



Further Amended Planning Agreement

Under section 7.4 of the Environmental Planning and Assessment Act, 1979

Central Coast Council & Wathara NSW Pty Limited

Final Version

Central Coast Council

date

11/10/22



Planning Agreement

Author: Central Coast Council

Central Coast Council & Developer

Date of Approval:

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Further Amended Voluntary Planning Agreement

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Further Amended Voluntary Planning Agreement

SUMMARY SHEET

Council:

Name: Central Coast Council

Wyong Office: 2 Hely St / PO Box 20 Wyong NSW 2259 | P 02 4350 5555

Email: ask@centralcoast.nsw.gov.au

Representative: Chief Executive Officer

Developer:

Name: Wathara NSW Pty Limited

Address: Level 16, 101 Miller St, North Sydney NSW 2060

Telephone: (02) 9060 1471

Email: jeanette@tglcorp.com.au

Representative: Mr Jean-Marie Klumper, Wathara NSW Pty Limited

Land:

See definition of *Land* in clause 4.1

Development:

See definition of *Development* in clause 4.1

Application of s7.11 s7.12 and s7.24 of the Act:

See clause 3

Registration:

See clause 14

Dispute Resolution:

See clause 11

DATE: 11/10/22

Central Coast Council (ABN 73 149 644 003) of 2 Hely St, Wyong in the State of New South Wales
(**Council**)

and

Wathara NSW Pty Limited (ACN 634 482 349) of Level 16, 101 Miller St, North Sydney, in the State of
New South Wales (**Developer**)

BACKGROUND

- A. The Developer is the registered proprietor of the Land.
- B. The Developer has sought the Instrument Change.
- C. The Developer intends to lodge a Development Application for the Development of the Land and proposes to carry out the Development on the Land.
- D. The Developer has offered to enter into this Agreement to provide the Development Contributions to Council if the Instrument Change is made.
- E. The Developer and the Council agree that this Agreement provides for a material public benefit, (being the provision of the Development Contributions), in-lieu of any development contributions under sections 7.11 and 7.12 of the *Environmental Planning and Assessment Act 1979* (NSW).

OPERATIVE PROVISIONS

1 PLANNING AGREEMENT UNDER THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979 (NSW) (Act)

- 1.1 The parties agree that this Agreement is a Planning Agreement governed by Subdivision 2 of Division 7.1 of Part 7 of the Act.

2 APPLICATION OF THIS AGREEMENT

- 2.1 This Agreement applies to the Land, the Development and the Instrument Change.

3 OPERATION OF THIS AGREEMENT

- 3.1 This Agreement takes effect once executed by the parties.
- 3.2 By complying with the obligations of this Agreement, the Developer will provide a benefit, in the form of the Development Contributions, being the:
 - (a) Open Space Contribution;
 - (b) Roadworks Contribution; and
 - (c) C2 Land Contribution.
- 3.3 This Agreement excludes the operation of section 7.11 and section 7.12 of the Act.

- 3.4 This Agreement will remain in force until it is terminated in accordance with clause 10. This agreement does **not** apply to any obligation that the Proponent may have to pay contributions, fees or charges under section 7.24 of the Act, the Water Management Act 2000 or the Local Government Act in respect to the development of the land.

4 DEFINITIONS AND INTERPRETATION

- 4.1 In this Agreement the following definitions apply:

Act means the *Environmental Planning and Assessment Act 1979* (NSW).

Agreement means this agreement and any schedules, annexures and appendices to this Agreement.

Amending LEP means an environmental planning instrument that has the effect of amending the *Gosford Local Environmental Plan 2014 (GLEP 2014)* or new *Central Coast Local Environmental Plan (CCLEP)*, so the Development of the Land is permissible with Development Consent.

Business Day means a day other than a Saturday, Sunday or public holiday in New South Wales.

C2 Land Contribution means the undertaking of the C2 Land Works and the obligations specified in clause 4 of Schedule 2.

C2 Land Works means those works to be carried out on the Ecological Offset Area in accordance with the Vegetation Management Plan and clause 4 of Schedule 2.

Consent means the consent granted to the Development Application.

Contamination has the same meaning as in the *Contaminated Land Management Act 1997*.

Contamination Report means an assessment prepared by a suitably qualified Contamination consultant which states that the Open Space Land is suitable for its intended use as a public reserve.

Council means Central Coast Council.

Deal in relation to the Land, means, without limitation, selling, transferring, assigning, mortgaging, charging, encumbering or otherwise dealing with the Land and **Deal** has the corresponding meaning.

Dedication Date has the meaning given to that term in clause 2.1(a) of Schedule 2.

Defects Liability Period The period of twelve months which commences on the date of achieving Practical Completion of the construction and embellishment of the Open Space Land forming part of the Open Space Contribution.

Developer means Wathara NSW Pty Ltd. (ACN 634 482 349)

Developer's Representative is the person identified in clause 15.1 of this Agreement, appointed by the Developer to act on behalf of the Developer, or that person, from time to time, notified to Council in writing by the Developer.

Development means the development of the Land, ~~as shown in Schedule 3~~ proposed by

DA/2087/2023 subject to and in accordance with a consent, for the purposes of residential subdivision and any ancillary works.

Development Application means a development application under Part 4 of the Act seeking consent to carry out the Development on the Land.

Development Consent has the same meaning as in the Act.

Development Contributions means the C2 Land Contribution, the Open Space Contribution and the Roadworks Contribution.

Ecological Offset Area means the land in Lot 522 DP 1077907 to be zoned C2 Environmental Conservation shown in the draft Land Zoning Map in Schedule 4.

Instrument Change means the taking of effect of the Amending LEP generally in accordance with the Planning Proposal.

GST has the same meaning as in the GST law.

GST Law has the meaning given to that term in *A New Tax system (Goods and Services Tax) Act 1999 (Cth)* and any other Act or Regulation relating to the imposition or administration of the GST.

Guarantee means an unconditional and irrevocable bank guarantee to be signed and issued by an Australian bank having a grade security rating from an industry recognised rating agency of at least:

- a) BBB + (Standard & Poors and Fitch);
- b) Baa 1 (Moody's); or
- c) Bbb (Bests),

and on such terms and in such form as approved by Council.

Land means Lot 522 DP 1077907, Lot 3 DP 101649 and Lot 4 DP 1000694 also known as Nos. 985-991 The Entrance Road and No. 139 Bakali Road Forrester's Beach, NSW.

Maximum Works Cost – means the maximum cost Council will reimburse the developer for the Playground Works, being \$160,000.

Open Space Contribution means the dedication of the Open Space Land to Council.

Open Space Land means the land coloured green and depicted as "Open Space" 3636m² in Schedule 3.

Park Concept Plan means Concept Plan 22-10 Rev D dated September 2025.

Playground Works means the construction of the Playground as part of the Open Space Contribution.

Parties mean the Council and the Developer, including both their successors and assigns.

Party means a party to this Agreement including its successors and assigns.

Planning Proposal means PP-2021-4795 seeking to amend Gosford Local Environmental Plan 2014 and any successor to that LEP including the, as yet proposed, Central Coast Local Environmental Plan to rezone Land partly to R2 Low Density Residential, partly RE1 Public

Recreation and partly to C2 Environmental Conservation as shown on the plan in Schedule 4.

Playground means the Proposed Play Space as shown on the Park Concept Plan.

Practical Completion means the stage at which the construction and embellishment of the Open Space Land as part of the Open Space Contribution are complete, aside from minor works that would not prevent it from being used for its intended purposes as a local park.

Practical Completion (WAD) means practical completion as defined under the WAD.

Public Purpose has the same meaning as set out in section 7.4 (2) of the Act.

Public Reserve has the same meaning as in the *Local Government Act 1993*.

Register means the Register kept under the *Real Property Act 1900* (NSW).

Regulation means the *Environmental Planning and Assessment Regulation 2021*.

Roadworks means works to be undertaken by or on behalf of the Developer on the Central Coast Highway, being intersection works at the Central Coast Highway and Forresters Beach Road intersection under a WAD.

Roadworks Contribution means the undertaking of the Roadworks in accordance with clause 3 of Schedule 2.

Stage means a stage of the Development, generally as shown in Schedule 3.

Subdivision Certificate has the same meaning as in the Act.

Subdivision Works Certificate has the same meaning as in the Act.

TfNSW means Transport for NSW.

Vegetation Management Plan means the Vegetation Management Plan prepared ~~by Conacher Consulting dated February 2019~~ Fraser Ecological dated 3 December 2025 Ref: 8088/3 being Schedule 5 to this Agreement.

WAD means a works authorisation deed or other deed or agreement to be entered into between the Developer and TfNSW in relation to the Roadworks.

Works Costs means the Developer's costs of undertaking the Playground Works.

5 PAYMENT OF MONETARY CONTRIBUTIONS

- 5.1 This Agreement does not require the Developer to pay any monetary contribution to Council.

6 PARTIES' OBLIGATIONS

- 6.1 The Developer undertakes to:

-
- (a) carry out the Development (subject to the grant of Development Consent) sequentially in accordance with the Stages as shown in Schedule 3; and
 - (b) provide or procure the provision of the Development Contributions to Council in accordance with the requirements of Schedule 2 to this Deed.

7 DEVELOPER WARRANTIES AND INDEMNITIES

7.1 The Developer warrants to Council that:

- (a) it is the registered owner of the Land;
- (b) it is able to fully comply with its obligations under this Agreement;
- (c) it has full capacity to enter into this Agreement; and
- (d) there is no legal impediment to it entering into this Agreement or performing its obligations under this Agreement.

8 REVIEW OF THIS AGREEMENT

8.1 Any amendments, variation or modification to or of, or consent to any departure by any party from the terms of this Agreement shall have no force or effect unless effected by a document executed by the parties which complies with the requirements of section 7.5 of the Act.

9 FURTHER AGREEMENT(S) RELATING TO THIS AGREEMENT

9.1 The Parties may, at any time and from time to time, enter into agreements relating to the subject matter of this Agreement for the purpose of implementing this Agreement that are not inconsistent with this Agreement.

10 TERMINATION

10.1 A party can terminate this Agreement by written notice to the other Party if the Planning Proposal is not made by the Minister and both parties agree that it will not be made.

10.2 The termination of this Agreement is without prejudice to the accrued rights of Council at the time of such termination.

10.3 If this Agreement is terminated then:

- (a) the rights of each party that arose before the termination or which may arise at any future time for any breach or non-observance of obligations occurring prior to the termination are not affected;
- (b) the parties must take all steps reasonably necessary to minimise any loss that each party may suffer as a result of the termination of this document;
- (c) Council will return the Guarantee to the Developer after first deducting any amounts owing to Council or costs incurred by Council by operation of this Agreement. If in exercising its rights under this Agreement Council expends more money than the Guarantee Amount, then the amount in excess of the Guarantee Amount will be deemed to be a debt due and owing to Council by the Developer; and

-
- (d) Council will, at the cost of the Developer, do all things reasonably required to remove this Agreement from the title to the Land.

11 DISPUTE RESOLUTION

- 11.1 If a dispute arises out of or relates to this Agreement (including any dispute as to the meaning, performance, validity, subject matter, breach or termination of this Agreement or as to any claim in tort, in equity or pursuant to any statute) (**Dispute**), any court or arbitration proceedings shall not be commenced by or against Council, the Developer or their successors or assigns, relating to the Dispute unless the parties to the Dispute (**Parties**) have complied with this clause, except where a party seeks urgent interlocutory relief.
- 11.2 A party claiming that a Dispute has arisen under or in relation to this Agreement is to give written notice to the other parties to the Dispute, specifying the nature of the Dispute.
- (a) The Parties agree to mediate the Dispute in accordance with the Mediation Rules of the Law Society of New South Wales and to take action to have the Dispute mediated within 7 working days of the receipt of written notice of the Dispute.
- (b) The Parties agree that the President of the Law Society of New South Wales or the President's nominee will select the mediator and determine the mediator's remuneration.
- (c) The Parties to the mediation will be jointly responsible for the fees of the mediation and each party shall bear its own costs.
- (d) The Parties may, but are not required, to enter into a written agreement before mediating a Dispute.
- (e) If any procedural aspects are not specified sufficiently in the rules under this clause 10, the Parties agree to conduct the mediation regarding those aspects in accordance with the determination of the mediator whose decision regarding those aspects is final and binding on the Parties.
- (f) A legal representative acting for either of the Parties may participate in the mediation.
- 11.3 From the time when a notice of Dispute is served, neither party shall take action to terminate this Agreement, until after the conclusion of the mediation.
- 11.4 Should mediation fail to resolve any dispute then the dispute shall be determined by arbitration pursuant to the *Commercial Arbitration Act 2010* (NSW) (**CAA**) and the General Manager of the Council shall request the President for the time being of the Law Society of New South Wales to appoint an arbitrator to carry out such arbitration in accordance with the provisions of the CAA.
- 11.5 Despite clause 10.1, either Council or the Developer may institute court proceedings to seek urgent equitable relief in relation to a dispute or difference arising out of or in connection with this Agreement.

12 COSTS

- 12.1 The Developer agrees to pay or reimburse agreed costs incurred by Council in connection with the:
- (a) negotiation, preparation and execution of this Agreement, to a reasonable maximum

amount;

- (b) advertising and exhibiting this Agreement in accordance with the Act; and
- (c) all costs related to registration of this Agreement where required, within 14 working days after receipt of a tax invoice from Council.

13 ENFORCEMENT

- 13.1 In addition to clause 13.2, the parties agree that clause 2.3 of Schedule 2 is the provision of security for the dedication of the Open Space Land to Council and clause 4.3 of Schedule 2 is the provision of security for the C2 Land Contribution.
- 13.2 This Agreement may be enforced by the issuance of notices by the Parties pursuant to clause 15 and/or by the commencement of proceedings in the Courts of New South Wales.

14 REGISTRATION OF THIS AGREEMENT

- 14.1 The Developer agrees to register or procure the registration of this Agreement on the Land for the purposes of section 7.6(1) of the Act.
- 14.2 On the date execution of this Agreement, the Developer, at its expense, will take all practical steps and otherwise do anything that the Council reasonably requires to procure:
 - 14.2.1 the execution of any documents, including an instrument in registrable form requesting registration of this Agreement on the title to the Land duly executed by the Developer;
 - 14.2.2 the written and irrevocable consent of each person to referred in section 7.6(1) of the Act to that registration;
 - 14.2.3 production of the certificate of title for the Land, for the purpose of procuring the registration of this Agreement; and
 - 14.2.4 the lodgement and registration of this Agreement by the Registrar-General in the relevant folio of the Register.
- 14.3 The Council agrees to do all things reasonably required by the Developer to release and discharge any notation relating to this Agreement from the title to any part of the Land once the Developer has completed its obligations under this Agreement with respect to that part of the Land or this Agreement is terminated in accordance with clause 10 or otherwise comes to an end for any other reason.

15 NOTICES

- 15.1 Any notice, consent, information, application or request that must or may be given or made to a Party under this Agreement is only given or made if it is in writing and sent in one of the following ways:
 - (a) Delivered or posted to that Party at its address set out in (b) below.
 - (b) Faxed or emailed to that Party at the relevant details set out below.

(i) **Council: Central Coast Council**

Attention: Chief Executive Officer
DX Address: DX 7306 WYONG
Postal address: 2 Hely St, Wyong NSW 2259
Fax No: 02) 4350 2098
Email: ask@centralcoast.nsw.gov.au

(ii) Developer: Wathara NSW Pty Ltd

Attention: Jean-Marie Klumper
Postal Address: Level 16, 101 Miller St, North Sydney NSW
2059; and PO Box 654, Terrigal NSW 2260
Email: jeanette@tglcorp.com.au

- 15.2 If a Party gives the other Party 3 Business Days' notice of a change of its address or fax number, any notice, consent, information, application or request is only given or made by that other party if it is delivered, posted or faxed to the latest address or fax number.
- 15.3 Any notice, consent, information, application or request is to be treated or given or made at the following time:
- (a) If it is delivered, when it is left at the relevant address.
 - (b) If it is sent by post, five Business Days after it is posted.
 - (c) If it is sent by fax, as soon as the sender receives from the sender's fax machine a report of an error free transmission to the correct fax number.
- 15.4 If any notice, consent, information, application or request is delivered, or an error free transmission report in relation to it is received, on a day that is not a business day, or if it is on a Business Day, after 5.00pm on that day in the place of the Party to whom it is sent, it is to be treated as having been given or made at the beginning of the next Business Day.

16 ENTIRE AGREEMENT

- 16.1 This Agreement contains everything to which the parties have agreed in relation to the matters it deals with. No party can rely on an earlier document, or anything said or done by another party, or by a director, officer, agent or employee of that party before this Agreement was executed, except as permitted by law.

17 FURTHER ACTS

- 17.1 Each Party agrees to promptly execute all documents and do all such things that another Party from time to time reasonably requests to affect, perfect or complete this Agreement and all transactions incidental to it.

18 GOVERNING LAW AND JURISDICTION

- 18.1 This Agreement is governed by the law of New South Wales, Australia. The parties submit to the nonexclusive jurisdiction of its Courts and Courts of appeal from them. The parties will not object to the exercise of jurisdiction by those Courts on any basis provided that the dispute resolution provisions in clause 11 of this Agreement have first been satisfied.

19 JOINT AND INDIVIDUAL LIABILITY AND BENEFITS

- 19.1 Except as otherwise set out in this Agreement, any agreement, covenant, representation or warranty under this Agreement by two or more persons binds them jointly and each of them individually, and any benefit in favour of two or more persons is for the benefit of them jointly and each of them individually.

20 NO FETTER

- 20.1 Nothing in this Agreement is to be construed as requiring Council to do anything that would cause it to be in breach of any of its obligations at law, and without limitation, nothing is to be construed as limiting or fettering in any way the exercise of any statutory discretion or duty.

21 REPRESENTATIONS AND WARRANTIES

- 21.1 The Parties represent and warrant that they have power to enter into this Agreement and comply with their obligations under this Agreement and that entry into this Agreement will not result in the breach of any law.
- 21.2 The Developer warrants that it has no expectation arising only from this Agreement that the development consent will be granted by the Council or any other consent authority to the Development.

22 SEVERABILITY

- 22.1 If a clause or part of a clause in this Agreement can be read in a way that makes it illegal, unenforceable or invalid, but can also be read in a way that makes it legal, enforceable and valid, it must be read in the latter way. If any clause or part of a clause is illegal, unenforceable or invalid, that clause or part is to be treated as removed from this Agreement, but the rest of the Agreement is not affected.

23 WAIVER

- 23.1 The fact that a Party fails to do, or delays in doing, something the Party is entitled to do under this Agreement, does not amount to a waiver of any obligation of, or breach of obligation by, another Party. A waiver by a Party is only effective if it is in writing. A written waiver by a Party is only effective in relation to the particular obligation or breach in respect of which it is given. It is not to be taken as an implied waiver of any other obligation or breach or as an implied waiver of that obligation or breach in relation to any other occasion.

24 EXPLANATORY NOTE

- 24.1 The Appendix contains the Explanatory Note relating to this Agreement required by section 205 of the Regulation.
- 24.2 Pursuant to section 205(5) of the Regulation, the Parties agree that the Explanatory Note in the Appendix is not to be used to assist in construing this Agreement.

25 EXECUTION PANEL

EXECUTED as an Agreement

Date: date

Executed pursuant to delegated authority under sections 377 of the *Local Government Act, 1993* (NSW), in accordance with the resolution of the Central Coast Council dated date.

Chief Executive Officer

Witness [BLOCK LETTERS]

DAVID FARMER

Name [BLOCK LETTERS]

Name [BLOCK LETTERS]

Signed, sealed and delivered by Wathara NSW Pty Limited (ACN 634 482 349) in accordance with Section 127 of the Corporations Act 2001 (Cth) by:

Director

Director/Secretary [if not Sole Director]

Name [BLOCK LETTERS]

Name [BLOCK LETTERS]

SCHEDULE 1

Table 1 – Requirements under section 7.4 of the Act (clause 2.2)

The parties acknowledge and agree that the table set out below provides for certain terms, conditions and procedures for the purpose of the Agreement complying with the Act.

