy positions of the Queensland Fire and Emergency Services (QFES). It includes procedures for undertaking a bushfire hazard assessment (BHA), calculating asset protection zones and preparing a Bushfire Management Plan.

1.1.2 Scenic Rim Planning Scheme 2020

The purpose of Scenic Rim Planning Scheme 2020 - *Planning Scheme Policy Schedule 6.2.4: Bushfire Management Plans* is to provide guidance for the preparation of a Bushfire Management Plan (BMP) to ensure:
(a) development is designed and located to minimise risks to people and property from bushfires;
(b) bushfire risk mitigation treatments are accommodated in a manner that avoids or minimises impacts on the natural environment and ecological processes;
(c) development contributes to effective and efficient disaster management response and recovery capabilities.

This planning scheme policy applies where:
(1) development occurs within areas identified as a Bushfire Hazard Area (Very High, High, Medium or Potential Impact Buffer) on Overlay Map OM-03-B Bushfire Hazard; and
(2) the Bushfire Hazard Overlay Code requires the preparation of a Bushfire Management Plan.

A Bushfire Management Plan identifies bushfire hazards, risk to development and strategies for mitigating the impacts of bushfire on life, property and the environment. This includes identifying specific risk factors associated with developments, planning for the separation of at-risk elements and providing access and treatments to facilitate an effective response to bushfire.

1.1.3 AS3959:2018 Construction of Buildings in Bushfire Prone Area

The Australian Standard AS3959:2018 Construction of Buildings in Bushfire-Prone Areas (Standards Australia, 2009) specifies the requirements for the construction of buildings in bushfire-prone areas in order to improve their resistance to bushfire attack. AS3959:2018 applies to those areas where a regulated map (i.e. a planning scheme overlay map) identifies an area as a bushfire prone area (or similar), requiring calculation of Bushfire Attack Level (BAL) in accordance with a methodology outlined in the standard. AS3959:2018 prescribes the construction details for buildings depending on the calculated BAL. The detailed requirements relating to construction methods and materials are typically dealt with as part of building design and enabled via private certification in accordance with the Building Code of Australia.

2. SITE DESCRIPTION AND DETAILS

2.1 Overview

The site is located at Oakland Way, Beaudesert and is described as Lot 4 on SP314720 and Lot 802 SP342853 within Scenic Rim Regional Council (Figure 1).

Figure 1

Lot 4 on SP314720 and Lot 802 SP342853 has an area of 93 870 square meters and is aligned north - south with a southerly aspect (Figure 2).

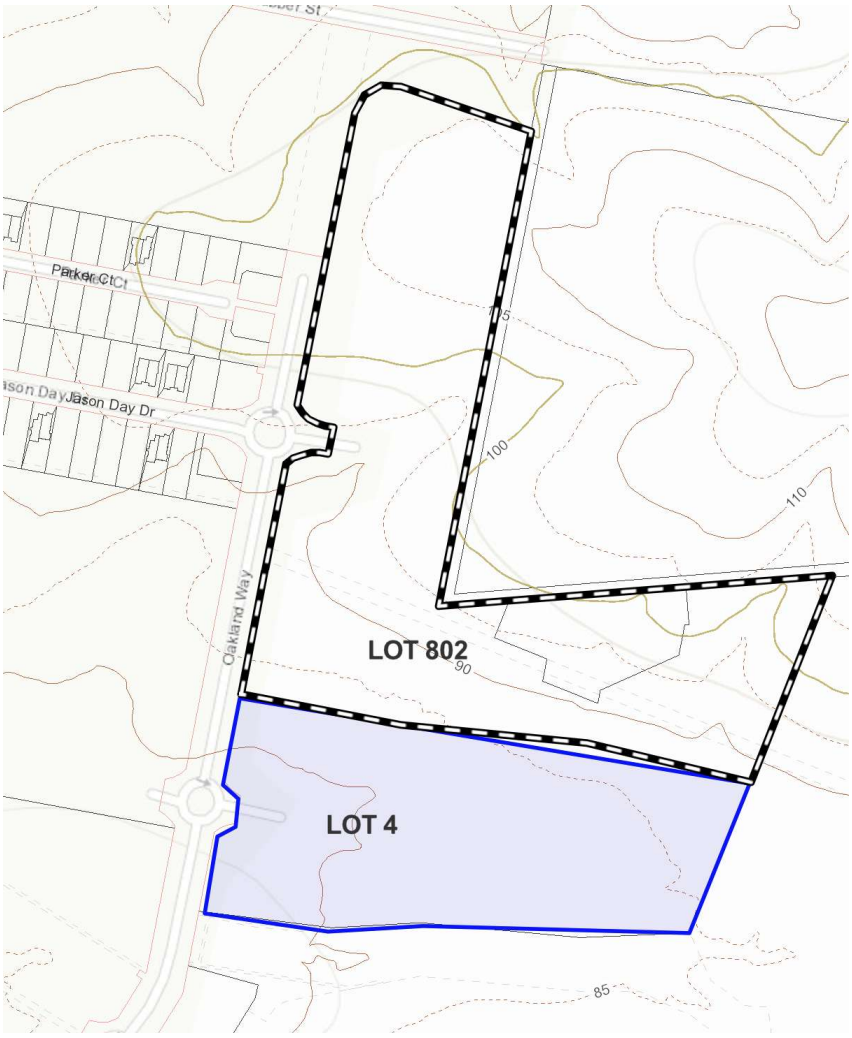


Figure 2

Lot 4 on SP314720 and Lot 802 SP342853 is currently zoned Low to Medium Density Residential (Figure 3).

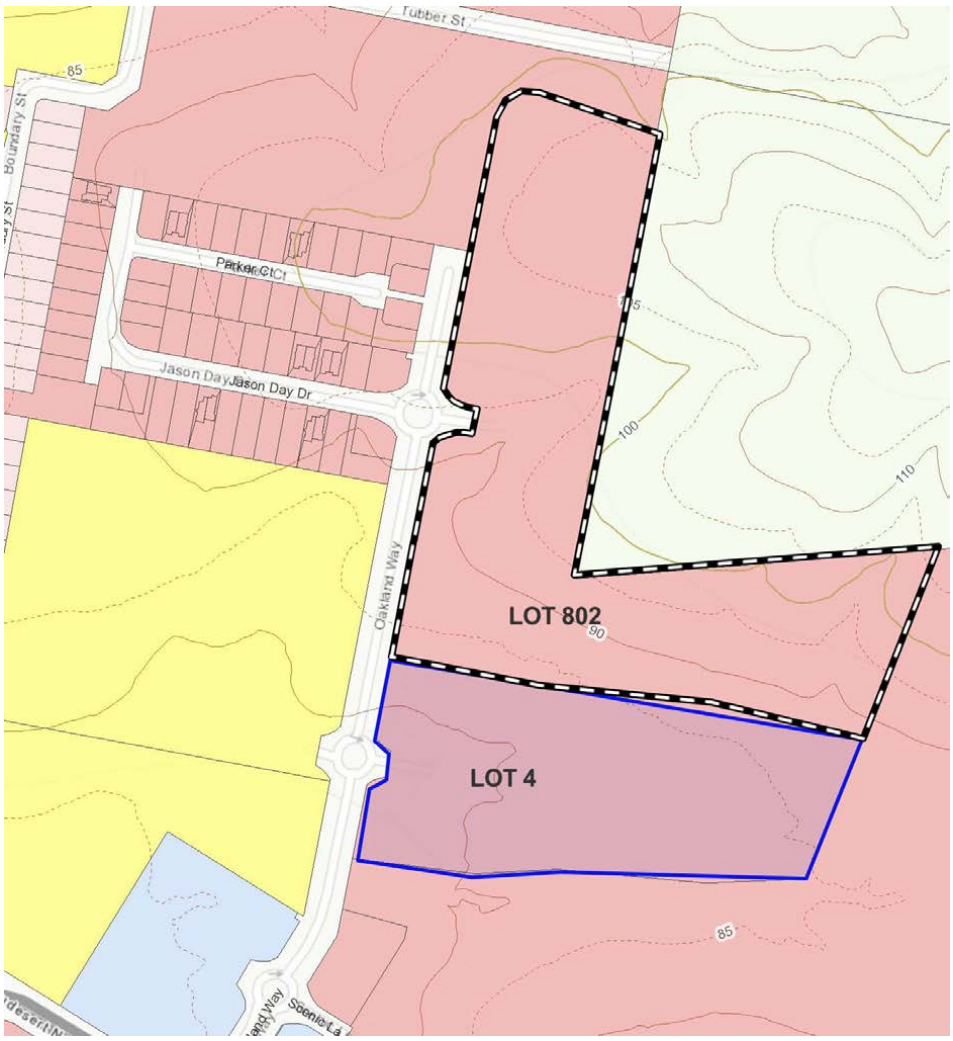


Figure 3

2.2 Proposed Development

The proposed development is residential (Figure 4).

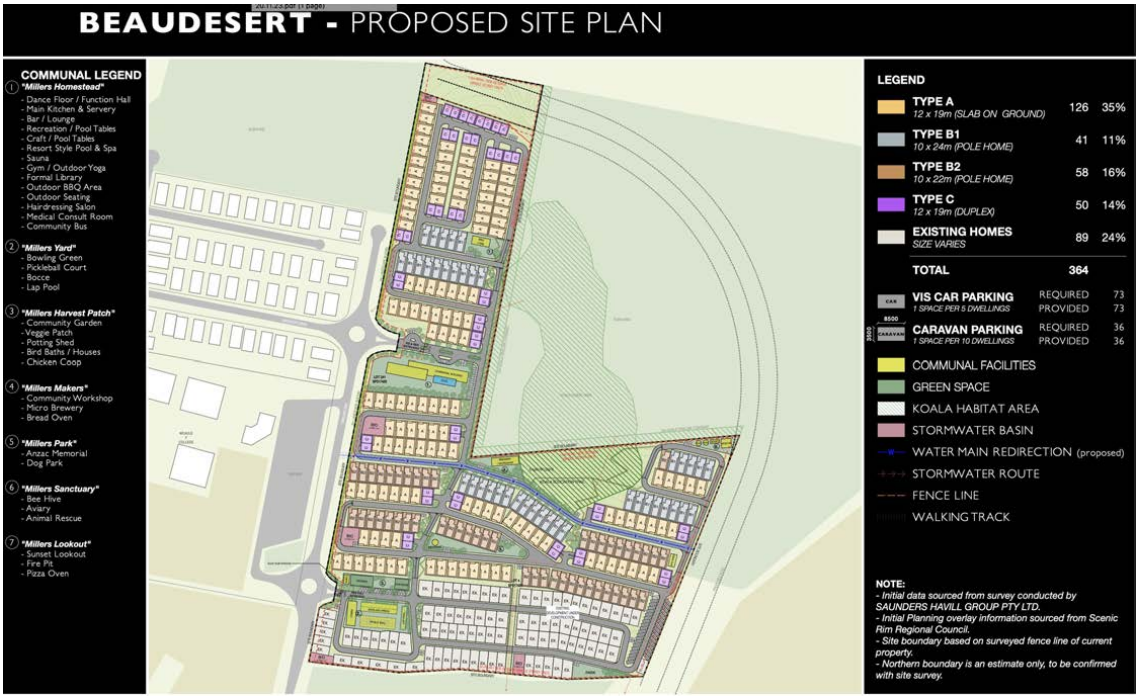


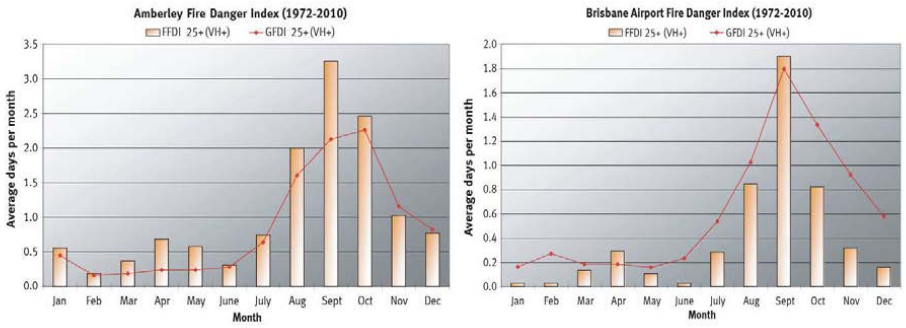
Figure 4

3. BUSHFIRE HAZARD AND RISK ASSESSMENT

3.1 Overview

Scenic Rim Regional Council is situated in Southeast Queensland, an area characterised by a mild sub-tropical costal climate which does not normally experience extended periods of server fire weather that are frequently experienced in southern Australia. The number of days each year characterised by weather conditions conducive to the ignition and rapid spread of a high intensity bushfire are limited. The Southeast Queensland (SEQ) fire season (when more severe wildfires normally occur) is generally recognised as September to December. In the southern part of SEQ, as indicated by analysis of fire weather data from Brisbane Airport and Amberley, August is also a period of elevated fire risk, and more significant than November which has a lower risk with the commencement of storm rains. September, the peak month for wildfires is characterised by frequent westerly winds, typically low rainfall, low humidity and increasing temperatures.

The graphic below illustrates the average number of days per month that were characterised by Forest Fire Danger Index (FFDI) of 25 or greater using data from the Amberley and Brisbane Airport weather stations for the period 1972 to 2010. FFDI of 25 is the base FFDI value for the Very High Fire Danger rating used in Queensland. This analysis indicates that on average there are less than 14 days per year where an FFDI of 25 or greater can be expected. For the rest of the year the prevailing meteorological conditions mean if a bushfire starts it can most likely be contained without significant risk to human health or property.



Consistent with the relatively low frequency of high risk bushfires in SEQ compared to southern states, the number of lives and houses lost as a result of bushfire is also relatively low. Not withstanding, bushfires still do frequently occur in Southeast Queensland and present a risk that needs to be considered as part of a comprehensive approach to land use planning and development.

3.2 Bushfire Hazard Assessment

3.2.1 Scenic Rim Planning Scheme Bushfire Risk Map

Figure 5 shows the bushfire hazard overlay mapping in the Scenic Rim Regional Council Planning Scheme.

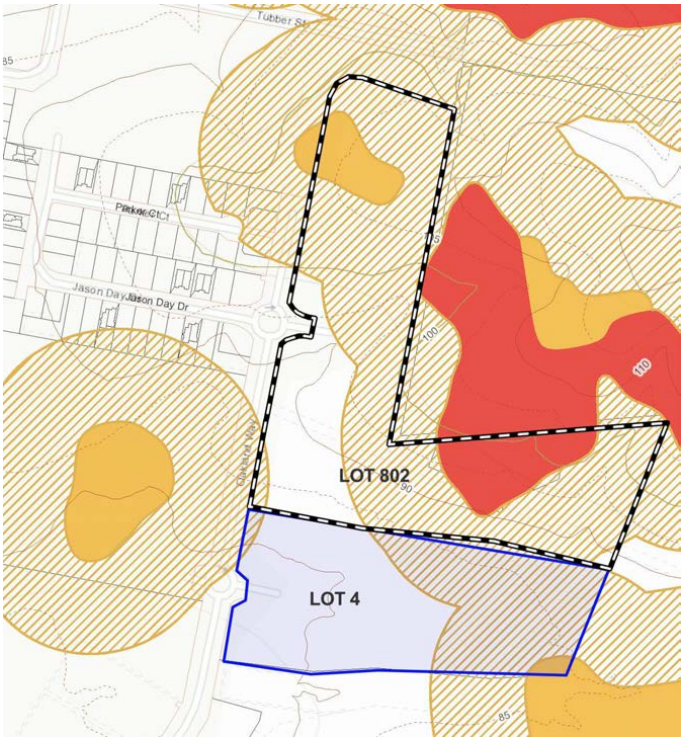


Figure 5

3.2.2 SPP Natural Hazard Mapping

The State Government Single State Planning Policy (SPP) released in 2017, includes mapping that is an outcome of the new bushfire hazard mapping methodology developed by the CSIRO and the Queensland Government. The new Bushfire Prone Area mapping was found to have an average reliability of 85%. The new methodology provides a major improvement in Bushfire hazard mapping. The new modified approach calculates potential fire line intensity using total fuel loads, landscape slope and fire weather severity. A default 100-metre buffer was determined from analysis of heat and radiation decay curves and research that indicates 80% of housing loss and 80% of life loss occurred within 100 metres of bushland.