Item	Section of Act or Regulation	Provision/clause of this Agreement
1.	Planning instrument and/or development application (section 7.4 of the Act) The Developer has: (a) sought a change to an environmental planning instrument; (b) made, or proposes to make, a Development Application; or (c) entered into an agreement with, or is otherwise associated with, a person, to whom paragraph (a) or (b) applies.	(a) Yes (b) Yes (c) No
2.	Description of land to which this document applies (section 7.4(3)(a) of the Act)	Clause 4.1 – definition of Land, being Lot 522 DP 1077907, Lot 3 DP 101649 and Lot 4 DP 1000694.
3.	Description of change to the environmental planning instrument to which this document applies and/or the development to which this document applies (section 7.4(3)(b) of the Act)	See definition of Development in Clause 4.1.
4.	The scope, timing and manner of delivery of the provision to be made by the Developer required by this document (section 7.4(3)(c) of the Act)	See Schedule 2
5.	Applicability of sections 7.11 or 7.12 of the Act (section 7.4(3)(d) of the Act)	Clause 3.3 of this Agreement. The application of sections 7.11 or 7.12 of the Act is excluded in respect of the Development.
6.	Applicability of section 7.24 of the Act (section 7.4(3)(d) of the Act)	Clause 3.3 of this Agreement. The application of section 7.24 of the Act is not excluded in respect of the Development.
7.	Consideration of benefits under this document if section 7.11 applies (section 7.4(3)(e) of the Act)	Not applicable.

Item	Section of Act or Regulation	Provision/clause of this Agreement
8.	Mechanism for Dispute Resolution (section 7.4(3)(f) of the Act)	Clause 11
9.	Enforcement of this document (section 7.4(3)(g) of the Act)	Clause 13
10.	No obligation to grant consent or exercise functions (section 7.4(9) of the Act)	Clause 20
11.	Registration of this document (section 7.6 of the Act)	Clause 14
12.	Whether certain requirements of this document must be complied with before a construction certificate is issued (section 205(2) of the Regulation)	Not required
13.	Whether certain requirements of this document must be complied with before a subdivision certificate is issued (section 205(2) of the Regulation)	Required – see Schedule 2.
14.	Whether certain requirements of this document must be complied with before an occupation certificate is issued (section 205(2) of the Regulation)	Not required.
15.	Whether the explanatory note that accompanied exhibition of this document may be used to assist in construing this document (section 205(5) of the Regulation)	Clause 24

SCHEDULE 2

1. Development Contributions

The Developer undertakes to provide the Development Contributions to the Council in the manner set out below:

Development Contribution	Timing
Open Space Contribution	In accordance with clause 2 of this Schedule
Roadworks Contribution	In accordance with clause 3 of this Schedule
C2 Land Contribution	In accordance with clause 4 of this Schedule.

2. Open Space Contribution

2.1 Embellishment of Open Space Land

- a) The developer must:
 - i. Prior to commencement of construction and embellishment of the Open Space Land, the developer must consult with Council's Open Space and Recreation Unit to finalise the Park Concept Plan. This includes agreement on required communication with Council, inspection points, access requirements, hand over date, defects liability and maintenance period requirements.
 - ii. Construct the Playground Works on the Open Space Land in accordance with Park Concept Plan prepared by Brian Filby Landscape Design, 22-10 Rev D, dated September 2025 (schedule 6) at Stage 2 of the subdivision as amended (if at all) under i.
 - iii. Embellish the Open Space Land in accordance with Park Concept Plan prepared by Brian Filby Landscape Design, 22-10 Rev D, dated September 2025 (schedule 6) with the exception of the Playground Works.
 - iv. Maintain the construction and embellishment of the Open Space Land for a period of 12 months following dedication of the Open Space Land. Maintenance will include weeding, mowing, general landscaping and maintenance of any equipment.
 - v. At Practical Completion of the construction and embellishment of the Open Space Land, the developer must supply to Council the receipts for the Playground Works and a tax invoice. The Works Costs to be reimbursed to the developer must not exceed the Maximum Works Cost of \$160,000.
 - vi. Rectify any defects in the construction and embellishment of the Open Space Land notified by Council during the Defects Liability Period.
- b) The Council must:
 - i. Pay the Works Costs to the Developer within 30 days from receipt of a tax invoice being

issued. Council will not pay more than the Maximum Works Cost.

2.2 Dedication of Open Space Land to Council

- (a) The Open Space Contribution will be deemed to have been made on the date a deposited plan is registered by the Registrar General that dedicates the Open Space Land as Public Reserve under the *Local Government Act 1993* (NSW) (**Dedication Date**).
- (b) The first Subdivision Certificate for Stage 2 of the Development must indicate the dedication of the Open Space Land to Council as Public Reserve (to be dedicated free of cost).
- (c) The Developer must:
 - (i) provide or ensure that Council has a Contamination Report prior to the first Subdivision Certificate for Stage 1; and
 - (ii) must not dedicate the Open Space Land until Council has provided the Developer with a notice in writing which states that the Council is satisfied with the Contamination Report.
- (d) The Developer must ensure that at the Dedication Date, the Open Space Land is:
 - (i) free from noxious weeds and vermin, to Council's satisfaction; and
 - (ii) free from all encumbrances and affectations, except for any encumbrances agreed in writing by the Council in its absolute discretion.
- (e) The Developer must pay all rates and taxes owing in respect of the Open Space Land up to and including the Dedication Date.

2.3 Consent to Compulsory Acquisition of the Open Space Land

Subject to clause 2.3(a) of this Schedule, the Developer consents to the compulsory acquisition of the Open Space Land.

- (a) in accordance with the *Land Acquisition (Just Terms Compensation) Act 1991* (**Acquisition Act**); and
- (b) on the terms set out in clause 2.3 below.

2.4 Council's right to acquire

- (a) Council may acquire the Open Space Land compulsorily in accordance with the Acquisition Act if the Developer has failed to comply with its obligations with respect to the dedication of that land under this Agreement.
- (b) If Council acquires the Open Space Land compulsorily in accordance with the Acquisition Act:
 - (i) the Developer agrees that the compensation payable to it on account of that acquisition under the Acquisition Act is \$1.00; and
 - (ii) Council must complete that acquisition within twelve (12) months of a written notice from Council to the Developer and Developer setting out the Developer's failure to comply with its obligations with respect to the dedication

of the Open Space Land under this Agreement.

2.5 Consent of owners

- (a) The Parties agree that the provisions of clause 2.2 and 2.3 are an agreement with respect to the compulsory acquisition of the Open Space Land for the purpose of section 30 of the Acquisition Act.

3. Roadworks Contribution

- (a) The Developer acknowledges and agrees that any future Development Application:
 - (i) relating to Stage 1 must include a subdivision plan and concept road design plans (**Concept Plans**) for a road connection which is compatible with TfNSW future Traffic Control Signals (**TCS**) upgrade of the intersection of the Central Coast Highway and Forresters Beach Road. The Concept Plan must ensure that legal site access is maintained to properties adjoining the Land and include illustrations of dedication of any land accommodating the fourth leg of the TCS into the Land, at no cost to TfNSW or Council;
 - (ii) with respect to the Land will need to be supported by a Traffic Impact Assessment (**TIA**), prepared by suitably qualified person/s. The TIA must identify impacts and mitigation measures, including concept designs for access to the Central Coast Highway. The TIA is to be provided prior to Council granting development consent and must be to the satisfaction of Council and TfNSW.
- (b) The Developer must construct the internal road system for the Development in accordance with the chronological order proposed in the Staging Plan.
- (c) Prior to the issue of any Subdivision Certificate for the Development, the Developer will enter into a WAD with TfNSW for the Roadworks. The Roadworks will be designed and constructed in accordance with *Austroads* guidelines, Australian Standards and TfNSW Supplements.
- (d) The Developer must notify the Council promptly following entry into the WAD and provide the Council with a copy of the WAD.
- (e) The Developer must, at its cost, carry out the Roadworks in accordance with the WAD prior to the issue of a Subdivision Certificate for Stage 1.
- (f) The Developer must, promptly following Practical Completion of the Roadworks, provide the Council with evidence that the Roadworks have reached Practical Completion, including a written notice from TfNSW confirming that the Roadworks have reached Practical Completion.
- (g) The Developer must not make an application for a Subdivision Certificate for any part of the Land within Stage 3 of the Development until such time as the TfNSW have completed the widening of the Central Coast Highway under the planned Central Coast Highway upgrade – Wamberal to Bateau Bay project between Forresters Beach Road and Bakali Road.

4. C2 Land Contribution

4.1 C2 Land Works

- (a) The Developer must implement the recommendations of the Vegetation Management Plan (**VMP**) in accordance with the requirements of that plan, including but not limited to:
 - (b) undertaking the initial C2 Land Works prior to the issue of a Subdivision Certificate for Stage 1 of the Development; and
 - (c) monitoring and maintaining the C2 Land Works ~~for a period of 8 years~~ in accordance with ~~section 4 of~~ the VMP; and
- provid~~ing~~ing Council with an annual report in accordance with ~~section 5 of~~ the VMP.

~~(d) For the avoidance of doubt and to clarify clause 3.10(i) of the VMP, the Developer will construct the required fence along the boundary of the C2 Land adjoining the residential and Open Space lots in Stage 1 of the Development prior to the issue of a Subdivision Certificate for Stage 1.~~

~~(e) In the VMP any reference to land use zone E2 is to be understood to refer to land use zone C2.~~

4.2 Registration of Public Positive Covenant

- (a) No later than 2 months prior to the Developer lodging an application for the first Subdivision Certificate for Stage 1 of the Development, the Developer must provide Council with a draft instrument which has the effect of creating a public positive covenant under s88E of the *Conveyancing Act 1919* (NSW), on the title to the C2 Land for approval which:
 - (i) specifies Council as the relevant prescribed authority; and
 - (ii) requires that the C2 Land be maintained ~~for a period of 8 years~~ in accordance with the VMP,

(Public Positive Covenant).

- (b) The Developer must, within the later of 5 Business Days of approval by Council or 30 days of the issue of the first Subdivision Certificate for Stage 1 of the Development, register the Public Positive Covenant on the C2 Land.
- (c) The Developer must submit documentary evidence to Council of the registration of the Public Positive Covenant with NSW Land Registry Services within 30 days of such registration.

4.3 Security

- (a) The Developer must prior to the issue of any Subdivision Certificate for Stage ~~1~~2 of the Development, provide to Council a Guarantee.
- (b) The Guarantee will:
 - (i) be in favour of Council;

- (ii) be in the amount ~~of \$37,800~~calculated in accordance with clause 4.4 below;
- (iii) have an expiry date of no less than 205 years; and
- ~~(iv)~~ secure the performance of obligations under clause 4.1 and 4.2 of this clause 4 (Secured Obligation); and
- ~~(v)~~ be provided in such manner as will facilitate the release of the amount of the Guarantee in respect of the proportion of the Guarantee for each previous year once the Monitoring report referred to in the VMP has been submitted and approved by Council as meeting the requirements of the VMP for the year in question.

~~(e)~~—

~~(d)~~(c) _____ The Council may:

- (i) call upon the Guarantee where the Developer has failed to comply with the Secured Obligation; and
- (ii) retain and apply such monies towards any costs and expenses incurred by Council in rectifying any default by the Developer under this clause 4.

~~(e)~~(d) _____ Prior to calling on the Guarantee, the Council must give the Developer not less than 10 Business Days written notice of Council's intention to call upon the Guarantee and if the Developer remedies the breach or non-compliance to the Council's satisfaction, the Council will not call on the Guarantee.

~~(f)~~(e) _____ If the Council:

- (i) calls upon the Guarantee; and
- (ii) applies all or part of such monies towards the Secured Obligation and any costs and expenses incurred by the Council in rectifying any breach of the Secured Obligation; and
- (iii) has notified the Developer of its intention to call on the Guarantee in accordance with clause 4.3(d) of this Schedule,

then the Developer must provide the Council with 'top up' funding of the Guarantee to ensure that at all times, until the Guarantee is released in accordance with clause 4.3(f) of this Schedule, the Council has a Guarantee for a face value of ~~\$37,800~~the amount of the Guarantee as calculated in accordance with clause 4.4 less any amount previously released by the Council.

~~(g)~~(f) _____ The Developer may request that Council return the Guarantee that is not less than ~~8-20~~ years from the date the Guarantee was provided to Council in accordance with clause 4.3(a) of this Schedule or in respect of any amount relative to works carried out referenced in an annual Monitoring report which has been approved by the Council, inclusive of the 25% contingency for that period.

~~(h)(g)~~ If

(i) Council is satisfied that the Developer has satisfied the Secured Obligations;
and

(ii) the whole of the Guarantee has not been expended,

the Council will return the Guarantee to the Developer (less, if applicable, any amounts properly claimed by the Council from the Guarantee under this Agreement).

4.4 Calculation of Guarantee

(a) Prior to the provision of the Guarantee, the Developer must cause a report to be prepared by a Restoration Ecologist and to be approved by an Approved Ecologist. The report is to consider, through the obtaining no less than three quotes from suitably qualified local bushland regeneration companies, as to the annual cost of management of the VMP area in accordance with the VMP for a period of 20 years from the issuing of the Stage 2 subdivision works certificate for the Development.

The report must include costing of the following on an annual basis:

- i. Boundary fence maintenance.
- ii. Weed management.
- iii. Nest box management.
- iv. Rubbish removal.
- v. Preparation of progress reports by a bushland regenerator.
- vi. Any report review fees for the Council Ecologist identified in Council's fees and charges that may be charged.
- vii. Where variation in the quotes vary by more than 30%, additional justification for identified management costs is required.

(b) The costing in the report must:

- i. Use a consumer price index (CPI) inflation figure of 3 percent annually to index the financial security amount.
- ii. Provide a contingency of 25% of the amount identified in the cost estimate to account for any stochastic events (eg fires and floods), higher than expected inflation or increased rates of vandalism.
- iii. Not contain qualifications or exclusions or provisional sums

~~(h)(c)~~ The amount of the Guarantee is to be the mean of the three quote amounts identified in the report as approved by the Approved Ecologist and as adjusted in accordance with paragraph (b).

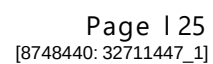
(d) In this clause an Approved Ecologist means a suitably qualified ecologist for the time being approved in writing by the Council for the purposes of this clause such approval not to be unreasonably withheld. Any such approval shall remain current for the period of five (5) years from the date of approval.

SCHEDULE 3

[DELETED]

SCHEDULE 4

PROPOSED ZONING MAP



VEGETATION MANAGEMENT PLAN

Fraser Ecological



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VEGETATION MANAGEMENT PLAN

**LOT 522 DP 1077907, LOT 3 DP 101694 CENTRAL COAST
HIGHWAY & LOT 4 DP 1000694 BAKALI ROAD,
FORRESTERS BEACH**

PREPARED BY:

FRASER ECOLOGICAL

ABN – 797 637 40114

MACMASTERS BEACH NSW 2251

MOB: 0423238193

Site Details:	Lot 522 DP 1077907, Lot 3 DP191649, Lot 4 DP 1000694 Bakali Road, Forresters Beach.
Prepared by:	<i>Alex Fraser B.Sc. (Hons)</i> <i>BAAS18156 Accredited Assessor</i> <i>Fraser Ecological Pty Ltd</i> ABN – 797 637 40114 M: 0423238193 Email: alohafraser@gmail.com
Prepared for:	John Klumper (owner)
Reference No.	VMP Bakali Rd Forresters Beach
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1.0 INTRODUCTION

1.1 Introduction

Fraser Ecological Consulting has been contracted by Wathara Pty Ltd to prepare a Vegetation Management Plan for the approved subdivision located at Lot 522 DP 1077907 No. 987-991 Bakali Road, FORRESTERS BEACH NSW 2260 which has an area of approximately 1.848 Ha (hectares) zoned C2 Environmental Conservation.

The subject site is proposed to be retained under private ownership and under separate ownership from the proposed residential estate (future Lot X Lot 522 DP 1077907).

The subject site is to be provided with connectivity to the future adjoining residential area and Public Open Space Area for ongoing access purposes and to allow for persons and equipment to undertake weed control and site management requirements.

This VMP aims to satisfy Council's solicitor letter (Lindsay Taylor Lawyers dated 25/11/2025) for VMP requirements and other best practice guidelines.

Please refer to Figure 1 (Appendix A) for the VMP area.

It comprises of the large patch of native paperbark swamp forest occurring in the north-western extent of the study area will be protected and enhanced as part of a Vegetation Management Plan.

Any drainage works required as part of the subdivision will not to be constructed on land to be zoned C2 Environmental Conservation and are to have no adverse impact on the wetland vegetation.

A previous Vegetation Management Plan was prepared by Conacher's Environmental dated February 2019. Therefore, this VMP is there a revised version reflecting the current site conditions (2025).

The previous Plan prepared by Conacher's Environmental (2019) described the site as:

- The Vegetation Retention Area (15,492m²) contains vegetation with an intact native canopy, shrub and groundcover strata and low levels of exotic flora species.
- The Vegetation Rehabilitation Area (2,305m²) contains mostly cleared land dominated by exotic flora species.

The recent surveys for this VMP has noted that the areas of the two zones mentioned above now has higher levels of exotic flora species within the core and edge areas of the vegetation patch.

For the purposes of consistency, we have referred to these same Management Zones as follows:

- Vegetation Retention Area (17,805m²)
- Vegetation Rehabilitation Area (680m²)

The extent of these areas are shown in Figure 1 (Appendix A) with the area of extent updated with recent aerial imagery using GIS for the updated area calculations.

The VMP area has been subject to numerous flora and fauna surveys over the last 7 years including targeted surveys to address ecological concerns previously raised by Council (including threatened amphibian and Giant Dragonfly surveys). No threatened species were recorded, however, improved habitat for threatened species is hopefully enhanced as a result of this Management Plan.

A works schedule is provided in Section 5 of this VMP which outlines the order of task completion to assist the landowner and to enforce by compliance.

Important note: Prior to the issuing of the Subdivision Works Certificate, all primary weeding (reducing weed densities to less than 5% in any 1000m² area) and completion of all primary replanting is required. This a significant task given the amount and type of weeds present, and therefore, it is recommended these works commence immediately after DA consent has been granted.

Management strategies are provided in the following sections of this VMP, with additional management guidelines provided in the Appendices of this report where relevant.

Additional details can be included in any further reviews by Council.

The landowner will be responsible for the engagement of a suitably qualified Bush Regeneration Contractor (BRC) to undertake weed control and planting works outlined in this VMP.

Bush Regenerator(s) or company(s) shall have;

- Australian Association of Bush Regenerators (AABR) Accreditation. The Bush Regenerators shall hold a current AQF3 qualification;
- Site Supervisor must have demonstrated minimum of 4 years' experience in the bush regeneration or related field and must have experience at a supervisory level in providing training, supervision and technical advice to staff, clients, volunteers and members of the public; and
- The Site Supervisor must hold a current AQF 3 qualification or higher and must have completed the Bush Regeneration Level IV Certificate or have a diploma or degree in a field related to natural resource management.

Prior to any construction works, the Landowner will appoint a Project Ecologist to ensure compliance with ecological mitigation measures;

- The Project Ecologist shall undertake all required pre-clearance surveys and limit-of-works marking and supervise clearing of native vegetation associated with the surrounding subdivision development works;
- Ensure works avoid impacts upon Protected Matters in general
- Ensure only native vegetation scheduled for removal in the approved plans are removed;
- Ensure all subcontractors are inducted into avoidance measures scheduled
- herein;
- Ensure all mitigation measures scheduled in the DA consent are implemented; and
- Ensure compliance where scheduled is reported in required VMP time frames.
- Liaise with the BRC regarding the compliance with the VMP
- Undertake the monitoring reports and provide them to Council

1.2 Objectives and Requirements

The objectives of this VMP are to:

1. Provide details on the vegetation proposed to be retained within the site.
2. Outline suitable measures for the management of weed species within the site.
3. Provide information on any other matters of relevance for the future management of the site to achieve longer term vegetation and fauna habitat protection within the site.
4. Consideration of in-perpetuity management, including what can reasonably be achieved by a single landowner after the completion of the initial implementation phase by the Applicant.
5. Maintenance of fencing and signage.
6. Weeds to be continually suppressed and destroyed to maintain densities at less than 10% in any 1000m² area.
7. Maintain nest boxes/ artificial hollows in good order.
8. Ensure rubbish removal undertaken in appropriate manner.