The subject site is identified on the State Planning Policy Natural Hazards Risk and Resilience mapping as being within potential bushfire impact zone, requiring the bushfire hazard impacts be addressed (Figure 6).

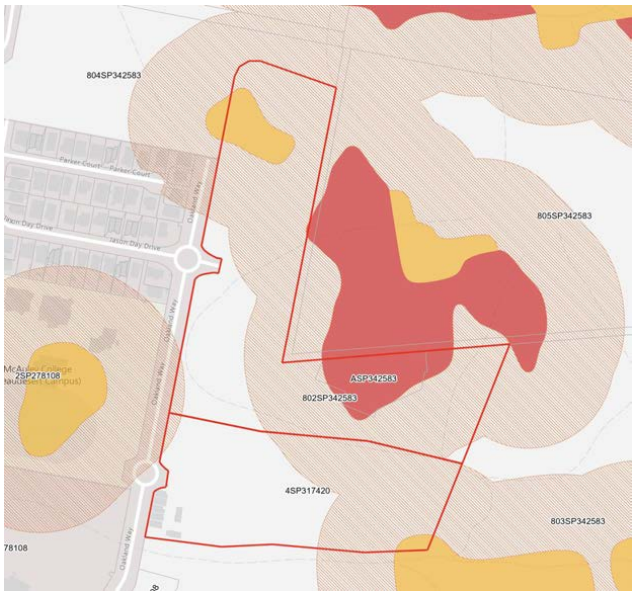


Figure 6

3.3 Site Assessment

The site specific assessment of the bushfire hazard classification for the development at Oakland Way, Beaudesert, Lot 4 on SP314720 and Lot 802 SP342853 and immediate locality has been completed based on a review of aerial imagery, topographic data, available vegetation mapping and a physical site inspection conducted on October 20, 2023. The site inspection was conducted to confirm and record the relevant information to determine the bushfire hazard in accordance with the requirements of the Scenic Rim Planning Scheme 2020. These assessments account for changes that will occur to the extent and nature of the vegetation types as a result of the proposed development at Oakland Way, Beaudesert. The site specific assessments were based on the methodology specified in Australian Standard AS3959:2018 - Construction of Building in Bushfire Prone Areas.

The classification of an area's Potential Bushfire Intensity takes into account three key variables:

- Total Fuel Load - primarily a function of the vegetation type(s) in an area.
- McArthur Forest Fire Danger Index (FFDI) - an index that considers variability in fire intensity associated with a range of weather variable including recent precipitation, current wind speed, relative humidity and temperature.
- Slope - an important variable controlling the rate of fire spread and fuel consumption.

3.3.1 Pre Development Vegetation

Table 1 shows the original vegetation on and about the site identified using the *Public Safety Business Agency (PSBA) State-wide Bushfire Hazard (Bushfire Prone Area)* mapping.

VHC Description	Regional Ecosystem (RE)	Site Specific Assessment of Presence	Potential Fuel Load (t/Ha) Surface	Potential Fuel Load (t/Ha) Total
1. VHC: 10.2 (Photo 1)	12.9 - 10.2 Corymbia citriodora subsp. variegata Â± Eucalyptus crebra open forest on sedimentary rocks	Broad landscape vegetation	17.0	18.0
1. VHC: 13.1 (Photo 2)	12.9 10.3 Eucalyptus moluccana open forest on sedimentary rocks	Associated vegetation type	19.4	21.8

Table 1

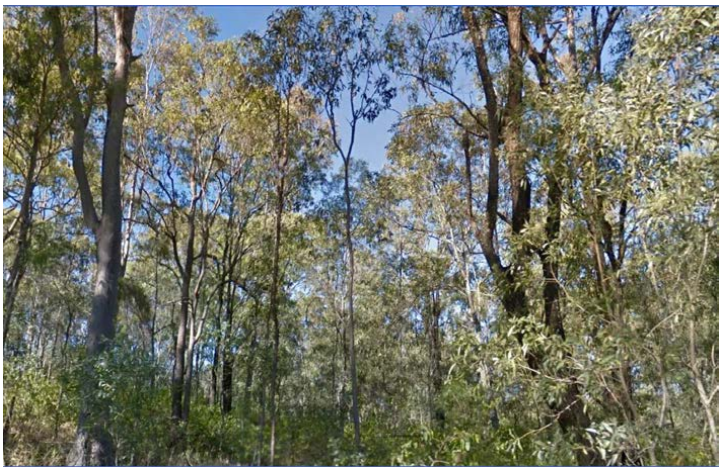


Photo 1

Photo 2

3.3.2 Classified Vegetation

Australian Standard, *Construction of Buildings in Bushfire Prone Areas* (AS 3959–2018*)* requires any classified vegetation within 100 metres of the proposed works must be assessed. Table 2 shows the vegetation on and about the site identified using the *Public Safety Business Agency (PSBA) State-wide Bushfire Hazard (Bushfire Prone Area)* mapping

VHC Description	Regional Ecosystem (RE)	Site Specific Assessment of Presence	Potential Fuel Load (t/Ha) Surface	Potential Fuel Load (t/Ha) Total
1. VHC: 13.1 (Photo 1)	12.9 - 10.3 (remnant)	Discrete area to east of community proposal.	19.4	21.8
1. VHC: 10.2 (Photo 2)	12.9 - 10.2 Corymbia citriodora subsp. variegata Â± Eucalyptus crebra open forest on sedimentary rocks (non - remnant)	Some scattered discrete areas not impacting proposal.	17.0	18.0

Table 2

Based on the above, the Potential Fuel Loads available within and adjacent to Lot 4 on SP314720 and Lot 802 SP342853 range from:

- a minimum of 19.4 associated with existing and proposed fuel load: to
- a maximum of 21.8 associated with ares of remnant vegetation located within 100m of the development.

3.3.3 Forest Fire Danger Index

For land use planning purposes in Queensland the 1:20 year Forest Fire Danger Index, adjusted to reflect the expected climate in the year 2050, has been adopted as the design fire weather conditions. The FFDI for a 1:20 year is equivalent to a 5% annual exceedance probability (ie. 5% chance of occurring in any given year) and integrates the combined effect of a range of weather variables including long term dryness, recent precipitation, current wind speed, relative humidity and temperature.

The QFES Redi-Map Portal provides more refined mapping of FFDI (1 in 20 years) index values. Utilising this mapping the applicable FFDI for the development at Oakland Way, Beaudesert has resulted in an FFDI for the development of 56. An FFDI of 56 falls within the Severe Fire Danger Rating (FDR) according to the FDR system developed by Australasian Fire Authorities Council (AFAC) and summarised in Table 3.

Fire Danger Rating	AFAC Description of Likely Fire Behaviour and Consequence
Catastrophic FFDI > 100	Fires will be uncontrollable, unpredictable and fast moving. These are the worst conditions for a bush or grass fire. If a fire starts and takes hold, it will be extremely difficult to control. It will take significant fire fighting resources and cooler conditions to bring it under control. Spot fires will start well ahead of the main fire and cause rapid spread of the fire. Embers will come from many directions. Homes are not designed or constructed to withstand fires in these conditions. The safest place to be is away from bushfire prone areas.
Extreme **FFDI 75-99**	Fires will be uncontrollable, unpredictable and fast moving. These are very hot, dry and windy conditions for a bush or grass fire. If a fire starts and takes hold, it will be unpredictable, move very fast. It will be very difficult for fire fighters to bring under control. Spot fires will start and move quickly. Embers may come from many directions. Homes that are prepared to the highest level, have been constructed to bushfire protection levels and are actively defended, may provide safety. You must be prepared physically and mentally to defend in these conditions. The safest place to be is away from bushfire prone areas.

Fire Danger Rating	AFAC Description of Likely Fire Behaviour and Consequence
Severe **FFDI 50-74**	Fires will be uncontrollable and move quickly .These are hot, dry and possibly windy conditions for a bush or grass fire. If a fire starts and takes hold, it will be hard for fire fighters to bring under control. Well-prepared homes that are actively defended can provide safety. You must be prepared physically and mentally to defend in these conditions.
Very High **FFDI 25-49**	Fires Can be difficult to control. Flames may burn into the tree tops. Theres is a chance people may die or be injured. Some homes and businesses may be damaged or destroyed. Well prepared and actively defended house can offer safety during a fire. Embers may be blown ahead of a fire. Spot fires may occur up to 2km ahead of the fire. Leaving is the safest option for your survival. Your home will only offer safety if it and you are well prepared and you can actively defend during a fire.
High **FFDI 12-24**	Fires can be controlled. Loss of life is highly unlikely and damage to property will be limited. Well prepared and actively defended houses can offer safety during a fire. Embers may be blown ahead of the fire. Spot fires can occur close to the main fire. Know where to get more information and monitor the situation for any changes.
Low-Moderate **FFDI <12**	Fires can be easily controlled. Little or no risk to life and property. Know where to get more information and monitor the situation for any changes

Table 3

Note: An FFDI of 56 specified for use in the SPP for land use planning purpose is higher than the FFDI of 40 specified in AS3959-2018 for all of Queensland for building design and approval purposes.

3.3.4 Slope Assessment

From a bushfire hazard perspective slope of the land under the bushfire prone vegetation can greatly influence fire behaviour. This slope is referred to as the **effective slope**. If the potentially hazardous vegetation is located upslope of the asset(s) the contribution that slope makes towards the intensity and rate of spread of the fire is negligible. **Site slope** is the gradient of the land between retained vegetation and adjoining assets. The site slope influences the 'view factor' of the flame geometries in Bushfire Attack Level models.

Where potentially hazardous vegetation is located downslope of the asset(s) the effective slope gradient of the vegetated land will have significant influence on bushfire intensity and rate of spread. Typically, for each 18-20% (or 10 degrees) increase in slope gradient the rate of forward spread and intensity of a bushfire will double for a fire moving up the slope towards an asset. Similarly if the fire is moving down the slope the rate of spread will decrease by approximately double for each 18-20% (or 10 degrees) increase in slope gradient. As the rate of spread of a bushfire increase so does its intensity.

The effective and site slope for the proposed development at Oakland Way, Beaudesert were measured on site using a Nixon Forestry Pro II laser rangefinder/hypsometer as 3 degree (upslope) effective slope and 3 degrees (upslope) site slope.

NOTE: As fire travels slower down a hill, all classified vegetation that is upslope will assume a value of 0 degrees (i.e. flat land) *(AS3959:2018)*.

3.4 Bushfire Risk Assessment

3.4.1 Risk Classification

With reference to AS/NZS ISO 31000 Risk Management - Principles and Guidelines, The bushfire risk profile of an asset may be defined as "*the chance of something happening that will have an impact on objectives*" and can be qualified in terms of:

- **Likelihood:** the frequency with which it is expected a bushfire of a particular level of intensity will threaten an asset via smoke, embers, radiant heat or flame attack. This can be influenced by local environmental factors, fuel biomass and structure, density of potential ignition sources, fire management and intervention capability etc. , all of which can vary over time due to the influence of resource availability, weather and climate variability.
- **Consequences:** The nature and significance of the potential adverse outcomes for an asset exposed to a certain intensity of bushfire attack (eg. health effects, damage to structures, economic loss, interference with ecosystem processes, loss of biodiversity). This can be influenced by the vulnerability and resilience of the asset to bushfire exposure, the social, economic and environmental values of the asset, post fire recovery and prospects, costs and timeframes.

Assessing the risks to people and property posed by bushfires requires an understanding of the tolerances of people and property to different levels of bushfire attack, in particular attack by flames and radiant heat. For people there is generally no safe level of direct flame exposure and radiant heat is recognised as the biggest killer in a bushfire. Radiant heat levels increase with the increase in the proximity and intensity of bushfire.

The vulnerability of buildings and structures to bushfire attack is largely determined by:

- The material used in their construction.
- The severity and duration of the exposure to radiant heat or flame attack.

For land use planning purposes a maximum radiant heat flux exposure of 29 kW/m2 for residential dwellings on newly created lots is increasingly being recognised as the benchmark for an acceptable level of risk exposure. In this respect the building setback distance needed to achieve a 29 kW/m2 heat flux exposure:

- Reduces potential exposure to bushfire attack, particularly direct flame contact.
- Reduces the likelihood of piloted ignition due to radiant heat exposure.
- Provides opportunities for emergency access and operational space for firefighters before the arrival of a bushfire,
- Improves consistency between planning and building outcomes, thereby reducing the potential for conflicts between planning and building approvals.
- Avoids duplication and regulatory burden on home owners.

3.4.2 Bushfire Behaviour and Risk Exposure Modelling

For land use planning purposes, an important element of a "fit for purpose" method of assessing whether or not a proposed development provides a tolerable or acceptable level of bushfire risk is to consider likely bushfire behaviour and consequences for future residents, QFES personnel and built infrastructure under a design bushfire event. One method for assessing bushfire risk exposure levels examining the likely levels of flame, radiant heat and ember attack that people and property would be exposed to under a design fire event using the Australian Standard AS3959-2018: Construction of buildings in Bushfire Prone Areas - Bushfire Attack Level Method 2. This approach involves:

- **Step 1**: Determine the relevant FDI.
- **Step 2:** Determine the vegetation classification, fuel loads.
- **Step 3**: Determine the effective slope in degrees under the classified vegetation.
- **Step 4**: Determine the slope in degrees of the land between the site and the classified vegetation.
- **Step 5**: Determine the distance of the site from classified vegetation.
- **Step 6**: Determine the BAL rating using Method 2.

For the purposes of this assessment the relevant FFDI, classified vegetation types and slope characteristics used in this assessment are detailed in Section 3.3.2 and 3.3.4 of this Report.

3.4.3 Assessment of Bushfire Hazard

Australian Standard - *Construction of Buildings in Bushfire Prone Areas (AS 3959–2018)* requires that any classified vegetation within 100 metres of the proposed works must be assessed. Figure 9 shows the extent of the 100-metre separation zone (BAL Impact Zone).

Figure 9

Figure 10 shows the heat flux impacts (BAL) on the prosed development, as a function of distance from the classified vegetation.