Documents and other information resources:

A desktop survey was performed to ensure all relevant documentation is considered when preparing the plan. Documents and other information resources utilised include:

- Aerial photographs (Google Maps, NearMaps & DPI Land Information)
- NSW Land and Property Information SIX Maps Viewer (<https://maps.six.nsw.gov.au/>)
- The Southeast NSW Native Vegetation Classification and Mapping (NSW OEH 2010) mapped using QGIS software overlaid with cadastral boundaries obtained from the NSW Planning Portal database collection
- Soil Landscapes of the Sydney 1:100,000 Sheet (Chapman and Murphy 1989) using the Espade Version 2.0 managed by the NSW Office of Environment and Heritage accessed 16th July 2023
- Central Coast Council vegetation mapping by Stephen Bell (2019) - accessed via Council's interactive online mapping viewer on the 28th January 2022
- NSW Statewide PCT vegetation mapping dated NSW Department of Planning & Environment (accessed 17th July 2023)
- Ecological Assessment Report prepared by Conachers Consulting dated January 2022
- Vegetation Management Plan prepared by Conachers Consulting dated February 2019
- Koala Assessment report was prepared under the former State Environmental Planning Policy (Koala Habitat Protection) 2021 by Conacher Consulting Pty Ltd in November 2021
- Bushfire Assessment Report prepared by Black Ash Consulting

- Water Cycle Management Report by CivilCol Consulting Pty Ltd
- Statement of Environmental Effects prepared by Lorelle Fitzpatrick (AConsultOz)
- Lot 4 DP1000694, Lot 522 DP1077907 & Lot 3 DP101649 at Forresters Beach Lot 215 & 216 Layout - C2 Lands Lot 215 No. A Dated December 2023 Prepared By Bannister And Hunter
- STAGE 1 and 2 ARRANGEMENTS - PROPOSED SUBDIVISION OF LOT 4 DP1000694, LOT 522 DP1077907 & LOT 3 DP101649 AT FORRESTERS BEACH - Revision LOT 215 & 216 LAYOUT - C2 LANDS LOT 215 A Dated December 2023 Prepared By Bannister And Hunter (APPENDIX A).
- Arboricultural Impact Assessment Report prepared by Temporal Tree Management dated 23/07/2025 (includes retention of 5 additional Swamp Mahogany specimens that were previously proposed for removal (Trees 107, 109, 122, 123 and 124) along with mitigation of the major impact previously sustained by a very large Swamp Mahogany (Tree 110))
- An Assessment Of The Suitability Of Potential Habitat And Survey For Petalura Gigantea (Kleinfedler Australia dated Jan 2025)
- Landscape Plan prepared by Brian Filby dated July 2025
- Biodiversity Assessment Report prepared by Fraser Ecological dated July 2025

Activities specifically related to the preparation of this VMP included:

- Identification of native and weed species recorded from the subject site
- Determination of appropriate revegetation and rehabilitation techniques
- Determination of appropriate weed control techniques
- Outlining the applicant's responsibilities including environmental safeguards, performance criteria and preparation of a schedule of works for the plan's implementation as requested by Council as part of the approved subdivision.

All management objectives are outlined within this plan. A works schedule is provided in Section 5 of this VMP which outlines the order of task completion.

Management strategies are provided in the following sections of this VMP, with additional management guidelines provided in the Appendices of this report where relevant. Additional details can be included in any further reviews.

1.3 Vegetation Characteristics & Plant Community Type (PCT)

The VMP area has been surveyed multiple times as part of previous assessments as part of the subdivision and rezoning applications. A detailed report of the flora and fauna characteristics of the subject site has also been prepared by Fraser Ecological Consulting as part of the Biodiversity Assessment Report dated July 2025.

The VMP area was recently surveyed by ecologist Alex Fraser on the 27th November 2025 to examine the recent extent of weeds, to provide monitoring location to the future and to establish 2 x BAM plots as requested by Council. The plot data sheets are provided in Appendix B. Further vegetation details are also provided in Appendix B.

The vegetation present generally consists of 'Swamp Forest' vegetation and patches of cleared land dominated by exotic weed species around the outer edges of the Swamp Forest. More specifically, the NSW Statewide PCT Mapping and field validated surveys confirm the presence of '**PCT 4038 - Hunter Estuarine Melaleuca nodosa Scrub**' occurring on site.

Characteristics of the vegetation community are provided below:

A mid-high Melaleuca closed forest or mid-high to tall open forest dominated by casuarinas and eucalypts with a dense mid-stratum of Melaleuca and a sedge ground cover on estuarine creek flats, Hunter Coast between Gosford and Karuah. A taller tree canopy is commonly present either as an emergent layer or a sparse to mid-dense cover of *Casuarina glauca*, occasionally with *Eucalyptus robusta* or *Eucalyptus resinifera*.

Melaleuca nodosa almost always dominates the mid-stratum or the upper strata where taller species are absent, commonly with other Melaleucas such as *Melaleuca ericifolia* or *Melaleuca styphelioides*. Other shrubs or small trees include *Dodonaea triquetra*, *Pittosporum undulatum* and *Acacia longifolia*. The ground layer comprises species tolerant of the estuarine influences, including very frequent high cover of *Baumea juncea* and occasionally *Juncus kraussii* subsp. *australiensis* or *Phragmites australis*. Other species include *Lomandra longifolia*, *Entolasia marginata* and *Gahnia clarkei*. This PCT has a very low species richness relative to other forested wetlands types, and is restricted to elevations of below 10 metres asl. It grades into forests dominated by *Casuarina glauca* in estuarine environments (PCT 4028).

The Swamp Forest vegetation present is variable in structure and composition depending on the local topography and drainage patterns.

The landform position is typical of this PCT which typically occurs on poorly drained unconsolidated sediments of the coastal lowlands usually at elevations under 20m below (rarely above 10 m) sea level.

It forms mosaics with other floodplain forest communities and treeless wetlands, and fringes treeless floodplain lagoons or wetlands with semi-permanent standing water as stated in the NSW Scientific Determination for this community.

All other Sydney Coastal Dry Swamp Forests dominated or co-dominated by occasional occurrences of *Melaleuca nodosa*, *Eucalyptus robusta* and *Glochidion ferdinandi* within the Wyong IBRA sub-region were considered in undertaking the above determination. However, all other PCTs were ruled out based on floristics, geographic distribution or position in the landscape.

The Vegetation is classified as an endangered ecological community – Swamp Sclerophyll Forest on Coastal Floodplains of the NSW North Coast, Sydney Basin and South East Corner Bioregions as identified in the Biodiversity Conservation Act (2016).

It conforms to the NSW Threatened Species Scientific Committee (2011) description of the EEC in a number of features including landscape associated with grey-black clay-loams and sandy loams, where the groundwater is saline or sub-saline, on waterlogged or periodically inundated flats, drainage lines, lake margins and estuarine fringes associated with coastal floodplains).

Swamp Sclerophyll Forest on Coastal Floodplains is recognised by the NSW Scientific Committee as an Endangered Ecological Community (EEC). It occurs on coastal floodplains from the Queensland border to the Victorian border, typically occupying low-lying, poorly drained alluvial substrates such as backswamps, depressions, drainage channels, and areas influenced by periodic waterlogging or shallow inundation. The soils supporting this community are generally composed of silty, clayey or sandy alluvium, often associated with a high water table and a freshwater (non-saline) influence.

The community is structurally characterised by a tall to mid-height sclerophyll canopy, commonly dominated by *Eucalyptus robusta* (Swamp Mahogany) and several *Melaleuca* species including *Melaleuca quinquenervia*, *M. nodosa*, and *M. linariifolia*. The mid-storey is typically comprised of smaller trees and tall shrubs such as *Acacia longifolia*, *Glochidion ferdinandi*, and *Breynia oblongifolia*. The ground stratum contains a diverse range of sedges, grasses, and herbs tolerant of periodic waterlogging, including *Gahnia clarkei*, *Dianella caerulea*, *Lomandra longifolia*, *Hydrocotyle bonariensis*, and *Stenotaphrum secundatum*. These floristic characteristics are consistent with those described for the vegetation at the subject site, reinforcing its alignment with the listed EEC.

The NSW Scientific Committee recognises that this ecological community displays regional variation across its distribution due to factors such as soil type, hydrology, land-use history and fire regimes. In northern estuarine settings, for example, the canopy may be dominated by *Melaleuca nodosa* and related species, consistent with the structure described for Map Unit E43ai.

The Scientific Committee identifies numerous threatening processes contributing to the decline of this community. These include extensive clearing and fragmentation of floodplain vegetation for agriculture, urban development and infrastructure; weed invasion by species such as *Lantana camara*, *Asparagus aethiopicus*, *Ageratina adenophora*, and various environmental grasses; hydrological alteration through drainage works, filling,

channelisation and groundwater changes; nutrient enrichment and pollution from surrounding land uses; inappropriate fire regimes; and physical disturbance such as grazing and trampling.

Table 1: Vegetation details

Category	Sub-Category / Stratum	Details
Structure	Upper Stratum	To 12 metres high, 50-70% Projected Foliage Cover (PFC)
Structure	Mid Stratum	To 4 metres high, 5-10% PFC
Structure	Lower Stratum	To 0.2–0.5 metres high, 90-100% PFC
Floristics (Characteristic Species)	Upper Stratum	Dominated by <i>Melaleuca nodosa</i> , <i>Melaleuca linearifolia</i> , <i>Casuarina glauca</i> , with occasional <i>Eucalyptus robusta</i> at the eastern edges
Floristics (Characteristic Species)	Mid Stratum	<i>Melaleuca nodosa</i> , <i>Glochidion ferdinandi</i> , <i>Acacia longifolia</i> , <i>Senna pendula</i> var. <i>glabrata</i> , <i>Lantana camara</i>
Floristics (Characteristic Species)	Lower Stratum	<i>Hydrocotyle bonariensis</i> , <i>Ageratina adenophora</i> , <i>Asparagus aethiopicus</i> , <i>Zantedeschia aethiopica</i> , <i>Stenotaphrum secundatum</i> , <i>Gahnia clarkei</i> , <i>Dianella caerulea</i> , <i>Lomandra longifolia</i>
Variation	—	Larger patches contain higher tree densities and an unmanaged understorey; smaller patches occur in managed exotic grassland at edge-affected margins.
Disturbance and weeds	—	Weed invasion, clearing, and ongoing understorey management at edges. Weeds recorded included <i>Asparagus aethiopicus</i> , <i>Ligustrum sinense</i> , <i>Solanum mauritianum</i> , <i>Lantana camara</i> , <i>Camphor Laurel</i> , <i>Coral Tree</i> , <i>Canary Island Date Palm</i> , <i>Paspalum quadrifarium</i> , <i>Paspalum urvillei</i> , <i>Pennisetum clandestinum</i> , <i>Sporobolus africanus</i> , <i>Stenotaphrum secundatum</i> , <i>Rubus fruticosus</i> , <i>Vinca major</i> , <i>Lonicera japonica</i> , <i>Zantedeschia</i>

Category	Sub-Category / Stratum	Details
		<i>aethiopica</i> , <i>Cortaderia selloana</i> , <i>Senna pendula</i> var. <i>glabrata</i> (refer to weed coverage maps provided in Appendix A).
Vegetation Formation: Vegetation Class:	-	Forested Wetlands and Coastal Floodplain Wetlands
Central Coast Council (Bell 2019) classifications:	Estuarine Paperbark Scrub Forest' CC_SF10i (MAPPED FOR SITE – refer to Figure 18) Variant of Map Unit SF11i Estuarine Swamp Oak Forest Map Unit SF12i Swamp Oak Sedge Forest	

Table 2: Plant species recorded on site and immediate surrounds

Native species			
Trees			
Family	Binomial	Name	P = planted
ARAUCARIACEAE	<i>Araucaria heterophylla</i>	Norfolk Pine	P
ARECACEAE	<i>Archontophoenix cunninghamiana</i>	Bangalow Palm	
	<i>Livistona australis</i>	Cabbage Palm	
CASUARINACEAE	<i>Casuarina glauca</i>	Swamp Oak	
MELIACEAE	<i>Melia azedarach</i>	White Cedar	
MORACEAE	<i>Ficus rubiginosa</i>	Port Jackson Fig	
MYRTACEAE	<i>Callistemon salignus</i>	Willow-leaved Bottlebrush	
	<i>Callistemon viminalis</i>	Weeping Bottlebrush	P
	<i>Corymbia maculata</i>	Spotted Gum	P
	<i>Eucalyptus longifolia</i>	Woollybutt	
	<i>Eucalyptus robusta</i>	Swamp Mahogany	
	<i>Melaleuca nodosa</i>	Ball Tea Tree	
	<i>Melaleuca quinquenervia</i>	Paperbark	P
	<i>Melaleuca styphelloides</i>	Prickly Paperbark	
	<i>Syzygium australe</i>	Scrub Cherry	p
PHYLLANTHACEAE	<i>Glochidion ferdinandi</i> var. <i>ferdinandi</i>	Cheese Tree	
PITTOSPORACEAE	<i>Pittosporum undulatum</i>	Pittosporum	
PRIMULACEAE	<i>Myrsine variabilis</i>	Muttonwood	
PROTEACEAE	<i>Grevillea robusta</i>	Silky Oak	P
RHAMNACEAE	<i>Alphitonia excelsa</i>	Red Ash	
SAPINDACEAE	<i>Cupaniopsis anacardioides</i>	Tuckeroo	
Shrubs			
Family	Binomial	Name	
ASPHODELACEAE	<i>Xanthorrhoea resinosa</i>	Grasstree	
EUPHORBIACEAE	<i>Homalanthus populifolius</i>	Bleeding Heart	
FABACEAE (MIMOSOIDEAE)	<i>Acacia elongata</i>	Swamp Wattle	
MYRTACEAE	<i>Melaleuca decora</i>		
	<i>Melaleuca linariifolia</i>	Flax-leaved Paperbark	
OLEACEAE	<i>Notelaea longifolia</i> f. <i>longifolia</i>	Mock Olive	
PITTOSPORACEAE	<i>Pittosporum revolutum</i>	Hairy Pittosporum	
Vines			
Family	Binomial	Name	
APOCYNACEAE	<i>Parsonsia straminea</i>	Ivy Silkpod	
ASPARAGACEAE	<i>Eustrephus latifolius</i>	Wombat Berry	
ASPHODELACEAE	<i>Geitonoplesium cymosum</i>	Scrambling Lily	
BIGNONIACEAE	<i>Pandorea jasminoides</i>	Bower Vine	
FABOIDEAE	<i>Glycine clandestina</i>	Twining Glycine	
LAURACEAE	<i>Cassytha glabella</i> forma <i>glabella</i>	Twining Cassytha	
MENISPERMACEAE	<i>Stephania japonica</i> var. <i>discolor</i>	Snake Vine	
PRIMULACEAE	<i>Embelia australiana</i>	Embelia	
VITACEAE	<i>Cayratia clematidea</i>	Slender Grape	

Native species			
Herbs			
Family	Binomial	Name	
ADIANTACEAE	<i>Adiantum aethiopicum</i>	Common Maidenhair	
AMARANTHACEAE	<i>Alternanthera denticulata</i>	Lesser Joyweed	
APIACEAE	<i>Centella asiatica</i>	Indian Pennywort	
ARALIACEAE	<i>Hydrocotyle tripartita</i>	Pennywort	
	<i>Hydrocotyle verticillata</i>	Shield Pennywort	
ASPARAGACEAE	<i>Lomandra longifolia</i>	Spiny-headed Mat-rush	
ASPHODELACEAE	<i>Caesia parviflora</i> var. <i>parviflora</i>	Pale Grass-lily	
	<i>Dianella caerulea</i> var. <i>caerulea</i>		
ASTERACEAE	<i>Eclipta prostrata</i>		
CAMPANULACEAE	<i>Lobelia anceps</i> (syn. <i>Lobelia alata</i>)	Angled Lobelia	
	<i>Lobelia purpurascens</i> (syn. <i>Pratia purpurascens</i>)	Whiteroot	
COMMELINACEAE	<i>Commelina cyanea</i>	Scurvy Weed	
CONVULVULACEAE	<i>Calystegia marginata</i>	Creeping Calystegia	
CYPERACEAE	<i>Carex brunnea</i>	Greater Brown Sedge	
	<i>Cyperus enervis</i>	A Sedge	
	<i>Gahnia clarkei</i>	Tall Saw-sedge	
	<i>Lepidosperma laterale</i>	A Rapier Sedge	
	<i>Machaerina juncea</i>	Bare Twig-rush	
	<i>Machaerina tetragona</i>	Square Twig-rush	
DICKSONIACEAE	<i>Calochlaena dubia</i>	Common Ground fern	
FABOIDEAE	<i>Pullenia gunnii</i>	Slender tick trefoil	
GERANIACEAE	<i>Geranium homeanum</i>	Native Geranium	
HYPOXIDACEAE	<i>Hypoxis hygrometrica</i> var. <i>hygrometrica</i>	Yellow Star Lily	
JUNCACEAE	<i>Juncus usitatus</i>	Pinrush	
PLANTAGINACEAE	<i>Veronica plebeia</i>	Trailing Speedwell	
POACEAE	<i>Echinopogon caespitosus</i> var. <i>caespitosus</i>	Prickly Hedgehog Grass	
	<i>Echinopogon ovatus</i>	Forest Hedgehog Grass	
	<i>Hemarthria uncinata</i> var. <i>uncinata</i>	Matgrass	
	<i>Imperata cylindrica</i>	Blady Grass	
	<i>Microlaena stipoides</i> var. <i>stipoides</i>	Microlaena	
	<i>Oplismenus aemulus</i>	Australian Basket Grass	
	<i>Oplismenus imbecillis</i>	Creeping Beard Grass	
	<i>Ottochloa gracillima</i>	Swamp Grass	
	<i>Sacciolepis indica</i>	Indian Cupsacale Grass	
POLYGONACEAE	<i>Persicaria subsessilis</i>	Hairy Knotweed	
PTERIDACEAE	<i>Pellaea falcata</i>	Sickle Fern	
RESTIONACEAE	<i>Lepyrodia muelleri</i>	Erect Scale-Rush	
TYPHYACEAE	<i>Typha orientalis</i>	Broadleaf Cumbungi	
VIOLACEAE	<i>Viola hederacea</i>	Ivy-leaved Violet	
	<i>Viola silicestris</i>	Sandstone Violet	
Epiphytes			
Family	Binomial	Name	P = planted

<u>Native species</u>			
DAVALLIACEAE	<i>Nephrolepis cordifolia</i>	Fishbone Fern	P
ORCHIDACEAE	<i>Cymbidium suave</i>	Snake Orchid	
POLYPODIACEAE	<i>Platyterium bifurcatum</i>	Elkhorn Fern	

<u>Exotic species</u>			
Trees			
Family	Binomial	Name	
ARECACEAE	<i>Phoenix canariensis</i>	Canary Island Date Palm	
EUPHORBIACEAE	<i>Croton draconoides</i>		
FABOIDEAE	<i>Erythrina x skyei</i>	Coral Tree	
LAURACEAE	<i>Cinnamomum camphora</i>	Camphor Laurel	
OLEACEAE	<i>Ligustrum sinense</i>	Small-leaved Privet	
Shrubs			
Family	Binomial	Name	
ASTERACEAE	<i>Chrysanthemoides monilifera</i> subsp. <i>rotundata</i>	Bitou Bush	
CAESALPINIOIDEAE	<i>Senna pendula</i> var. <i>glabrata</i>	Senna	
MALVACEAE	<i>Sida rhombifolia</i>	Paddys' Lucerne	
MUSACEAE	<i>Musa acuminata</i>	Banana	
OCHNACEAE	<i>Ochna serrulata</i>	Mickey Mouse Plant	
POACEAE	<i>Phyllostachys aurea</i>	Fishpole Bamboo	
PRIMULACEAE	<i>Ardisia elliptica</i>	Shoebutton Ardisia	
RUTACEAE	<i>Murraya paniculata</i>	Murraya	
SOLANACEAE	<i>Cestrum parqui</i>	Green Cestrum	
	<i>Solanum americanum</i>	Glossy Nightshade	
	<i>Solanum mauritianum</i>	Tobacco Bush	
	<i>Solanum nigrum</i>	Black-berry Nightshade	
VERBENACEAE	<i>Lantana camara</i>	Lantana	
Vines			
Family	Binomial	Name	
ARACEAE	<i>Syngonium podophyllum</i>	Arrowhead Vine	
ARALIACEAE	<i>Hedera helix</i>	English Ivy	
ARECACEAE	<i>Monstera deliciosa</i>	Fruit Salad Plant	
ASCLEPIADACEAE	<i>Araujia sericifera</i>	Moth Vine	
ASPARAGACEAE	<i>Asparagus aethiopicus</i>	Ground Asparagus	
BASELLACEAE	<i>Anredera cordifolia</i>	Madeira Vine	
BIGNONIACEAE	<i>Campsis radicans</i>	Trumpet Vine	
CAPRIFOLIACEAE	<i>Lonicera japonica</i>	Japanese Honeysuckle	
CONVULVULACEAE	<i>Ipomoea indica</i>	Morning Glory	
ROSACEAE	<i>Rubus laudatus</i>	Kittatinny Blackberry	
Herbs			
Family	Binomial	Name	
AMARYLLIDACEAE	<i>Agapanthus praecox</i>	Agapanthus	
	<i>Allium triquetrum</i>	Three-cornered Garlic	
APIACEAE	<i>Cyclospermum leptophyllum</i>	Slender Celery	
ARACEAE	<i>Zantedeschia aethiopica</i>	Arum Lily	
ARALIACEAE	<i>Hydrocotyle bonariensis</i>	Beach Pennywort	