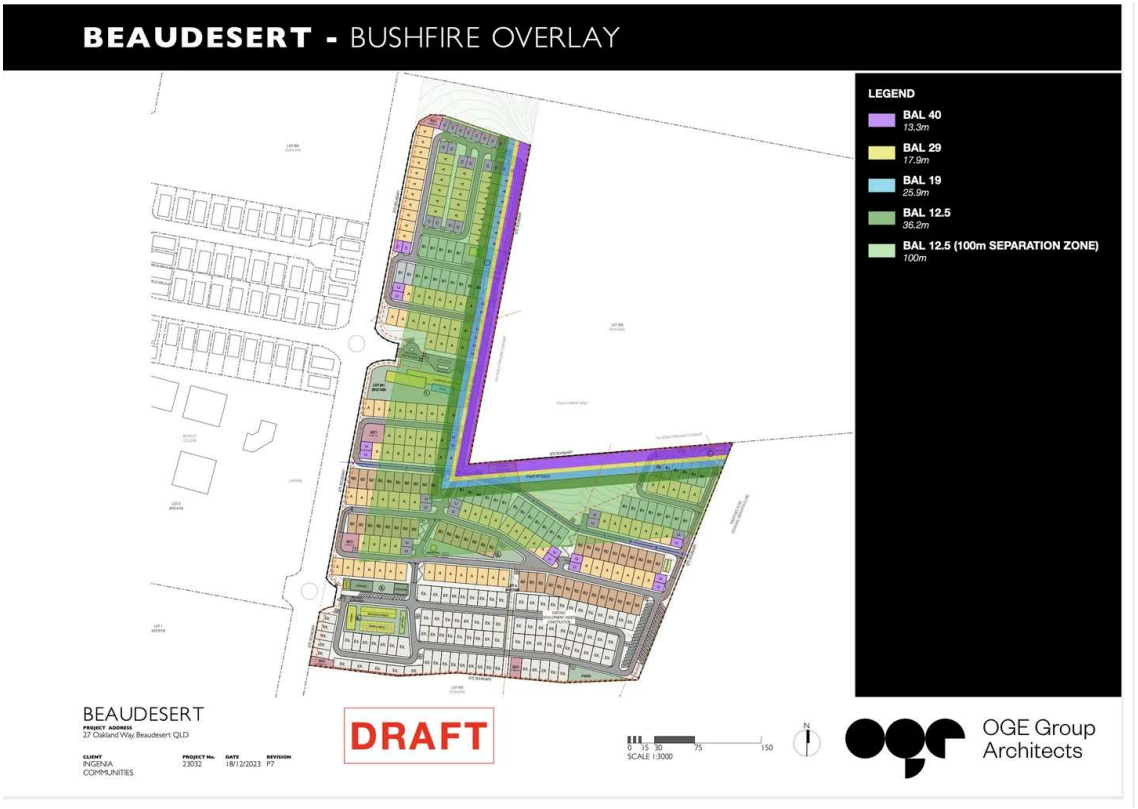


Figure 10

Calculations using AS 3959-2018, in accordance with Appendix B - *Detailed Method for Determining the Bushfire Attack Level (BAL) – Method 2 (Normative)*, indicate that at a separation distance of refer to Table 4 metres a building located on the proposed site will be exposed to a radiant heat flux of refer to Table 4 kW/m2 equating to a Bushfire Attack Level (BAL) of refer to Table 4 .

Minimum Distance Calculator - AS3959-2018 (Method 2)			
Inputs		Outputs	
Fire Danger Index	56	Rate of spread	1.3 km/h
Vegetation classification	Forest	Flame length	11.08 m
Understorey fuel load	19.4 t/ha	Flame angle	65 °, 71 °, 76 °, 79 °, 80 ° & 84 °
Total fuel load	21.8 t/ha	Elevation of receiver	5.02 m, 5.24 m, 5.38 m, 5.44 m, 5.46 m & 5.51 m
Vegetation height	n/a	Fire intensity	14,683 kW/m
Effective slope	0 °	Transmissivity	0.867, 0.85, 0.826, 0.803, 0.791 & 0.734
Site slope	0 °	Viewfactor	0.4118, 0.3038, 0.2055, 0.139, 0.1131 & 0.0304
Flame width	100 m	Minimum distance to < 40 kW/m²	13.3 m
Windspeed	n/a	Minimum distance to < 29 kW/m²	17.9 m
Heat of combustion	18,600 kJ/kg	Minimum distance to < 19 kW/m²	25.9 m
Flame temperature	1,200 K	Minimum distance to < 12.5 kW/m²	36.2 m

Table 4

Table 5 describes the six (6) Bushfire Attack Levels.

Bushfire Attack Level (BAL)	Radiant Heat Exposure (AS3959)	Description of Predicted Bushfire Attack and Levels of Exposure
BAL - Low	Insignificant	The risk is very low, radiant heat on the building is insignificant to warrant specific construction requirements. However, ember attack may still occur.
BAL 12.5	0 to 12.5kW/m2	Primarily risk of ember attack. Risk of radiant heat is considered low.
BAL 19	12.5 to 19kW/m2	Risk is considered moderate with increasing levels of ember attack and burning debris ignited by wind borne embers. Increasing likelihood of exposure to radiant heat.
BAL 29	19 to 29kW/m2	Risk is considered to be high. Increasing levels of ember attack and burning debris ignited by wind borne embers. Increasing likelihood of exposure to radiant heat.
BAL 40	29 to 40kW/m2	Risk is considered to be very high. Increasing levels of ember attack and burning debris ignited by wind borne embers. Increasing likelihood of exposure to radiant heat and some direct exposure to flames possible.
BAL FZ	40kW/m2 plus (flame contact)	Risk is considered to be extreme. Direct exposure to flame from the fire front is likely in addition to high levels of radiant heat exposure and ember attack.

Table 5

4. BUSHFIRE HAZARD AND RISK MITIGATION

Figure 11 illustrates that effective protection against bushfire can only be achieved by the integration of multiple measures. Removing the bushland (hazard) will remove the risk but this option is neither necessarily possible nor desirable. An acceptable level of protection of life and property can be achieved while still retaining and protecting biodiversity and the natural values of the bushland.

Figure 11

The appropriate mitigation and management of bushfire hazards and risks involves the integration of a combination of bushfire hazard mitigation measures during the design, construction and operational phase of any development, including:

- Ensuring development design, including the layout of roads and driveways and the location, size and orientation of residential lots and buildings, is responsive to bushfire hazards;
- Appropriate firefighting and management infrastructure is provided, including an adequate and accessible water supply, fire breaks and maintenance/access trails;
- Specifications and materials for building design and construction are in accordance with AS3959-2018 Construction of Buildings in Bushfire Prone Areas;
- Management of potentially hazardous vegetation taking into account the conservation values of that vegetation and the important role fire plays in the functioning of many Australian ecosystems;
- Landscape design and property maintenance requirements;
- Community awareness, education and training; and
- Identification of parties to be responsible for specific bushfire management tasks and actions.

The design of the residential development at Oakland Way, Beaudesert has been informed by the above. The following sections provide detail concerning some of the key design elements which have been incorporated into the design of the development to ensure an acceptable level of risk to human safety and property is maintained in the event of a bushfire occurring in the general locality. Where appropriate, details concerning measures that need to be taken during construction and occupational phases of the development are also provided.

4.1 Access and Evacuation

The intent of design requirements for roads is to provide safe egress for residents and access for attending firefighting vehicles. A road system that is compliant with guideline measures provides fire services with easier access to buildings, a safe retreat for firefighters and residents, and can provide a fire control line where hazard reduction and back burning can take place. In determining safe access to a site, consideration is given to the fire brigade vehicles which are required to access public and private roads. Given the size of these vehicles and the poor visibility in which they often operate, roads need to be designed to specific requirements, including road width, grade, cross-fall, weight capacity, passing bays and turnaround areas, all of which may vary depending on whether it is a perimeter, access, cul-de-sac or battle-axe road type.

Ultimately egress and ingress to the residential development will be direct to Oakland Way via constructed roads away from the hazardous vegetation. There is likely to be substantial warning of a major bushfire front approaching the development allowing site occupants sufficient time to implement their bushfire emergency plans.

4.2 Water Supply

Providing a sufficient water supply provides firefighters and residents with the appropriate levels of water to undertake building defense. There are two options in which a house site can be supplied with a sufficient water supply; from either reticulated water accessible via a hydrant, or a dedicated static water supply. Reticulated water will be supplied to the development meeting the required statutory standards.

4.3 Building Design and Construction

Buildings within the residential development at Oakland Way, Beaudesert situated within 100metres of areas of hazardous vegetation (ie. bushfire prone vegetation with the capacity to support bushfires with an intensity of 4000kW/m2 or greater under design fire weather conditions) need to be designed and constructed in accordance with AS3959-2018: *Construction of Buildings in Bushfire Prone Areas.*

4.4 Vegetation Management

The bushfire severity potential of an area can be substantially reduced by managing vegetation in a manner that reduces or removes potential bushfire fuel loads. This includes management of areas that are intended to provide a conservation function. The failure to manage vegetation fuel loads in conservation reserves can result in high intensity wildfires that have adverse ecological impacts for the reserve as well as creating an unnecessary hazard for adjacent urban areas.

Onsite vegetation and landscape management are important to maintaining low hazard conditions by:

- Limiting fuel accumulation;
- Reducing connectivity of fuels;
- Establishing and maintaining defendable space;
- Appropriate landscaping; and
- The proposed lot size of the development will constrain the development of any additional bushfire hazard.

Clearing - The site will be cleared to facilitate the proposed development.

4.5 Residential Landscape Design

Inappropriate landscape design in bushfire prone areas (ie. any land within 100m of bushfire prone vegetation) may expose a dwelling to increased levels of ember attack, radiant heat and flame contact. Well designed and maintained landscaping with appropriate plant species can actually help protect houses by:

- Reducing the amount of radiant heat received by a house;
- Reducing the chance of direct flame contact with the house;
- Deflecting and filtering embers; and
- Reducing flammable landscaping materials within the defendable space.

All vegetation material can burn under the influence of a bushfire, therefore landscape designs in bushfire prone areas should give careful consideration to:

- Species selection;
- Species planting proximity to assets and access paths relative to their flammability.
- Avoidance of both horizontal and vertical continuity of vegetation.

In general "mesic" plant species that have a higher leaf moisture content, less bark and a lower rate of leaf drop will assist with reducing available bushfire fuel loads thereby assisting in reducing the likelihood and severity of bushfire attack. The use of mesic plant species in combination with the following guidelines form the basis for a low risk landscape design in bushfire prone areas:

- Establish and maintain lawn or paved areas such as paths and/or pebble garden with herbs near to the house.
- Maintain cleared areas around all driveways, pathways, fire trails and roadways that may be need to used as access/egress route during a bushfire.
- Plant trees at least 5m from any dwelling house to allow clear access and minimise canopy overhang of roofs and associated accumulation of leaf litter.
- Space trees and shrubs to avoid the creation of continuous canopy that may carry fire.
- Prune lower limbs of trees to height of 2m above ground level.
- Avoid using confers, paperbarks (ie. Melaleuca species), stringy bark and ribbon bark eucalyptus in landscape planting.
- Avoid using organic mulch with preference given to non-flammable mulches such as scoria (light weight volcanic stone), pebbles, recycled crushed bricks.
- Regularly water landscape plantings to maintain plant health and moisture levels.

4.5 Fencing

Fencing materials have the capacity to contribute to fire spread and intensity. It is recommended that non-combustible fencing materials should be used adjoining the bushfire hazard

4.6 Community Awareness

Property owners are responsible for developing their own knowledge and understanding of the level of bushfire risk specific to their respective properties. A household bushfire plan is required and must take account of matters such as where occupants are during the day (at home, work or school), if any occupants require special assistance (i.e. infants, the elderly or the ill), evacuation routes available, evacuation destinations, property maintenance and preparation and arrangements for pets. Planning ahead of any perceived bushfire event is essential.

The warning systems now implemented by Emergency Services and Local Authorities provide timely information and advice to occupants. Understanding what to do in the event of bushfire emergency is critical. Prior knowledge as to the steps to take during the lead up to a fire event, during the passage of bushfire, and what to do immediately after the fire front has passed is critical. The Rural Fire Service Queensland (RFSQ) ‘Bushfire Survival Plan’ provides detailed information on how to prepare for the bushfire season and how to take action to survive in the event of bushfire. A copy of this publication can be obtained from the RFSQ website. https://bushfire-survival-plan.qfes.qld.gov.au/

5. COMPLIANCE ASSESSMENT

Bushfire Hazard Overlay Code - Scenic Rim Planning Scheme 2020 (Section 8.2.03)

Performance Outcomes	Acceptable Outcomes	Compliance
Access for Firefighting Appliances **PO1** All premises are provided with vehicular access that enables safe evacuation for occupants and easy access by fire-fighting appliances.	**AO1.1** Development has a driveway from a *constructed road* with: (1) a minimum vertical clearance of 4.8m; and (2) a minimum formed width of 3.5m. **AO1.2** (1) a driveway does not exceed a length of 60m from a constructed road; OR (2) where a driveway from a constructed road is longer than 60m, it is designed to accommodate turning bays for firefighting appliance vehicles in accordance with Queensland Fire and Emergency Services, *Fire Hydrant and vehicle access guidelines for residential, commercial and industrial lots (2019)*.	Internal roads will be constructed to comply with Fire Hydrant and Vehicle Access Guidelines for Residential, Commercial and Industrial Lots. Fire Hydrant Guidelines (Effective: 03/2019).
All Development **PO1** Development is located where it is not at risk from bushfire hazard.	**AO1** A site specific assessment determines that bushfire hazard is unlikely on any part of the site affected by the development.	The Bushfire Management Plan prepared by Queensland Bushfire Planning (QBP) has determined the level of bushfire impact on the proposed development.

Performance Outcomes	Acceptable Outcomes	Compliance
PO2 Development complies with a site specific Bushfire Management Plan (BMP), prepared by a *suitably qualified person* in accordance with **Planning Scheme Policy 4 - Bushfire Management Plans**. The BMP demonstrates: (1) that the safety of people and property in a bushfire event can be managed and risks mitigated; and (2) how the specific outcomes of this Code can be achieved.	**AO2** No Acceptable Outcome is prescribed.	The Bushfire Management Plan prepared by Queensland Bushfire Planning (QBP) has determined the level of bushfire impact on the proposed development. Compliance with the *AS3959 - 2018 construction of buildings in bushfire prone areas* will mitigate risk to an acceptable level.
PO3 Development does not increase the number of people living, congregating or working on land in a *bushfire hazard area*, unless a Bushfire Management Plan (BMP), prepared by a *suitably qualified person* in accordance with **Planning Scheme Policy 4 - Bushfire Management Plans**, demonstrates that the safety of people and property in a bushfire event can be managed and risks mitigated.	**AO3.1** Development does not increase the number of people living, congregating or working on land in a *bushfire hazard area*. **AO3.2** Development involving a *vulnerable use* is not established in a *bushfire hazard area*.	The proposed development is not within a bushfire hazard area. No vulnerable uses within bushfire hazard area.