ASTERACEAE	<i>Ageratina adenophora</i>	Crofton Weed	
	<i>Aster subulatus</i>	Wild Aster	
	<i>Bidens pilosa</i>	Farmer's Friend	
	<i>Cirsium vulgare</i>	Spear Thistle	
	<i>Conyza bonariensis</i>	Flaxleaf Fleabane	
	<i>Hypochaeris glabra</i>	Flatweed	
	<i>Senecio madagascadensis</i>	Fireweed	
	<i>Sonchus oleraceus</i>	Common Sowthistle	
BORAGINACEAE	<i>Heliotropium amplexicaule</i>	Blue Heliotrope	
BRASSICACEAE	<i>Brassica rapa</i>	Field Mustard	
CARYOPHYLLACEAE	<i>Stellaria media</i>	Chickweed	
COMMELINACEAE	<i>Tradescantia fluminensis</i>	Wandering Spiderwort	
CYPERACEAE	<i>Cyperus eragrostis</i>	Umbrella Sedge	
EUPHORBIACEAE	<i>Euphorbia hirta</i>	Asthma Plant	
FABOIDEAE	<i>Dipogon lignosus</i>	Dolichos Pea	
	<i>Medicago minima</i>	Woolly Burr Medic	
	<i>Trifolium repens</i>	White Clover	
	<i>Vicia sativa</i> subsp. <i>nigra</i>	Narrow-leaved Vetch	
IRIDACEAE	<i>Sisyrinchium micranthum</i>	Blue Pigroot	
	<i>Watsonia meriana</i> var. <i>bulbillifera</i>	Watsonia Lily	
JUNCACEAE	<i>Juncus cognatus</i>		
ONAGRACEAE	<i>Ludwigia peruviana</i>	Peruvian Primrose	
PLANTAGINACEAE	<i>Plantago lanceolata</i>	Plantago	
	<i>Veronica arvensis</i>	Wall Speedwell	
POACEAE	<i>Andropogon virginicus</i>	Whiskey Grass	
	<i>Avena fatua</i>	Wild Oats	
	<i>Axonopus compressus</i>	Broad-leaved Carpet Grass	
	<i>Briza maxima</i>	Quaking Grass	
	<i>Briza minor</i>	Quaking Grass	
	<i>Cenchrus clandestinus</i>	Kikuyu Grass	
	<i>Cortyderia selloana</i>	Pampas Grass	
	<i>Cynodon incompletus</i>		
	<i>Lolium perenne</i>	Perennial Ryegrass	
	<i>Megathyrsus maximum</i> var. <i>maximum</i>	Guinea Grass	
	<i>Paspalum dilatatum</i>	Paspalum	
	<i>Paspalum urvillei</i>	Vasey Grass	
	<i>Setaria pumila</i>	Pale Pigeon Grass	
	<i>Setaria sphacelata</i>	Setaria	
	<i>Stenotaphrum secundatum</i>	Buffalo Grass	
POLYGONACEAE	<i>Rumex crispus</i>	Curled Dock	
PRIMULACEAE	<i>Lysimachia arvensis</i>	Scarlet Pimpernel	
ROSACEAE	<i>Potentilla indica</i>	Indian Strawberry	
SCROPHULARIACEAE	<i>Buddleja davidii</i>	Buddleja	
SOLANACEAE	<i>Physalis ixocarpa</i>	Wild Gooseberry	
VERBENACEAE	<i>Verbena bonariensis</i>	Purpletop	

	<i>Verbena rigida</i> var. <i>rigida</i>	Veined Verbena	
ZINGIBERACEAE	<i>Hedychium gardnerianum</i>	Ginger Lily	



Photograph 1: Example of good condition 'PCT 4038 - Hunter Estuarine Melaleuca nodosa Scrub' in the southern edge of the site



Photograph 2: Example of poorer condition 'PCT 4038 - Hunter Estuarine Melaleuca nodosa Scrub' in the central area of the site



Photograph 3: Example of very poor condition 'PCT 4038 - Hunter Estuarine Melaleuca nodosa Scrub' on the northern boundary of the site dominated by a weedy understorey and low % native canopy as a result

2.0 SITE MANAGEMENT MATTERS

The following site management areas have been identified within the subject site for the purposes of implementing this plan:

- Vegetation Retention Areas (enhance and protect)
- Vegetation Rehabilitation Area (revegetate)

These areas are identified in Figure 1.

The Vegetation Retention Area (17,805m²) contains vegetation with an intact native canopy, shrub and groundcover strata and low levels of exotic flora species.

The Vegetation Rehabilitation Area (680m²) contains mostly cleared land dominated by exotic flora species.

The vegetation management requirements for these areas are provided in Section 3.

3.0 VEGETATION MANAGEMENT DETAILS

3.1 Native Fauna Protection and Hollow Bearing Tree Management

The site contains coastal swamp forest/scrub vegetation, A range of niche habitats are present throughout the site, these include:

- Several hollow bearing trees occur within the proposed VMP area to be retained in C2 Environmental Lands (absent in the BAM plots)
- Areas of forest/scrub and canopy only vegetation;
- Nectar and seed producing trees and shrubs;
- Leaf litter leaf litter; and
- Cleared areas.

All hollow bearing trees within the subject site are to be retained (refer to Figure A below for location of hollow-bearing trees). They occur along the south-eastern corner of the VMP area.

Existing tree trunks, root material and branches from dead trees stockpiled within the site are to be retained and/or relocated to appropriate positions for fauna habitat enhancement.

A summary of fauna habitats present and absent is provided in Table 3.

The main development impact for the approved subdivision area provides fauna habitat in the following forms:

- Seasonal foraging resources when eucalypts and other plants flower provide nectar and insect resources for mobile fauna including Grey-headed Flying Fox, possums, gliders, microchiropteran bats and a variety of woodland bird species (breeding habitat absent)
- Seasonal sources of seed on the forest floor and grasses and acacias for parrots
- Bird species likely to occur include parrots and nectivorous honeyeaters that forage and roost in the upper canopy of the trees. Blossoms from flowering canopy Myrtaceae would attract a variety of nectivores including possums, birds and threatened Grey-headed Flying Fox.
- Southern Myotis (*Myotis macropus*) was observed foraging during anabat surveys undertaken by Conachers Environmental (dated January 2022) due to the presence of the dam within neighbouring property Lot 3 DP 1000694.
- Swift Parrot potential feed trees - *Eucalyptus robusta* (Swamp Mahogany)

Large Forest Owls including threatened Barking Owl (*Ninox connivens*), Masked Owl (*Tyto novaehollandiae*) and Powerful Owl (*Ninox strenua*) may occasionally visit the site depending upon the availability of prey items, however critical breeding resources (suitable hollow-bearing trees) were not observed on site.

Other mobile threatened fauna species, Grey-headed Flying-fox and a variety of microchiropteran bat species are likely to forage over the subject site, important maternity sites were not observed during surveys.

Fauna habitat of significant value was not recorded within the proposed development impact area.

The fauna species observed within the subject site are listed in Table 3 (following pages). It is an updated species list to account for all fauna species recorded in the study area to date from collective surveys.

Four (4) threatened fauna species have been previously recorded including Southern Myotis (*Myotis macropus*), Large Bent-winged Bat (*Miniopterus orianae oceanensis*), Eastern Falsistrelle (*Falsistrellus tasmaniensis*), and Grey-headed Flying-fox (*Pteropus poliocephalus*).



Figure A: Location of habitat hollows are shown as the white dots (Source: Treehouse Ecology)

Table 3: Fauna species recorded on-site (Fraser Ecological and Treehouse Ecology 2024 & 2025)

Common name	Scientific name	Method observed
BIRDS		
Australian Magpie	<i>Gymnorhina tibicen</i>	OW Q
Australian Raven	<i>Corvus coronoides</i>	OW
Australian White Ibis	<i>Threskiornis moluccus</i>	Q
Black-faced Cuckoo-shrike	<i>Coracina novaehollandiae</i>	OW
Brown Thornbill	<i>Acanthiza pusilla</i>	OW
Buff-banded Rail	<i>Gallirallus philippensis</i>	OW Q
Common Koel	<i>Eudynamys scolopacea</i>	OW
Common Myna *	<i>Sturnus tristis</i>	OW Q
Crested Pigeon	<i>Ocyphaps lophotes</i>	OW
Domestic Fowl	<i>Gallus gallus domesticus</i>	OW
Double-barred Finch	<i>Taeniopygia bichenovii</i>	OW
Eastern Rosella	<i>Platycercus eximius</i>	OW
Eastern Whipbird	<i>Psophodes olivaceus</i>	W
Figbird	<i>Sphecotheres viridis</i>	OW
Galah	<i>Eolophus roseicapilla</i>	OW
Grey Butcherbird	<i>Cracticus torquatus</i>	W
Laughing Kookaburra	<i>Dacelo novaeguineae</i>	Q
Lewin's Honeyeater	<i>Meliphaga lewinii</i>	OW
Little Wattlebird	<i>Anthochaera chrysoptera</i>	OW
Magpie-lark	<i>Grallina cyanoleuca</i>	OW Q
Masked Lapwing	<i>Vanellus miles</i>	OW
Noisy Friarbird	<i>Philemon corniculatus</i>	OW

Common name	Scientific name	Method observed
Noisy Miner	<i>Manorina melanocephala</i>	OW Q
Olive-backed Oriole	<i>Oriolus sagittatus</i>	OW
Pied Butcherbird	<i>Cracticus nigrogularis</i>	W
Pied Currawong	<i>Strepera graculina</i>	OW
Rainbow Lorikeet	<i>Trichoglossus haematodus</i>	OW
Red-browed Finch	<i>Neochmia temporalis</i>	OW
Red-whiskered Bulbul *	<i>Pycnonotus jocosus</i>	O
Rufous Whistler	<i>Pachycephala rufiventris</i>	OW
Sulphur Crested Cockatoo	<i>Cacatua galerita</i>	OW
Superb Fairy-wren	<i>Malurus cyaneus</i>	OW
Tawny Frogmouth	<i>Podargus strigoides</i>	Q
White-browed Scrubwren	<i>Sericornis frontalis</i>	OW
Yellow-faced Honeyeater	<i>Lichenostomus chrysops</i>	OW
MAMMALS		
Black Rat *	<i>Rattus rattus</i>	Q
Brown Antechinus	<i>Antechinus stuartii</i>	Q
Brush-tailed Possum	<i>Trichosurus vulpecula</i>	Q
Bush Rat	<i>Rattus fuscipes</i>	T Q
Cat (feral)*	<i>Felis catus</i>	O
Common Brushtail Possum	<i>Trichosurus vulpecula</i>	O
Large Bent-winged Bat ^{TS}	<i>Miniopterus orianae oceanensis</i>	U
Eastern Falsistrelle ^{TS}	<i>Falsistrellus tasmaniensis</i>	U
European Red Fox *	<i>Vulpes vulpes</i>	Q
Gould's Wattled Bat	<i>Chalinolobus gouldii</i>	U
Gould's Long-eared Bat	<i>Nyctophilus gouldii</i>	U

Common name	Scientific name	Method observed
Grey-headed Flying-fox ^{TS}	<i>Pteropus poliocephalus</i>	O
Long-nosed Bandicoot	<i>Perameles nasuta</i>	Q
Rabbit *	<i>Oryctolagus cuniculus</i>	P
Southern Myotis ^{TS}	<i>Myotis macropus</i>	U
Sugar Glider	<i>Petaurus breviceps</i>	Q
Swamp Rat	<i>Rattus lutreolus</i>	Q
Swamp Wallaby	<i>Wallabia bicolor</i>	Q
Reptiles		
Eastern Water Dragon	<i>Intellagama lesueurii</i>	Q
AMPHIBIANS		
Common Eastern Froglet	<i>Crinia signifera</i>	W
Dusky Toadlet	<i>Uperoleia fusca</i>	W P O
Dwarf Tree Frog	<i>Litoria fallax</i>	W
Peron's Tree Frog	<i>Litoria peronii</i>	W
Striped Marsh Frog	<i>Limnodynastes peronii</i>	W

Note: * indicates introduced species

^{TS} indicates threatened species

^{MS} indicates Migratory species

All species listed are identified to a high level of certainty unless otherwise noted as:

^{PR} indicates species identified to a 'probable' level of certainty – more likely than not

^{PO} indicates species identified to a 'possible' level of certainty – low-moderate level of confidence

Common name		Scientific name		Method observed
E - Nest / roost	H - Hair / feathers / skin	P - Scat	W - Heard call	
F - Tracks / scratchings	K - Dead	Q - Camera	X - In scat	
FB - Burrow	O - Observed	T - Trapped / netted	Y - Bone / teeth / shell	
G - Crushed cones	OW - Observed & heard call	U - Ultrasound recording	Z - In raptor / owl pellet	

3.2 Nestbox installation

The Nest Box Monitoring Program in **Appendix F** outlines the installation, maintenance, and long-term monitoring of 28 artificial nest boxes installed at a density of 15 nest boxes per hectare. It is designed to meet ecological requirements to support SWC compliance.

The program is designed to meet requirements for:

- Environmental approval conditions
- Biodiversity Assessment Method (BAM) offset requirements
- Pre-SWC (Site Works Completion) compliance checks
- Long-term ecological monitoring (≥ 2 years)

Primary objectives include replacing lost hollow-bearing habitat, monitoring nest box performance every 6 months, and completing two checks prior to SWC. Secondary objectives include threat detection, adaptive management, and long-term fauna response tracking.

Primary Objectives

- Replace habitat features lost due to clearing, specifically tree hollows.
- Provide suitable roosting and nesting opportunities for target fauna species.
- Monitor functional performance at 6-month intervals.
- Complete two monitoring rounds prior to issue of SWC.

Secondary Objectives

- Detect early colonisation patterns by native fauna.
- Identify and manage threats such as feral bees, mynas, or predation.
- Document occupancy trends over time and recommend adaptive actions.

Target coastal NSW hollow-dependent fauna include squirrel gliders, sugar gliders, brushtail possums, rosellas, small parrots, pardalotes, and microbat species such as Gould's wattled bat.

Important note: Council has stipulated that the installation of nest boxes shall occur at a density of 15 per hectare (notionally 28 nest boxes), including monitoring once every 6 months with two checks completed prior to issue of SWC.

Monitoring shall occur at installation, 6 months, 12 months (two checks required prior to SWC), and every 6 months thereafter.

Two monitoring rounds must be completed before SWC. After that, monitoring continues every 6 months. Installation and monitoring shall be undertaken by an experienced field ecologist (under the direction of the Project Ecologist) which is likely be Corey Mead (Treehouse Ecology).

Table 4: Nestbox monitoring staging of works

Stage	Timing	Purpose
Installation Check	Day 0	Confirm correct placement & hardware
Monitoring Round 1	6 months	Structural + fauna usage inspection
Monitoring Round 2	12 months	Required before SWC; trend assessment
Ongoing Monitoring	Every 6 months	Long-term performance tracking

3.3 Fencing & Signage

Fencing details including how access from the open space will be prevented.

Important note: All fencing and signage is to be constructed prior to the release of the Subdivision Certificate.

Council have identified that the fencing along the eastern side of the E2 zoned land is required for inclusion in the VMP as it would ensure the preservation of the endangered ecological community.

Fencing along the western boundary is to comprise timber post and metal star pickets (1200mm high at 3 metre spacing) with a three strand plain wire livestock-style control fence. Plain wire (not barbed wire) to enable fauna movement through the fence is to be used in the fence construction.

Fencing along the eastern boundary adjoining the Public Open Space Area is to comprise of colorbond fence 1800mm high.

Access control signage is to be installed at specified intervals along the northern, western and southern boundary fencing. The primary aim of the signs will be to alert residents about the presence of private property and access prevention to the subject site.

Refer to Figure 2 for fencing and signage locations.

The signs are to be weather resistant (timber, metal or corflute) and are to measure 500mm x 350mm and are to have the following wording included:

PRIVATE PROPERTY
HABITAT PROTECTION AREA
PLEASE KEEP OUT



Photograph 4: Existing cyclone mesh fencing along the northern perimeter of the site



Photograph 5: Existing cyclone mesh fencing along the southern perimeter of the site



Photograph 6: Location of proposed fencing along the eastern boundary adjoining the Public Open Space Area is to comprise of colorbond fence 1800mm high.



Photograph 7: Location of proposed fencing along the western (rear) boundary to comprise of timber post and metal star pickets (1200mm high at 3 metre spacing) with a three strand plain wire livestock-style control fence. Plain wire (not barbed wire) to enable fauna movement through the fence is to be used in the fence construction.

3.4 Weed Removal & Management

Weed management will occur within the Vegetation Retention Area and the Vegetation Rehabilitation Area shown in Figure 1. Recently updated weed distribution maps are provided Figure 3-8 in Appendix A.

Weed control works are to be undertaken by a Contract Bushland Regenerator to be engaged by the Landowner.

Primary weed control is to be undertaken during the first year of implementation of this plan. It must be completed prior to the release of the Subdivision Certificate.

Secondary weed control works are to be undertaken utilising low impact bush regeneration methods and are to occur annually after primary weed control works until weed levels have been controlled to an acceptable level.

Important Note: Council stipulates that prior to the issuing of a Subdivision Works Certificate, all primary weeding (reducing weed densities to less than 5% in any 1000m² area) is completed. For clarity, exotic trees are considered to be weeds within the VMP area.

Weed Control works within all of the VMP area to be undertaken by a qualified bushland regeneration team using industry standards. Any reproductive material of weeds, including weeds which can spread vegetatively, or seeds, must be taken off site to be disposed of at an appropriate local waste management centre.

No weed material with the potential of spreading must be stockpiled within the development site or VMP Lands.

The general recommended process is:

1. Primary Weeding – First 6-9 months. This is where most problematic weeds are removed from Management Zones. Intensive effort will be required and will be the most financially consuming stage of the VMP works. Will be completed prior to the issuing of a Subdivision Works Certificate.
2. Consolidation (Secondary and tertiary weeding) – Six-months following the completion of primary weeding. Management Zones will require monthly visits to remove weeds that are regenerating and / or have grown in response to the disturbance. These visits are essential, otherwise the weeds will recolonise and inhibit native regeneration. Will be completed immediately after the issuing of a Subdivision Works Certificate.
3. Maintenance Weeding – Starts six-months to a year post-secondary or tertiary weeding and will continue on a monthly basis for the following year. Maintenance

will decrease overtime based on weed cover of Management Zones. Changes to frequency will be outlined in annual reports.

This interval will be evaluated based on-site condition during each monitoring period. Depending on the management zone, weed control works across the site are to be undertaken over the maintenance period of up to **twenty (20) years**.

However, given the adaptive management approach, this time-frame is flexible, and may need to be extended based on changing site conditions and monitoring results indicating management zones have reached targets set out in this VMP.

Target Weed Species

Weeds recorded included *Asparagus aethiopicus*, *Ligustrum sinense*, *Solanum mauritianum*, *Lantana camara*, *Camphor Laurel*, *Coral Tree*, *Canary Island Date Palm*, *Paspalum quadrifarium*, *Paspalum urvillei*, *Pennisetum clandestinum*, *Sporobolus africanus*, *Stenotaphrum secundatum*, *Rubus fruticosus*, *Vinca major*, *Lonicera japonica*, *Zantedeschia aethiopica*, *Cortaderia selloana*, *Senna pendula* var. *glabrata* (refer to weed distribution maps provided in Appendix A).

Any other weeds present which are listed as environmental or priority weeds within the Central Coast local government area are to be targeted during weed control works.

They are to be targeted for management and removal as part of weed maintenance works.

Physical Control Methods

Physical control methods involve using physical means such as machinery, hand removal and the use of hand tools and hand operated power equipment to remove either specific or broad ranges of weeds.

High levels of weeds are present within the Vegetation Rehabilitation Area between the Vegetation Retention Area and the northern, southern and eastern boundaries. Weeds removed from within this area are to be taken from the site.

Only minor weed incursions are present within the Vegetation Retention Area. These weeds are to be managed during primary weed control works with the use of hand tools and hand operated power equipment.

Physical control methods employed during secondary weeding are to be undertaken with the use of hand held tools only.

Further detailed descriptions of physical weed control techniques are provided in Appendix 3.

Herbicide Control Methods

Herbicide control methods involve the use of chemicals which can target specific types of weeds or a broad spectrum of weeds. Physical control methods are to be initially given priority, however herbicide control may be required to eradicate weeds which re-establish following initial physical control works.

Problems with the use of herbicides include chemical residues affecting soils, herbicide runoff into water bodies and the health and safety of the operator involved in the application of the herbicide. These potential adverse impacts should be appropriately mitigated by use of herbicides in accordance with the manufacturer's instructions. Advantages of herbicide use include the low time taken to spray weeds as opposed to physically removing them, especially for large infestations of weeds. Broad area spray application is considered inappropriate for this site. Herbicides will be applied by cut and paint or hand held application methods only. Suitable physical control methods are to be the preferred option. Further detailed descriptions of herbicide control techniques are provided in Appendix 3.



Photograph 8: *Zantedeschia aethiopica* infestation recorded on site



Photograph 9: *Vinca major* infestation recorded on site



Photograph 10: *Asparagus aethiopicus* infestation recorded on site



Photograph 11: *Phoenix canariensis* occurrences recorded on site



Photograph 12: *Lantana camara* infestation recorded on site

3.5 Bushland Regeneration

Weed control from areas of high resilience to low resilience, upper slope to lower slope in accordance with the Bradley Method (Buchanan 1989). The bush regeneration approach includes focussing on where damage is relatively low, and pre-existing biota should be able to recover after cessation of degrading practices. The Natural Regeneration Approach requires limited to no interventions with weeding being the only task undertaken to encourage continual natural regeneration.

Important note: Natural regeneration of native species within this area is to be monitored annually for the 20 year monitoring period.

Bush regeneration techniques are described as a guide to infer their intended performance. These techniques are to be implemented by a qualified and experienced bush regeneration company. The use of trained personnel will ensure correct plant identification, work methods and compliance with required Occupational Health and Safety standards (Appendix D).

3.6 Revegetation works (ecosystem reconstruction)

Revegetation works focusses on the Vegetation Rehabilitation Area (680sqm) depicted in Figure 1 – Appendix A) where the vegetation condition is poor, generally due to a range of causes of degradation that have led to partial or total damage to biotic and abiotic factors.

It is dominated by introduced weeds mainly including exotic pasture species (Photograph 13 – below).

The revegetation works includes:

- Combination of spraying, mowing and then physical spraying of dead exotic grasses
- Installation of mulch, jute matting and coir logs
- Planting of tree, shrub and ground species in appropriate areas after the colorbond fencing has been installed (refer to Figure 2);
- Installation of guards around tree and shrub species;
- Watering;
- Secondary weeding;
- Mulching in areas without jute matting;
- Maintenance watering;
- Maintenance of tree guards; and
- Replacement of dead plants.

Herbicide control methods involve the use of chemicals which can target specific types of weeds or a broad spectrum of weeds. Physical control methods are to be initially given priority, however herbicide control may be required to eradicate weeds which re-establish following initial physical control works

Where monitoring of the Vegetation Rehabilitation Area identifies that natural regeneration has failed or requires supplementation, planting of native vegetation is to be undertaken within those areas. Suitable species for replanting are to be determined for each separate location as part of the further development of this VMP.

Appendix D identifies locally occurring native species are to be utilised within the Vegetation Rehabilitation Area (Swamp Sclerophyll Forest) tube stock obtained from a recognized native nursery only. This includes all supplementary planting.

All planting works shall include:

- one tree per four square metres
- one shrub per two square metres
- four ground covers per square metres

Important note: The above specification shall be maintained as the minimum density of initial plantings unestablished plantings for the entire 20 year life of this VMP.

The objective for the growth of planted canopy trees is that they should achieve a median height of no less than three metres and should achieve a survival rate of 80%.

The height and survival rate of any planted canopy trees are to be measured at each monitoring inspection to record how they are meeting the growth height and survival rate as required by Council.

Plantings are to be protected with suitable tree guards to prevent grazing by native macropod species.

The more specific following management actions are:

1. Spraying, physical removal and mulching;
2. Initial planting, watering and installation of tree guards;
3. Weekly water for 3 months after initial planting;
4. Monthly water 4-12 months after initial planting;
5. Watering cease 12 months after initial planting;
6. Primary weeding to occur monthly for 12 months after initial planting;
7. Weeding to occur every 3 months for the 1–5-year period post initial planting;
8. Dead plants to be replaced monthly for 12 months after initial planting;
9. Dead plants to be replaced 6-monthly for the 1–5-year period post initial planting;
10. Tree guards to be replaced monthly for 12 months after initial planting as required;
11. Tree guards to be replaced 6-monthly for the 1–5-year period post initial planting as required; and
12. Tree guards to be removed 5 years after initial planting.

For further details on planting area preparation and planting techniques refer to Appendix 3.



Photograph 13: Vegetation Rehabilitation Area (680sqm) (depicted in Figure 1 – Appendix A)

3.7 Weed and Pathogen Transfer Management

Potential weed propagules and pathogen transfer into the subject site is to be controlled through the methods outlined in Appendix C.

To avoid the spread of *Phytophthora cinnamomi* and other soil borne pathogens, appropriate hygiene procedures and guidelines described in Best Practice Management Guidelines for *P. cinnamomi* within the Sydney Metropolitan Catchment Management Authority Area (Botanic Gardens Trust, 2008) will be followed.

This will involve the disinfection of all machinery, clothing (such as boots and gloves), and tools which have been in contact with soil with a spray prior to entering and leaving the site.

Recommended disinfectant products include:

- Non corrosive disinfectants including Coolacide®, Phytoclean®, or Biogram® which can be for cleaning footwear, tools, tyres, machinery and other items in contact with soil;
- 70% Methylated spirits solution in a spray bottle which is suitable for personal use (clothing); and
- Sodium Hypochlorite 1%, which is effective, but can damage clothing and degrades rapidly in light.

Additionally, contractors will be required to clean equipment and clothing prior to commencing work and after completion of work, in order to prevent transport of weed propagules

3.8 Rubbish Removal and Management

Edge treatment to the open space lands to ensure that turf and other exotic plants do not establish in the VMP area.

As part of the initial stages of works, all rubbish and fill material within the subject site is to be removed and the land maintained rubbish free. Material that cannot be recycled is to be disposed of to a licenced waste facility. An appropriately experienced Project Ecologist is to be engaged to advise and directly supervise the removal of any larger items to ensure impacts to native vegetation and fauna are minimised. Rubbish observed during site inspections consists of furniture, soil, building materials, concrete, bottles and old fencing wire.

4.0 VEGETATION MONITORING, MAINTENANCE & REPORTING GUIDELINES

4.1 Monitoring Guidelines

Monitoring is to be undertaken initially prior to works and annually thereafter for 20 years from the release of the Subdivision Works Certificate (SWC) to allow for the assessment of the health of the Vegetation Retention Area and Vegetation Rehabilitation Area.

Monitoring of these areas is to include identification of any areas suffering from disturbance or in need of additional plantings, weed control or sediment and erosion control.

Updated plot-based floristic vegetation surveys were conducted, in accordance with s.5.2.1.9 of the BAM, by Alex Fraser on the 27th November 2025 their locations are shown in APPENDIX B. Two BAM plots were sampled.

The plot was carefully examined to identify all flora species present. Searches continued until it was confident that all flora species within a plot were detected. Data collected for each species included:

- Stratum and layers in which each species occurs
- Growth form for each species
- Scientific and common name for each species
- Percentage foliage cover (PFC) across the plot, of each species rooted in or overhanging the plot
- Abundance rating for each species

Plot data, photographs and location of the BAM plots are provided in Appendix E.

A total of the nine (9) vegetation condition monitoring quadrats (20m x 20m in size) established and throughout the subject site (refer to Figure 9 and Appendix E for data sheets of recently established baseline data sheets).

The landholder is required to provide an annual monitoring report to Council in accordance with the template provided in Appendix E, including taking photos of the site at defined locations provided in Figure 9.

The monitoring reporting works shall be done by the Project Ecologist.

Monitoring will include a performance evaluation of the works and will include assessment addressing any deficiencies observed, and determining a successful outcome.

The established 20 x 20m monitoring quadrats are established in the Vegetation Retention and one in the Vegetation Rehabilitation Areas. For all monitoring points:

- Photographs to be taken from the 9 monitoring locations;
- Provide estimates of density of native plant regeneration;
- The survival rate for any plantings; and
- Identification of any adaptive changes or additional measures required to ensure vegetation regeneration and weed control meets the required targets.

A template for completion of an Annual Site Inspection Monitoring Report for the subject site is included as Appendix E of this VMP.

Maintenance will include weeding (herbicide or low impact physical weed removal as required), watering of any supplementary plantings, replacement planting for any planting losses, removing rubbish and regular inspections and performance assessment.



Photograph 14: BAM Plot A mid-line (view west)



Photograph 15: BAM Plot A mid-line (view east)



Photograph 16: BAM Plot B mid-line (view south -west)



Photograph 17: BAM Plot B mid-line (view north-east)

4.2 Performance targets (current and future VIS), Weed map (current densities)

Council's solicitor letter (Lindsay Taylor Lawyers dated 25/11/2025) for VMP requirements stated:

'Performance targets based on increases in Vegetation Integrity Score. This will need quantification of the current VI score and the likely increases through hypothetical adjustment in the BAM calculator. Include two BAM plot monitoring locations as well as 6 x point specific monitoring locations (10 x 10 m quadrats or similar) where there is to be an improvement in overall native cover abundance and a decrease in weed density.'

We applied this recommendation by undertaking two BAM plots and entering the data into the BAM-C. Refer to the table summaries provided on the following pages.

The benchmark data from the BAM-C for PCT 4038 is useful for performance targets, however, it is not ideal for using it as a tool for showing positive changes in the future VIS as a result of on-ground weed removal/ bushland regeneration. The reason being, that although the maximum future and hypothetical vegetation Integrity Score (VIS) was entered into the BAM-C, the future VIS did not increase.

Therefore, while the BAM plot data is useful for assessing the current vegetation condition (by providing a VIS) —it is not useful for monitoring future changes. This is because, even after assuming complete removal of all High Threat Exotic (HTE) weeds, the VIS remains unchanged (refer to table below where this was evident).

Given this outcome, a more effective monitoring approach would be to focus on simple measures of weed cover and abundance, supported by clear evidence of weed reduction over time, rather than relying on VIS modelling for future condition assessment. i.e. 6 x point specific monitoring locations (20 x 20 m quadrats or similar) where there is to be an improvement in overall native cover abundance and a decrease in weed density would be the best method recommended by Council.

Nevertheless, the 2 x BAM plots shall be undertaken yearly as part of the monitoring works in addition to 9 x point specific monitoring locations (20 x 20 m quadrats) shown in Figure 9 to monitor changes in vegetation with the overall targets to reduce weed coverage and increase native vegetation diversity (species composition), abundance and cover.

Vegetation Retention Area – Performance targets (1.78 ha)

In general weeds to be continually suppressed and destroyed to maintain densities at less than 10% in any 1000m² area. i.e. Maximum 10% weed cover in any given area.

Prior to Subdivision Certificate the currently heavy weed infestation of approximately 70% shall be reduced to a maximum 10% weed cover.

Whilst this will require a very intensive effort to remove all weed species—and will be particularly challenging over such a large area, especially for species such as Arum Lily (*Zantedeschia aethiopica*), which must be removed by hand from seasonally inundated sites and transported off-site without vehicle access—the applicant is financially committed to engaging a bush-regeneration contractor to undertake the work.

Vegetation Rehabilitation Area. – Performance targets (0.068ha)

A successful outcome is identified as a minimum of 80% survival rate for all plantings and a maximum of 5% weed cover for the treated areas and a regeneration rate of 30% cover for Vegetation Rehabilitation Areas (per 1000m² i.e. the entire management area) over the period of this plan.

For areas requiring ecosystem reconstruction, planting shall be undertaken at the following densities:

- one tree per 4 m², one shrub per 2 m², and four groundcovers per square metre.

All planted species must be native to, and characteristic of, Swamp Sclerophyll Forest (species list provided in Appendix B).

Performance targets for canopy height targets and cover abundance for revegetation areas.

Current VIS - Summary for both BAM Plots

PCT Code	Condition Class	Vegetation Zone Name	Composition Condition Score	Structure Condition Score	Function Condition Score	Current Vegetation Integrity Score
4038	A	4038_A	36.3	27.8	23.3	28.7
4038	B	4038_B	21.7	44.3	29.1	30.4

Plot A - change VIS after HTEs reduced O and all sub-scores hypothetically increased to maximum

Composition condition score	Structure condition score	Function condition score	Vegetation integrity (VI) score	Change in VI score	Total VI loss
36.3	27.8	23.3	28.7	0	0

Plot B - change VIS after HTEs reduced O and all sub-scores hypothetically increased to maximum

Composition condition score	Structure condition score	Function condition score	Vegetation integrity (VI) score	Change in VI score	Total VI loss
21.7	44.3	29.1	30.4	0	0

Plot A: Plot 'A' Composition Summary Table

Item	Tree	Shrub	Grass & Grass-like	Forb	Fern	Other
Benchmark	4	8	8	8	2	4
Future mean ($\bar{x}$)	4	1	4	3	0	1
Unweighted composition score (UCS _i)	100	2.7	59.1	35.2	0	14.6
Weighted composition score (WCS _i)	11.8	0.6	13.9	8.3	0	1.7
Dynamic weighting (w _i)	0.12	0.24	0.24	0.24	0.06	0.12

Plot 'A' Structure Summary Table

Item	Tree	Shrub	Grass & Grass-like	Forb	Fern	Other
Benchmark	21	21	69	3	1	1
Future mean ($\bar{x}$)	51.5	1	15	8	0	3
Unweighted structure score (USS _i)	100	0.2	10.5	100	0	100
Weighted structure score (WSS _i)	18.1	0	6.2	2.6	0	0.9
Dynamic weighting (w _i)	0.18	0.1				

Plot 'A' Function Summary Table

Item	Number of Large Trees	Litter Cover	Length of Fallen Logs	Stem Size Class	Tree Regeneration <5 cm Diameter	High Threat Weed Cover
Benchmark	1	40	12	4	Present	–
Future mean ($\bar{x}$)	0	21	0	3	Absent	44
Weighted function score (WFS _i)	0	9.5	0	13.8	0	–

Plot 'B' Composition Summary Table

Item	Tree	Shrub	Grass & Grass-like	Forb	Fern	Other
Benchmark	4	8	8	8	2	4
Future mean ($\bar{x}$)	5	1	2	1	1	1
Unweighted composition score (UCS _i)	100	2.7	14.6	2.7	59.1	14.6
Weighted composition score (WCS _i)	11.8	0.6	3.4	0.6	3.5	1.7

Plot 'B' Structure Summary Table

Item	Tree	Shrub	Grass & Grass-like	Forb	Fern	Other
Benchmark	21	21	69	3	1	1
Future mean ($\bar{x}$)	62	5	25	20	3	1
Unweighted structure score (USS_i)	100	13	32.9	100	100	100
Weighted structure score (WSS_i)	18.1	2.4	19.			

Plot 'B' Function Summary Table

Item	Number of Large Trees	Litter Cover	Length of Fallen Logs	Stem Size Class	Tree Regeneration <5 cm Diameter	High Threat Weed Cover
Benchmark	1	40	12	4	Present	–
Future mean ($\bar{x}$)	0	17	5	3	Absent	0
Weighted function score (WFS_i)	0	6.7	8.6	13.8	0	–
Weighting (w_i)	0.35	0.15	0.2	0.15	0.15	–

4.3 Trigger Action Response Plan (TARP)

Trigger Action Response Plan (TARP) has been prepared for contingency in case of performance targets not being met.

Following on from the monitoring program Table 5 also includes trigger values or conditions under which corrective actions are taken. Monitoring records are incorporated into the reporting requirements as mentioned.

With all regeneration plans, objectives and targets are set based on good conditions, however, this may not always be the case.

Table 5 has been prepared to ensure any issues or threats that may arise, the Project Ecologist and BRC can step through actions to ensure targets can be achieved.

The level of incident or threat will determine the action and response required.

It is worth noting that not all incident or threats have multiple response levels, for example a catastrophic bushfire within the VMP lands will require the emergency works and the preparation of an amended management plan to be developed in response.

Table 5: Trigger Action Response Plan (TARP)

Element	Trigger	Action	Response
Fire – Bushfire/Dwelling Fire	Bushfire or dwelling fire within surrounding landscape	Assess VMP lands for spot fires from embers	1. No impact – no response. 2. Below 500m ² : monthly monitoring for regrowth. 3. Above 500m ² : prepare new plan incl. plantings & monitoring; Council Ecologist approval required.
Fire – Bushfire in VMP Lands (Various Impact Levels)	Bushfire within VMP lands; assess canopy/shrub/groundcover/nest boxes/soil/water quality	Assess level of impact when safe; assess fauna, canopy, shrubs, groundcover, habitat, soils, water quality.	Multiple response levels for <500m ² , 500m ² –1ha, and >1ha including injured wildlife care, monitoring, mulching, fencing, weed/pest suppression, water quality monitoring, erosion control, sediment controls, new VMP preparation, nest box replacement, new planting schedules.
Flood – <1 in 50 year event	Assess VMP for fauna loss, vegetation damage, soils, rubbish, blockages, water quality	Assess and record level of impact	1. No impact – no response. 2. <500m ² : monthly monitoring + rubbish/blockage removal. 3. >500m ² : new plan incl. plantings + monitoring; Council approval.
Flood – ≥1 in 50 year event	Assess VMP for fauna, canopy/shrub/groundcover damage, plant loss, nest boxes,	Assess and record level of impact	Multi-level responses similar to fire category: injured fauna care, regeneration assessment, nest box replacement, blockages removed, mulching, erosion

Element	Trigger	Action	Response
	soils, rubbish, blockages, water quality		controls, water quality monitoring, new planting schedules, weekly pest/weed work, preparation of new VMP for >1ha.
Drought – 25–50% rainfall reduction	Reduced growth, death, decline in flowering	Assess flora health	1. No impact. 2. <500m ² : watering plan + monthly monitoring for 6–12 months. 3. >500m ² : new plan incl. watering, plantings, additional monitoring; Council approval.
Drought – >50% rainfall reduction	Assess fauna loss, canopy/shrub/groundcover damage, plant loss, soils, water quality	Assess level of impact	Response levels similar to fire/flood: watering schedule, fauna care, mulching, erosion controls, weed/pest suppression, new planting schedules, new VMP for >1ha with new targets, nest boxes, mulching, watering, fencing.
Weeds – Recorded at baseline (<1000m ²)	Weed species recorded at baseline	Assess flora health; apply baseline controls	1. Apply baseline controls for 1–2 growth seasons. 2. If persistent → revised weed plan; Council approval.
Weeds – Recorded at baseline (>1000m ²)	Weed infestation >1000m ²	Ecologist + BRC site meeting; prepare step 1 eradication plan	Notify Council; implement step 1; prepare new weed plan; Council approval.

Element	Trigger	Action	Response
Weeds – Not recorded at baseline	Assess area of infestation	Ecologist + BRC determine action plan	Prepare & implement step 1; notify Council; prepare new weed plan; Council approval.
Pathogen – Recorded at baseline (<1000m ²)	Pathogen species recorded at baseline	Assess flora; apply baseline controls	1–2 seasons control; if persistent → revised pathogen plan; Council approval.
Pathogen – Recorded at baseline (>1000m ²)	Pathogen infestation >1000m ²	Ecologist + BRC determine plan; step 1 eradication	Notify Council; implement; prepare new pathogen plan; Council approval.
Pathogen – Not recorded at baseline	Assess area of infestation	Ecologist + BRC determine plan	Prepare & implement step 1; notify Council; prepare new pathogen plan; Council approval.
Pest Species – Recorded at baseline (<1000m ²)	Increase in pest species	Assess flora & fauna health; apply baseline controls	If persistent after one season → revised pest plan; Council approval.
Pest Species – Recorded at baseline (>1000m ²)	Area >1000m ²	Ecologist + BRC determine plan; step 1 eradication	Notify Council; implement; prepare new pest plan; Council approval.
Pest Species – Not recorded at baseline	Assess area of infestation	Ecologist + BRC determine plan	Prepare & implement step 1; notify Council; prepare new pest plan; Council approval.

Element	Trigger	Action	Response
Reduction in Native Fauna	Decline in fauna species diversity; not recorded in one round (may be seasonal)	Ecologist monitoring	After 3 rounds: increase monitoring intensity (camera traps, timing), assess habitat condition, predator pressure, prepare revised species mgmt strategies (nest boxes, habitat, fencing), Council approval.
Vehicle Strike	>3 wildlife fatalities in 6 months	Community Board records & reviews all incidents	Increase community awareness; if no reduction after 12 months → revised management plan incl. physical measures (speed limits, traffic calming); Council approval.
Vandalism / Theft	Any evidence of vandalism/theft in VMP lands	All incidents reported to Ecologist & Community Board	Community awareness; repair vandalism within 1 month; if still occurring after 12 months → revised plan incl. fencing/signage; Council approval.
Growth Rate of Plantings	Reduced growth over 12 months (not fire/flood/drought related)	Monitoring, assessing, reporting	After 12 months: if growth increased → no action. If not: specialist Arborist/Horticulturalist engaged; expert recommendations implemented; report to Council.

4.4 Reporting Guideline

Certification Reports

The Project Ecologist is to provide reports to Council's Development Ecologist for review, certifying how the requirements are being implemented, within 10 working days following completion of the following stages of the VMP works:

- Following induction of the Contract Bush Regenerator
- Following initial perimeter fencing
- Following completion of the initial / primary weed removal works
- Following completion of the initial / primary weed removal works
- Following completion of the nestbox installation

Monitoring Reports

Monitoring Reports are to be prepared by the Ecologist or bush regenerator and submitted to Council detailing the progress of the weed management works annually.

Photo monitoring locations and monitoring photos are already established.

Monitoring Reports are to be accompanied by updated photos (north, south, east and west locations already provided in Appendix E for each photo monitoring report including the baseline 20x20m quadrat data undertaken recently).

Monitoring reports are to outline the level of compliance achieved with regard to the requirements of this VMP.

Reports are to be prepared by the Project Ecologist and submitted to Council detailing the progress of the weed management annually and any recommended additional actions, with a final report certifying completion of the VMP at the end of the 20 year VMP period.

5.0 IMPLEMENTATION DETAILS

5.1 Implementation & Timing of Works

A works schedule for the implementation of this Vegetation Management Plan is provided in Table 6.

Table 6: Schedule of works

[illegible]

[illegible]

APPENDIX A: FIGURES

Figure 1. VMP Boundary

Figure 2. Fence and Signage Location

Figure 3. Spot Weeding

Figure 4. Arum Lily Distribution

Figure 5. Lantana Distribution

Figure 6. Periwinkle Distribution

Figure 7. Asparagus Fern Distribution

Figure 8. Blackberry Distribution

Figure 9. BAM Plot and Monitoring Points

Figure 10. Revegetation Areas

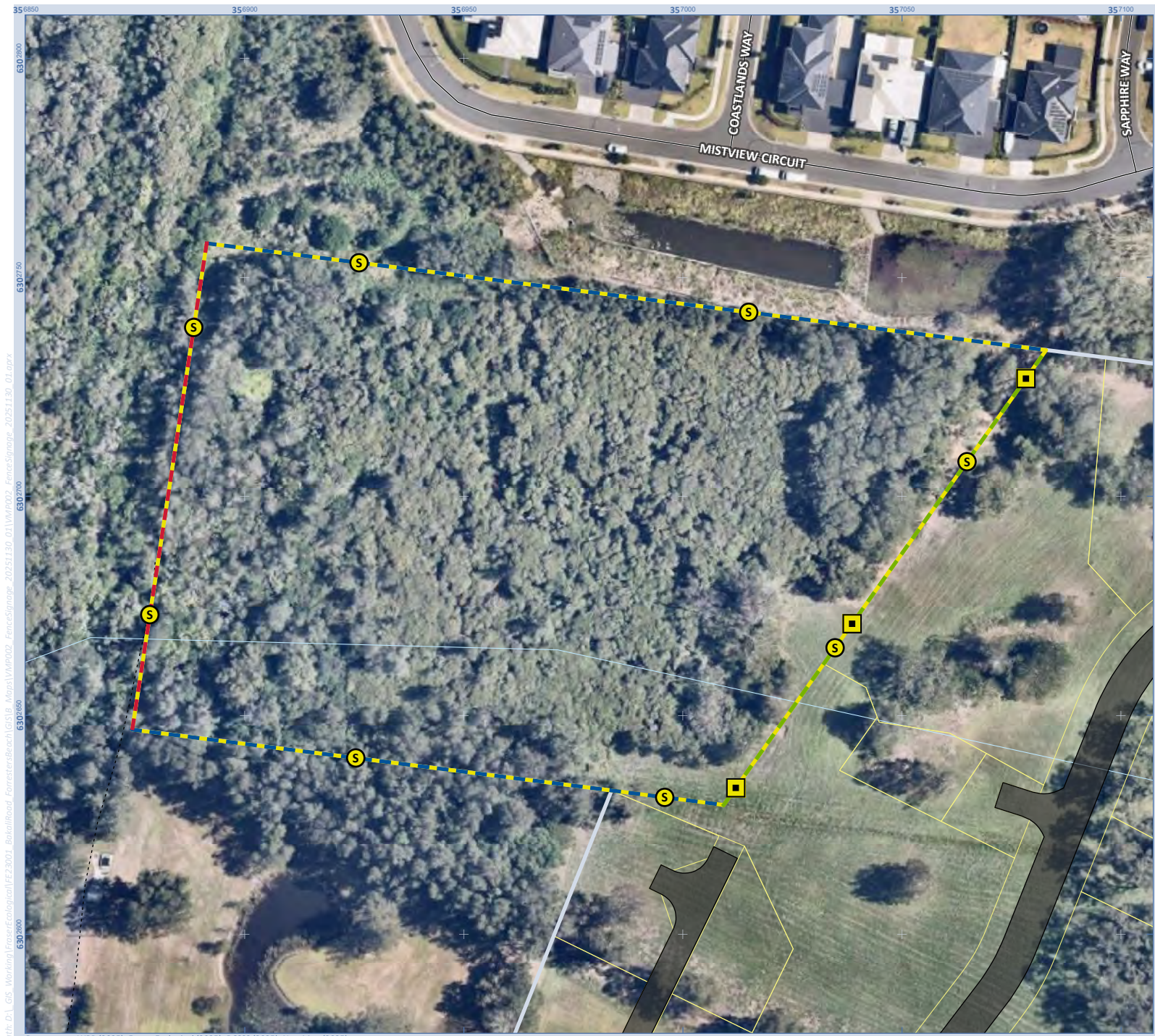
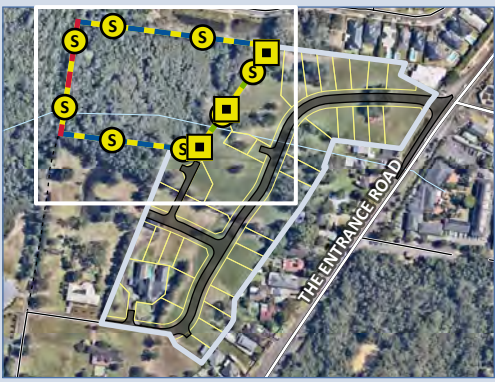


FIGURE 2 | FENCE AND SIGNAGE LOCATION



- LEGEND**
- Site boundary (61,742 m²)
 - Vegetation Management Plan (VMP) boundary (18,485 m²)
 - S Signage
 - Maintenance access gate
 - Existing cyclone mesh fence
 - Install star picket and strained wire fence
 - Colorbond fence to prevent public access
- Proposed subdivision layout**
- Stage 1 & 2 – lots
 - Stage 1 & 2 – roads
- Existing environment**
- Minor road
 - Local road
 - Vehicular track
 - Watercourse/drainage line

Bakali Road & The Entrance Road, Forrester's Beach
01/12/2025 (v1) 1:1,250 @A4 GDA2020 MGA Zone 56



Data source: WBP (2025); Fraser Ecological (2025); DCSSS (2025); NearMap (2025)



FIGURE 3 | SPOT WEEDING LOCATIONS



LEGEND

- Site boundary (61,742 m²)
- Vegetation Management Plan (VMP) boundary (18,485 m²)
- Spot weeding**
 - *Cortaderia selloana* (Pampas Grass)
 - *Ochna serrulata* (Mickey Plant)
 - *Phoenix canariensis* (Phoenix Palm)
- Proposed subdivision layout**
 - Stage 1 & 2 – lots
 - Stage 1 & 2 – roads
- Existing environment**
 - Minor road
 - Local road
 - Vehicular track
 - Watercourse/drainage line

Bakali Road & The Entrance Road, Forrester's Beach
01/12/2025 (v1) 1:1,250 @A4 GDA2020 MGA Zone 56

Fraser Ecological

Disclaimer: mapping is indicative only and the data shown has an inherent level of accuracy that is dependent on the data source. The location of all mapped features and boundaries should be confirmed by a registered surveyor.

Path 01_GIS_Working[Fraser Ecological][FEZ-2001_Bakali Road, Forrester's Beach]GIS[Mapa][VMP003_Spot Weeding_20251130_01.aprx]

Data source: WBP (2025); Fraser Ecological (2025); DCSSS (2025); NearMap (2025)



FIGURE 5 | LANTANA DISTRIBUTION



- LEGEND**
- Site boundary (61,742 m²)
 - Vegetation Management Plan (VMP) boundary (18,485 m²)
 - Lantana camara* (Lantana) (7,506 m²)
- Proposed subdivision layout**
- Stage 1 & 2 – lots
 - Stage 1 & 2 – roads
- Existing environment**
- Minor road
 - Local road
 - Vehicular track
 - Watercourse/drainage line

Bakali Road & The Entrance Road, Forrester's Beach
 01/12/2025 (v2) 1:1,250 @A4 GDA2020 MGA Zone 56

0 15 30
metres

Disclaimer: mapping is indicative only and the data shown has an inherent level of accuracy that is dependent on the data source. The location of all mapped features and boundaries should be confirmed by a registered surveyor.

Perth 01, GIS Working | Fraser Ecological | FEZ-3001, Bakali Road, Forrester's Beach | GIS | Maps | VMP005, Lantana, 20251201, 02.aprx
 356850 356900 356950 357000 357050 357100
 6302500 6302550 6302600 6302650 6302700

Data source: WBP (2025); Fraser Ecological (2025); DCSSS (2025); NearMap (2025)



FIGURE 8 | BLACKBERRY DISTRIBUTION



LEGEND

- Site boundary (61,742 m²)
 - Vegetation Management Plan (VMP) boundary (18,485 m²)
 - Rubus fruticosus* (Blackberry) (4,231 m²)
- Proposed subdivision layout
- Stage 1 & 2 – lots
 - Stage 1 & 2 – roads
- Existing environment
- Minor road
 - Local road
 - Vehicular track
 - Watercourse/drainage line

Bakali Road & The Entrance Road, Forrester's Beach
01/12/2025 (v2) 1:1,250 @A4 GDA2020 MGA Zone 56



Disclaimer: mapping is indicative only and the data shown has an inherent level of accuracy that is dependent on the data source. The location of all mapped features and boundaries should be confirmed by a registered surveyor.



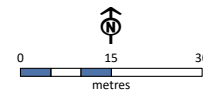
FIGURE 10 | REVEGETATION AREA



LEGEND

- Site boundary (61,742 m²)
- Vegetation Management Plan (VMP) boundary (18,485 m²)
- Vegetation rehabilitation area (680 m²)
- Proposed subdivision layout
 - Stage 1 & 2 – lots
 - Stage 1 & 2 – roads
- Existing environment
 - Minor road
 - Local road
 - Vehicular track
 - Watercourse/drainage line

Bakali Road & The Entrance Road, Forrester's Beach
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Disclaimer: mapping is indicative only and the data shown has an inherent level of inaccuracy that is dependent on the data source. The location of all mapped features and boundaries should be confirmed by a registered surveyor.

Path 01_GIS_Working\Fraser Ecological\FE23001_BakaliRoad_Forrester's Beach\GIS\6_Maps\VMP\010_Revegetation_20251130_01.aprx

Data source: WBP (2025); Fraser Ecological (2025); DCSSS (2025); NearMap (2025)

APPENDIX B: SITE VEGETATION DETAILS

3.3.3 PCT 4038 - HUNTER ESTUARINE MELALEUCA NODOSA SCRUB (VMP RETAINED AREA) – VEGETATION ZONE ‘C’

NSW statewide PCT name: Hunter Estuarine *Melaleuca nodosa* Scrub (PCT 4038)

Vegetation Formation: Forested Wetlands

Vegetation Class: Coastal Floodplain Wetlands

Central Coast Council (Bell 2019) classifications:

- ‘Estuarine Paperbark Scrub Forest’ CC_SF10i (MAPPED FOR SITE – refer to [Figure 18](#))
- Variant of Map Unit SF11i Estuarine Swamp Oak Forest
- Map Unit SF12i Swamp Oak Sedge Forest

Formerly legacy PCT options:

- PCT 1716 Prickly-leaved Paperbark forest on coastal lowlands of the Central Coast and Lower North Coast)
- PCT 1728 Swamp Oak – Prickly Paperbark- Tall Sedge Swamp Forest on Coastal Lowlands of the Central Coast and Lower North Coast

Justified current PCT:

- The landform position is typical of this PCT which typically occurs on poorly drained unconsolidated sediments of the coastal lowlands usually at elevations under 20m below (rarely above 10 m) sea level.
- It forms mosaics with other floodplain forest communities and treeless wetlands, and fringes treeless floodplain lagoons or wetlands with semi-permanent standing water as stated in the NSW Scientific Determination for this community.
- As described in Section 3.1 (above) the diagnostic and dominant species *Casuarina glauca* is present.
- All other Sydney Coastal Dry Swamp Forests dominated or co-dominated by occasional occurrences of *Melaleuca nodosa*, *Eucalyptus robusta* and *Glochidion ferdinandi* within the Wyong IBRA sub-region were considered in undertaking the above determination. However, all other PCTs were ruled out based on floristics, geographic distribution or position in the landscape.
- This PCT was cross-referenced with the former legacy PCT 1716 used in the previous version of this BDAR during the approved re-zoning application that was consistent with the vegetation occurring in proposed VMP area of the site.

- It conforms to the NSW Threatened Species Scientific Committee (2011) description of the EEC in a number of features including landscape associated with grey-black clay-loams and sandy loams, where the groundwater is saline or sub-saline, on waterlogged or periodically inundated flats, drainage lines, lake margins and estuarine fringes associated with coastal floodplains).

BC Act 2016 status:

- Swamp Oak Floodplain Forest of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions (*BC Act 2016*)

Commonwealth EPBC Act 1999 status: Not listed

Structure:

Upper Stratum: To 12 metres high, with 70% Projected Foliage Cover (PFC).

Mid Stratum: To 4 metres high, with 10% PFC.

Lower Stratum: To 0.2-0.5 metres high, with 100% PFC.

Floristics:

(Characteristic Species)

Upper Stratum: Dominated by *Melaleuca nodosa* *Casuarina glauca* with occasional occurrences of *Eucalyptus robusta*

Mid Stratum: *Melaleuca nodosa*, *Melaleuca quinquenervia*, *Glochidion ferdinandi*, *Acacia longifolia*, *Senna pendula* var. *glabrata* and *Lantana camara*.

Lower Stratum: *Hydrocotyle bonariensis*, *Ageratina adenophora*, *Asparagus aethiopicus*, *Zantedeschia aethiopica* and *Stenotaphrum secundatum*. *Gahnia clarkei*, *Dianella caerulea* and *Lomandra longifolia*.

Variation:

Larger patches generally contain higher densities of trees and an unmanaged understorey, whereas smaller patches occur in areas of managed exotic grassland on the edge effected margins.

Disturbance:

Disturbances include weed invasion, clearing and ongoing understorey management at edges.

Weed Invasion:

High levels of weed invasion were present within the understorey layers. Dominant species observed include *Senna pendula* var. *glabrata*, *Lantana camara*, *Hydrocotyle bonariensis*, *Ageratina adenophora*, *Asparagus aethiopicus*, *Zantedeschia aethiopica* and *Stenotaphrum secundatum*

Location and Distribution:

This community occurs within Lot 108 (C2 Zone land – 1.849ha) that will be retained and enhanced as part of the proposal (via the Vegetation Management Plan prepared by Conachers Consulting dated 2022) – refer to Figure 20.

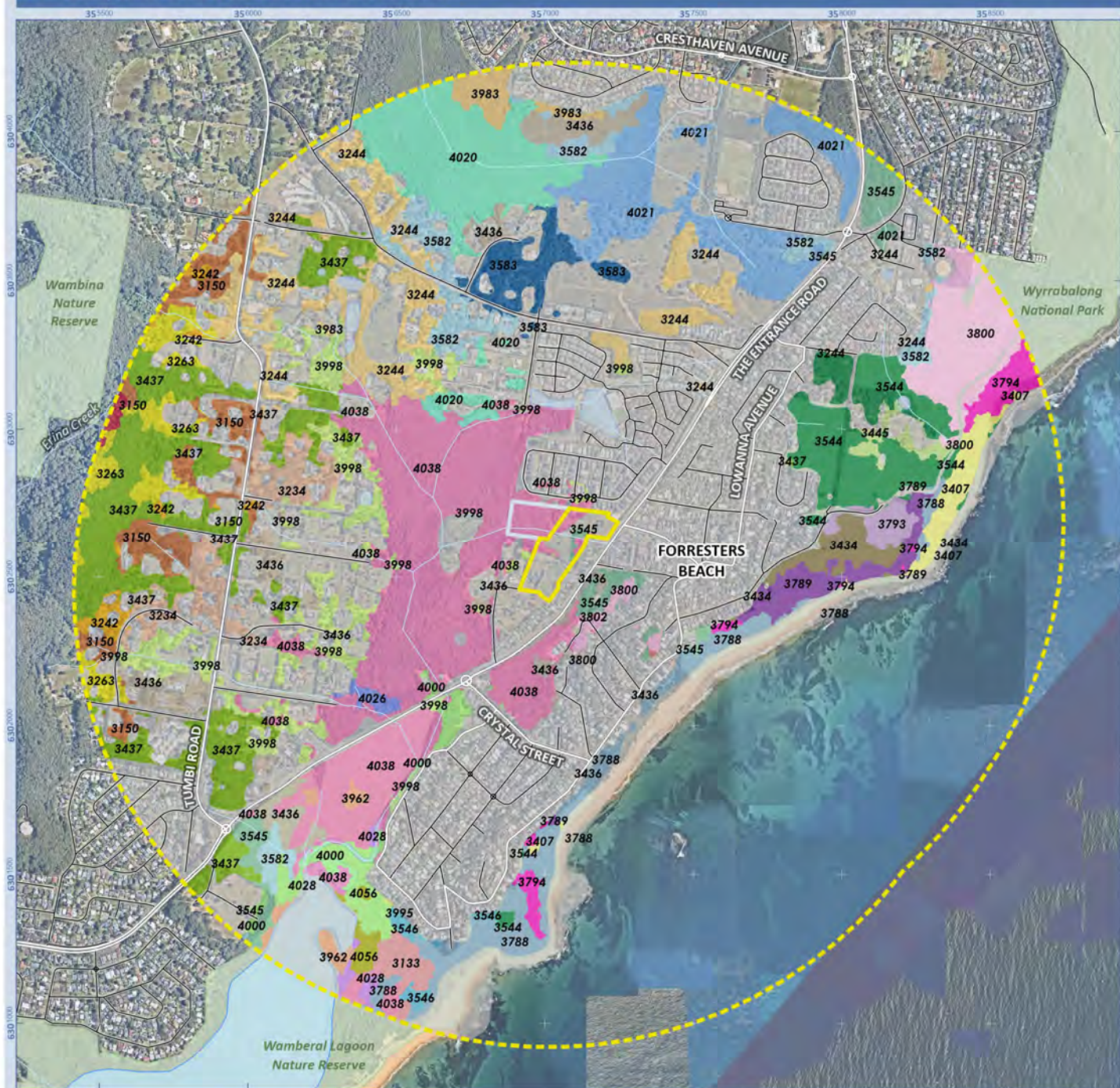
The occurrences of this Endangered Ecological Community in the western part of Lot 522 DP 1077907 is the subject of a Vegetation Management Plan under a Planning Agreement relating to the land. This area, zoned C2 Environmental Conservation, is to be placed under an 88B restriction as to its use and enforced under Section 88E of the *Conveyancing Act 1919* (Photograph 1).

BAM plots were not undertaken as this vegetation zone will not be impacted by the proposal.



Photograph 5: Good Quality Intact Paperbark Swamp Oak Forest (EEC) PCT 4038 within Lott 108 (C2 Zoned Lands)

FIGURE 7 | NSW STATEWIDE PCT VEGETATION MAP



Data source: WBP (2025); Fraser Ecological (2025); ABS (2021); DCCEEW (2020); DCSSS (2025); GA (2011); NearMap (2025)

LEGEND

- Site boundary (6.174 ha)
- Subject land (4.325 ha)
- Subject land 1.500 m buffer (856.655 ha)
- Existing environment
 - Minor road
 - Local road
 - Watercourse/drainage line
 - Waterbody
 - National park/reserve
- Plant community type (NSW SVTM (DCCEEW, 2024) vC2.0.M2.1)
 - Not classified (345,441 ha)
 - PCT 3029 | Lower North Wet Gully Palm Rainforest (0.589 ha)
 - PCT 3133 | Sydney Coast Tuckeroo Littoral Rainforest (2.820 ha)
 - PCT 3150 | Hunter Coast Ranges Turpentine Wet Forest (11.104 ha)
 - PCT 3234 | Hunter Coast Lowland Spotted Gum Moist Forest (9.272 ha)
 - PCT 3242 | Lower North Ranges Turpentine Moist Forest (2.079 ha)
 - PCT 3244 | Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest (21.122 ha)
 - PCT 3263 | Watagan Range Turpentine-Mahogany Grassy Forest (7.449 ha)
 - PCT 3407 | Central Headland Grassland (4.279 ha)
 - PCT 3434 | Hunter Coast White Mahogany Low Forest (3.994 ha)
 - PCT 3436 | Hunter Coast Sandy Creekflat Low Paperbark Scrub (13.091 ha)
 - PCT 3437 | Hunter Coast Lowland Spotted Gum Dry Forest (34.869 ha)
 - PCT 3445 | Lower North Coastal Hills Red Gum Grassy Forest (1.840 ha)
 - PCT 3544 | Coastal Sands Apple-Blackbutt Forest (17.319 ha)
 - PCT 3545 | Coastal Sands Bloodwood Low Forest (7.475 ha)
 - PCT 3546 | Coastal Sands Littoral Scrub-Forest (1.337 ha)
 - PCT 3582 | Hunter Coast Lowland Apple-Bloodwood Forest (12.334 ha)
 - PCT 3583 | Hunter Coast Lowland Scribbly Gum Forest (6.506 ha)
 - PCT 3788 | Coastal Foredune Wattle Scrub (12.778 ha)
 - PCT 3789 | Coastal Headland Clay Heath (5.421 ha)
 - PCT 3793 | Hunter Coast Headland Clay Heath (2.493 ha)
 - PCT 3794 | Lower North Coast Headland Clay Heath (4.374 ha)
 - PCT 3800 | Bouddi Headland Wallum Heath (13.790 ha)
 - PCT 3802 | Lower North Sandplain Wallum Heath (0.083 ha)
 - PCT 3962 | Coastal Floodplain Phragmites Reedland (1.869 ha)
 - PCT 3983 | Central Coast Flats Mesic Swamp Forest (3.751 ha)
 - PCT 3995 | Hunter Coast Paperbark-Swamp Mahogany Forest (0.053 ha)
 - PCT 3998 | Lower North Creekflat Mahogany Swamp Forest (16.738 ha)
 - PCT 4000 | Northern Estuarine Paperbark Sedge Forest (6.884 ha)
 - PCT 4020 | Coastal Creekflat Layered Grass-Sedge Swamp Forest (24.251 ha)
 - PCT 4021 | Coastal Creekline Dry Shrubby Swamp Forest (1.220 ha)
 - PCT 4026 | Estuarine Sea Rush Swamp Oak Forest (0.982 ha)
 - PCT 4028 | Estuarine Swamp Oak Twig-rush Forest (0.984 ha)
 - PCT 4038 | Hunter Estuarine Melaleuca nodosa Scrub (66.985 ha)
 - PCT 4056 | Southern Estuarine Swamp Paperbark Creekflat Scrub (1.286 ha)



139 Bakali Road, 985 & 987-991 The Entrance Road, Forrester's Beach

26/02/2025 (v3)

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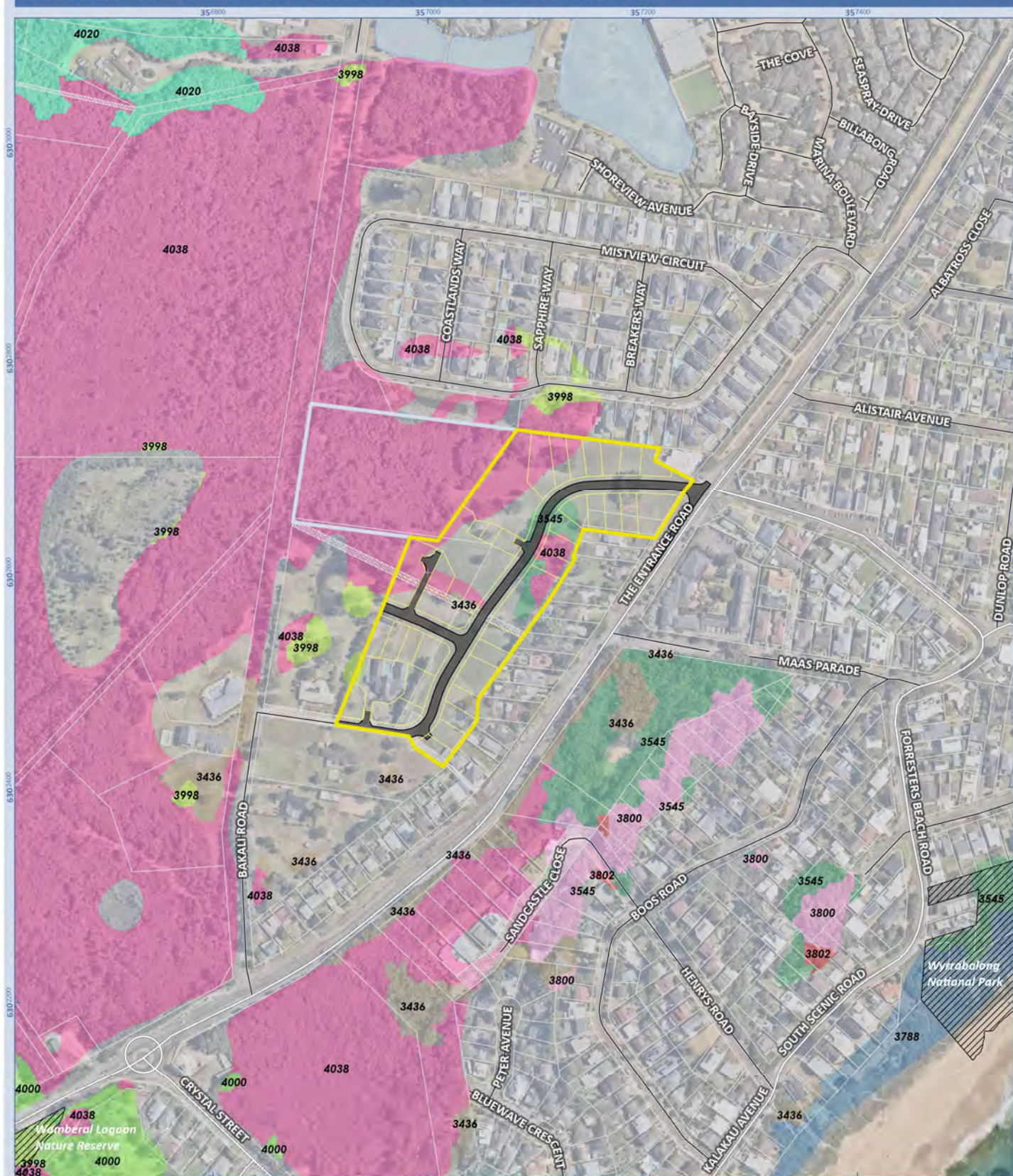
GDA2020 MGA Zone 56



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FIGURE 8 | NSW STATEWIDE PCT VEGETATION MAP (CLOSE UP OF SUBJECT PROPERTY)



Data source: WBP (2025); Fraser Ecological (2023); DCCEEW (2020); DCSSS (2025); GA (2011); NearMap (2025)

LEGEND

- | | | |
|-----------------------------|---|---|
| Site boundary (6.174 ha) | Waterbody | PCT 3545 Coastal Sands Bloodwood Low Forest |
| Subject land (4.325 ha) | National park/reserve | PCT 3788 Coastal Fore-dune Wattle Scrub |
| Proposed subdivision layout | Lot boundary | PCT 3800 Bouddi Headland Wallum Heath |
| Stage 1 & 2 – lots | Easement | PCT 3802 Lower North Sandplain Wallum Heath |
| Stage 1 & 2 – roads | Plant community type (NSW SVTM (DCCEEW, 2024) vC2.0.M2.1) | PCT 3998 Lower North Creekflat Mahogany Swamp Forest |
| Existing environment | Not classified | PCT 4000 Northern Estuarine Paperbark Sedge Forest |
| Minor road | PCT 3244 Lower North Spotted Gum-Mahogany-Ironbark Sheltered Forest | PCT 4020 Coastal Creekflat Layered Grass-Sedge Swamp Forest |
| Local road | PCT 3436 Hunter Coast Sandy Creekflat Low Paperbark Scrub | PCT 4038 Hunter Estuarine Melaleuca nodosa Scrub |

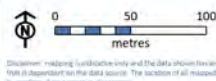


139 Bakali Road, 985 & 987-991 The Entrance Road, Forresters Beach

26/02/2025 (v2)

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BioNet Vegetation Classification - Community Profile Report

Plant Community Type ID (PCT ID): 4038

PCT Name: Hunter Estuarine Melaleuca nodosa Scrub

Classification Confidence Level: 2-High

Total Number of Replicates: 9

Number of Primary Replicates: 8

Number of Secondary Replicates: 1

Vegetation Description: A mid-high Melaleuca closed forest or mid-high to tall open forest dominated by casuarinas and eucalypts with a dense mid-stratum of Melaleuca and a sedge ground cover on estuarine creek flats, Hunter coast between Gosford and Karuah. A taller tree canopy is commonly present either as an emergent layer or a sparse to mid-dense cover of Casuarina glauca, occasionally with Eucalyptus robusta or Eucalyptus resinifera. Melaleuca nodosa almost always dominates the mid-stratum or the upper strata where taller species are absent, commonly with other Melaleucas such as Melaleuca ericifolia or Melaleuca styphelioides. Other shrubs or small trees include Dodonaea triquetra Pittosporum undulatum and Acacia longifolia. The ground layer comprises species tolerant of the estuarine influences, including very frequent high cover of Machaerina juncea and occasionally Juncus kraussii subsp. australiensis or Phragmites australis. Other species include Lomandra longifolia, Entolasia marginata and Gahnia clarkei. This PCT has a very low species richness relative to other forested wetlands types, and is restricted to elevations of below 10 metres asl. It grades into forests dominated by Casuarina glauca in estuarine environments (PCT 4028).

Vegetation Formation: Forested Wetlands;

Vegetation Class: Coastal Floodplain Wetlands;

IBRA Bioregion(s): NSW North Coast; Sydney Basin;

IBRA Sub-region(s): Karuah Manning; Hunter; Wyong;

LGA: CENTRAL COAST; LAKE MACQUARIE; PORT STEPHENS;

Elevation (m) (Min, Median, Max): 0.0 2.7 11.7

Annual Rainfall (mm) (Min, Median, Max): 1122 1245 1289

Annual Mean Temperature (deg C) (Min, Median, Max): 17.00 17.05 17.32

Median Native Species Richness per plot: 12

TEC Assessed: Has associated TEC

TEC List: Listed BC Act,E: Swamp Oak Floodplain Forest of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions (Part); Listed EPBC Act,E: Coastal Swamp Oak (Casuarina glauca) Forest of New South Wales and South East Queensland ecological community (Part);

TEC Comments: (Comment TEC1) Relates to the NSW Swamp Oak Floodplain Forest TEC. (Comment TEC2) Relates to the Commonwealth Coastal Swamp Oak Forest TEC where a patch satisfies the condition requirements as per section 3.2 of the Conservation Advice.

PCT Percent Cleared: 50.58

PCT Definition Status: Approved

Species By Growth Form Group

Growth Form Group	Species	Median cover score	Frequency
Forb (FG)	Dianella caerulea	2	25
Forb (FG)	Samolus repens	2	25
Forb (FG)	Lobelia purpurascens	1	13
Forb (FG)	Pterostylis longifolia	1	13
Forb (FG)	Selliera radicans	1	13
Forb (FG)	Viola hederacea	1	13
Forb (FG)	Wilsonia backhousei	1	13
Grass & grasslike (GG)	Machaerina juncea	3	88
Grass & grasslike (GG)	Gahnia clarkei	1	38
Grass & grasslike (GG)	Lomandra longifolia	2	38
Grass & grasslike (GG)	Entolasia marginata	2	25
Grass & grasslike (GG)	Juncus kraussii subsp. australiensis	3	25
Grass & grasslike (GG)	Phragmites australis	6	25
Grass & grasslike (GG)	Sporobolus virginicus	2	25
Grass & grasslike (GG)	Zoysia macrantha	2	25
Grass & grasslike (GG)	Entolasia stricta	1	13
Grass & grasslike (GG)	Imperata cylindrica	3	13

Grass & grasslike (GG)	Lepidosperma elatius	1	13
Grass & grasslike (GG)	Lepidosperma neesii	1	13
Grass & grasslike (GG)	Oplismenus imbecillis	2	13
Grass & grasslike (GG)	Poa poiformis var. poiformis	1	13
Other (OG)	Parsonsia straminea	2	75
Other (OG)	Pandorea pandorana subsp. pandorana	1	38
Other (OG)	Billardiera scandens	1	13
Other (OG)	Geitonoplesium cymosum	1	13
Other (OG)	Livistona australis	1	13
Other (OG)	Marsdenia rostrata	1	13
Other (OG)	Sarcopetalum harveyanum	1	13
Shrub (SG)	Melaleuca nodosa	6	100
Shrub (SG)	Pittosporum undulatum	2	63
Shrub (SG)	Dodonaea triquetra	1	50
Shrub (SG)	Melaleuca ericifolia	2	50
Shrub (SG)	Acacia longifolia	2	38
Shrub (SG)	Breynia oblongifolia	1	38
Shrub (SG)	Melaleuca styphelioides	3	38
Shrub (SG)	Pittosporum revolutum	1	38
Shrub (SG)	Acrotriche divaricata	1	13
Shrub (SG)	Bursaria spinosa	1	13
Shrub (SG)	Callistemon salignus	2	13
Shrub (SG)	Goodenia ovata	1	13
Shrub (SG)	Lasiopetalum parviflorum	1	13
Shrub (SG)	Melaleuca decora	1	13
Shrub (SG)	Myrsine variabilis	2	13
Shrub (SG)	Pultenaea paleacea	1	13
Shrub (SG)	Pultenaea villifera	1	13
Shrub (SG)	Senna coronilloides	1	13
Tree (TG)	Casuarina glauca	3	75
Tree (TG)	Notelaea longifolia	2	25
Tree (TG)	Eucalyptus paniculata	3	13
Tree (TG)	Eucalyptus robusta	2	13
Tree (TG)	Glochidion ferdinandi	2	13

APPENDIX C: WEED AND PATHOGEN TRANSFER MANAGEMENT

i. Weed transfer management

The implementation of weed management and removal strategies will minimise the ecological risk posed by weed invasion and aid in the maintenance of the long term environmental and ecological values of the retained areas within the site.

The following protocol is to be implemented to reduce the risk of transfer of noxious weeds and environmental weeds onto or from the subject site during site clearing, surface regrading and construction works:

- No plant material identified to contain weeds is to be transported onto the site. All introduced plant material is to be checked for weeds prior to entering the site;
- Prior to entering the site all clearing and vegetation maintenance machinery and equipment are to be cleaned of all vegetative material and soil. Any foreign vegetative or soil material is to be removed from equipment and disposed of at an approved waste management facility;
- Plant material brought onto the site is to be limited to vegetative material required for mulching or rehabilitation, revegetation and landscaping works;
- All surplus mulch from the site contaminated with weed material is to be transported to an approved waste facility;
- Piling of soil that may contain seeds of exotic species must be located outside of areas containing retained native vegetation to prevent transportation to adjacent areas during rainfall or wind events;
- Weeds are to be managed in accordance with the Biosecurity Act (2015);
- At the completion of works all machinery and equipment are to be cleaned of all vegetative material and soil prior to leaving the site.

ii. Pathogen transfer Management

The following protocol is to be implemented to reduce the risk of the transfer of pathogens such as Phytophthora (*Phytophthora cinnamomi*) or Myrtle Rust (*Uredo rangelli*) onto or from the subject site:

- If pathogens are identified, an exclusion zone should be established as required. All plant, vehicles and equipment on the site should be washed down prior to leaving the site. All infected material should be remediated on site or disposed of at an approved waste management facility.
- Introduced plant material is to be limited to vegetative material required for revegetation works.
- No plant material identified to contain pathogens is to be transported onto the site. All introduced plant material is to be supplied by a certified supplier and is to be screened for pathogens prior to entering the site.
- All mulch from the site, not suitable for re-use within the site, is to be transported to an approved waste management facility.

APPENDIX D: REVEGETATION AND WEED MANAGEMENT GUIDELINES

PART 1 REVEGETATION METHODS

1. TIMETABLE OF WORK

The Bushland Regenerator is to provide a preliminary planting schedule which incorporates a draft timetable of works for the planting activities. A final planting schedule is to be prepared in consultation with the Proponent. This schedule should be designed to minimise the time the sites are exposed and take into account seasonal factors, availability of planting material, and timing of construction works.

2. SITE PREPARATION

Site preparation activities for all planting sites will include preliminary weed control and rubbish removal). Bare soil areas are to be sown with a native grass mix or alternate cover crop to provide temporary soil stabilisation, and (where applicable) soil erosion control measures installed.

3. PLANT MATERIAL

Plant material used for revegetation within the project area is to be sourced only from local provenance material. The Bushland Regenerator is responsible for obtaining all necessary permits and licenses. All plants are to be provided in a healthy condition. They must have good root development and a sturdy shoot system. Plants with an elongated or yellowed shoot system are not to be accepted. Planting is to be undertaken immediately after delivery. If this is not possible, the Bushland Regenerator will be required to provide appropriate storage to keep the plants in good condition on the site, adequately protected from frost, wind, sun and vermin, and secured from vandals.

4. PLANTING GUIDELINES

4.1 Planting Densities and Niche species

The Bushland Regenerator is to be responsible for planting according to the Site Planting Plan prepared by in consultation with the Proponent. This Plan will detail the required species and their distribution across the planting area. The Bushland Regenerator is to be responsible for ensuring planting densities and appropriate niche species.

Only locally indigenous plants are to be used. Niche preferences shall be considered in planting, with plants being placed in the correct position with regard to soil type, moisture, aspect and slope. Plantings should be at a density which will result in a near natural canopy density at all structural levels.

4.2 Planting Methods

Planting holes are to be excavated to a depth of 150 mm and a diameter of 200 mm. Slow release native plant fertiliser (low phosphorous formulated native plant fertilizer tablet/granules) is to be placed into the planting hole. In poorly structured soils, approximately 200 cubic centimetres of native plant soil mix is to be placed and incorporated into the planting hole with fertiliser and water storing granules. Plants must be placed into moistened soil preferably by soaking 1-2 litres of water into each hole. After planting the soil is to be replaced and carefully firmed, leaving a slight depression around each plant to allow for water collection.

All plants are to be thoroughly watered before planting and again after planting. If the weather is hot, a third watering is to be carried out within two days or a drip irrigation system set up to water plants on a weekly basis.

4.3 Plant Protection

The Bushland Regenerator is to be responsible for adequately protecting plant material from frost, wind, sun, vermin and animals. Suitable plant and stake guards are to be used around each plant and maintained throughout the maintenance period of up to 8 years. The use of Jute mats (mulch mats) is recommended where annual or grass regrowth is expected.

4.4 Mulching

After planting, the exposed ground should be mulched with low-nutrient mulch such as chipped eucalyptus. A depth of approximately 75 mm and a diameter of 400 mm around each plant are recommended. No exotic plant material is to be used. Pine bark is not considered to be a suitable mulch material. The provenance of all mulch material must be known and approved by the Bushland Regenerator. Care should be taken to keep mulch material away from the stems of the newly planted tubestock. Alternately, a light sowing of a suitable cover crop (Rye Corn or Japanese Millet) can be made between plantings to provide a protective microclimate and soil stabilizer. Sowing rates to be used are those recommended and agreed with the Bushland Regenerator.

4.5 Maintenance and Weed Control

Plantings must be suitably maintained (watering and weeding). During the maintenance phase any plant losses must be replaced at the expense of the Bushland Regenerator as part of the ongoing maintenance works.

Site maintenance is to consist of the following tasks:

- Weeding throughout the planting area;
- Watering planted material;
- Replacing dead or deceased plants (as required); and
- Removing rubbish from the planting area.

The Bushland Regenerator is to provide a preliminary maintenance schedule which incorporates a timetable of works for each of the activities listed above.

PART 2 WEED MANAGEMENT TECHNIQUES

1. BACKGROUND INFORMATION

Weed removal should be undertaken using small tools such as spades, mattocks, garden forks and saws to reduce soil disturbance and minimise damage to nearby plants. In addition to hand removal of weeds in some situations where weeds are abundant, such as for many of the grass species and when native plants will not be affected by spray drift, the use of Glyphosate herbicide is recommended in accordance with the manufacturers specifications.

Herbicides should not be applied prior to rain occurring as this reduces the herbicides' effectiveness and increases the potential to enter creeks and drainage lines in runoff.

2. WEED REMOVAL TECHNIQUES

Weeds are to be removed in accordance with the following techniques recommended by the National Trust, NSW National Parks and Wildlife Service, Australian Association of Bush Regenerators and Buchanan (2009).

2.1 Weed removal techniques for woody plants

Cut and Paint (Woody weeds to 10 cm basal diameter)

- Make a horizontal cut close to the ground using secateurs, loppers or a bush saw; and
- Immediately apply herbicide to the exposed flat stump surface.

Considerations:

- Cuts should be horizontal to prevent herbicide from running off the stump, sharp angle cuts are hazardous;
- Herbicide must be applied immediately before the plant cells close (within 30 seconds) and translocation of herbicide ceases;
- If plants resprout cut and paint the shoots after sufficient regrowth has occurred; and
- Stem scraping can be more effective on some woody weeds.

Stem Injection

- At the base of the tree drill holes at a 45 degree angle into the sapwood;
- Fill each hole with herbicide immediately; and
- Repeat the process at 5 cm intervals around the tree.

Frilling or Chipping

- At the base of the tree make a cut into the sapwood with a chisel or axe;
- Fill each cut with herbicide immediately; and
- Repeat the process at 5 cm intervals around the tree.

Considerations:

- Plants should be actively growing and in good health;
- Deciduous plants should be treated in spring and autumn when leaves are fully formed;
- For multi-stemmed plants, inject or chip below the lowest branch or treat each stem individually; and
- Herbicides must be injected immediately before plant cells close (within 30 seconds) and translocation of herbicide ceases.

2.2 Weed removal techniques for small hand-pullable plants

Hand Removal

- Remove any seeds or fruits and carefully place into a bag;
- Grasp stem at ground level, rock plant backwards and forwards to loosen roots and pull out; and

- Tap the roots to dislodge any soil, replace disturbed soil and pat down.

Considerations:

- Leave weeds so roots are not in contact with the soil eg. hang in a tree, remove from site or leave on a rock.

2.3 Weed removal techniques for vines and scramblers

Hand Removal

- Take hold of one runner and pull towards yourself;
- Check points of resistance where fibrous roots grow from the nodes;
- Cut roots with a knife or dig out with a trowel and continue to follow the runner;
- The major root systems need to be removed manually or scrape/cut and painted with herbicide; and
- Any reproductive parts need to be bagged.

Stem Scraping

- Scrape 15 to 30 cm of the stem with a knife to reach the layer below the bark/outer layer; and
- Immediately apply herbicide along the length of the scrape.

Considerations:

- A maximum of half the stem diameter should be scraped. Do not ringbark;
- Larger stems should have two scrapes opposite each other; and
- Vines can be left hanging in trees after treatment.

2.4 Weed removal techniques for plants with underground reproductive structures

Hand Removal of Plants with a Taproot

- Remove and bag seeds or fruits;
- Push a narrow trowel or knife into the ground beside the tap root, carefully loosen the soil and repeat this step around the taproot;
- Grasp the stem at ground level, rock plant backwards and forwards and gently pull removing the plant; and
- Tap the roots to dislodge soil, replace disturbed soil and pat down.

Crowning

- Remove and bag stems with seed or fruit;
- Grasp the leaves or stems together so the base of the plant is visible;
- Insert the knife or lever at an angle close to the crown;
- Cut through all the roots around the crown; and
- Remove and bag the crown.

Herbicide Treatment – Stem Swiping

- Remove any seed or fruit and bag; and
- Using a herbicide applicator, swipe the stems/leaves.

Considerations:

- Further digging may be required for plants with more than one tuber;
- Some bulbs may have small bulbils attached or present in the soil around them which need to be removed;
- It may be quicker and more effective to dig out the weed;
- Protect native plants and seedlings; and
- For bulb and corn species the most effective time to apply herbicide is after flowering and before fruit is set.

Exotic vegetation should be removed and stockpiled in a clear area away from adjoining bushland. This stockpile should be removed from the site at a convenient time. As part of the regular

maintenance of the restored area any regrowth of exotic plant species should be removed and disposed of appropriately.

3. USE OF HERBICIDES

There are various categories of herbicides currently used specifically those that kill on contact (contact herbicides), and those that must move through the tissue of the plant (systemic herbicides). Other herbicides include those that are non-selective and those that are selective. There are also those herbicides that kill all existing plants and those that prevent germination (Buchanan, 1989). The most commonly used biodegradable herbicides by bush regenerators are those containing glyphosate (ZERO ®, Glyphosate 340 ® and Roundup ®).

An advantage of herbicide use is the relatively reduced amount of time taken to spray weeds as compared to physically removing them, particularly for large infestations of weeds. Another advantage is that the dead weeds may provide some measure of soil stabilisation for a short period of time.

Herbicides should not be applied prior to rain occurring. This reduces the herbicides effectiveness as well as being transported in runoff to creeklines and waterways.

An advantage of herbicide use is the low time taken to spray weeds as compared to physically removing them, particularly for large infestations of weeds.

Buchanan (1989), recommends that the use of herbicides should be considered when:

- There are small areas of dense weeds with few or no native plants to protect;
- There are large areas of weeds;
- The weeds are growing too rapidly for physical removal; and
- The weeds are located in areas with a high potential for erosion if vegetation is removed.

The spraying of weeds must only be undertaken by experienced and qualified persons. The success of each treatment must be evaluated by the operator after a set period of time according to the labelled effectiveness for each herbicide. Care must be taken when applying herbicides near drainage lines to avoid excess use due to the sensitivity of the wetlands and waterways into which runoff will eventually flow.

**APPENDIX E: ANNUAL SITE INSPECTION MONITORING REPORT, BAM PLOT &
PHOTO MONITORING SHEETS**

ANNUAL SITE INSPECTION MONITORING REPORT

DA No.

REPORT No.

LOT No.

DATE:

INSPECTED BY

1) ACTIONS UNDERTAKEN DURING REPORTING PERIOD

- Fencing
-
-
- Weed Management
-
-
- Threatened Species/Habitat Protection
-
-
- Other Relevant Activities
-

2) VEGETATION CONDITION ASSESSMENT

- Condition of retained Vegetation
- Growth of planted trees
 - Height
 - Survival Rate
-
- Details of natural regeneration occurring
-
- Weed Occurrences/Location/Cover
-

3) OTHER MATTERS

Eg. Bushfire events, weed invasions, severe weather events etc.

4) COMPLIANCE/NON COMPLIANCE WITH REQUIREMENTS OF FLORA/FAUNA MANAGEMENT PLAN

5) REFERENCE AREA PHOTOGRAPHS

6) FOLLOW UP ACTIONS

7) CONCLUDING COMMENTS

**INSPECTION TO BE COMPLETED IN JUNE/JULY EACH YEAR
REPORT TO BE FORWARDED TO COUNCIL BY END OF JULY**

BAM Site – Field Survey Form

Survey Name		Date	Zone ID	Recorders	
BAKALIRO, Forrester Beach		27/11/25	A	A. FRASER.	
Zone: 56	Datum: AMG	Plot ID: A	Plot dimensions: 50x20 m		Photo #:
Easting: 356931	Northing: 6302633	IBRA region: (WYOMING-18A SYDNEY S/REGION)		Midline bearing from 0 m: -	
Vegetation Class: ~~Dry Rainforests~~ CASUAL FLOODPLAIN WETLAND					Confidence H M L
Plant Community Type: PCT 4038 - HUNTER ESTUARINE MELALEUCA MODOSA SCRUB					EEC: ☒ Confidence H M L

Record easting and northing at 0m on midline. Dimensions (Shape) of 0.04ha base plot.

BAM Attribute (400m ² plot)	Sum values	
	Count of native richness	Cover
Trees	4	51.5
Shrubs	1	1
Grasses etc.	4	15
Forbs	3	8
Ferns	-	-
Other	1	3
High threat weed cover		44

Cover: 0.1, 0.2, 0.3.....
1,2,3,.....,10, 15, 20, 25, ...
100% (foliage cover). Note:
0.1% cover is approx. 63x63 cm
or a circle about 71 cm diameter,
0.5% approx. 1.4 x 1.4m, 2%
cover is approx. 2 x 2m, 5% = 4
x 5m, 25% 10 x 10m

BAM Attribute (1000m ² plot)		
DBH	#Tree Stems Count	#Stems with Hollows
80 + cm		
50 – 79 cm		MIL
30 – 49 cm	1	
20 – 29 cm	11	
10 – 19 cm	11	MIL
5 – 9 cm		
<5 cm		
Length of logs (m) (≥ 10 cm diameter, >50cm in length)	Tally: MIL	Total: —

Counts apply when the number of tree stems within a size class is ≤ 10. Estimate can be used when > 10 (eg. 10, 20, 30....100, 200). For a multi-stemmed tree, only the largest living stem is included in the count / estimate. Tree stems must be living.

For hollows, count only the presence of a stem containing hollows. For a multi-stemmed tree, only the largest stem is included in the count/estimate. Stems may be dead and may be shrubs.

BAM Attribute (1 x 1 m plots)																				
Subplot score % in each	Litter cover %					Bare ground cover %					Cryptogam cover %					Rock cover %				
	5	15	25	35	45	5	15	25	35	45	5	15	25	35	45	5	15	25	35	45
	15	25	20	25	20															
Average of the 5 subplots	21					N/A					N/A					N/A				

Litter cover includes leaves, seeds, twigs, branchlets and branches (less than 10cm in diameter)

BAM Site – Plot Species List

400m ² plot: Sheet ____ of ____	Survey Name	Plot ID	Recorders
Date: 27/11/25	Vmp Area	A	A FRASER.

GF Code	Top 3 native species in each growth form group: full species name mandatory. All other native and exotic species: full species name where practicable	N, E or HTE	Cover	Abund	Stratum	Voucher	Photo #
T	Melaleuca quinquecervia	N	45	720			
B	Melaleuca nodosa	M	5	710			
T	Casuarina glauca	M	5	2			
-	Senna pendulavar. glauca	E	5	20			
T	Strobilidium ferdinandi	M	1	5			
S	Acacia longifolia	M	1	2			
Forb	Centella asiatica	N	3	5			
T	Cupaniopsis anacardioides	N	0.5	1			
Forb	Pichondra repens	N	3	10			
Grass	Eutylaria marginata	N	2	2			
Grass	Opilismenus imbecillius	N	1	5			
"	Gahnia clarkei	N	10	10			
"	Comandra longifolia	N	2	3			
Forb	Dianella caerulea	N	2	5			
-	Lantana camara	HTE	10	750			
-	Asparagus aethiopicus	HTE	10	750			
-	Rubus fruticosus	HTE	5	15			
-	Phoenix canariensis	E	4	2			
-	Ipomoea indica	HTE	5	720			
-	Ligustrum sirense	HTE	10	710			
-	Vinca major	HTE	4	750			
OG	Livistona australis	M.	3	1			

N: native, E:exotic, HTE: high threat exotic, GF - circle code if 'top 3'

Cover: 0.1, 0.2, 0.3, ..., 1, 2, 3, ..., 10, 15, 20, 25, ..., 100% (foliage cover). *Note:* 0.1% cover is approx. 63x63 cm or a circle about 71 cm diameter, 0.5% approx. 1.4 x 1.4m, 2% cover is approx. 2 x 2m, 5% = 4 x 5m, 25% 10 x 10m

Abundance: 1, 2, 3, ..., 10, 20, 30, ..., 100, 200, ..., 1000

Stratum: E – emergent, C – canopy, M – mid-storey / sub canopy, S – shrub layer, G – ground layer

BAM Site – Field Survey Form

Survey Name		Date	Zone ID	Recorders	
BAKALI RD, FORRESTER BEACH		27/11/25	B	A. FRASER.	
Zone: 56	Datum: AMG	Plot ID: B	Plot dimensions: 50x20 m		Photo #:
Easting: 356 987	Northing: 6302 707	IBRA region: (WYONG IBRA STONEY BASIN SR)		Midline bearing from 0 m:	
Vegetation Class: ~~Dry Rainforests~~ COASTAL FLOODPLAIN WETLAND				Confidence H M L	
Plant Community Type: PCT 4038 - HUNTER ESTUARINE MELALEUCA MODICA SCRUB.				EEC: Y. Confidence H M L	

Record easting and northing at 0m on midline. Dimensions (Shape) of 0.04ha base plot.

BAM Attribute (400m ² plot)	Sum values	
	Count of native richness	Cover
Trees	5	62
Shrubs	1	5
Grasses etc.	2	25
Forbs	1	20
Ferns	1	3
Other	1	1
High threat weed cover		100

Cover: 0.1, 0.2, 0.3.....
1,2,3,.....,10, 15, 20, 25, ...
100% (foliage cover). Note:
0.1% cover is approx.. 63x63 cm
or a circle about 71 cm diameter,
0.5% approx. 1.4 x 1.4m, 2%
cover is approx. 2 x 2m, 5% = 4
x 5m, 25% 10 x 10m

BAM Attribute (1000m ² plot)		
DBH	#Tree Stems Count	#Stems with Hollows
80 + cm	-	NIL
50 – 79 cm	-	
30 – 49 cm	2	
20 – 29 cm	11 HHH HHH HHH	
10 – 19 cm	HHH 11	
5 – 9 cm	-	
<5 cm	-	
Length of logs (m) (≥ 10 cm diameter, >50cm in length)	Tally: 5m	Total: -

Counts apply when the number of tree stems within a size class is ≤ 10. Estimate can be used when > 10 (eg. 10, 20, 30....100, 200). For a multi-stemmed tree, only the largest living stem is included in the count / estimate. Tree stems must be living.

For hollows, count only the presence of a stem containing hollows. For a multi-stemmed tree, only the largest stem is included in the count/estimate. Stems may be dead and may be shrubs.

BAM Attribute (1 x 1 m plots)																				
Subplot score % in each	Litter cover %					Bare ground cover %					Cryptogam cover %					Rock cover %				
	5	15	25	35	45	5	15	25	35	45	5	15	25	35	45	5	15	25	35	45
	10	20	15	20	20															
Average of the 5 subplots	17																			

Litter cover includes leaves, seeds, twigs, branchlets and branches (less than 10cm in diameter)

BAM Site – Plot Species List

400m ² plot: Sheet ___ of ___	Survey Name	Plot ID	Recorders
Date: 27/1/25	YMP Area	B	A FRASEN.

[illegible]

N: native, **E:** exotic, **HTE:** high threat exotic, **GF** – circle code if 'top 3'

Cover: 0.1, 0.2, 0.3..... 1,2,3,.....,10, 15, 20, 25, ... 100% (follage cover). *Note:* 0.1% cover is approx.. 63x63 cm or a circle about 71 cm diameter, 0.5% approx. 1.4 x 1.4m, 2% cover is approx. 2 x 2m, 5% = 4 x 5m, 25% 10 x 10m

Abundance: 1, 2, 3, ..., 10, 20, 30, ..., 100, 200, ..., 1000

Stratum: E – emergent, C – canopy, M – mid-storey / sub canopy, S – shrub layer, G – ground layer

MONITORING PLOT # 1

BAM Site – Plot Species List

400m ² plot: Sheet ___ of ___		Survey Name	Plot ID	Recorders			
Date: 2/12/2025		MONITORING	1	A FRASER			
GF Code	Top 3 native species in each growth form group: full species name mandatory. All other native and exotic species: full species name where practicable	N, E or HTE	Cover	Abund	Stratum	Voucher	Photo #
T	Eucalyptus robusta	N					
T	Melaleuca quinquenervia	N					
S	Melaleuca adnata linearifolia	N	3	2			
T	Casuarina glauca	N	25	15			
T	Glochidion ferdinandi	N	4	3			
S	Acacia longifolia	N					
OG	Livistona australis	N					
T	Cupaniopsis anacardioides	N					
-	Antara camara	HTE	10	720			
-	Senna pendula var. glabrata	E	10	720			
Forb	Centella asiatica	N	2	750			
-	Hydrocotyle pedunculata	E	10	7100			
FERN	~~Adiantum~~ ~~exaltatum~~ ~~bonariensis~~	~~N~~	1	750			
FERN	Hieracium incisum	N	10	20			
FERN	Pellaea falcata	N					
FERN	Adiantum aethiopicum	N					
Forb	Dichondra repens	N					
GG	Entolasia marginata	N					
GG	Oplismenus imbericillif	N	2	750			
GG	Gahnia clarkii	N	1	720			
GG	Lomandra longifolia	N					
Forb	Dianella caerulea	N					
-	Asparagus aethiopicus	HTE					
-	Rubus fruticosus	HTE	5	720			
-	Phoenix canariensis	HTE					
-	Phoenix indica Bitou Bush	HTE	2				
-	Ligustrum sinense	HTE	0.5	710			
OG	~~Vallisneria~~ Typha orientalis	~~N~~	50	7100			
-	Zantedeschia aethiopica	HTE	10	750			
-	Cortaderia setacea	HTE					
OG	Parsonsia straminea	N	3	710			

N: native, E: exotic, HTE: high threat exotic, GF – circle code if 'top 3'

Cover: 0.1, 0.2, 0.3, ..., 1, 2, 3, ..., 10, 15, 20, 25, ..., 100% (foliage cover). Note: 0.1% cover is approx. 63x63 cm or a circle about 71 cm diameter, 0.5% approx. 1.4 x 1.4m, 2% cover is approx. 2 x 2m, 5% = 4 x 5m, 25% 10 x 10m

Abundance: 1, 2, 3, ..., 10, 20, 30, ..., 100, 200, ..., 1000

Stratum: E – emergent, C – canopy, M – mid-storey / sub canopy, S – shrub layer, G – ground layer

BAM Site – Plot Species List

[illegible]

N: native, **E:** exotic, **HTE:** high threat exotic, **GF** – circle code if 'top 3'

Cover: 0.1, 0.2, 0.3..... 1,2,3,.....,10, 15, 20, 25, ... 100% (foliage cover). Note: 0.1% cover is approx. 63x63 cm or a circle about 71 cm diameter, 0.5% approx. 1.4 x 1.4m, 2% cover is approx. 2 x 2m, 5% = 4 x 5m, 25% 10 x 10m

Abundance: 1, 2, 3, ..., 10, 20, 30, ..., 100, 200, ..., 1000

Stratum: E – emergent, C – canopy, M – mid-storey / sub canopy, S – shrub layer, G – ground layer









MONITORING POINT # 2

BAM Site – Plot Species List

400m ² plot: Sheet ___ of ___		Survey Name	Plot ID	Recorders			
Date: 2/12/25		MONITORING	2	A FRASER			
GF Code	Top 3 native species in each growth form group: full species name mandatory. All other native and exotic species: full species name where practicable	N, E or HTE	Cover	Abund	Stratum	Voucher	Photo #
~~GM~~	~~Melaleuca robusta~~	~~N~~					
~~GM~~	~~Melaleuca argentea~~	~~N~~					
S	Melaleuca robusta linearifolia	N	50	730			
T	Casuarina glauca	N					
T	Glochidion ferdinandii	N					
S	Acacia longifolia	N					
OG	Livistona australis	N					
T	Cupaniopsis anacardioides	N					
-	Antara camara	HTE					
-	Senna pendula var. glabrata	E	15	18			
Forb	Centella asiatica	N					
-	Hydrocotyle peduncularis	E					
Fern	Pteridium esculentum	N					
Fern	Hieracium incisum	N					
Fern	Pellaea falcata	N					
Fern	Adiantum aethiopicum	N					
Forb	Dichondra repens	N					
GG	Entolasia marginata	N	30	750			
GG	Oplismenus imbericilis	N					
GG	Gahnia clarkii	N					
GG	Lomandra longifolia	N					
Forb	Dianella caerulea	N					
-	Asparagus aethiopicus	HTE	60	7100			
-	Rubus fruticosus	HTE	10	720			
-	Phoenix canariensis	HTE					
-	Pomoea indica	HTE					
-	Ligustrum sinense	HTE					
-	Vinca major	HTE					
-	Zantedeschia aethiopica	HTE					
-	Cortaderia seloana	HTE					
OG	Parsonsia straminea	N	5				

N: native, E: exotic, HTE: high threat exotic, GF – circle code if 'top 3'
 Cover: 0.1, 0.2, 0.3, ..., 1.2, 3, ..., 10, 15, 20, 25, ..., 100% (foliage cover). Note: 0.1% cover is approx. 63x63 cm or a circle about 71 cm diameter, 0.5% approx. 1.4 x 1.4m, 2% cover is approx. 2 x 2m, 5% = 4 x 5m, 25% 10 x 10m
 Abundance: 1, 2, 3, ..., 10, 20, 30, ..., 100, 200, ..., 1000
 Stratum: E – emergent, C – canopy, M – mid-storey / sub canopy, S – shrub layer, G – ground layer