Performance Outcomes	Acceptable Outcomes	Compliance
PO4 *Emergency services* and uses providing community support services: (1) are able to function effectively and safely during and immediately after a bushfire hazard event; and (2) can demonstrate, by a Bushfire Management Plan prepared by a *suitably qualified person* in accordance with **Planning Scheme Policy 4 - Bushfire Management Plans**, that the safety of people and buildings in a bushfire event can be managed and lives protected during a bushfire event.	**AO4** *Emergency services* and uses providing community support services; (1) are not located in a *bushfire hazard area*; and (2) ensures the *development footprint*, including internal driveways between buildings and from buildings to the roadway, does not traverse a *bushfire hazard area*.	Complies
PO5 Development does not cause: (1) an adverse risk to people, property and the environment due to the impact of bushfire on hazardous materials; and (2) excess danger or difficulty for emergency services to provide an emergency response or evacuation.	**PO5** Development does not cause: (1) an adverse risk to people, property and the environment due to the impact of bushfire on hazardous materials; and (2) excess danger or difficulty for emergency services to provide an emergency response or evacuation.	The Bushfire Management Plan prepared by Queensland Bushfire Planning (QBP) has determined the level of bushfire impact on the proposed development.. The compliance with the AS3959 - 2018 will mitigate risk to an acceptable level.
PO6 Landscaping and fuel sources within the bushfire prone area between hazardous vegetation and building envelopes does not increase the potential for bushfire hazard.	**AO6** Landscaping treatments and fuel sources within a bushfire prone area, and any hazardous vegetation and building envelopes are designed and managed to achieve: (1) a potential available fuel load which is less than 5 tonnes/hectare in aggregate; and (2) a fuel structure which is discontinuous.	The vegetation within the proposed development will be established and maintained as low hazard.

Performance Outcomes	Acceptable Outcomes	Compliance
PO7 Development is designed to minimise vegetation clearing and avoid or minimise impacts on the natural environment and ecological processes.	**AO7** Development is located in an area that does not require the removal of *native vegetation*.	No significant vegetation clearing is proposed within the development area.
PO8 Development outside reticulated water supply areas include a dedicated static supply that is available solely for fire-fighting purposes and can be accessed by fire-fighting appliances.	**AO8** A water tank is provided within 10 metres of each building (other than a class 10 building) which: (1) is either below ground level or of non-flammable construction; (2) has a take-off connection at a level that allows the following dedicated, static water supply to be left available for access by fire fighters: (a) 10,000 litres for residential buildings; (b) for industrial, commercial and other buildings, a volume specified in AS 2304–2011; (3) includes shielding of tanks and pumps in accordance with AS2304–2011; (4) includes a hardstand area (concrete or construction standard gravel) allowing medium rigid vehicle (15 tonne fire appliance) access within 6 metre of the tank; (5) is provided with rural fire brigade tank fittings if serviced by a rural fire brigade (i.e. 50 mm ball valve and male camlock coupling and, if underground, an access hole of 200mm (minimum) to accommodate suction lines); and (6) is clearly identified by directional signage at the street frontage.	Not applicable. Reticulated water supply connected to comply with Local Government requirements.

Performance Outcomes	Acceptable Outcomes	Compliance
PO9 Where development is undertaken in an urban area or is for urban purposes a constructed perimeter road with reticulated water supply is established between the lot or building envelope and is readily accessible at all times for urban fire fighting vehicles. The access to the perimeter road is available for both fire-fighting and maintenance works for hazard reduction purposes.	**AO9.1** Lot boundaries or building envelopes are separated from hazardous vegetation by a public road which: (1) has a two-lane sealed carriageway clear of hazardous vegetation; (2) contains a reticulated water supply; (3) is connected to public roads at both ends and at intervals of no more than 500 m; (4) accommodates geometry, turning radii and vertical clearance in accordance with *Queensland Fire and Emergency Services' Fire Hydrant and Vehicle Access Guidelines* and the Department of Transport and Main Roads' Planning and Design Manual; and (5) allows and does not impede access for fire-fighting and maintenance for fire-fighting purposes. **AO9.2** Where a reticulated water supply is available, fire hydrants are designed, sited and installed in accordance with AS2419.1-2009 Fire Hydrant Installations - System Design, Installation and Commissioning, and connected to a reticulated water supply, unless otherwise specified by the relevant water entity.	Internal roads will be constructed to meet determined standards. A minimum roadway clearance of 3.5m wide by 4.8m high is required for a fire truck. Constructed roads must comply with Government legislation as specified in the "Road Planning and Design Manual". Installed reticulated hydrant systems will meet required standards. The local water authority requirements will be adopted.

Performance Outcomes	Acceptable Outcomes	Compliance
PO10 Where development is undertaken for non-urban purposes either a constructed perimeter road or a formed, all weather fire trail is established between the development (including lots or building envelopes) and the hazardous vegetation, and is readily accessible at all times for the type of fire-fighting vehicles servicing the area. The access to the perimeter road or fire trail is available for both fire-fighting and maintenance works or hazard reduction activities. hazard reduction purposes.	**AO10** Lot boundaries or building envelopes are separated from hazardous vegetation by a public road (as per AO19), or a fire trail which has: (1) a reserve or easement width of at least 20 metres; (2) a minimum trafficable (cleared and formed) width of 4 metres and no less than 4.8 metres vertical clearance, with 3 metres each side cleared of all flammable vegetation greater than 10 centimetres in height; (3) no cut or fill embankments or retaining walls adjacent to the 4 metres wide trafficable path; (4) the trail must be capable of accommodating a 10 tonne vehicle; (5) the balance 10 metre width of the easement has managed vegetation to remove major surface hazards; (6) turning areas and vertical clearances for firefighting appliances in accordance with Queensland Fire and Emergency Services' Fire hydrant and vehicle access guidelines; (7) a maximum gradient of 12.5 per cent (8) a cross-fall of no greater than 10 degrees; (9) drainage and erosion control devices in accordance with the standards prescribed in a planning scheme policy;	A designed perimeter road will provide access and egress for residents and emergency services.

Performance Outcomes	Acceptable Outcomes	Compliance
	(10) vehicular access at each end, which is connected to the public road network at intervals of no more than 500 metres; (11) designated fire-trail signage; (12) if used, has gates locked with a system authorised by Queensland Fire and Emergency Services; (13) if a fire trail, has an access easement that is granted in favour of council and Queensland Fire and Emergency Services; and (14) allows and does not impede access for firefighting and maintenance for firefighting purposes.	
PO11 Development is not located on slopes and land forms that expose people or property to an intolerable level of risk to life or property.	**AO11.1** Development along ridgelines, saddles and crests where adjacent slopes exceed 14 degrees is avoided. **AO11.2** Development is located where the effective slope is less than 5 degree downslope.	No development on ridgelines or slopes in excess of 14 degrees.
PO12 To ensure the protection of peoples' lives and property, an area designated for revegetation or rehabilitation will not create an additional bushfire prone area.	**AO12.1** The dimensions and configuration of an area designated for revegetation or rehabilitation ensure the area does not have the ability to become a medium, high or very high bushfire prone area in the future; **OR** The landscaping treatments are designed to achieve; (1) potential available fuel load which is less than 5 tonnes/hectare in aggregate; and (2) fuel structure which is discontinuous.	Landscape Management Plan to comply with requirements to be provided by client.

Performance Outcomes	Acceptable Outcomes	Compliance
	AO12.2 A landscape maintenance plan specifies long-term management arrangements necessary to ensure that: (1) potential available fuel load is maintained at less than 5 tonnes/hectare in aggregate; and (2) fuel structure remains discontinuous.	
PO14 Essential infrastructure is designed or located to minimise the creation of ignition sources that would increase the potential risk of bushfires to people and property.	**AO14** Major electricity infrastructure, electricity distribution and transmission networks within the bushfire hazard area, are managed in accordance with Electrical Safety Act 2002 and Regulation 2013.	No development within designated bushfire hazard area.
PO15 The safety of people and property are maintained by locating house site areas and other vulnerable uses on land or part of the land not affected or accessed by bushfire hazard.	**AO15.1** (1) Land that is subject to bushfire hazard is not subdivided for residential or rural residential purposes; or (2) Proposed lots are sited on land or part of the land that is determined as having low bushfire hazard by a Bushfire Management Plan prepared by a suitably qualified person in accordance with Planning Scheme Policy 4 - Bushfire Management Plans. **AO15.2** Additional lots are not created where the only vehicular access route is through a bushfire hazard area	Not Applicable

Performance Outcomes	Acceptable Outcomes	Compliance
PO16 Development is located and designed to incorporate a bushfire defendable space which achieves separation between buildings and hazardous vegetation necessary to reduce risk to an acceptable or tolerable level.	**AO16.1** Lots or building envelopes are separated from hazardous vegetation by a distance that achieves a radiant heat flux level at any point on the building or envelope respectively of; (1) 10kW/m² where involving a vulnerable use; or (2) 29kW/m² otherwise. **AO16.2** Building envelopes are provided that separate adjacent buildings or building envelopes by a distance of 8 metres.	Determined Heat Flux Impacts (kW/m2) have been mapped according to the assessment conducted by QBP.
PO17 Lots are designed so that their size and shape allow for efficient emergency access to buildings for firefighting appliances.	**AO17** Private driveways within individual lots: (1) a length no greater than 60 metres from the street to the dwelling; or (2) where exceeding a length of 60m, provide a turning bay with an 8m radius adjacent to the proposed location of any buildings; and (3) have a minimum formed width of 3.5m; and (4) have a minimum vertical clearance of 4.8m; and (5) serve no more than 3 dwellings or occupied buildings.	Not Applicable

Performance Outcomes	Acceptable Outcomes	Compliance
PO18 Development minimises the risk of damage to life and property from bushfires, by providing: (1) permanent access for fire-fighting vehicles; and (2) an adequate water supply for fire fighting purposes	**AO18.1** Development involving the opening of a new road in a bushfire hazard area: (1) provides through roads; or (2) avoids cul-de-sac and dead end roads; and (3) ensures road design is capable of providing access for fire fighting and other emergency vehicles. **AO18.2** Development: (1) where reticulated water supply is available, incorporates a reticulated water supply that provides a reliable water supply that has a minimum flow and pressure of 10 litres per second at 200 kPa; or (2) where outside reticulated water supply areas, provides an accessible water tank that is provided within 10m of each building (other than a class 10 building) that (a) is either below ground level or of nonflammable construction; (b) has a take-off connection at a level that allows the following dedicated, static water supply to be left available for access by fire fighters: (i) 10,000 litres for residential buildings; (ii) for industrial, commercial and other buildings, a volume specified in AS 2304–2011; (c) includes shielding of tanks and pumps in accordance with AS2304–2011;	Roads provide safe and effective ingress and egress to Oakland Way. Reticulated water will be supplied to meet determined standards.

Performance Outcomes	Acceptable Outcomes	Compliance
	(d) includes a hardstand area (concrete or construction standard gravel) allowing medium rigid vehicle (15 tonne fire appliance) access within 6m of the tank; (e) is provided with rural fire brigade tank fittings if serviced by a rural fire brigade (i.e. 50 mm ball valve and male camlock coupling and, if underground, an access hole of 200mm (minimum) to accommodate suction lines); and (f) is clearly identified by directional signage at the street frontage. **AO18.3** Where a reticulated water supply is available, fire hydrants are designed, sited and installed in accordance with Queensland Fire and Emergency Services Fire Hydrant and Vehicle Access Guidelines, unless other specified by the relevant water entity.	Hydrants above or below ground will be provided and maintained to the minimum required performance standard as per AS 2419.1 2005.
PO19 The development design: (1) minimises the area of development exposed to bushfire attack; and (2) establishes safe evacuation routes to achieve an acceptable or tolerable risk to people.	**AO19** The development: (1) minimises the length of the development perimeter exposed to, or adjoining hazardous vegetation; (2) avoids the creation of bottle-neck points in the movement network within the development; (3) establishes direct access to a safe assembly/evacuation area in the event of an approaching bushfire;	Internal roads will provide egress and ingress from Oakland Way.

Performance Outcomes	Acceptable Outcomes	Compliance
	(4) ensures roads internal and external to the development are designed to have sufficient capacity for the evacuating population, and minimise traffic congestion in the event of a bushfire; and (5) ensures access routes do not expose occupants to bushfire hazard. specified by the relevant water entity.	
PO20 Emergency services and community infrastructure are able to function effectively and immediately after a bushfire event.	**AO20** Access and egress routes are: (1) public roads; (2) are designed to be used in all weather conditions; and (3) allow provision for safe passage of a fire appliance in accordance with Queensland Fire and Emergency Services' Fire Hydrant and Vehicle Access Guidelines.	Roads will be sealed all weather and will comply with Queensland Fire and Emergency Services' Fire Hydrant and Vehicle Access Guidelines.

QUEENSLAND BUSHFIRE PLANNING

Appendices

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QUEENSLAND BUSHFIRE PLANNING

APPENDIX 1

POTENTIAL BUSHFIRE ATTACK LEVEL

The Australian Standard, Construction of Buildings in Bushfire Prone Areas (AS 3959-2018) provides a suitable methodology for identifying assessable vegetation and determining the requirements for the construction of buildings in order to improve their resistance to bushfire attack from burning embers, radiant heat, flame contact and a combination of the three attack forms.

Determination of BAL

Step 1. Relevant Fire Danger Index

The PSBA bushfire hazard mapping identifies the FFDI as 56.

Step 2. Vegetation Classification - Fuel Loads

The vegetation type was classified as dry to moist eucalypt open forests on undulating metamorphics and granite. Available fuel weights were derived from *PSBA State – Wide Bushfire Hazard (Bushfire Prone Area) Mapping. Fuel weight was determined as: 21.8 tonne/hectare.*

Fuel weights were determined as:

- 15.9 tonne/hectare surface fuels
- 3.5 tonne/hectare near surface fuels
- 1.4 tonne/hectare elevated fuels
- 1.0 tonne/hectare bark fuels
- Total fuel weight = *21.8 tonne/hectare.*

Step 3. Determine the effective slope in degrees under the classified vegetation

The classified vegetation is upslope at 3 degrees, calculated using a Nikon Forestry Pro Range Finder and Inclinometer.

Step 4. Determine the slope in degrees of the land between the site and the classified vegetation

The slope between the site and the classified vegetation is with an average slope of 3 degrees.

Step 5. Determine the distance of the site from classified vegetation

Distance is calculated from the closest edge of the classified vegetation. Classified vegetation under AS 3959-2018 does not include low threat vegetation. The distance to the classified vegetation was calculated using a Nikon Forestry Pro Range Finder and Inclinometer at Appendix 2 metres.

Step 6. Calculations

Effective slope (°) - 3

Site slope (°) - 3

Distance (m) - Appendix 2

Vegetation classification — dry to moist eucalypt open forests on undulating metamorphics and granite

Forest Fire Danger Index (FFDI) – 56

Surface fuel load (t/ha) – 15.9

Overall fuel load (t/ha) – *21.8*

Heat of combustion (kj/kg) – 18600

Flame temperature (K) – 1200

Outcomes

Intensity (kW/m2) – 14 683

Radiant heat flux (kW/m2) – refer to Table 4

Bushfire Attack Level (BAL) - refer to Table 4

QUEENSLAND BUSHFIRE PLANNING

APPENDIX 2

About the Report Author

This Report was prepared by Bushfire Specialist Bernard Trembath. Bernard has extensive practical knowledge and experience in bushfire planning and management and an intimate working knowledge of Queensland vegetation and climate, particularly in relation to fire prediction and behaviour.

Prior to establishing Queensland Bushfire Planning in 2014, Bernard was the Regional Manager Rural Operations, Brisbane Region, for Queensland Fire and Emergency Services (QFES). As Regional Manager, Bernard was responsible for bushfire mitigation within the Brisbane Region, working with Local Governments and many other organisations to help reduce the impacts of bushfires. Bernard was also the QFES bushfire planning specialist, providing specialist bushfire planning and management advice on behalf of QFES.
Since 2014, Bernard has provided his specialist bushfire planning knowledge to advise and assist a large number of individuals, companies and government agencies. His happy clients include: