The Minister administering the Biodiversity Conservation Act 2016 (NSW)

And

Googong Township Pty Limited

Biodiversity Certification Agreement

Biodiversity Conservation Act 2016 (NSW)

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PartiesMinister for Environment and Heritage as the Minister administering the
Biodiversity Conservation Act 2016 (NSW) (the Minister)

on

and

Googong Township Pty Limited ABN 95 154 514 593

Background

- A. On 7 May 2021 Googong Township Pty Ltd made an application (Biodiversity Certification Application) for Biodiversity Certification under Part 8 of the BC Act in relation to the Biodiversity Certification Area.
- B. The Biodiversity Certification Application relates to the ongoing staged development in the Googong township area. This stage of the development is referred to as 'Googong Township Neighbourhoods 3 to 5'.
- C. Googong Township and the Biodiversity Certification Area fall within the Queanbeyan-Palerang Regional Council local government area.
- D. As at the date of this Agreement, Googong Township Pty Ltd owns all parcels of land in the Biodiversity Certification Area except for Lot 42 in DP754881 (Lot 42). Lot 42 is owned by the Hamsons. Googong Township Pty Ltd holds a power of attorney which allows it to apply for Biodiversity Certification over Lot 42 on behalf of the Hamsons.
- E. The Biodiversity Certification Application was accompanied by a BCAR dated 2 October 2021 and prepared by Sam Reid and Robert Speirs of Capital Ecological.
- F. The BCAR proposes the following measures to be the Approved Conservation Measures:
 - i. the retirement of 136 PCT 999 (Norton's Box Broad-leaved Peppermint open forest on footslopes, central and southern South Eastern Highlands Bioregion) Biodiversity Credits and 900 PCT 1334 (Yellow Box grassy woodland of the northern Monaro and Upper Shoalhaven area, South Eastern Highlands Bioregion) Biodiversity Credits (total 1036 credits) (or any equivalent PCT classification it may be known by in the future); and
 - ii. the retirement of 48 Pink-Tailed Legless Lizard Species Credits.
- G. In addition to the Approved Conservation Measures, the BCAR recommends entering into a Biodiversity Certification Agreement to, among other things, ensure the Avoided Land is conserved and enhanced in perpetuity as a measure to reduce impacts on Biodiversity Values.

Operative provisions

1. Definitions and Interpretation

1.1 Definitions

In this Agreement, unless the context indicates otherwise:

Agreement means this agreement titled 'Biodiversity Certification Agreement' and includes all schedules.

Approved Conservation Measures has the meaning given in section 8.1 of the BC Act.

Avoided Land means the land identified in Schedule 2(2) of this Agreement.

BC Act means the Biodiversity Conservation Act 2016 (NSW).

BCAR Stage means the development stages of the proposed development as indicated by Figure 18 of the BCAR.

Biodiversity Certification has the same meaning as in section 8.2 of the BC Act.

Biodiversity Certification Application has the meaning given in Recital A.

Biodiversity Certification Assessment Report (BCAR): has the same meaning as in the BC Act and in this Agreement refers to the BCAR dated 2 October 2021 prepared for the purposes of the Biodiversity Certification Application.

Biodiversity Certification Area means the land identified in Schedule 2(2) of this Agreement.

Biodiversity Certification Order means any order made by the Minister to confer Biodiversity Certification in relation to the Biodiversity Certification Application.

Biodiversity Credit means a biodiversity credit created under Part 6 Division 4 *Biodiversity Conservation Act 2016.*

Biodiversity Values has the meaning given in section 1.5(2) of the BC Act.

Business Day means any day except for Saturday or Sunday or a day which is a public holiday in Sydney.

Clearing means clearing within the meaning of section 60C of the *Local Land Services Act 2013*.

Commencement Date means the date that this Agreement commences in accordance with clause 2.

Conservation Agreement has the meaning given in Recital D.

Coordinator-General means the Coordinator-General of E&H and includes any person for the time being acting as such or in such alternative position or office from time to time.

Credit Retirement Obligations means the obligations to retire Biodiversity Credits imposed by any Biodiversity Certification Order.

E&H means Environment and Heritage group of the Department of Planning and Environment.

EP&A Act means the Environmental Planning & Assessment Act 1979 (NSW).

Minister means the Minister of the State of New South Wales administering the BC Act and includes his or her successors in office and where not repugnant to the context includes the servants and agents of the Minister.

Party means a party to this Agreement and includes a person or persons taken to be parties to this agreement by operation of section 8.17 of the BC Act.

Plant community type (PCT) means a NSW plant community type identified using the PCT classification system.

Registrar-General has the same meaning as in the Real Property Act 1900 (NSW).

Subdivision Works Certificate means a subdivision works certificate as defined in Part 6 of the EP&A Act.

Vegetation Management Plan means the plan attached to this Agreement at Schedule 3.

1.2 Interpretation

In this Agreement:

headings are for convenience only and do not affect interpretation;

and unless the context indicates a contrary intention:

- (a) **person** includes an individual, a corporation, an authority, an association or a joint venture (whether incorporated or unincorporated), a partnership and a trust;
- (b) a reference to a Party includes that Party's executors, administrators, successors and permitted assigns, including persons taking by way of novation;
- (c) a reference to a document is to that document as varied, novated, ratified or replaced from time to time;
- (d) a reference to a statute includes its delegated legislation and a reference to a statute or delegated legislation or a provision of either includes consolidations,
 amendments, re-enactments and replacements;
- (e) a word importing the singular includes the plural (and vice versa), and a word indicating a gender includes every other gender;
- (f) a reference to a Party, clause, schedule, exhibit, attachment or annexure is a reference to a Party, clause, schedule, exhibit, attachment or annexure to or of this Agreement, and a reference to this Agreement includes all schedules, exhibits, attachments and annexures to it;
- (g) if a word or phrase is given a defined meaning, any other part of speech or grammatical form of that word or phrase has a corresponding meaning;
- (h) **includes** in any form is not a word of limitation;

- where a schedule contains obligations of any Party then the obligation so expressed shall be read and construed and shall constitute obligation on the part of the relevant Party, as the case may be, to be performed or observed under this Agreement;
- (j) neither this Agreement nor any part of it is to be construed against a Party on the basis that the Party or its lawyers were responsible for its drafting; and
- (k) if a Party to this Agreement is subsequently made up of more than one person:
 - (i) an obligation of those persons is joint and several;
 - (ii) a right of those persons is held by each of them severally; and
 - (iii) any references to that Party is a reference to each of those persons separately, so that (for example), a representation, warranty or undertaking is given by each of them separately.

1.3 Agreement to run with the land

In accordance with section 8.17 of the BC Act this Agreement when registered by the Registrar-General, is binding on and is enforceable against the owner of the land over which it is registered from time to time as if each owner for the time being had entered into the Agreement.

2. Commencement

This Agreement commences on the date it is signed by the Parties.

3. Status of this Agreement & Acknowledgements

- (a) The Parties acknowledge that this Agreement is a Biodiversity Certification Agreement within the meaning of Part 8 of the BC Act.
- (b) The Parties acknowledge that this Agreement does not impose any obligation on the Minister to:
 - (i) confer Biodiversity Certification on any specified land; or
 - (ii) enter into any other Biodiversity Certification Agreement with the owner of any land.

4. Obligations

4.1 Land management obligations

Except for the Minister, all Parties to this Agreement including Googong Township Pty Ltd agree to:

- (a) ensure the ongoing management and protection of land consistent with the Vegetation Management Plan by undertaking any management action (or refraining from certain activities) as specified in the Vegetation Management Plan in relation to land for which they are the registered proprietor, and
- (b) ensure the ongoing management and protection of the Avoided Land as required in clause 5 of this Agreement.

4.2 Registration & notice to purchasers

Except for the Minister, all Parties to this agreement including Googong Township Pty Ltd agree to:

- (a) arrange for the registration of this Agreement on the title of their land (whether that is land that relates to the *Real Property Act 1900* (NSW) or otherwise) by the Registrar-General in accordance with clause 12 of this Agreement and section 8.17(3) of the BC Act,
- (b) not transfer the title of land subject to this Agreement prior to the registration of this Agreement on the title of that land, and
- (c) provide notice of this Agreement to purchasers of any land to which this Agreement relates.

4.3 Satisfaction of Biodiversity Credit Obligations

(a) The Parties agree that Googong Township Pty Ltd must retire the type and number of Biodiversity Credits required to be retired by a Biodiversity Certification Order for the Biodiversity Certification Area in accordance with the table below:

Turne		Number	
Туре	Stage 1	Stage 2	Stage 3
PCT999	28	11	97
PCT1334	166	431	303
Pink-Tailed Legless Lizard	0	5	43

(b)

The Parties agree that Googong Township Pty Ltd must retire the type and number of Biodiversity Credits required to be retired by a Biodiversity Certification Order for the Biodiversity Certification Area by the date of each stage:

- (i) Stage 1, being the date on which the earlier of the following occurs:
 - (A) the date of the issue of a Subdivision Works Certificate over BCAR Stage 1 of the Biodiversity Certification Area; or
 - (B) two years after the date any Biodiversity Certification is conferred on the Biodiversity Certification Area.
- (ii) Stage 2, being the date on which the earlier of the following occurs:
 - (A) the date of the issuing of a Subdivision Works Certificate over BCAR Stage 2 of the Biodiversity Certification Area; or
 - (B) four years after the date any Biodiversity Certification is conferred on the Biodiversity Certification Area.
- (iii) Stage 3, being the date on which the earlier of the following occurs:

- (A) the date of the issuing of a Subdivision Works Certificate over BCAR Stage 3 of the Biodiversity Certified Area; or
- (B) six years after the date any Biodiversity Certification is conferred on the Biodiversity Certification Area.
- (c) For the avoidance of doubt, where the table at clause 4.3(a) and the stages at clause 4.3(b) are inconsistent with a Biodiversity Certification Order that applies to the Biodiversity Certification Area, the Biodiversity Certification Order prevails and clause 4.3(a) and clause 4.3(b) shall be taken to be updated to ensure consistency with the Biodiversity Certification Order.

5. Avoided Land

5.1 **Prohibited activities**

The Parties agree, in relation to the Avoided Land, not to undertake the following activities:

- (a) clearing vegetation or ground cover,
- (b) removing biomass, soil or rocks,
- (c) planting exotic plants,
- (d) establishing new walking tracks or trails,
- (e) driving, riding, or leading an animal, and
- (f) grazing animals.

To avoid doubt, any action undertaken in accordance with the Vegetation Management Plan will not constitute a breach of this provision.

5.2 Reasonable steps

The owner of the Avoided Land (or any part of the Avoided Land) agrees to take all reasonable steps to prevent other persons who may enter the Avoided Land from undertaking or continuing to undertake the prohibited activities in clause 5.1, including by, but not limited to:

- (a) installing signage on the Avoided Land, including on any walking tracks or trails,
- (b) installing fences around or within the Avoided Land,
- (c) providing written notice to persons who may enter the Avoided Land, and
- (d) providing oral directions to persons who enter the Avoided Land.

5.3 Clearing

The Parties acknowledges that clauses 5.1(a) and 5.1(b) apply, notwithstanding any legislation, regulation, rule or code which provide that the Owner is permitted to clear vegetation on the Avoided Land.

5.4 Relocating dead trees

If the Minister confers Biodiversity Certification on the Biodiversity Certification Area and the Biodiversity Certification Order provides for the removal of dead trees within the Biodiversity Certification Area, then the parties, except for the Minister, agree to move the dead trees onto the Avoided Land.

6. Enforcement

In accordance with section 13.16 of the BC Act, and without limiting other remedies available to the Minister, the Minister or a person acting with the written consent of the Minister, may bring proceedings in the Land and Environment Court for an order to remedy or restrain a contravention of this Agreement.

7. Permissions, consents and authorisations

The Parties to this Agreement are responsible for obtaining all necessary licences, consents, authorisations, permits or approvals in order to lawfully comply with and carry out their respective obligations under this Agreement.

8. Dispute resolution

- (a) Where there is a dispute, difference or claim (**Dispute**), the Party raising the Dispute must, in writing, notify the other Party of the nature of the Dispute, including the factual and legal basis of the Dispute (**Dispute Notice**).
- (b) Within 14 days of the Dispute Notice, the Parties, or nominated senior representatives of the Parties, must confer to attempt to resolve the Dispute, and if the Dispute cannot be resolved within 21 days of the Dispute Notice, the Parties will refer the matter to mediation.
- (c) The Parties will agree on the terms of appointment of the mediator and the terms of the mediation in writing within 14 days.
- (d) If the Parties are unable to agree on the terms of appointment of a mediator in clause 8(c), then the Parties must refer the Dispute to the Resolution Institute for mediation in accordance with the 2016 edition of the Mediation Rules prepared by the Resolution Institute.
- (e) If the matter has not been resolved within 28 days of the appointment of the mediator, the mediation process will be at an end and any Party may commence court proceedings in respect of the Dispute.
- (f) Despite this clause 8, the Minister, the Minister's delegate or a person duly authorised by the Minister, may:
 - (i) enforce this Agreement, or
 - (ii) institute proceedings,

in accordance with the BC Act.

9. GST

(a) The Parties to this Agreement agree that the retirement of Biodiversity Credits by the Coordinator-General is not a taxable supply, and that no additional

amounts will be payable on account of GST and no tax invoices will be exchanged between the Coordinator-General and the Biodiversity Certification Party (as the case may be) on the retirement of Biodiversity Credits.

- (b) The Parties to this Agreement acknowledge and agree that for any taxable supply made by one Party to another Party under this Agreement the Party which has received the supply will on receipt of a tax invoice from the supplier make a payment to the supplier that covers both the value of the supply and the GST liability of the Party that has made the supply.
- (c) This clause will not merge on completion or termination of this Agreement.
- (d) Words used in this clause that are defined in the GST Law have the meaning given in that legislation.
- (e) In this clause, 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.

10. Releases and indemnities

- (a) The Parties to this Agreement agree to carry out their obligations under this Agreement at their own risk.
- (b) Each Party, other than the Minister (severally, not jointly), agrees to release and indemnify the Minister from any claim, liability or loss arising from and costs incurred in connection with a breach of the respective obligations of the Party under this Agreement except to the extent caused or contributed to by the Minister's wilful act or omission, negligence or default under this Agreement.
- (c) Subject to clause 13,the indemnity in clause 10(b) is a continuing obligation, independent of the other obligations of the Party under this Agreement and does not merge on termination of this Agreement.

11. Costs

- (a) Subject to clause 11(b), each Party bears its own costs in connection with the preparation and execution of this Agreement.
- (b) Googong Township Pty Ltd agrees to pay the Minister's reasonable costs in connection with the preparation and execution of this Agreement, within 20 Business Days of receipt of a tax invoice itemising the reasonable costs incurred by the Minister.

12. Registration of this agreement

- (a) Within 60 days of the Commencement Date, Googong Township Pty Ltd must, at its cost, register this Agreement on the folio of all parcels of land that comprise the Avoided Land.
- (b) Googong Township Pty Ltd must, within 21 days of registration of this Agreement in accordance with clause 12(a), provide the Minister with evidence of registration of this Agreement.

13. Termination

- (a) The Parties agree that, if the Minister determines not to confer Biodiversity Certification over the Biodiversity Certification Area, then this Agreement will terminate on and from the date of that determination (Termination Date).
- (b) On and from the Termination Date, each Party releases the other Party from any and all obligations under this Agreement.
- (c) The release in clause 13(b), does not release either Party from any obligation or breach of this Agreement which arose prior to the Termination Date.

14. General provisions

14.1 **Prior representations**

No Party can rely on an earlier document, anything said or done by another Party, or by an authorised officer, agent or employee of that Party, before the Agreement was executed.

14.2 Further acts

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

14.3 Governing law and jurisdiction

This Agreement is governed by the laws of the State of New South Wales and the Parties agree to submit to the non-exclusive jurisdiction of the courts of that State.

14.4 No fetter

- (a) Without prejudice to or limiting the express obligations that each Party has agreed to perform under this Agreement, this Agreement is not intended to operate to fetter, in any unlawful manner:
 - (i) the sovereignty of the Parliament of the State of New South Wales to make any law;
 - (ii) the power of the Executive Government of the State of New South Wales to make any statutory rule; or
 - (iii) the exercise of any statutory power or discretion of any Minister of the State of New South Wales.
- Nothing in this Agreement is to be construed as requiring any Party to do anything that would cause it to be in breach of any of its obligations at law, and without limitation and nothing in this Agreement is to be construed as limiting or fettering in any way the exercise of any statutory discretion or duty.

14.5 No joint venture, etc.

Unless otherwise stated:

- (a) nothing in this Agreement creates a joint venture, partnership, or the relationship of principal and agent, or employee and employer between the Parties; and
- (b) no Party has the authority to bind any other Party by any representation, declaration or admission, or to make any contract or commitment on behalf of any other Party or to pledge any other Party's credit.

14.6 **Representations and warranties**

The Parties represent and warrant that they have power to enter into this Agreement and comply with their obligations under this Agreement.

14.7 Severability

- (a) If any part of 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.
- (b) If any part of this Agreement is illegal, unenforceable or invalid, that part is to be treated as removed from this Agreement, but the rest of this Agreement is not affected.

14.8 Modification

No modification of this Agreement will be of any force or effect unless it is in writing and signed by all the Parties.

14.9 Waiver

- (a) 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 a breach of obligation by, another Party.
- (b) A waiver by a Party is only effective if it is in writing.
- (c) 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.

14.10 Good faith

Each Party must act in good faith towards all other Parties and use its best endeavours to comply with the spirit and intention of this Agreement.

15. Notices

15.1 Form

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 delivered or posted to that Party at its address set out below.

The Minister	
Address:	Environment and Heritage Group Department of Planning and Environment 11 Farrer Place Queanbeyan 2620
Attention: Telephone: Email	Mr Michael Saxon Director, South East Branch (02) 6229 7107 Michael.Saxon@environment.nsw.gov.au

Googong Township Pty Limited

Address:	Level 3, 64 Allara Street CANBERRA ACT 2161
Attention:	Mr Tim Corby
Telephone:	(02) 62300800
Email	Tim.Corby@peet.com.au

15.2 Change in details

The name or title of the nominated officer or the address for the Parties referred to in clause 15.1 above may be updated from time to time by a further written notice being sent to the other Parties by the Party (which in the case of the Minister may include an officer of E&H) advising of the new officer (or title of an office) and address to which such documents, information or notification may be sent.

15.3 Receipt

A notice given in accordance with clause 15 takes effect when received (or such later time as specified in it), and is taken to be received:

- (a) if hand delivered, on delivery;
- (b) if sent by email to the email address set out in the at clause 15.1, when the email (including any attachment) is sent to the receiving party at that email address, unless the sending party receives a notification of delivery failure within 24 hours of the email being sent;
- (c) if sent from and to a place within Australia by:
 - by express post, at 9.00 am on the next business day after the date of posting;
 - (ii) by priority post, at 9.00 am on the fourth business day after the date of posting; and

(iii) by regular post, at 9:00 am on the sixth business day after the date of posting,

but if the delivery, receipt or transmission is not on a business day or is after 5.00 pm on a business day, the Notice is taken to be received at 9.00 am on the next business day after that delivery, receipt or transmission.

15.4 Reporting under the Vegetation Management Plan

The report to be provided to E&H in accordance with part 7.2.2 of the Vegetation Management Plan must be provided in accordance with clause 15.1.



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Executed as an agreement

Executed on behalf of by The Honourable James Griffin, Minister for Environment and Heritage for the State of New South Wales as the Minister administering the *Biodiversity Conservation Act 2016* (NSW)

LOUISA MARGARET ASHCROFT Name of Witness in full (written in block letters)

Delegate for the Hon. James Griffin, MP.

Delegate for the Hon. James Griffin, MP. Minister for Environment and Heritage

Signature of Witness

Executed by Googong Township Pty Limited in accordance with s127 of the Corporations Act 2001 (Cth)

Name of Director/Company eorotary (written in block letters)

ERENDAN DAMD GORE

Name of Director (written in block letters)

Signature of Director Company secretary

DOMENICO SCAFETTA Signature of Director Company Secretary



Schedule 1 - Proposed Googong Site Map (BCA)

Error! Unknown document property name.

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Schedule 2(1) - Avoided Land

The following table and maps identify the Avoided Land. Note that the area marked 'PTWL Conservation Area' does not form part of the Avoided Land.

Lot	DP Number	Owner
Lot 2	DP 1231713	Googong Township Pty Ltd
Lot 1605	DP 1266000	Googong Township Pty Ltd
Lot 12	DP 1266001	Googong Township Pty Ltd





Error! Unknown document property name.

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Schedule 2(2) Biodiversity Certification Area

The following table and map identifies the Biodiversity Certification Area. The area shaded pink and marked 'Land Proposed for Certification' is the land to be certified.

Lot	DP Number
Lots 10	DP 754881
Part Lot 11	DP 754881
Lot 42	DP 754881
Lot 996	DP 1276892
Lot 1605	DP 1266000
Lot 2	DP 1231713
Lot 13	DP 1266001
Lot 12	DP 1266001
Lot 7	DP 1246784
Lot 3	DP 1149329

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Schedule 3 – Vegetation Management Plan



Biodiversity Certification, Googong Township, NSW

Vegetation Management Plan

Final 02 – 23 February 2022 Prepared for Googong Township Pty Ltd



Document Information

Report for:	Googong Township Pty Ltd
Prepared by:	Sam Reid
Capital Ecology project no.:	2820

Citation: Capital Ecology (2022). *Biodiversity Certification, Googong Township, NSW – Vegetation Management Plan.* Final 02 – 23 February 2022. Prepared for Googong Township Pty Ltd. Author: S. Reid and R. Speirs. Project no. 2820.

Version Control

Version	Internal reviewer	External reviewer	Date of issue
Draft 01	Robert Speirs	Tim Corby (GTPL)	21/01/2022
		Malcolm Leslie (GTPL)	
Draft 02	Robert Speirs		02/02/2022
Final 01	Robert Speirs	Dept. of Planning and Environment	03/02/2022
Final 02	Robert Speirs		23/02/2022

Acknowledgements

Capital Ecology gratefully acknowledges the contributions and/or assistance of the following people and organisations in undertaking this study.

• Tim Corby & Malcolm Leslie – Googong Township Pty Ltd (GTPL).

We acknowledge the Traditional Custodians of the land on which we work. We pay our respects to Elders past and present.

Disclaimer

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Capital Ecology Pty Ltd

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1 Introduction

Googong Township Pty Ltd (GTPL) is currently progressing with the planning and approval process to develop Googong Township Neighbourhoods 3 to 5 (the 'proposed development'), comprising Lots 10, 11, and 42 DP754881, Lots 1 and 2 DP1231713, Lot 121 DP1240191, Lot 901 DP1242930, and Lots 6 and 7 DP1246784, Googong, NSW (the 'study area', total area of 261.43 ha, Figure 1). Capital Ecology Pty Ltd (Capital Ecology) has been commissioned by GTPL to undertake ecological surveys and prepare a Biodiversity Certification Assessment Report (BCAR) to identify the biodiversity values of the study area and assess the significance of the impacts that the proposed development will have on those values (Capital Ecology 2021¹). Reference should be made to the BCAR for further contextual information relevant to this Vegetation Management Plan (VMP).

As detailed in the BCAR, the study area supports a number of significant biodiversity values listed under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and/or NSW *Biodiversity Conservation Act 2016* (BC Act), namely:

- the Box-Gum Woodland critically endangered ecological community;
- habitat for the vulnerable Pink-tailed Worm-lizard Aprasia parapulchella; and
- foraging habitat for several vulnerable woodland birds.

As described in the BCAR, the layout and extent of the proposed development have been designed to avoid and minimise impacts upon the biodiversity values of the study area. A key element of the avoidance and minimisation is the portion of the study area that is identified as 'Avoided Land' in the BCAR (Figure 2). The 84.32 ha of Avoided Land is composed of four distinct parcels of land, namely the 'Yellow Box Reserve' (10.96 ha), 'Avoided E2 Zoned Land' (40.39 ha), 'Large Lot Avoided Land' (5.38 ha), and the 'Pink-tailed Worm-lizard (PTWL) Conservation Area – Southern Section' (27.59 ha) (Figure 3). The PTWL Conservation Area – Southern Section is not considered further in this VMP as it is already subject to the approved Googong Township Pink-tailed Worm-lizard Protection and Management Plan (PTWL P&MP²). As such, this VMP focusses on the Yellow Box Reserve, Avoided E2 Zoned Land, and Large Lot Avoided Land.

The purpose of this VMP is to guide the in-perpetuity retention, protection, and management of the biodiversity values within the Yellow Box Reserve, Avoided E2 Zoned Land, and Large Lot Avoided Land. As outlined in this VMP, this will be achieved via a series of management actions and associated activities that are designed to maintain native vegetation and habitat in an appropriate condition and reduce the impact of known threats. In addition, more active management actions are included which are designed to enhance the condition of vegetation and habitat.

¹ Capital Ecology (2021). *Googong Township – Neighbourhoods 3 to 5 – Biodiversity Certification Assessment Report*. Final 02 – October 2021. Prepared for Googong Township Pty Ltd. Authors: S. Reid & R. Speirs. Project no. 2820.

² Available at <u>https://www.peet.com.au/-/media/peet/documents/act/compliance/pink_tailed</u> worm lizard protection and management plan version 6 oct 19.ashx



This VMP comprises the following sections, each of which details a key element of the VMP.

- Section 2 Avoided Land and Biodiversity Values. Section 2 describes the current ecological values of the land to be included in the VMP.
- Section 3 Vegetation Management Units. Section 3 describes the Vegetation Management Units (VMUs), their purpose, intended use/s, and extent.
- Section 4 Timing, Responsibilities, and Funding. Section 4 details when management will begin, who is responsible for their initial and ongoing implementation, and funding arrangements.
- Section 5 Management Actions and Activities. Section 5 describes the key management actions and activities included in the VMP and how they will be implemented.
- Section 6 Performance Measures and Ecological Response Targets. Section 6 details how the implementation of the management actions and activities will be measured and outlines the expected ecological response targets for specific key indicators of ecological condition.
- Section 7 Record Keeping, Reporting, Review, and Adaptive Management. Section 7 details all record keeping, reporting, review, and adaptive management requirements associated with the VMP.
- Section 8 Summary of Management Actions and Activities. Section 8 provides a practical summary for each management action, including all associated management activities, management locations, frequencies, timings, and responsibilities.









2 Avoided Land and Biodiversity Values

The BCAR study area has been substantially modified by its current and past land uses, which have primarily been sheep grazing with some cattle grazing in recent years. The original woody vegetation (canopy, midstorey and shrubstorey) was historically cleared across much of the study area to promote the pastoral productivity of the land. The relatively small areas which retain some of the original canopy trees have still undergone substantial historic thinning. The prolonged period (at least several decades) of high intensity stock grazing has prevented regeneration of the overstorey and midstorey and depleted the native species diversity in the groundstorey. The resulting vegetation across the majority of the study area is characterised by an absent or low-density canopy of old eucalypts, an absent midstorey and shrubstorey, and a low diversity groundstorey dominated by disturbance tolerant native grasses. The paddock in the eastern extent of the study area is the only location where some canopy regeneration has been permitted to establish.

The information presented in Figure 4, Table 1, and described below is drawn from the BCAR and illustrates the key ecological values that are present in the Yellow Box Reserve, Avoided E2 Zoned Land, and Large Lot Avoided Land, including the vegetation mapping (Plant Community Types [PCTs] and their constituent Vegetation Zones), the location of remnant trees, and Pink-tailed Worm-lizard habitat.

- PCT999 Norton's Box Broad-leaved Peppermint open forest on footslopes, central and southern South Eastern Highlands Bioregion.
 - 2.23 ha of Zone 1, characterised by a thinned native canopy over a moderate diversity native dominant groundstorey.
 - 26.18 ha of Zone 2, characterised by a thinned native canopy over a low diversity native dominant groundstorey.
 - 1.77 ha of Zone 3, characterised by a cleared native canopy over a moderate diversity native dominant groundstorey.
 - 14.27 ha of Zone 4, characterised by a cleared native canopy over a low diversity native dominant groundstorey.
- PCT1334 Yellow Box grassy woodland of the northern Monaro and Upper Shoalhaven area, South Eastern
 - 4.94 ha of Zone 2, characterised by a thinned native canopy over a low diversity native dominant groundstorey.
 - 6.34 ha of Zone 4, characterised by a cleared native canopy over a low diversity native dominant groundstorey.

As detailed in the BCAR, PCT1334 Zones 2 and 4 are consistent with the definition of the *White* Box – Yellow Box – Blakely's Red Gum Grassy Woodland and Derived Native Grassland (NSW



Threatened Species Scientific Committee 2020, gazetted 17 July 2020³) ecological community, listed as critically endangered under the BC Act.

- Pink-tailed Worm-lizard habitat, comprising 4.31 ha in the Avoided E2 Zoned Land and 0.67 ha in the Large Lot Avoided Land.
- One hundred and ninety-six (196) mature remnant trees comprising: 77 Red Box Eucalyptus polyanthemos; 44 Yellow Box E. melliodora; 38 Bundy E. nortonii;; 33 Blakely's Red Gum E. blakelyi; 23 Scribbly Gum E. rossii; 3 Candlebark E. rubida; 2 Apple Box E. bridgesiana; and 20 dead/stag trees. Most of these trees are estimated be over 150 years in age and contain locations for stick nest building and foraging resources for native birds and arboreal mammals. In total, 57 remnant trees contain one or more functional hollow.
- A portion of Googong Township where the ground profile has not been substantially modified (i.e. by ploughing) and where native grasses remain dominant. These grasses provide an important foraging resource for the native birds and mammals (notably Eastern Grey Kangaroo *Macropus giganteus* and Wombat *Vombatus ursinus*) which are common in the Googong locality.
- Patches of woodland and dry sclerophyll forest that occur in the southeast portion of Googong Township. These areas will comprise a substantial component of the land designated for biodiversity/environmental conservation at Googong. Being linked to the Googong Foreshores Nature Reserve and beyond, these areas will also contribute to the preservation of the important habitat linkage and other landscape connectivity functions of the mature remnant trees in the Googong locality.

³ NSW Threatened Species Scientific Committee (2020). *Final Determination: White Box – Yellow Box – Blakely's Red Gum Grassy Woodland and Derived Native Grassland*. Gazetted 17 July 2020.



Table 1. Biodiversity Values within the Yellow Box Reserve, Avoided E2 Zoned Land, and Large Lot Avoided Land

10.96 ha 40.39 ha 1.57 ha 1.57 ha 6.77 ha 1.57 ha 1.57 ha 1.57 ha 1.57 ha 1.52 ha 1.57 ha 1.52 ha 1.57 ha 1.52 ha 1.57 ha 1.52 ha 1.57 ha 1.420 ha 1.57 ha 1.125 ha 1.58 ha 1.125 ha	Biodiversity Value	Yellow Box Reserve	Avoided E2 Zoned Land	Large Lot Avoided Land	Combined Total
Tread 10.96 ha 40.39 ha ation zones 40.39 ha ation zones 1.57 ha 9 Zone 1 1.57 ha 9 Zone 2 6.77 ha 9 Zone 3 1.21 ha 9 Zone 4 0.07 ha 1.21 ha 9 Zone 4 0.07 ha 1.21 ha 9 Zone 4 0.010 ha 1.25 ha 9 Zone 4 0.10 ha 1.25 ha 10 Earting remnant trees 1.25 ha 10 Earting remnant trees 1.25 ha 10 Earting remnant trees 1.25 ha	Area		A DESCRIPTION		No. I No.
tion zones - - 1.57 ha 0.661 9 Zone 1 - 6.77 ha 1.57 ha 0.661 9 Zone 2 6.77 ha 1.57 ha 4.141 9 Zone 3 - 6.77 ha 1.57 ha 4.141 9 Zone 4 0.07 ha 1.21 ha 0.561 9 Zone 4 1.21 ha 1.21 ha 0.561 9 Zone 4 0.07 ha 1.21 ha 0.561 9 Zone 4 0.010 ha 1.25 ha 0.54 ha 34 Zone 2 3.69 ha 1.25 ha 0.54 ha 34 Zone 4 0.10 ha 6.24 ha 1.25 ha Int trees 6.24 ha 1.05 5 Int trees 1.05 33 34 ha 1.25 ha Int trees 1.10 1.12 1.12 1.12 Int trees 1.12 1.12 1.12 1.12 1.12 Int trees 1.13 1.12 1.12 1.12 1.12 1.12 1.12 1.12 1.12 1.12 1.12 1.12 1.12 1.12 1.12 1.12 1.12	Total Area	10.96 ha	40.39 ha	5.38 ha	56.73 ha
9 Zone 1 - 1.57 ha 0.66 9 Zone 2 6.77 ha 1.57 ha 0.66 9 Zone 3 - 6.77 ha 15.27 ha 4.14 9 Zone 3 0.07 ha 1.21 ha 0.56 9 Zone 4 0.07 ha 1.25 ha 0.56 34 Zone 2 3.69 ha 1.25 ha 0.56 34 Zone 4 0.10 ha 0.10 ha 0.56 10 for trees 6.24 ha 3.3 1.05 10 for trees 1.05 3.3 1.05	Vegetation zones				
9 Zone 2 6.77 ha 15.27 ha 4.14 9 Zone 3 1.21 ha 0.56 9 Zone 4 1.21 ha 0.56 9 Zone 4 0.07 ha 14.20 ha 0.56 9 Zone 4 0.01 ha 14.20 ha 0.56 9 Zone 2 3.69 ha 1.25 ha 0.56 9 Zone 4 0.10 ha 0.10 ha 6.24 ha 10 It trees 6.24 ha 6.24 ha 6.24 ha 10 It trees 6.24 ha 105 7.10 10 It trees 18 33 105 10 It trees 18 33 105	PCT999 Zone 1		1.57 ha	0.66 ha	2.23 ha
9 Zone 3 9 Zone 3 1.21 ha 0.56 ha 9 Zone 4 0.07 ha 1.21 ha 0.56 ha 9 Zone 4 0.07 ha 1.25 ha 0.56 ha 34 Zone 2 3.69 ha 3.69 ha 1.25 ha 0.56 ha 34 Zone 2 0.010 ha 1.25 ha 1.25 ha 0.56 ha 34 Zone 4 0.10 ha 0.56 ha 1.25 ha 0.56 ha 34 Zone 4 0.10 ha 1.25 ha 0.56 ha 0.56 ha 34 Zone 4 0.10 ha 0.10 ha 0.27 ha 0.56 ha 34 Zone 4 0.10 ha 1.25 ha 0.56 ha 0.56 ha 34 Zone 4 0.10 ha 0.10 ha 0.57 ha 0.56 ha 34 Zone 4 0.10 ha 1.05 ha 0.56 ha 0.56 ha A Zone 4 0.10 ha 1.05 ha 0.57 ha 0.57 ha 0.57 ha A Zone 5 0.56 ha A Zone 4 0.56 ha 0.56 ha	PCT999 Zone 2	6.77 ha	15.27 ha	4.14 ha	26.18 ha
9 Zone 4 0.07 ha 14.20 ha 34 Zone 2 3.69 ha 1.25 ha 34 Zone 4 1.25 ha 1.25 ha 34 Zone 4 0.10 ha 6.24 ha 11 Trees 6.24 ha 1.05 11 Trees 6.24 ha 1.05 11 Trees 1.05 1.05	PCT999 Zone 3		1.21 ha	0.56 ha	1.77 ha
34 Zone 2 3.69 ha 1.25 ha 34 Zone 4 0.10 ha 1.25 ha 34 Zone 4 0.10 ha 6.24 ha 34 Zone 4 0.10 ha 0.10 ha 10 For 10 ha 10 ha 10 For 10 ha 33 10 For 10 ha 10 ha 10 For 10 ha 10 ha	PCT999 Zone 4	0.07 ha	14.20 ha		14.27 ha
34 Zone 4 0.10 ha 6.24 ha 34 Zone 4 0.10 ha 6.24 ha Int trees 105 Int trees 105 Int trees 133 Int trees 133	PCT1334 Zone 2	3.69 ha	1.25 ha		4.94 ha
Int trees 67 105 105 105 105 105 105 105 105 105 105	PCT1334 Zone 4	0.10 ha	6.24 ha		6.34 ha
itrees 67 105 itret 33	Trees				ALL TA
: trees 18 33 interest 18 18 19 10 10 10 10 10 10 10 10 10 10 10 10 10	Remnant trees	29	105	24	196
itat daga daga daga daga daga daga daga d	Hollow-bearing remnant trees	18	33	9	57
	Threatened species habitat				
BIITCT	Pink-tailed Worm-lizard	U.	4.31 ha	0.67 ha	4.98 ha

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3 Vegetation Management Units

As shown in Figure 5, the land subject to this VMP will be divided into the following five Vegetation Management Units (VMUs). VMUs have been defined by the level of expected management, degree of proposed vegetation/habitat enhancement, on-going land use activities, and the suite of ecological values they support (i.e. PCT allocation and presence/absence of Pink-tailed Worm-lizard habitat).

1. VMU 1 – Yellow Box Reserve and Avoided E2 Zoned Land

VMU 1 will comprise the 10.96 ha Yellow Box Reserve and 40.39 ha Avoided E2 Zoned Land. The primary function of VMU 1 is to retain the ecological values of these areas and improve them through both passive (i.e. natural) and active regeneration/re-establishment of the native woodland and dry sclerophyll forest vegetation communities. As such, VMU 2 will be subject to various restrictions, management requirements, and enhancement measures, with the primary measures relevant for VMU 1 being supplementary planting of all strata, importation of habitat features (i.e. surface rock and fallen timber), control of feral pests and noxious weeds, and control of human disturbance.

As stated in the BCAR, VMU 1 will include a number of low-impact walking trails⁴. However, as the exact location of these trails is not currently known an impact budget for the vegetation within the Yellow Box Reserve and Avoided E2 Zoned Land was included in the BCAR to account for future impacts. This is estimated to be 3% of the area within the Yellow Box Reserve and 1% of the area within the avoided E2 zoned land.

VMU 1 is further separated into three sub-units as follows. This is necessary as certain management actions (e.g. supplementary planting) are tailored to the dominant PCT or excluded based on the presence of specific ecological values (i.e. Pink-tailed Worm-lizard habitat).

- VMU 1a (28.69 ha) encompasses all areas that support PCT999.
- VMU 1b (9.46 ha) encompasses all areas that support PCT1334.
- VMU 1c (12.92 ha) encompasses all areas that support known Pink-tailed Worm-lizard habitat and areas proposed for Pink-tailed Worm-lizard habitat augmentation.

2. VMU 2 – Large Lot Avoided Land

VMU 2 will comprise the 5.38 ha of retained vegetation and habitat in the Large Lot Avoided Land. Given that these areas will be privately owned, the primary function of VMU 2 is to retain their existing ecological values. As such, VMU 2 will be subject to various restrictions and management requirements, with the primary measures relevant for VMU 2 being control of feral pests, noxious weeds, and human disturbance.

VMU 2 is further separated into two sub-units as follows. This is necessary as certain management actions must be excluded based on the presence of specific ecological values (i.e.

⁴ Natural mineral earth trails with boardwalks/steps to cross gullies or take up levels to avoid excessive cut/fill.



Pink-tailed Worm-lizard habitat). Note that the below VMUs are named in a manner similar to that of VMU 1 in order to ensure consistency.

- VMU 2a (4.71 ha) encompasses all areas that support PCT999.
- VMU 2c (0.67 ha) encompasses all areas that support known Pink-tailed Worm-lizard habitat.




4 Timing, Responsibilities, and Funding

4.1 Timing

As illustrated in Figure 2, the development of Googong Township Neighbourhoods 3 to 5 is proposed to proceed in three stages. The commencement of works for this VMP will therefore occur in the following manner.

- Trigger 1 This will occur upon final approval of the Biodiversity Certification Agreement for Googong Township Neighbourhoods 3 to 5. This is referred to throughout this VMP as <u>Year 0</u>.
- Trigger 2 This will occur upon the commencement of works for Stage 3 of Googong Township Neighbourhoods 3 to 5. This is referred to throughout this VMP as <u>'Stage 3 Trigger'</u>.

In general, management actions and activities for all VMUs begin from 'Year O'. The exceptions to this are grazing management (Section 5.1), supplementary planting (Section 5.2.1), restrictions on domestic animals (Section 5.4.2), and fencing (Section 5.6.3), which will occur from 'Year O' in the Yellow Box Reserve and from 'Stage 3 Trigger' for the Avoided E2 Zoned Land.

4.2 Responsibilities

4.2.1 Yellow Box Reserve and Avoided E2 Zoned Land (VMU 1)

VMU 1 will be managed and maintained according to this VMP by GTPL at its cost until the completion of a staged subdivision whereby an adjacent public road provides access to the VMU 1 land. Prior to or at the time of the completion of the stage subdivision (which is estimated to span approximately twelve years), VMU 1 will be dedicated to Council. GTPL will work collaboratively with Council to manage the handover of the monitoring and management measures established by GTPL. Following dedication, Council will be responsible for managing and maintaining VMU 1 in accordance with this VMP.

4.2.2 Large Lot Avoided Land (VMU 2)

VMU 2 will be managed and maintained according to this VMP by GTPL at its cost until the associated lots are sold to private landowners. At the time of sale, the private landowner will be responsible for managing and maintaining their portion of VMU 2 in accordance with this VMP. GTPL will work collaboratively with the private landowner to manage the handover of the monitoring and management measures established by GTPL.

4.3 Funding

The responsible party (i.e. GTPL/Council) commits to the financial burden this VMP outlines. It is estimated that a lump sum of \$1,000,000 be spent on revegetation and \$400,000 on weed control. While the exact costs will depend primarily on the successful revegetation works, other factors such as drought will influence how much is spent per year. It is assumed that costs will decrease year on year as revegetation work is completed and agreed vegetation targets are realised.



5 Management Actions and Activities

Portions of the Avoided E2 Zoned Land and Large Lot Avoided Land are already subject to restrictions and management actions associated with the Googong Foreshores Interface Management Strategy (GFIMS⁵). Where required, the management actions detailed in this section of the VMP have therefore been designed to be compatible with the GFIMS.

All management actions and activities proposed for this VMP are described in detail in the following sub-sections. In addition, Section 8 of this VMP provides a practical summary for each management action, including all associated management activities, management locations (i.e. VMUs), frequencies, timings, and responsibilities.

5.1 Grazing Management

5.1.2 Yellow Box Reserve and Avoided E2 Zoned Land (VMU 1)

Stock grazing will be prohibited within VMU 1. This will occur:

- from 'Year 0' and then in-perpetuity for the Yellow Box Reserve; and
- from the 'Stage 3 Trigger' and then in-perpetuity for the Avoided E2 Zoned Land.

5.1.3 Large Lot Avoided Land (VMU 2)

Stock grazing will be prohibited within VMU 2. This will occur from the 'Stage 3 Trigger' and then inperpetuity.

If site inspections and/or monitoring indicate that groundstorey biomass and/or structure are not being sufficiently managed via native herbivores (refer to Section 5.2.3) or mowing/slashing (refer to Section 5.2.4), stock grazing should be reconsidered as a potential management activity. This should occur in collaboration with the Department of Planning and Environment – Biodiversity Conservation Division (DPE-BCD).

5.2 Native Vegetation Management and Enhancement

5.2.1 Supplementary plantings (VMU 1a and VMU 1b)

Supplementary planting will be undertaken with consideration of the NSW Biodiversity Conservation Trust (BCT) Restoring Native Vegetation. Guidelines for assisted regeneration and revegetation. November 2020 (available at <u>https://www.bct.nsw.gov.au/general-resources</u>).

Supplementary planting will only occur in VMU 1a and VMU 1b. Supplementary planting will be prohibited in known Pink-tailed Worm-lizard habitat and areas proposed for Pink-tailed Worm-lizard habitat augmentation (i.e. VMU 1c and VMU 2c, Figure 5 and Figure 6); the exception to this is the planting of groundstorey species to control erosion (if required). No mandated supplementary planting is proposed for VMU 2 (but refer to Section 5.2.2 for restrictions on plantings).

⁵ Available at <u>http://compliance.googong.net/upload/pdfs/project-documents/18082_GFIMS_V3_RES07072014.pdf</u>



Supplementary planting will occur:

- from 'Year 0' for the Yellow Box Reserve; and
- from the 'Stage 3 Trigger' for the Avoided E2 Zoned Land.

Initial supplementary planting will be completed within 12 months of the relevant trigger.

Planting locations are not prescribed in this VMP as this will be best determined by the engaged revegetation provider following their site visit. However, recommended minimum planting densities are detailed in Table 2.

Planting species for each VMU must be matched to the corresponding PCT for that VMU (i.e. PCT999 species for VMU 1a and PCT1334 species for VMU 1b). Recommended species for planting are listed in Appendix A.

All plantings must be of stock grown from seed of local provenance.

Six months before planting, each identified planting location must be managed for feral pests as per Section 5.4 of this VMP and for weeds as per Section 5.5 of this VMP.

Tree guards must be installed on each tree and shrub to protect from extreme weather (frosts and heat), herbivorous grazing, and herbicide drift during weed control activities.

Following planting, mulch will be required to a depth of 100 mm around tree and shrub plantings.

Following planting and for at least six months, supplementary watering may need to be undertaken to ensure plants establish. The level of watering will be determined by the rainfall and temperature experienced at the planting location.

For the three years following planting, each planting location will be inspected every 12 months. The aim of the inspection will be to determine:

- if feral animal control is required;
- if weed control is required; and/or
- if plantings have died and need to be replaced.

Following inspection, appropriate management actions will be carried out (i.e. feral animal control, weed control, and/or replacement planting). Replacement planting should occur at the most appropriate time of year (i.e. autumn or spring).

Records will be kept by the owner of VMU 1 (i.e. GPTL then Council) of the results from inspections and any subsequent management actions that were carried out.



Table 2. Supplementary planting densities and timing

Stratum ⁶	VMU/s	Number of plants per area	Planting method	Timing	
Canopy		> 5 per hectare			
Midstorey		> 10 per hectare			
Shrubstorey		> 10 per hectare		Planting to occur in autumn and/or	
Groundstorey	VMU 1a and			spring and be	
- Shrub	VMU 1b	> 20 per hectare	Tubestock	completed within	
- Sedge/rush		> 20 per hectare		12 months of the relevant trigger	
- Grass		> 100 per hectare		relevant trigger	
- Forb/lily/orchid		> 50 per hectare			

5.2.2 Restrictions on plantings (VMU 1 and VMU 2)

All plantings in VMU 1 and VMU 2 must be of species which are complementary to the indigenous vegetation of the respective VMU (i.e. PCT999 species for VMU 1a and VMU 2a, PCT1334 species for VMU 1b, refer to Figure 4 and Figure 5). Recommended species for planting are listed in Appendix A.

Supplementary planting is prohibited in the identified Pink-tailed Worm-lizard habitat and areas proposed for Pink-tailed Worm-lizard habitat augmentation (i.e. VMU 1c and VMU 2c, Figure 5 and Figure 6). The exception to this is the planting of groundstorey species to control erosion (if required).

No species listed in Appendix B may be planted in VMU 1 or VMU 2.

5.2.3 Over-abundant Eastern Grey Kangaroo control (VMU 1)

Whilst important for the maintenance of herbage mass and fuel loads, overgrazing by over-abundant Eastern Grey Kangaroo populations within VMU 1 has the potential to impact negatively on biodiversity. However, given that Eastern Grey Kangaroos will move freely between VMU 1 and the Googong Foreshores and other adjoining rural land, populations in the locality will be managed effectively by the existing and ongoing operations undertaken by the ACT Government Parks and Conservation Service (ACT Government 2020⁷). As such, over-abundant Eastern Grey Kangaroo control is not proposed as a management activity in this VMP. However, over-abundant Eastern Grey Kangaroo control will be reconsidered during reviews of this VMP (refer to Section 7).

5.2.4 Herbage mass management

5.2.4.1 Yellow Box Reserve and Avoided E2 Zoned Land (VMU 1)

The soils in VMU 1 are relatively thin and infertile. Such soils are not prone to generating high groundstorey herbage mass, as has been observed across the spring-summer seasons of 2018 to 2021 which have displayed the full spectrum of dry and wet conditions. Accordingly, it is not envisaged that treatments will be necessary in VMU 1 to maintain herbage mass at an appropriate level for both

⁷ ACT Government (2020). *Googong Foreshores Land and Conservation Management Plan 2020*. Produced by the Environment, Planning and Sustainable Development Directorate. Available at:

⁶ Refer to Appendix A for appropriate planting species for each stratum and each PCT (i.e. VMU)

https://www.environment.act.gov.au/ data/assets/pdf file/0005/1648778/googong-foreshore-landconservation-management-plan-2020.pdf



biodiversity conservation and bushfire hazard management. Rather, control of groundstorey herbage mass is expected to be primarily achieved via native herbivores (refer to Section 5.2.3).

5.2.4.2 Large Lot Avoided Land (VMU 2)

Control of groundstorey herbage mass in VMU 2 expected to be primarily achieved via native herbivores (refer to Section 5.2.3). However, if required, biomass control in VMU 2 can be achieved via mowing/slashing.

The decision to mow/slash will be determined solely by the owner of the respective lot.

5.3 Threatened Species Habitat Management and Enhancement

5.3.1 Pink-tailed Worm-lizard habitat augmentation (VMU 1c)

Suitable habitat rocks removed by GTPL during the construction of Googong Township Neighbourhoods 3 to 5 will be imported into the portions of VMU 1c identified as 'Pink-tailed Wormlizard – Habitat Augmentation' (Figure 6). These rocks will then be scattered throughout areas devoid of suitable habitat rocks or where such rocks are at low scatter density. The rocks used for importation will be selected due to their small and/or flat characteristics. Large or spherical rocks will not be imported. Rocks will be scattered in a manner that results in a moderate to high scatter density whilst ensuring that rocks are not piled and do not result in excess of 30% ground cover. Care will be taken to avoid existing rocky areas and to minimise soil disturbance during delivery and scattering of these rocks.

To prevent the importation of additional weed species into VMU 1c, only rocks removed from adjacent areas of the Googong Township Neighbourhoods 3 to 5 development footprint will be imported.

Pink-tailed Worm-lizard habitat augmentation will occur in a stepwise manner as it will be dependent on the availability of suitable habitat rocks.

Records will be kept by the owner of VMU 1 (i.e. GPTL then Council) of all actions relating to Pinktailed Worm-lizard habitat augmentation.

5.3.2 Relocation of woody debris (VMU 1a and VMU 1b)

A proportion of the remnant trees removed by GTPL during the construction of Googong Township Neighbourhoods 3 to 5 will be relocated to VMU 1a and VMU 1b in order to the replace the fallen woody debris that has been removed over the preceding decades. Exact locations are not prescribed in this VMP as this will be best determined based on access requirements and other site factors. However, the recommended density for the relocation of woody debris is 3 felled remnant trees per hectare.

In order to reduce the likelihood of forming harbour for feral pests and to improve portability, limbs below 15 cm diameter will be removed from felled remnant trees.

Relocation of woody debris will occur in a stepwise manner as it will be dependent on the availability of felled remnant trees.

Records will be kept by the owner of VMU 1 (i.e. GPTL then Council) of all actions relating to the relocation of woody debris.



5.4 Integrated Feral Pest Control

5.4.1 Feral pest control

The feral pests in Table 3 are known, or considered likely, to occur in/periodically visit VMU 1 and VMU 2.

Table 3. Feral pests

Pest	Name of feral pest	Description of extent/severity of impact	VMU/s
Α	European Rabbit Oryctolagus cuniculas		
В	Brown Hare Lepus capensis		
С	Red Fox Vulpes vulpes		
D	Feral Cats Felis catus		
E	Fallow Deer Dama dama	Low intensity	All
F	Sambar Deer Rusa unicolor		
Н	Goat Capra hircus		
1	Feral Pig Sus scrofa		

Based on surveys by Capital Ecology over the past decade, the presence of the above feral pests in Googong Township and the surrounding farmland is low. This is largely due to the fact that feral herbivores and feral predators move freely between Googong Foreshores and the surrounding areas. As such, these feral pests are managed effectively by the existing and ongoing operations undertaken by the ACT Government Parks and Conservation Service (ACT Government 2020). Notwithstanding this, the effectiveness of the ACT Government's program relies in part on the co-operation of adjacent land managers. As such, the co-operation and assistance of the relevant land managers of VMU 1 and VMU 2 will be required (i.e. GTPL then Council for VMU 1; private landowners for VMU 2).

Therefore, if required as determined by regular site inspections (refer to Section 5.7), feral pest control activities in VMU 1 and VMU 2 will be undertaken by, or under the direct supervision of, an appropriately qualified and/or experienced party. Feral pest control will be undertaken with consideration of the control recommendations outlined in the Department of Primary Industries website and associated resources (<u>https://www.dpi.nsw.gov.au/biosecurity/vertebrate-pests</u>), and be undertaken following the NSW Codes of Practices (COPs) and Standard Operating Procedures (SOPs).

Records will be kept by the owner of each VMU (i.e. GPTL then Council for VMU 1; private landowners for VMU 2) of all feral pest control activities.

Control strategies and their suitability for this VMP are detailed in Table 4.



Pest	Name and description of program or method	Suitability	Frequency
A	Biocontrol , such as rabbit haemorrhagic disease virus (calicivirus). Effective means of controlling rabbits.	Suitable for both VMU 1 and VMU 2.	As required.
, C, D, I	Baiting ('1080' sodium monofluoraceate). Considered one of the most effective methods of reducing rabbit populations short term. Can be an effective means of controlling foxes.	Unsuitable for both VMU 1 and VMU 2 as located near urban areas.	•
A	Pindone poison baits Effective means of controlling rabbits, with much lower risks of secondary poisoning of humans and non-target animals.	Suitable for VMU 1 only.	Annually, as required.
A	Warren destruction This should only be undertaken on active warrens. Care must be taken to prevent unnecessary removal of native vegetation and surface rock.	Suitable for both VMU 1 and VMU 2.	Annually, as required.
С	Den destruction This should only be undertaken on active dens. Care must be taken to prevent unnecessary removal of native vegetation and surface rock.	Suitable for both VMU 1 and VMU 2.	Annually, as required.
A	Burrow fumigation Phostoxin (alluminum phosphide) is the only fumigant presently available for rabbit fumigation and use is extremely limited at the present time due to animal welfare and workplace health and safety concerns. However, it is used at the nearby Mulligans Flat Nature Reserve in the ACT and so is considered appropriate for use in this VMP.	Suitable for VMU 1 only.	Annually, as required.
All	Shooting Shooting may be opportunistic or strategic. The later can be very effective as a tertiary control technique. It may also be used as a primary technique if it is implemented frequently and intensively. However, use in peri-urban areas may be restricted or untenable due to increased risks to human safety.	Suitable for VMU 1 only.	Annually, as required.
All	Trapping Labour-intensive and expensive. Trapping is considered a tertiary control that has merit in the later stages of an integrated control program.	Suitable for both VMU 1 and VMU 2.	Annually, as required.
A, C	Harbour destruction / removal of refuges Harbour destruction is considered the most important follow-up rabbit control technique after baiting to minimise/prevent the recolonisation of the residual rabbit population. Care must be taken to prevent unnecessary removal of native vegetation and surface rock.	Suitable for both VMU 1 and VMU 2.	Annually, as required.

Table 4. Feral pest control methods considered in this VMP



5.4.2 Restrictions on domestic animals

5.4.2.1 Yellow Box Reserve and Avoided E2 Zoned Land (VMU 1)

Restrictions on domestic animals will occur:

- from 'Year 0' and then in-perpetuity for the Yellow Box Reserve; and
- from the 'Stage 3 Trigger' and then in-perpetuity for the Avoided E2 Zoned Land.

The following measures will be implemented to prevent domestic animals from roaming in VMU 1 and potentially beyond into Googong Foreshores.

- As detailed in Section 5.6.3, the boundary of VMU 1 adjoining the residential development will be constructed as a permanent Boundary Type 2 as outlined in the GFIMS. The Boundary Type 2 fence will be a non-mountable square kerb and a line of permanent bollards at 1.8 m spacing. This will restrict unauthorised vehicular access but not restrict pedestrian access or movements by fauna. Signage at appropriate intervals will provide education to the public stating that the area has been established to protect and enhance a number of significant biodiversity/environmental values.
- 2. All domestic animals, including dogs and horses, will be prohibited in VMU 1 (unless required for medical reasons).
- 3. A cat prohibition covenant will be placed over VMU 1. This covenant will be enforced via the provisions of the NSW *Companion Animals Act 1998* of which 'Section 30 Cats prohibited in some public places' permits implementation and enforcement of such a covenant for –

(b) Wildlife protection areas (meaning any public place or any part of a public place set apart by the local authority for the protection of wildlife and in which the local authority ordered that cats are prohibited for the purposes of the protection of wildlife and in which, or near the boundaries of which, there are conspicuously exhibited by the local authority at reasonable intervals notices to the effect that cats are prohibited in or on that public place).

5.4.2.2 Large Lot Avoided Land (VMU 2)

The following restrictions will be enacted within VMU 2 from the 'Stage 3 Trigger'.

The following measures will be implemented to prevent domestic animals from roaming in VMU 2 and potentially beyond into Googong Foreshores.

- As detailed in Section 5.6.3, the boundary of VMU 2 adjoining Avoided E2 Zoned Land will be constructed as a permanent fence. The fence will be at least 1.2 m high, and no direct access will be permitted through the fence to VMU 1. This will restrict unauthorised vehicular access, pedestrian access, and movement of domestic animals.
- 2. All unrestrained domestic animals, including cats, dogs, chickens, horses, and pigs, will be prohibited in VMU 2 (unless required for medical reasons).



5.5 Integrated Weed Management

The identified priority weeds detailed in Table 5 are known to occur in or adjacent to VMU 1 and VMU 2. Note that Table 5 does not include other exotic grass and herbaceous species (primarily pasture species and common rural species) which are widespread throughout VMU 1 and VMU 2 as control of such species is unwarranted. This is because such species are generally considered 'naturalised' throughout the rural areas of the region and, as such, efforts to eradicate them would be largely futile and unnecessary. The prohibition of stock grazing and associated reduction in the nutrification of the soils, combined with the re-establishment of native grasses and forbs, is likely to reduce the prominence of many of the exotic grasses and herbs within VMU 1 and VMU 2.

Based on surveys by Capital Ecology over the past decade, the presence of the identified priority weeds listed in Table 5 is low. The exceptions to this are Briar Rose *Rosa rubiginosa* and Blackberry *Rubus fruticosus aggregate*, which are currently more widespread and occur at a moderate density in some locations.

Species Name	Common Name	Status	Description of infestation
Shrub	in also and the	p-covjectory	CONTRACTOR STATES
Rosa rubiginosa	Briar Rose	-	Wide distribution with variable density, cover ranging from 0.1% to 2%.
Rubus fruticosus aggregate	Blackberry	WoNS, LM/AP	Wide distribution with variable density, cover ranging from 0.1% to 3%.
Forb			
Carthamus lanatus	Saffron Thistle	-	Wide distribution with variable density, cover ranging from 0.1% to 2%.
Echium plantagineum	Paterson's Curse	<u>_</u>	Restricted distribution with low density, cover of approximately 0.1% when present.
Hypericum perforatum	St John's Wort	LM	Restricted distribution with low density, cover of approximately 0.1% when present.
Grass		and the second	
Eragrostis curvula	African Lovegrass	АР	Restricted distribution with low density, cover ranging from 0.1% to 1% when present.
Nassella trichotoma	Serrated Tussock	WoNS, C	Restricted distribution with low density, cover of approximately 0.1% when present.

Table 5. Identified priority weeds

Table key. Commonwealth Weed of National Significance = **WoNS**. Regional Priority Weed in the South East Local Land Services region under the NSW *Biosecurity Act 2015*: **P** = Prevention; **E** = Eradication; **C** = Containment; **AP** = Asset Protection; **LM** = Species subject to Local Management programs.

5.5.1 Initial weed control (VMU 1 and VMU 2)

The presence and distribution within VMU 1 and VMU 2 of each of the identified priority weeds (Table 5) will be assessed and mapped within 12 months of 'Year 0'. This mapping will be provided to a suitably qualified and experienced weed control contractor who will be engaged to undertake weed control throughout the relevant portion of the VMUs. The specific weed control techniques employed will be determined by the weed control contractor at the time of employment, based upon suitability/applicability for the subject species. Weed control works will be timed to maximise the effectiveness of the chosen technique.



Weed control will be repeated until such time as all WoNS species have been eradicated, all other woody weeds have been eradicated, and all non-woody weeds have been appropriately supressed (refer to Table 5).

Records will be kept by the owner of VMU 1 (i.e. GPTL then Council) of all weed control activities.

5.5.2 On-going weed control

5.5.2.1 Yellow Box Reserve and Avoided E2 Zoned Land (VMU 1)

Ongoing weed monitoring and control in VMU 1 will occur every 12 months (refer to Section 5.7). Weed control activities will be undertaken by a suitably qualified and experienced weed control contractor.

The specific weed control techniques employed will be determined by the suitably qualified and experienced weed control contractor at the time of employment, based upon suitability/applicability for the subject species. Weed control works will be timed to maximise the effectiveness of the chosen technique.

Weed control activities must occur in a manner that is sensitive to the fauna habitat values on site, especially with respect to weed control activities in known Pink-tailed Worm-lizard habitat or areas proposed for Pink-tailed Worm-lizard habitat augmentation (i.e. VMU 1c).

Records will be kept by the owner of VMU 1 (i.e. GTPL then Council) of all weed control activities.

5.5.2.2 Large Lot Avoided Land (VMU 2)

Owners of the private lots comprising VMU 2 will be required to control all 'state priority weeds' and 'regional priority weeds'⁸ on their properties in accordance with the NSW *Biosecurity Act 2015*.

Weed control activities must be undertaken by, or under the direct supervision of, an appropriately qualified and/or experienced party.

The specific weed control techniques employed will be determined by appropriately qualified and/or experienced person at the time of employment, based upon suitability/applicability for the subject species. Weed control works will be timed to maximise the effectiveness of the chosen technique.

Weed control activities must occur in a manner that is sensitive to the fauna habitat values on site, especially with respect to weed control activities in known Pink-tailed Worm-lizard habitat or areas proposed for Pink-tailed Worm-lizard habitat augmentation (i.e. VMU 2c).

Records will be kept by the owner of VMU 2 (i.e. private landowners) of all weed control activities.

5.6 Management of Human Disturbance

5.6.1 Restriction of construction impacts (VMU 1 and VMU 2)

Impacts from construction associated with Googong Township Neighbourhoods 3 to 5 will be confined to areas identified as 'Land Proposed for Certification' (refer to Figure 2) and will not encroach into



VMU 1 or VMU 2. This includes all materials stockpiles, vehicle parking, machinery storage, and other temporary facilities.

Exceptions to this will be limited impacts within VMU 1 and VMU 2 associated with:

- construction and maintenance of the low-impact walking trails network (refer to Section 3);
- fence and bollard construction and maintenance;
- supplementary planting preparation, planting, and maintenance;
- works necessary for human safety; and
- any other minor works necessary to facilitate the biodiversity/environmental conservation outcomes of VMU 1 and/or VMU 2.

In addition to the above, the following standard construction best practice management measures will be implemented during all initial construction works within or adjacent to VMU 1 or VMU 2.

- Construction sites will be fenced for site security and safety reasons. Construction vehicles and/or personnel will not be permitted outside of the construction site fencing.
- A Construction Environmental Management Plan (CEMP) will be prepared for the management of environmental issues during construction. The CEMP will detail the protection of ecological features of Googong township, including the location of VMU 1 and VMU 2. The CEMP will also detail general environmental protection measures, such as sediment and erosion control measures to be undertaken during construction activities.
- Construction personnel will be inducted. Inductions (and less formal, task-specific actions such as 'toolbox talks') will include, where relevant, the location of VMU 1 and VMU 2, and the relevant protection measures required of the particular construction personnel. Generally, this will entail construction personnel being informed to remain within the designated construction sites/areas at all times.
- In order to prevent the importation of additional weed species into the locality, all vehicles will be cleaned of all potentially seed laden material prior to entry.
- Construction personnel will not bring any domestic pets into the site.
- All rubbish will be removed from site and disposed of at an appropriately licenced facility. No rubbish will be burned, buried, or otherwise disposed of on site.



5.6.2 Protection of existing values (VMU 1 and VMU 2)

5.6.2.1 Native vegetation

Native vegetation⁹ must not be cut down, felled, thinned, logged, killed, destroyed, poisoned, ringbarked, uprooted, burnt, or otherwise removed from VMU 1 or VMU 2, except:

- in accordance with Section 5.6.1 of this VMP; or
- it is specifically permitted or required as part of a management action or activity.

5.6.2.2 Dead timber

Dead timber (whether standing or fallen, and including branches) must not be removed from or moved within VMU 1 or VMU 2, except:

- in accordance with Section 5.6.1 of this VMP; or
- it is specifically permitted or required as part of a management action or activity.

5.6.2.3 Surface rock

Surface rock must not be removed from or moved within VMU 1 or VMU 2, except:

- in accordance with Section 5.6.1 of this VMP; or
- it is specifically permitted or required as part of a management action or activity.

All practicable efforts will be made during detailed design to locate low-impact walking trails in a manner that avoids or minimises disturbance of surface rock. If this is unavoidable, any rocks disturbed will be carefully relocated in an adjacent area and placed in a natural form.

5.6.3 Fencing

5.6.3.1 Boundary delineation – short term – VMU 1 and VMU 2

Short term boundary fencing will occur:

- from 'Year 0' for the Yellow Box Reserve; and
- from the 'Stage 3 Trigger' for the Avoided E2 Zoned Land and VMU 2

A fence will be installed around the perimeter of VMU 1 and VMU 2. The purpose of this fence will be to allow GTPL to establish VMU 1 and VMU 2 prior to development of the adjoining subdivision, thereby permitting the management measures outlined in this VMP to progress prior to development of the surrounding areas of Googong Township Neighbourhoods 3 to 5. The specific form/style of this fence will be determined by GTPL, however it will:

- be sufficient to effectively exclude stock, but not of a form that prevents movement of native fauna;
- not include barded wires;

⁹ Defined as 'any plants (including trees, saplings, shrubs, scrub, groundcover) native to New South Wales (i.e. established in New South Wales before European settlement).



- include gates at a number of locations to provide access for management and maintenance; and
- include signage at appropriate intervals to advise that the fenced area is to be established for biodiversity conservation and is not to be accessed without authorisation from the responsible party.

The installed fence will be maintained until it is removed and replaced (refer to Section 5.6.3.2 and Section 5.6.3.3).

5.6.3.2 Boundary delineation – long term – VMU 1

During or on completion of the sealed roads that boarder VMU 1, the above detailed short-term boundary fence will be removed and the boundary of VMU 1 adjoining the residential development will be constructed as a permanent Boundary Type 2 as outlined in the GFIMS and described below. The Boundary Type 2 fence will comprise/involve the following (refer to Plate 1).

- A non-mountable square kerb and a line of permanent bollards at 1.8 m spacing.
- Restrict unauthorised vehicular access but not restrict pedestrian access or movements by native fauna.
- Openings with lockable barriers to provide access for management and maintenance.
- Signage at appropriate intervals to provide education to the public stating that the area has been established for biodiversity conservation (refer to Section 5.6.5).
- The fence will be maintained as required.



Plate 1. Boundary Type 2. Non-mountable square kerb and a line of permanent bollards at 1.8 m spacing



5.6.3.3 Boundary delineation – long term – VMU 2

During the establishment of the large lots (which includes all of VMU 2), the above detailed short-term boundary fence will be removed and the boundary of VMU 2 adjoining Avoided E2 Zoned Land will be constructed as a permanent fence. This fence will comprise/involve the following.

- The fence will be at least 1.2 m high.
- No direct access will be permitted through the fence to VMU 1.
- The fence will be maintained as required.

5.6.4 Access (VMU 1)

As noted in Section 5.6.3, the boundary fence between VMU 1 and the adjoining residential development will restrict unauthorised vehicular access but not restrict pedestrian access. However, pedestrian access and movement within VMU 1 will be controlled via signage (refer to Section 5.6.5) and trail heads that link with the low-impact walking trail network. Note that the exact location of trail heads and thus access points is not currently known as it will be determined at the detailed design stage.

5.6.5 Signage (VMU 1)

Signage must be installed and maintained at every formed entry point to VMU 1 and every 200 m along the boundary of VMU 1 adjacent to the residential development. Signage will inform the public that the area has been established for biodiversity conservation.

At strategic locations along the VMU 1 / residential boundary (e.g. at trail heads) more detailed signage will be installed that includes additional details relating to the:

- biodiversity values of VMU 1 and the importance of protecting those values;
- management activities that have occurred and will continue to occur within VMU 1;
- roles that the public can play in protecting the biodiversity values of VMU 1;
- actions that will damage VMU 1 and/or diminish the biodiversity values of the area (i.e. recreational rock turning, bush rock collection, wood collection, unrestrained pets, weed introduction, etc); and
- party responsible for the management of VMU 1 and who members of the public should contact if they observe illegal or degrading activities being conducted within or immediately adjacent to VMU 1.

Signage must be replaced if the writing or the images on the sign are no longer clearly visible or are illegible.



5.6.6 Restrictions on allowable activities (VMU 1 and VMU 2)

The following activities will be prohibited in VMU 1 and VMU 2, except if required in accordance with Section 5.6.1 of this VMP or specifically permitted or required as part of a management action or activity.

- Trail bike riding.
- Four-wheel driving.
- Lighting, using, or maintaining fires.

The following activities will be prohibited in VMU 1 only.

- Cycling / mountain bike riding.
- Camping.

5.6.7 Rubbish (VMU 1 and VMU 2)

Existing rubbish in VMU 1 and/or VMU 2 must be removed within 12 months from 'Year 0'.

From 'Year 0', all reasonable steps must be taken to remove rubbish deposited by others in VMU 1 and/or VMU 2.

5.6.8 Erosion control (VMU 1 and VMU 2)

All reasonable steps must be taken to prevent, control, and remedy erosion in VMU 1 and VMU 2. This can be achieved by:

- planting PCT appropriate groundstorey plant species in and along erosion gullies to reduce the speed of overland flows; and/or
- placing rocks and/or fallen timber in and along sections of erosion gullies to reduce the speed of overland flows.

5.7 Site Inspections and Monitoring

Regular site inspections and ongoing monitoring are essential as they will be used to track the implementation of this VMP and assess progress towards achieving the objective improvements in biodiversity values (refer to Section 6). The outcomes from monitoring will also be used during the five-yearly review of this VMP and to inform the need for any adaptive management (refer to Section 7).

5.7.1 Site inspections (VMU 1 and VMU 2)

Site inspections will occur across VMU 1 and VMU 2 at least every 12 months. The purpose of the site inspections will be to:

- inspect native/introduced fauna grazing activity and impact (Section 5.1);
- inspect supplementary plantings (Section 5.2.1);
- inspect for signs of feral pest presence (Section 5.4); and



• inspect for signs of human disturbance, including construction, disturbance from visitors, walking trails, fencing, signage, rubbish, and erosion (Section 5.6).

Records will be kept by the owner of the respective VMU (i.e. GPTL then Council for VMU 1; private landowners for VMU 2) of site inspection dates, any issues that require management (e.g. dead supplementary plantings, low biomass levels, the number and location of feral pest sightings/signs, rubbish, etc.), and the subsequent actions that were taken.

5.7.2 Weed monitoring and management

5.7.2.1 Yellow Box Reserve and Avoided E2 Zoned Land (VMU 1)

A professional weed control contractor will be engaged to complete a weed monitoring and management program every 12 months (refer to Section 5.5). This monitoring and management will identify any regrowth of woody weeds and locate any other 'identified priority weed' (or other 'Weed of National Significance' or otherwise high threat weed) that may have re-established within VMU 1. Any such regrowth or re-establishment will be appropriately controlled using targeted removal techniques.

The results of the weed monitoring and management events will be provided to the owner (i.e. GPTL or Council) in a short report.

5.7.2.2 Large Lot Avoided Land (VMU 2)

Owners of the private lots comprising VMU 2 will be required to monitor any regrowth of woody weeds and locate any other 'identified priority weed' (or other 'Weed of National Significance' or otherwise high threat weed) that may have re-established within VMU 2. In accordance with the NSW *Biosecurity Act 2015*, any such regrowth or re-establishment will be appropriately controlled using targeted removal techniques.

Records will be kept by the owner of VMU 2 (i.e. private landowners) of all weed monitoring and management activities.

5.7.3 Vegetation Integrity (VI) plot monitoring (VMU 1)

The purpose of the Vegetation Integrity (VI) plot monitoring is to:

- provide a baseline for assessing the change in biodiversity values over time; and
- track progress towards achieving the predicted gain in biodiversity values.

Permanent VI plots will be established in VMU 1 within 12 months from 'Year 0'. The VI plots will be permanently marked and labelled.

The number of VI plots has been determined based on the area of each vegetation zone within VMU 1a, 1b, and 1c, and the locations of VI plots have been selected in order to evenly sample across the respective VMU. In order to avoid excessive sampling, vegetation zones with less than 1.5 ha within a given VMU are not assessed via a VI plot.

The above information is presented in Table 6 and Figure 7.



PCT and Zone	VM	U 1a	VM	IU 1b	VM	IU 1c
	Area	VI Plots	Area	VI Plots	Area	VI Plots
PCT999 Zone 1		-	-	-	1.57	1
PCT999 Zone 2	20.42	4	ž.		5.76	2
PCT999 Zone 3				-	1.21	0
PCT999 Zone 4	11.92	3			2.35	1
PCT1334 Zone 2	-	:-	3.93	2	1.01	0
PCT1334 Zone 4		-	5.36	3	0.98	0

Table 6. Vegetation Integrity (VI) plot monitoring

VI plot monitoring must be carried out by an appropriately trained/qualified person in accordance the NSW Biodiversity Assessment Method (BAM) (NSW Government 2020¹⁰).

Baseline VI plot monitoring in VMU 1 will be performed within 12 months from 'Year O'. Future monitoring events will occur at five-year intervals thereafter (i.e. year 5, 10, 15, etc.). However, VI plot monitoring should not be conducted during an extreme weather year (i.e. substantially less/more rainfall than average). If the scheduled VI plot monitoring occurs during an extreme weather year, monitoring should be delayed until conditions are appropriate.

VI plot monitoring must occur when the greatest diversity of native species can be detected, which is generally between October and December in the region. The exact timing of VI plot monitoring within this date range will be determined by the appropriately trained/qualified party.

As detailed in Section 6.2, data collected during VI plot monitoring will be entered into the NSW Government's online BAM Calculator in order to assess the condition of the vegetation (i.e. composition, structure, function, and vegetation integrity).

The results of VI plot monitoring will be provided to the owner of VMU 1 (i.e. GPTL or Council) in a short report.

5.7.4 Photo point monitoring (VMU 2)

Permanent photo points will be established in VMU 2 within 12 months from 'Year 0'. The photo points will be permanently marked and labelled.

The number and location of photo points have been determined in order to evenly sample across VMU 2. This information is presented in Figure 7.

Photographs will be taken every 12 months according to the following methodology. The photographs must:

- 1. be taken during October or November;
- 2. be taken in all directions (i.e. north, south, east, and west) from the photo point;

¹⁰ NSW Government (2020). *Biodiversity Assessment Method*. NSW Department of Planning, Industry and Environment. Published October 2020.



- 3. be taken at the same location, with the same starting direction for the commencement and direction of the sweep, with the camera held at the same location, height, and angle;
- 4. show the same field of view each monitoring event, to enable comparison across years;
- 5. be clear and of suitable resolution to show detail, and be taken at appropriate light conditions to display optimal contrast; and
- 6. be dated and labelled with the corresponding photo point reference number.

Photographs will be:

- kept by the owner of the respective lot for a minimum of 5 years; and
- be sent to the owner of VMU 1 (i.e. GTPL or Council) during regular annual reporting (refer to Section 7).





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6 Performance Measures and Ecological Response Targets

6.1 Performance Measures

Performance measures are outputs directly related to the successful implementation of management and can be audited against the VMP during reviews. Table 7 details the performance measures for the management actions and activities included in this VMP.

Table 7. Performance measures

Management Action	Management Activity	VMU/s	Performance Measure/s
Grazing Management	Grazing management	VMU 1	 Stock grazing is prohibited from 'Year 0' and then in-perpetuity for the Yellow Box Reserve.
			 Stock grazing is prohibited from the 'Stage 3 Trigger' and then in-perpetuity for the Avoided E2 Zoned Land.
		VMU 2	 Stock grazing is be prohibited from the 'Stage 3 Trigger' and then in-perpetuity for VMU 2.
			 Stock grazing is reconsidered as a potential management activity if site inspections and/or monitoring indicate that groundstorey biomass and/or structure are not being sufficiently managed via native herbivores or mowing/slashing.
Native Vegetation Management and	Supplementary planting	VMU 1a and VMU 1b	 Supplementary planting is undertaken as proposed and completed within 12 months of the relevant trigger.
Enhancement			 No less than 90% of planted stock is alive at the time of inspection.
			 Feral animal control, weed control, and/or replacement planting is undertaken as required.
	Restriction on plantings	VMU 1 and VMU 2	 Only species that are complementary to the indigenous vegetation of the respective VMU are planted.
			 No supplementary planting occurs in known Pink-tailed Worm-lizard habitat or areas proposed for Pink-tailed Worm-lizard habitat augmentation. The exception to this is the planting of groundstorey species to control erosion (if required).
			 No species listed in Appendix B is planted
	Over-abundant Eastern Grey Kangaroo control	VMU 1	 Control of over-abundant Eastern Grey Kangaroo control is reconsidered during each review of the VMP.

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Management Action	Management Activity	s/nmv/s	Performance Measure/s
	Herbage mass management	VMU 1 and VMU 2	 Biomass is maintained within acceptable limits.
Threatened Species Habitat Management and Enhancement	Pink-tailed Worm-lizard habitat augmentation	VMU 1c	 Suitable habitat rocks removed by GTPL during the construction of Googong Township Neighbourhoods 3 to 5 are imported into the portions of VMU 1c identified as 'Pink- tailed Worm-lizard – Habitat Augmentation' as proposed.
	Relocation of woody debris	VMU 1a and VMU 1b	 Remnant trees removed by GTPL during the construction of Googong Township Neighbourhoods 3 to 5 are relocated to VMU 1a and VMU 1b as proposed.
Integrated Feral Pest Control	Integrated feral pest control	VMU 1 and VMU 2	 Feral pest control is carried out as required. Inspection/monitoring does not determine there to be an increase in, or increase in impacts by, feral vertebrate fauna as a result of the development of Googong Township Neighbourhoods 3 to 5.
	Restrictions on domestic animals	VMU 1 and VMU 2	 Only permitted domestic animals are kept in VMU 1 and VMU 2.
Integrated Weed management	Initial weed control	VMU 1 and VMU 2	 Identified priority weeds are mapped within 12 months of 'Year 0'. All identified priority weeds are adequately supressed (WoNS and woody weeds absent, remainder at least 90% reduced) prior to sale or dedication.
	On-going weed control	VMU 1 and VMU 2	 The severity of weed infestations does not increase over time.
Management of Human Disturbance	Restriction of construction impacts	VMU 1 and VMU 2	 Construction in, or adjacent to, VMU 1 and VMU 2 occurs as proposed.
	Protection of existing values	VMU 1 and VMU 2	 Native vegetation, dead timber, and surface rock are protected as proposed.
	Fencing	VMU 1 and VMU 2	 The relevant section of the boundary is defined and fenced as proposed. Boundary fencing is defined and constructed prior to access being provided to land purchasers or the public. Fences are structurally sound at the time of inspection/monitoring.
	Access	VMU 1	 Signage and trail heads are installed/constructed prior to access being provided to land purchasers or the public.
	Signage	VMU 1	 Signage is installed prior to access being provided to land purchasers or the public. Signage is replaced, as required.

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Management Action	Management Activity	s/nwn	Performance Measure/s
	Restrictions on allowable activities	VMU 1 and VMU 2	 Prohibited activities do not occur in VMU 1 or VMU 2.
	Rubbish	VMU 1 and VMU 2	 Existing rubbish is removed within 12 months from 'Year 0'. All reasonable steps are taken to remove rubbish deposited by others in VMU 1 and/or VMU 2.
	Erosion control	VMU 1 and VMU 2	 Erosion is prevented, controlled, and/or remedied in VMU 1 and VMU 2.
Monitoring	Site inspections	VMU 1 and VMU 2	 Site inspections occur as proposed every 12 months.
	Weed monitoring and management	VMU 1	 A professional weed control contractor is engaged to complete a weed monitoring and management program every 12 months. The results of the weed monitoring events are provided to the owner (i.e. GPTL or Council) in a short report.
		VMU 2	 Owners of the private lots monitor any regrowth of woody weeds and locate any other 'identified priority weed' (or other 'Weed of National Significance' or otherwise high threat weed) that may have re-established.
	Vegetation Integrity (VI) plot monitoring	VMU 1	 Permanent VI plots are established within 12 months from 'Year 0'. VI plot monitoring is carried out as proposed by an appropriately trained/qualified person in accordance the NSW Biodiversity Assessment Method (BAM). The results of VI plot monitoring are provided to the owner (i.e. GPTL or Council) in a short report.
	Photo point monitoring	VMU 2	 Permanent photo points are established within 12 from 'Year 0', Photo point monitoring is carried out as proposed.



6.2 Ecological Response Targets

Ecological response targets are biodiversity outcomes that are expected to occur in response to management actions (e.g. improvement in VI attribute scores, increased threatened species abundance, etc.).

Ecological response targets should include the following.

- 1. The measure or 'metric' of response (e.g. VI score, VI attributes).
- 2. Five-year interim (i.e. at 5, 10, 15 years) and long-term (i.e. 20 years) targets for all key biodiversity values.
- The layout, including any stratification of units (e.g. vegetation plots by VMU). For example, the number and type of sampling units (e.g. five plots, three transects), their design (e.g. purposeful placement, simple random sampling, etc.), and the frequency and timing of sampling.

Ecological response targets are not proposed for VMU 2 for the following reasons.

- VMU 2 will be owned by private landowners. As such, regular access to those areas cannot be mandated nor guaranteed.
- The ecological response target will be based on changes in VI (see below). As VI plot monitoring requires specific expertise (refer to Section 5.7.3) and access to VMU 2 cannot be guaranteed, it is impractical to set an ecological response target for VMU 2.
- The aim of VMU 2 is to maintain the condition of the vegetation and habitat, not to improve it to a pre-determined level (refer to Section 3). This will be adequately achieved via application of this VMP, which can be assessed during reporting and review (refer to Section 7) and audited against performance measures (refer to Section 6.1).

Accordingly, ecological response targets for this VMP are in reference to VMU 1 only and will be based on the increase in VI for each vegetation zone present in VMU 1. The level of increase will be dependent on the specific VMU (i.e. the increase in VI for vegetation zones in VMU 1c will be lower than that for VMU 1a or 1b as no supplementary planting is proposed).

However, at the time of writing this VMP it is not possible to stipulate exact ecological response targets for increases in VI; this can only occur following the completion of baseline VI monitoring (refer to Section 5.7.3).

In order account for this, ecological response targets for this VMP have been determined based on data from the BCAR and the percentage increase in VI assuming VMU 1 were established as a biodiversity stewardship site. This methodology is described in greater below.

- 1. For each vegetation zone, enter the data from the BCAR into the online BAM Calculator and assess in the same manner as a biodiversity stewardship site.
- 2. For each vegetation zone, determine the 'Baseline VI' scores.
- 3. For each vegetation zone, determine the increase in 'Baseline VI' after 20 years assuming:
 - a. only required management actions are carried out; and



- b. both required management actions and supplementary planting are carried out.
- 4. For each vegetation zone, determine the percentage increase in VI from 'Baseline VI' over 20 years for 3a and 3b above.

The result of this process will therefore give the minimum and maximum expected percent increase in VI for each vegetation zone.

For the purposes of this VMP, supplementary planting is assumed to increase the following VI attributes (up to a maximum of the benchmark value).

- Composition (i.e. species richness) an increase of 1 for all composition condition variables.
- Structure (i.e. % cover) an increase of 5 for all structure conditions variables.
- Function:
 - o an increase of 5 for litter cover;
 - o an increase of 5 for length of fallen log;
 - o regeneration present; and
 - o an increase of 1 for stem diversity.

Following the above-described methodology, Table 8 presents the estimated minimum and maximum percent increase in VI after 20 years for each vegetation zone in VMU 1. As the improvement is assumed to be linear over the 20-year period, the expected percentage increase in VI at any point in time from year 0 to year 20 can be determined.

Note that, as no supplementary planting is proposed for VMU 1c, only the minimum expected percent increase in VI is applicable for vegetation zones in VMU 1c.

Biodiversity Value	Baseline VI	Minimum increase in VI	Maximum increase in VI
PCT999 Zone 1	36	27.8%	35.0%
PCT999 Zone 2	26.8	15.7%	26.1%
PCT999 Zone 3	28.8	4.9%	9.4%
PCT999 Zone 4	15.6	44.2%	53.8%
PCT1334 Zone 2	26.6	13.5%	22.6%
PCT1334 Zone 4	24.5	9.0%	21.2%

Table 8. Minimum and maximum percent increase in VI after 20 years



7 Record Keeping, Reporting, Review, and Adaptive Management

7.1 Record Keeping

As detailed in Section 4, records will be kept by the respective owner of each VMU of the management actions and activities carried out in accordance with this VMP. Management actions and activities that require records to be kept are summarised in Table 9.

These records will be kept by the respective owner of each VMU for a period of no less than 5 years and must be presented if requested by DPE-BCD or another relevant NSW Government agency.

Management Action	Management Activity	VMU 1	VMU 2
Grazing Management	Grazing management	X	Х
Native Vegetation Management	Supplementary plantings	x	
and Enhancement	Biomass control	X	-
Threatened Species Habitat	Pink-tailed Worm-lizard habitat augmentation	X	
Management and Enhancement	Relocation of woody debris	X	
Integrated Feral Pest Control	Integrated feral pest control	x	х
Integrated Weed management	Initial weed control	X	-
	On-going weed control	x x x x	х
Monitoring	Site inspections	x	х
	Weed monitoring and management	x	х
	Vegetation Integrity (VI) plot monitoring	X	-
	Photo point monitoring	42	х

Table 9. Management actions and activities that require records to be kept

7.2 Reporting

7.2.1 Large Lot Avoided Land (VMU 2)

In order to ensure that the records of management actions and activities carried out in accordance with this VMP are preserved regardless of future lot ownership, the owner of each respective lot of VMU 2 most report the following information to the owner of VMU 1 (i.e. GTPL or Council) every 12 months.

- The records kept in accordance with Section 5 and Section 7.1.
- The photographs taken in accordance with Section 5.7.4.

This information will be kept by the owner of VMU 1 for a period of no less than 5 years and must be presented if requested by DPE-BCD or any other relevant NSW Government agency.



7.2.2 Yellow Box Reserve and Avoided E2 Zoned Land (VMU 1)

The owner of VMU 1 (i.e. GTPL or Council) will monitor and report on the implementation of this VMP following Year 1 and then every 5 years (i.e. year 1, 5, 10, 15, etc.). The report will:

- report on both VMU 1 and VMU 2;
- detail the management actions, management activities, and monitoring which have occurred each year of the VMP;
- include a discussion and assessment against performance measures and ecological response targets; and
- include an assessment the effectiveness, or otherwise, of the protection and maintenance measures implemented within this VMP.

The report will be provided to DPE-BCD and will be used during review of the VMP (refer to Section 7.3). If requested by DPE-BCD, the owner of VMU 1 (i.e. GTPL or Council) will facilitate follow-up site inspections of VMU 1 by DPE-BCD.

7.3 Review and Adaptive Management

This VMP is subject to review at least every five (5) years (i.e. year 5, 10, 15, etc.).

Reviews will be undertaken in collaboration with DPE-BCD and be informed by the 5-yearly reporting (refer to Section 7.2.2). The key aims of the review will be to:

- assess the implementation of the VMP against performance measures and ecological response targets;
- assess the effectiveness, or otherwise, of the protection and maintenance measures implemented within this VMP;
- provide for adaptive management to ensure that the objectives of VMU 1 and VMU 2 are being suitably achieved; and
- update the VMP, as required.

Reviews will be conducted by GTPL prior to handover to Council and by Council post-handover. GTPL and Council may conduct reviews in-house if suitable expertise is available or engage another suitably qualified specialist/organisation.



8 Summary of Management Actions and Activities

Table 10 and Table 11 present a practical summary for each management action, including all associated management activities, management locations, timings, frequencies, and responsibilities.

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Table 10. Summary of Management Actions and Activities – VMU 1

Management Activity	niwa.	2	Frequency	Timing	Respons Drive to dedication	Responsible Party direction Doct-dedication
Grazing Management (Section 5.1)						
Stock grazing will be prohibited	WA	VMU 1	As required	From 'Year O' for the Yellow Box Reserve. From the 'Stage 3 Trigger' for the	GTPL	Council
				Avoided E2 Zoned Land.		
Native Vegetation Management and Enhancement (Section 5.2)			The second s			
District structurery providureds		-	10	Initial supplementary planting		
Planung species must be matched to the corresponding PCL for that which Recommended minimum planting densities are detailed in Table 2.				will be completed within 12 from		
All blantines must be of stock grown from seed of local provenance.				'Year D' for the Yellow Box		
e managed for feral pests	as per Section 5.4 of this VMP and		As required	Heserve.		
Tree guards must be installed on each tree and shrub.				Initial supplementary planting will be completed within 12 from		
Mulch will be required to a depth of 100 mm around tree and shrub plantings.		VMU 1a and VMU 1b		the 'Stage 3 Trigger' for the Avoided E2 Zoned Land.	GTPL	N/A – completed
Supplementary watering may need to be undertaken to ensure plants establish.			As required	For the following 6 months after planting		prior to dedication
Each planting location will be inspected every 12 months. The aim of the inspection will be to determine if control is required for feral animals. weeds, and/or replacement plant me. Following inspection, appropriate management actions will be carried out.	ontrol is required for vill be carried out.			For the following 3 years after		
Records will be kept by the responsible party of the results from inspections and any subsequent management actions that were carried out.	nt actions that were		Every 12 months	planting		
Supplementary planting is prohibited in known >ink-tailed Worm-lizard habitat and areas proposed for Pink-tailed Worm-lizard habitat augmentation; the exception to this is the planting of groundstorey species to control erosion (if required).		VMU 1c	As required	From 'Year O' and in-perpetuity		
Restrictions on plantings		IS IS	and the second s	Second Street of Second Se		
All planting must be matched to the corresponding PCT for that VMU.	MV	VMIL 1				
No species listed in Appendix B may be planted.		1	As required	From 'Year 0' and in-perpetuity	GTPL	Council
Supplementary planting is prohibited in known Pink-tailed Worm-lizard habitat and areas proposed for Pink-tailed Worm-lizard habitat augmentation; the exception to this is the planting of groundstorey species to control erosion (if required).		VMU 1c				
Over-abundant Eastern Grey Kangaroo control						
Over-abundant Eastern Grey Kangaroo control will be reconsidered during regular review of this VMP	M	VMU 1	Every 5 years	From 'Year 5' and in-perpetuity	GTPL	Council
Threatened Species Habitat Management and Enhancement (Section 5.3)						
Pink-tailed Worm-lizard habitat augmentation				No. of the second se		
Suitable habitat rocks removed by GTPL during the construction of Googong Township Neighbourhoods 3 to 5 will be imported into the portions of VMU 1c identified as 'Pink-tailed Worm-lizard – Habitat Augmentation' (Figure 5) and Figure 6).	5 will be imported ure 6).					
Suitable habitat rocks will then be scattered throughout areas devoid of suitable habitat rocks or where such r scatter density.	or where such rocks are at low VM	VMU 1c	As suitable habitat rocks become	From 'Year 0'	GTPL	N/A – completed
Rocks will be scattered in a manner that results in a moderate to high scatter density whilst ensuring that rocks are not piled and do not result in excess of 30% ground cover.	cks are not piled and		available			
Records will be kept by the responsible party of all actions relating to Pink-tailed Worm-lizard habitat augmentation.	intation.					
Relocation of woody debris					D T S T S T T	
A proportion of the remnant trees removed by STPL during the construction of Googong Township Neighbourhoods 3 to 5 will be relocated to VMU 1a and VMU 1b.			As suitable feiled			
The recommended minimum density for the relocation of woody debris is 3 felled remnant trees per hectare.		VMU 1a and VMU 1b	remnant trees	From 'Year 0'	GTPL	N/A – completed prior to dedication
All limbs < 15cm diameter must be removed from felled remnant trees.		4	become available			
Records will be kept by the responsible party of all actions relating to the relocation of woody debris.		-				

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Intermentation NML Frequence Tensor Tensor Ref to Section 5.3), frag pet control activities will be undertaken by, or field anafore conservations cultured in the Department of Primary work this way our teomenaneshons. cultured in the Department of Primary work this way our teomenaneshons. cultured in the Department of Primary work this way our teomenaneshons. cultured in the Department of Primary work this way our teomenaneshons. cultured in the Department of Primary work this way our teomenaneshons. cultured in the Department of Primary work this way our teomenaneshons. cultured in the Department of Primary work this way our teomenaneshons. cultured in the Department of Primary densitied in table. Mon 'vas O' franch erelievel Primary of the Primary work of the table of the medical resons). Mon 'vas O' franch erelievel Primary of the table of the table of the table. Mon 'vas O' franch erelievel Primary of the table of		
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 supplementary planting preparation, planting, and maintenance; works necessary for human safety: and 		
- any other minor works necessary to facilitate the biodiversity/environmental conservation outcomes.		
Standard construction best practice management measures will also be implemented during all initial construction works within		

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cordance with Section 5.6.1 of this VMP or it is MOLA MOLA<	Dead timber (whether standing or fallen and including branches) must not be removed from or moved within VMU 1 except in accordance with Section 5.6.1 of this VMP or it is specifically permitted or required as part of a management action or activity.		Ac recuired	Vor N' and increating	GTDI	Council
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constructed as a permanent Boundary Type 2 fence. The The During or on completion of the t1 am spacing: access or movements by native fauna. VMU 1 access or movements by native fauna. VMU 1 Once During or on completion of the is raid maintenance. is stating that the area has been established for VMU 1 Once During or on completion of the is stating that the area has been established for MU 1 Once During or on completion of the GTPL is stating that the area has been established for MU 1 Once During or on completion of the GTPL is alge (refer to Section 5.6.5) and trail heads that link with VMU 1 Once During or on completion of the GTPL and thus access points is not currently known as it will be VMU 1 Once selled roads that boarder VMU 1 GTPL is the addition MU 1 and every 200 m along the boundary of VMU 1 Once selled roads that boarder VMU 1 GTPL is the addition MU 1 and every 200 m along the boundary of VMU 1 Once selled roads that boarder VMU 1 GTPL is of the addition MU 1 and every 200 m along the boundary of VMU 1 Dince selled roads that boarder VMU 1 GTPL	The installed fence will be maintained until it is removed and replaced					
Type 2 fence. The Control of the GTPL buring or on completion of the GTPL blished for the blis	Fencing - Long term					
a. VMU 1 Once During or on completion of the GTPL sealed for outs that boarder VMU 1 GTPL is the adds that line of the vMU 1 Once buring or on completion of the GTPL known as it will be vMU 1 Once buring or on completion of the cade tradit boarder VMU 1 Once buring or on completion of the GTPL sealed roads that boarder VMU 1 GTPL thrown as it will be vMU 1 Once buring or on completion of the cade tradit boarder VMU 1 Once cale tradit that boarder VMU 1 Once buring or on completion of the GTPL thrown as it will be vMU 1 once buring or on completion of the cade tradit boarder VMU 1 Once cale tradit that boarder vMU 1 As required that boarder vMU 1 Conce cale tradit that boarder vAU 1 Conce cale tradit that boa	The boundary of VMU 1 adjoining the residential development will be constructed as a permanent Boundary Type 2 fence. The Boundary Type 2 fence. The Boundary Type 2 fence. The Boundary Type 2 fence.					
lished for VMU 1 Once sealed roads that boarder VMU 1 Once sealed roads that boarder VMU 1 GTPL thrown as it will be / VMU 1 Once boundary of VMU 1 During or on completion of the GTPL Sealed that boarder VMU 1 Be installed that boarder VMU 1 As required that boarder VMU 1 GTPL be installed that vMU 1 As required that boarder VMU 1 GTPL Sealed roads that boarder VMU 1 GTPL Conce be installed that vMU 1 As required that boarder VMU 1 CTPL Sealed roads that boarder VMU 1 CTPL VMU 1 As required that boarder VMU 1 CTPL Sealed roads that boarder VMU 1 CTPL VMU	t bollards at 1.8 m spacing. nedestrian acress or movements			During or on completion of the		N/A – completed
lished for il heads that link with known as it will be known as it will be whu 1 be installed that be installed that whu 1 be installed that be installed that whu 1 As required who heads that boarder VMU 1 Be installed that whu 1 As required who heads that boarder VMU 1 CFPL		VMU 1	Once	sealed roads that boarder VMU 1	GIPL	prior to dedication
/ known as it will be VMU 1 Once During or on completion of the GTPL / known as it will be VMU 1 Once Eaeled roads that boarder VMU 1 GTPL boundary of VMU 1 be installed that VMU 1 As required be installed that vMU 1 As required sealed roads that boarder VMU 1 GTPL of turning, bush rock turning, bush rock turning are integrated or a sealed roads that boarder VMU 1 As required to a sealed roads that boarder VMU 1 A As required to a sealed roads that boarder VMU 1 A As required to a sealed roads that boarder VMU 1 A As required to a sealed roads that boarder VMU 1 A As required to a sealed roads that boarder VMU 1 A As required to a sealed roads that boarder VMU 1 A As required to a sealed roads that boarder VMU 1 A As required to a sealed roads that boarder VMU 1 A As required to a sealed roads that boarder VMU 1 A As required to a sealed roads that boarder V	 Signage at appropriate intervals to provide education to the public stating that the area has been established for biodiversity conservation (refer to Section 5.6.5). The fence will be maintained as required. 					
il heads that link with vill be VMU 1 Once During or on completion of the GTPL sealed troads that boarder VMU 1 GTPL boundary of VMU 1 be installed that volu 1 As required be installed that volu 1 As required sealed roads that boarder VMU 1 GTPL buring bush rock turning, bush rock volu 1 As required to be received to be received to be received of the sealed roads that boarder vMU 1 As required to be roads tha	Access					
boundary of VMU 1 be installed that be installed that vMU 1 As required sealed roads that boarder VMU 1 GTPL ck turning, bush rock void that boarder VMU 1 GTPL	Pedestrian access and movement within VMU 1 will be controlled via signage (refer to Section 5.6.5) and trail heads that link with the low-impact walking trail network. The exact location of trail heads and thus access points is not currently known as it will be determined at the detailed design stage.	VMU 1	Once	During or on completion of the sealed roads that boarder VMU 1	GTPL	N/A – completed prior to dedication
boundary of VMU 1 be installed that be installed that vMU 1 As required sealed roads that boarder VMU 1 GTPL ck turning, bush rock vou 1 As required be roads that boarder VMU 1 GTPL	Signage		The State of the S			CI VICE BOL
be installed that be installed that vMU 1 As required buring or on completion of the vobserve illegal or her boarder VMU 1 GTPL	Signage must be installed and maintained at every formed entry point to VMU 1 and every 200 m along the boundary of VMU 1 adjacent to the residential development.					
be installed that be installed that vMU 1 As required buring or on completion of the buring or on completion of the sealed roads that boarder VMU 1 GTPL ck turning, bush rock y observe illegal or In-perpetuity	Signage will inform the public that the area has been established for biodiversity conservation.					
ck turning, bush rock VMU 1 As required sealed roads that boarder VMU 1 GTPL y observe illegal or honorder or the in-perpetuitiv	At strategic locations along the VMU 1 / residential boundary (e.g. at trail heads) more detailed signage will be installed that includes additional details relating to the:					M.M.
ck turning, bush rock y observe illegal or	 biodiversity values of VMU 1 and the importance of protecting those values; management activities that have occurred and will continue to occur within VMU 1; 	VMU 1	As required	sealed roads that boarder VMU 1	GTPL	prior to dedication
y observe illegal or In-DerDetuity	ne area (i.e.					
In-Deroetuity	ublic should					
	degrading activities being conducted within or immediately adjacent to VMU 1.			la normatuitu		Council

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Manapamant Artistiu	VAAL5	Concession of the second	Tentore		
Antone under the second s		Automotiv		Prior to dedication	ination Post-dedication
Restrictions on allowable activities					
The following activities will be prohibited, except if required in accordance with Section 5.6.1 of this VMP or specifically permitted					
or required as part of a management action or activity.					
- I Jai Dike Tahing. - Entradikan dirihika	110.011			INTO	ļ
- Liehting. Using. or maintaining fires.		As required	From Year U and In-perpetuity	1 d l b l	Council
- Cycling / mountain bike riding.					
- Camping.					
Rubbish		Superior of Super-	Long and a second		10 10 10 10 10 10 10 10 10 10 10 10 10 1
Existing rubbish must be removed.		auu	Completed within 12 months of	βTΡΙ	N/A – completed
	VMU 1	200	'Year 0'	0.1	prior to dedication
All reasonable steps must be taken to remove rubbish deposited by others.		As required	From 'Year 0' and in-perpetuity	GTPL	Council
Erosion control					
All reasonable steps must be taken to prevent, control, and remedy erosion. This can be achieved by: - planting PCT appropriate groundstorey plant species in and along erosion gullies to reduce the speed of overland flows; and/or	VMU 1	As required	From 'Year 0' and in-perpetuity	GTPL	Council
 placing rocks and/or fallen timber in and along sections of erosion gullies to reduce the speed of overland flows. 					
Site Inspections and Monitoring (Section 5.7)					
Stle inspections					
Site inspections across will occur at least event 12 months.					
The numbers of the site increasions will be to:					
 Inspect of rative/introduced fauna grazing activity and impact (Section 5.1); 					
inspect supplementary plantings (Section 5.2.1);					
 inspect for signs of feral pest presence (Section 5.4); and 	VINALI 1	Even 12 months	From 'Year O' and in-paratelity	CTDI	Council
 inspect for signs of human disturbance, including construction, disturbance from visitors, walking trails, fencing, signage, 					
rubosh, and erosion (section 3.5).					
Records will be kept by the responsible party of site inspection dates, any issues that require management (e.g. dead supplementary plantings, low biomass levels, the number and location of feral pest sightings/signs, rubbish, etc.), and the					
subsequent actions which were taken.					
Weed monitoring and management					These and the
A professional weed control contractor will be engaged to complete a weed monitoring and management program. This monitoring and management will identify any regrowth of woody weeds and locate any other 'identified priority weed' (or other 'Weed of National Significance' or otherwise high threat weed) that may have re-established.	VMU 1	Every 12 months	From 'Year D' and in-perpetuity	GTPI	Council
Any regrowth or re-establishment will be appropriately controlled using targeted removal techniques.					
The results of the weed monitoring and management events will be provided to the responsible party in a short report.					
Vegetation Integrity (VI) plot monitoring					
Permanent VI plots will be established in VMU 1 within 12 months from 'Year 0'. The VI plots will be permanently marked and					1 () I () I () I () I () () () ()
labelled. The number and location of VI plots is presented in Table 6 and Figure 7,		Once	Within 12 months from 'Year 0'		N/A – compreted prior to dedication
Baseline VI plot monitoring in VMU 1 will be performed within 12 months from 'Year 0'.					
Future monitoring events will occur at five-year intervals thereafter (i.e. year 5, 10, 15, etc.).					
VI plot monitoring should not be conducted during an extreme weather year (i.e. substantially less/more rainfall than average). If the scheduled VI plot monitoring occurs during an extreme weather year, monitoring should be delayed until conditions are appropriate.	VMU 1	Every 5 years (i.e. year 5, 10, 15, etc.)	From 'Year 5' and in-perpetuity	GTPL	
VI plot monitoring must occur when the greatest diversity of native species can be detected, which is generally between September and December in the Southern Highlands. The exact timing of VI plot monitoring within this date range will be determined by the appropriately trained/qualified person.					Council
Data collected during VI nint monitoring will be entered into the NSW Government's noline BAM Calculator in order to access the		As required	From 'Year 0' and in-perpetuity		
condition of the vegetation (i.e. composition, structure, function, and vegetation integrity).					
The results of VI plot monitoring will be provided to the responsible party in a short report.					

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Management Activity	NWA	Frequency	Thming	Responsible Party Prior to dedication Post-	ble Party Post-dedication
Record Keeping, Reporting, Review, and Adaptive Management (Section 7)					
Record keeping					
As detailed in Section 4, records will be kept by the responsible party of the management actions and activities carried out in accordance with this VMP. Management actions and activities that require records to be kept are summarised in Table 9.	11/1/1	Ac roatiend	Erom 'Your O' and in-normatuitu	10LU	Council
These records will be kept by the respective owner of each VMU for a period of no less than 5 years and must be presented if requested by DPE-BCD or any other relevant NSW Government agency.	TIONA	As required	From rear o and in-perpendicy		
Reporting		No. of the local division of the local divis			The second second
The responsible party will monitor and report on the implementation of this VMP from 'Year 1' and then every 5 years (i.e. year 1, 5, 10, 15, etc.).					
The report will:					
 report on both VMU 1 and VMU 2; detail the management actions, management activities, and monitoring which have occurred each year of the VMP; 	E LIGWAY	'Year 1' and then	From Vors 1' and in normathility	1915	Council
 include a discussion and assessment against performance measures and ecological response targets; and include an assessment the effectiveness, or otherwise, of the protection and maintenance measures implemented within this VMP. 	TOWA	year 5, 10, 15, etc.)		2	
The report will be provided to DPE-BCD and will be used during review of the VMP (refer to Section 7.3).					
If requested by DPE-BCD, the responsible party of VMU 1 will facilitate follow-up site inspections of VMU 1 by DPE-BCD.					
Review and Adaptive Management				LAND AND	
This VMP is subject to review at every five (5) years					
Reviews will be undertaken in collaboration with DPE-BCD and be informed by the 5-yearly reporting (refer to Section 7.2.2). The bev aims of the review will he to:					
- assess the implementation of the VMP against performance measures and ecological response targets;				1111	Council Council
 assess the effectiveness, or otherwise, of the protection and maintenance measures implemented within this VMP; provide for adaptive management to ensure that the objectives of VMU 1 and VMU 2 are being suitably achieved; and 		Every 5 years	From Year 5' and In-perperuity	61 P L	Council
- update the VMP, as required.	-				
Reviews will be conducted by GTPL prior to handover to Council and by Council post-handover. GTPL and Council may conduct reviews in-house if suitable expertise is available or engage another suitably qualified specialist/organisation.					

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Table 11. Summary of Management Actions and Activities – VMU 2

	X.			Prior to sale	stale Post-sale
Grazing Management (Section 5.1)					
Stock grazing will be prohibited					
If site inspections and/or monitoring indicate that groundstorey biomass and/or structure are not being sufficiently managed via native herbivores or mowing/slashing, stock grazing should be reconsidered as a potential management activity. This should occur in collaboration with DPE-BCD.	VMU 2	As required	From the 'Stage 3 Trigger' and in- perpetuity	GTPL	Private landowners
Native Vegetation Management and Enhancement (Section 5.2)					
Restrictions on plantings		ALL ALL		Statute of	
All planting must be matched to the corresponding PCT for that VMU.					1
No species listed in Appendix B may be planted.	VMU 2	Ac resulted		THE C	Private
Planting is prohibited in known Pink-tailed Worm-lizard habitat; the exception to this is the planting of groundstorey species to control erosion (if required)	VMU 2c	As required	From rear 0 and in-perpetuity	d b	landowners
Herbage mass management					
If required, biomass control can be achieved via slashing/mowing.					Private
The decision to mow/slash will be determined solely by the owner of the respective lot.	VMU 2	As required	From 'Year 0' and in-perpetuity	GTPL	landowners
Integrated Feral Pest Control (Section 5.4)				N. Contraction	
Feral pest control					10-00-01
lf required as determined by regular site inspections (refer to Section 5.7), feral pest control activities will be undertaken by, or under the direct supervision of, an anonomiately outilified and/or experienced beson.					
Feral pest control will be undertaken with consideration of the control recommendations outlined in the Department of Primary Industries website and associated resources (https://www.dpi.nsw.gov.au/biosecurity/vertebrate-pests), and be undertaken					
touowing the Now Codes of Practices (LUPs) and Standard Operating Procedures (SUPs). Control crostonies and their cuitability for this VMD and deviated in					Private
		As required	From 'Year U' and in-perpetuity	GIPL	landowners
Table 4 Table 4.					
Records will be kept by the responsible party of all feral pest control activities.					
Restrictions on domestic animals	N WELD	- AVEN-			
As detailed in Section 5.6.3, the boundary of VMU 2 adjoining Avoided E2 Zoned Land will be constructed as a permanent fence. The fence will be at least 1.2 m high, and no direct access will be permitted through the fence to VMU 1. This will restrict unauthorised vehicular access, pedestrian access, and movement of domestic animals.	CIIMV	Ås required	From the 'Stage 3 Trigger' and in-	GTDI	Private
All unrestrained domestic animals, including cats, dogs, chickens, horses, and pigs, will be prohibited in VMU 2 (unless required for medical reasons).			perpetuity	2	landowners
Integrated Weed Management (Section 5.5)					
Initial weed control			The structure of the state of the		
The presence and distribution of each of the identified priority weeds in Table 5 will be assessed and mapped, This mapping will be provided to a suitably qualified and experienced weed control contractor.		Once	Completed within 12 months of 'Year 0'		
The suitably qualified and experienced weed control contractor undertake weed control throughout the relevant portion of the VMU. The specific weed control techniques employed will be determined by the weed control contractor at the time of employment, based upon suitability/applicability for the subject species. Weed control works will be timed to maximise the effectiveness of the chosen technique.	VMU 2	Every 6 months	Within 12 months of 'Year 0' and until all WoNS species have been eradicated, all other woody weeds have been eradicated, and	GTPL	N/A – completed prior to sale
Records will be kept by the responsible party of all weed control activities.			alf non-woody weeds have been appropriately supressed		

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Management Activity	NMN	Frequency	Timing	Respons Prior to sale	Responsible Party sale Post-sale
On-going weed control	1000			1.5.5.5.5.5	11 12 28 M
Owners of the private lots comprising VMU 2 will be required to control all 'state priority weeds' and 'regional priority weeds' on their properties in accordance with the NSW Biosecurity Act 2015.					
Weed control activities will be undertaken by a suitably qualified and experienced weed control contractor.					
The specific weed control techniques employed will be determined by appropriately qualified and/or experienced person at the time of employment, based upon suitability/applicability for the subject species. Weed control works will be timed to maximise the effectiveness of the chosen technique.	VMU 2	Every 12 months	From 'Year 0' and in-perpetuity	GTPL	Private landowners
Weed control activities must occur in a manner that is sensitive to the fauna values on the site, especially with respect to weed control activities in known Pink-tailed Worm-lizard habitat or areas proposed for Pink-tailed Worm-lizard habitat augmentation (i.e. VMU 2c).					
Records will be kept by the responsible party of all weed control activities.					
Management of Human Disturbance (Section 5.6)					
Restriction of construction impacts				Rue I - P	
Impacts from construction associated with Googong Township Neighbourhoods 3 to 5 will be confined to areas identified as 'Land Proposed for Certification' (refer to Figure 2). This includes all materials stockpiles, vehicle parking, machinery storage, and other temporary facilities.					
Exceptions to this will be limited impacts associated with:					
 construction and maintenance of the low-impact walking trans network, fence and bollard construction and maintenance; 	VMU 2	As required	From 'Year 0' and in-perpetuity	GTPL	Private landowners
 supplementary planting preparation, planting, and maintenance; works necessary for human safety: and 					
 any other minor works necessary to facilitate the blodiversity/environmental conservation outcomes. 					
Standard construction best practice management measures will also be implemented during all initial construction works within or adjacent to VMU 2.					
Protection of existing values					
Native vegetation must not be cut down, felled, thinned, logged, killed, destroyed, poisoned, ringbarked, uprooted, burnt, or otherwise removed except in accordance with Section 5.6.1 of this VMP or it is specifically permitted or required as part of a management action or activity.					Drivate
Dead timber (whether standing or failen and including branches) must not be removed from or moved within VMU 2 except in accordance with Section 5.6.1 of this VMP or it is specifically permitted or required as part of a management action or activity.	VMU 2	As required	From 'Year 0' and in-perpetuity	GTPL	landowners
Surface rock must not be removed from or moved within VMU 2 except in accordance with Section 5.6.1 of this VMP or it is specifically permitted or required as part of a management action or activity.			14		
Fencing-short term					
A fence will be installed around the perimeter of VMU 2.					
The specific form/style of this fence will be determined by GTPL, however it will: - be sufficient to effectively exclude stock, but not of a form that prevents movement of native fauna; - not include barded wires; -		Ċ	(Toracian Constraints)		N/A – completed
 include gates at a number of locations to provide access for management and maintenance; and include signage at appropriate intervals to advise that the fenced area is to be established for biodiversity conservation and 		5			prior to sale
The installed fence will be maintained until it is removed and replaced					
Fencing - Long term	COLUMN THE PARTY OF				SALANTIN S
During the establishment of the large lots (which include all of VMU 2), the above detailed short-term boundary fence will be removed and the boundary of VMU 2 adjoining Avoided E2 Zoned Land will be constructed as a permanent fence. This fence will					
comprise/involve the following The fence will be at least 1.2 m high.	VMU 2	Once	During the establishment of the large lots	GTPL	N/A – completed prior to dedication
 No direct access will be permitted through the fence to VMU 1. The fence will be maintained as required. 					

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Management Artivity	NWA	Frequency	Timing	Respon	Responsible Party
Restrictions on allowable activities	1. A 1460			and the second se	
The following activities will be prohibited, except if required in accordance with Section 5.6.1 of this VMP or specifically permitted or required as part of a management action or activity. - Trail bike riding. - Four-wheel driving. - Lighting, using, or maintaining fires.	VMU 2	As required	From 'Year O' and in-perpetuity	GTPL	Private landowners
Rubbish					
Existing rubbish must be removed.		Once	Completed within 12 months of 'Year 0'	GTPL	N/A – completed prior to sale
All reasonable steps must be taken to remove rubbish deposited by others.		As required	From 'Year 0' and in-perpetuity	GTPL	Private landowners
Erosion control					
All reasonable steps must be taken to prevent, control, and remedy erosion. This can be achieved by: planting PCT appropriate groundstorey plant species in and along erosion gullies to reduce the speed of overland flows; and/or	VMU 2	As required	From 'Year 0' and in-perpetuity	GTPL	Private landowners
Site Inspections and Monitoring (Section 5.7)					
Site inspections					
Site insuscentions across will orcur at least event 12 months					
The purpose of the site inspections will be to: - inspect native/introduced fauna grazing activity and impact (Section 5.1); - inspect for signs of feral pest presence (Section 5.4); and - inspect for signs of human disturbance, including construction, disturbance from visitors, fencing, rubbish, and erosion (Section 5.6).	VMU 2	Every 12 months	From 'Year O' and in-perpetuity	GTPL	Private landowners
Records will be kept by the responsible party of site inspection dates, any issues that require management (e.g. dead supplementary plantings, low biomass levels, the number and location of feral pest sightings/signs, rubbish, etc.), and the subsequent actions which were taken.					
Weed monitoring and management					A DESCRIPTION OF THE PARTY OF T
Owners of the private lots comprising VMU 2 will be required to monitor any regrowth of woody weeds and locate any other 'identified priority weed' (or other 'Weed of National Significance' or otherwise high threat weed) that may have re-established within VMU 2.	C TIMIN	Every 12 months	From 'Vear O' and in-nernet uitv	GTDI	Private
Any regrowth or re-establishment will be appropriately controlled using targeted removal techniques.	4				landowners
The results of the weed monitoring and management events will be provided to the responsible party in a short report.					
Photo point monitoring					
Permanent photo points will be established in VMU 2 within 12 months from 'Year O'. The photo points will be permanently marked and labelled. The number and location of photo points are presented in Figure 7.		Once	Within 12 months of 'Year 0'		N/A – completed prior to sale
Photographs will be taken every 12 months according to the following methodology. The photographs must: - be taken between October and November;					
 be taken in all directions (i.e. north, south, east, and west) from the photo point; be taken at the same location, with the same starting direction for the commencement and direction of the sweep, with the 					
camera held at the same location, height, and angle;	VMU 2			GTPL	
 be clear and of suitable resolution to show detail, and be taken at appropriate light conditions to display optimal contrast; 		Every 12 months	From 'Year 0' and in-perpetuity		Private landowner
and					
Photographs will be: - kept by the owner of the respective lot for a minimum of 5 years; and - be sent to the owner of VMU 1 (i.e. GTPL or Council) during regular annual reporting (refer to Section 7).					

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Management Activity	NMN	Frequency	Timing	Respons	Responsible Party
				Prior to sale	Post-sale
Record Keeping, Reporting, Review, and Adaptive Management (Section 7)	1000				
Record keeping					
As detailed in Section 4, records will be kept by the responsible party of the management actions and activities carried out in accordance with this VMP. Management actions and activities that require records to be kept are summarised in Table 9.	CHIVY	Ac roatifrod	Erom 'Year 0' and in-nemetuity	GTDI	Private landowner
These records will be kept by the respective owner of each VMU for a period of no less than 5 years and must be presented if requested by DPE-BCD or any other relevant NSW Government agency.	7 0.00			2	
Reporting	The second				
The owner of each respective lot of VMU 2 most report the following information to the owner of VMU 1 (i.e. GTPL or Council)					
every 12 months.		Every 12 months			Private landowner
 The records kept in accordance with Section 5 and Section 7.1. 	C HIMA		From 'Year 1' and in-perpetuity	GTPL	
The photographs taken in accordance with Section 5.7.4.					
This information will be kept by the owner of VMU 1 for a period of no less than 5 years and must be presented if requested by DF-ACD or any other relevant NSW Government agency.		As required			Council

Appendices







Appendix A. Recommend Plant Species for Supplementary Planting

<u>Note</u>: The list of recommended plant species has been developed to provide a list of suitable species for each stratum (i.e. canopy, midstorey, shrubstorey and groundstorey), based on the objective of augmenting or recreating the strata of the following Plant Community Types.

- PCT999 Norton's Box Broad-leaved Peppermint open forest on footslopes, central and southern South Eastern Highlands Bioregion (i.e. VMU 1a and VMU 2a)
- PCT1334 Yellow Box grassy woodland of the northern Monaro and Upper Shoalhaven area, South Eastern (i.e. VMU 1b).

It is noted that many of the species listed (notably groundstorey species) are not readily available from local suppliers, particularly during certain seasons. Accordingly, whilst the objective of the list is to ensure that only suitable species are planted, it is also important to maximise the species options. Therefore, whilst not exhaustive, the below table provides an extensive list of suitable species of which a sufficient diversity should be available. Species considered key species for the PCT are **bolded** and <u>underlined</u>.

Scientific Name	Common Name	PCT999	PCT1334
Canopy			and the second
Brachychiton populneus	Kurrajong	Х	X
Eucalyptus blakelyi	Blakely's Red Gum		X
Eucalyptus bridgesiana	Apple Box		x
Eucalyptus goniocalyx	Bundy	X	
Eucalyptus mannifera	Brittle Gum	<u>×</u>	
Eucalyptus melliodora	Yellow Box	<u>X</u>	<u>×</u>
Eucalyptus nortonii	Mealy Bundy	<u>×</u>	
Eucalyptus polyanthemos	Red Box	<u>×</u>	
Eucalyptus rossii	Scribbly Gum	<u>X</u>	
Eucalyptus rubida	Candlebark		X
Midstorey			Constant of the
Acacia decurrens	Black Wattle	x	X
Acacia falcata	Sickle Wattle	X	X
Acacia implexa	Hickory	X	X
Acacia mearnsii	Late Black Wattle	X	X
Acacia melanoxylon	Blackwood		X
Allocasuarina verticillata	Drooping Sheoak	Х	
Exocarpos cupressiformis	Cherry Ballart	X	X
Shrubstorey			
Acacia buxiflora	Box-leaf Wattle		X
Acacia dealbata	Silver Wattle	x	x
Acacia falciformis	Hickory	X	x
Acacia genistifolia	Early Wattle		X
Acacia gunnii	Ploughshare Wattle		x
Acacia rubida	Red-stem Wattle	x	X
Acacia ulicifolia	Prickly Moses	Х	X
Banksia marginata	Silver Banksia	X	
Bursaria spinosa subsp. lasiophylla	Native Blackthorn	<u>x</u>	X



Scientific Name	Common Name	PCT999	PCT1334
Cassinia aculeata	Common Cassinia	Х	X
Cassinia longifolia	Cauliflower Bush	X	X
Cassinia quinquefaria	Rosemary Cassinia	X	X
Dodonaea viscosa	Hopbush		X
Hakea decurrens	Bushy Needlewood		X
Indigofera australis	Austral Indigo	<u>×</u>	x
Kunzea ericoides	Burgan	x	х
Kunzea parviflora	Violet Kunzea	x	X
Pomaderris pallida	Pale Pomaderris	X	X
Rubus parvifolius	Native Raspberry		x
Styphelia triflora	Pink Five-corners	x	X
Groundstorey			X
Small Shrub			the second second
Bossiaea buxifolia	Box-leaved Bitter-pea		x
Brachyloma daphnoides	Daphne Heath	X	
Cryptandra amara	Bitter Cryptandra		X
Daviesia genistifolia		X	X
	Broom Bitter-pea	X	X
Daviesia latifolia	Hop Bitter-pea		X
Daviesia leptophylla	Narrow-leaf Bitter-pea	_	X
Daviesia mimosoides	Narrow-leaf Bitter-pea	X	X
Dillwynia sericea	Showy Parrot-pea	X	X
Hardenbergia violacea	False Sarsparilla	X	Х
Hibbertia obtusifolia	Grey Guinea-flower	X	X
Hibbertia riparia	Stream Guinea-flower		X
Leucopogon fletcheri	Pendant Beard Heath	X	
Leucopogon fraseri	Beard Heath	X	
Leucopogon virgatus	Common Beard Heath	X	Х
Lissanthe strigosa	Peach Heath	X	x
Melichrus urceolatus	Urn Heath	X	х
Pultenaea procumbens	Heathy Bush-pea	X	х
Sedge, Rush	the second second distance		- neiten es nestear
Carex appressa	Tall Sedge	X (wet areas, drainage lines etc.)	X (wet areas, drainage lines etc.)
Carex inversa	Knob Sedge		x
Juncus australis	Austral Rush	X (wet areas, drainage lines etc.)	X (wet areas, drainage lines etc.)
Juncus subsecundus	Finger Rush		X
Lepidosperma laterale	Sword Sedge	X	X
Lomandra bracteata	Mat-rush	X	X
Lomandra filiformis	Wattle Mat-rush	X	x
Lomandra multiflora	Many-flowered Matrush	<u>^</u>	X
Grass	inter a manual		
Aristida ramosa	Purple Wiregrass	X	X
Austrostipa bigeniculata	Tall Speargrass		X
Austrostipa densiflora	Dense Spear-grass	X	^
nasa osapa densijiora	Deuse Shear-Brazz	^	

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Scientific Name	Common Name	PCT999	PCT1334
Bothriochloa macra	Red-leg Grass		X
Chloris truncata	Windmill Grass		X
Cymbopogon refractus	Barbed Wire Grass		X
Elymus scaber	Wheat Grass		X
, Microlaena stipoides	Weeping Grass		X
Panicum effusum	Hairy Panic		X
Poa labillardierei	Tussock Grass		X (wet areas, drainage lines etc.)
Poa sieberiana	Snow Grass	x	X
Rytidosperma (various spp.)	Wallaby Grasses		x
Rytidosperma pallidum	Red-anther Wallaby Grass	<u>×</u>	
Sorghum leiocladum	Wild Sorghum	X	x
Themeda triandra	Kangaroo Grass	х	X
Forb, Lily, Orchid		1.1.1.1.1.1.1.1.1	Carl of Carl
Arthropodium milleflorum	Vanilla-lily		x
Arthropodium minus	Small Vanilla Lily		X
Arthropoalum minus Asperula conferta	Common Woodruff		x
		х	x
Asperula scoparia	Prickly Woodruff	^	× ×
Bulbine bulbosa	Bulbine Lily	~	× ×
Bulbine glauca	Rock Lily	Х	
Burchardia umbellata	Milkmaids		X
Caesia calliantha	Blue Grass-Lily		X
Calotis lappulacea	Yellow Burr-daisy		X
Cheilanthes austrotenuifolia	Rock Fern	X	X
Chrysocephalum apiculatum	Common Everlasting	X	X
Chrysocephalum semipapposum	Clustered Everlasting	X	X
Clematis microphylla	Small-leaved Clematis	X	X
Convolvulus erubescens	Australian Bindweed		X
Craspedia variabilis	Billy Buttons		X
Cullen microcephalum	Dusky Scurfpea		X
Cymbonotus lawsonianus	Austral Bears-ear	x	X
Cynoglossum australe	Australian Hound's-tongue		X
Cynoglossum suaveolens	Sweet Hound's-tongue		X
Daucus glochidiatus	Native Carrot	х	X
Derwentia perfoliata	Digger's Speedwell	х	X
Desmodium varians	Slender Tick-trefoil	х	X
Dianella longifolia	Smooth Flax Lily		х
Dianella revoluta	Black-anther Flax-lily	х	X
Dichondra repens	Kidney Weed		x
Dichopogon fimbriatus	Nodding Chocolate Lily		x
Dichopogon strictus	Chocolate Lily		x
Diuris dendrobioides	Long-tail Purple Diuris		X
Diuris maculata	Leopard Orchid		X
Diuris semilunulata	Donkey-ears		X
Diuris sulphurea	Tiger Orchid		X
Drosera peltata	Pale Sundew		X



Scientific Name	Common Name	PCT999	PCT1334
Eryngium ovinum	Blue Devil		х
Galium gaudichaudii	Rough Bedstraw	Х	х
Geranium antrorsum	Antrorse Geranium	Х	х
Geranium retrorsum	Common Cranes-bill	Х	х
Geranium solanderi	Native Geranium	Х	x
Glycine clandestina	Twining Glycine	х	х
Gonocarpus tetragynus	Raspwort	X	х
Goodenia hederacea	Ivy Goodenia	X	Х
Hovea linearis	Creeping Hovea	Х	x
Hydrocotyle laxiflora	Stinking Pennywort		х
Hypericum gramineum	Small St John's Wort		х
eptorhynchos squamatus	Scaly Buttons		х
Leucochrysum albicans var. tricolor	Hoary Sunray	Х	х
Luzula densiflora	Woodrush	Х	х
Microtis unifolia	Common Onion Orchid		Х
Oxalis perennans	Perrenial Oxalis	Х	х
Pimelea curviflora	Curved Rice-flower		x
Plantago varia	Variable Plantain		х
Podolepis jaceoides	Showy Copper-wire Daisy	X	х
Ranunculus lappaceus	Common Buttercup		x
Rumex brownii	Swamp Dock		х
Rutidosis leptorhynchoides	Button Wrinklewort		×
Schoenus apogon	Common Bog Sedge		x
Solenogyne dominii	Smooth Solenogyne		x
Stackhousia monogyna	Creamy Candles		x
Stypandra glauca	Nodding Blue Lily	x	х
Swainsona behriana	Behr's Swainson-pea		x
Swainsona sericea	Silky Swainson-pea		х
Thelymitra pauciflora	Slender Sun-orchid		
Thysanotus patersonii	Twining Fringe-lily	x	х
Thysanotus tuberosus	Common Fringe-lily	x	х
Tricoryne elatior	Yellow Rush-lily		x
Triptilodiscus pygmaeus	Common Sunray	x	х
/elleia paradoxa	Spur Velleia		х
/iola hederacea	Native Violet	х	x
/ittadinia cuneata	Fuzzweed	x	x
/ittadinia gracilis	Woolly New Holland Daisy	x	x
/ittadinia muelleri	Narrow-leaved New Holland Daisy	x	x
Nahlenbergia communis	Tufted Bluebell		x
Vahlenbergia gracilis	Australian Bluebell		X
Nahlenbergia stricta	Tall Bluebell	_	x
Nurmbea dioica	Early Nancy		X
Kerochrysum viscosum	Sticky Everlasting Daisy	x	x



Appendix B. Prohibited Plant Species

<u>Note</u>: The list of prohibited plant species includes weeds known to occur in the Queanbeyan-Palerang Local Government Area (LGA), together with other species which occur in adjoining/nearby LGAs and have the potential to establish. In addition to these species, no species listed as a Commonwealth Weed of National Significance (WoNS) or a 'state priority weeds' / 'regional priority weeds' for the Queanbeyan-Palerang LGA in the *South East Region Strategic Weed Management Plan 2017-2022* may be planted.

Scientific Name	Common Name
Acacia karoo	Karoo Thorn
Acacia paradoxa	Kangaroo Thorn
Acecia balieyana	Cootamundra Wattle
Achillea millefolium	Yarrow
Achnatherum cauda tum	Broad-kernel Espartillo
Ailanthus altissima	Tree of Heaven
Alnus gluttnosa	Black Adder
Alternanthera philoxeroides	Alligator Weed
Cannibis sativa	Indian Hemp
Cardus pycnoncephalus	Slender Thistle
Carduus nutans	Nodding Thistle
Carduus tenuiflorus	Slender Thistle
Cartaderia selloana	Pampus Grass
Carthamus lanatus	Saffron Thistle
Carus tenuiflorus	Slender Thistle
Cassinia arctuata	Sifton Brush
Celtus australis	Nettle Tree
Censchrus longispinus	Spiny Burrgrass
Centaurea caliptrata	Star Thistle
Cestrum pargui	Green Cestrum
Chromolaena ordorata	Siam Weed
Cirsium vulgare	Spear Thistle
Conium maculatum	Hemlock
Cortaderia jubata	Pampus Grass
Cotoneaster franchetti	Cotoneaster
Cotoneaster glaucophyllus	Cotoneaster
Cotoneaster pannosus	Cotoneaster
Cotoneaster salicifolius	Willow-leaf Cotoneaster
Cotoneaster simonsii	Cotoneaster
Crataegus monogyna	Hawthorn
Cuscuta campestris	Golden Dodder
Cyperus eragrostis	Umbrella Sedge
Cytisus scoparius	Scotch Broom
Echium plantagineum	Paterson's Curse
Echium vulgare	Vipers Bugloss
Eichornia crassipes	Water Hyacinth
Equisetum arvense	Horsetail
Eragrostris culvula	African Lovegrass

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Scientific Name	Common Name
Erythroxylum coca	Coca Leaf
Foeniculum vulgare	Fennel
Genista monspessulana	Montpellier Heliotrope
Gymnocoronis spilanthoides	Senegal Tea Plant
Hedera helix	English Ivy
Heliotropium europaeum	Common Heliotrope
Hypeicum perforatum	St John's Wort
Kochia scoparia	Kochia
Lagarosiphon major	Lagarosiphon
Ligustrum lucidum	Privet
Ligustrum sinense	Small-leaved Privet
Lonicera japonica	Japanese Honeysuckle
Lycium ferocissimum	Africa Boxthorn
Marrubium vulgare	Horehound
Nassella charruana	Lobed Needlegrass
Nassella neesiana	Chilean Needlegrass
Nassella trichotoma	Serrated Tussock
Onopordum acanthium	Scotch Thistle
Onopordum illyrcum	Stemless Thistle
Orobanche minor	Lesser Broomrape
Papaver somniferum	Opium Poppy
Parthenium hysterophorus	Parthenium Weed
Phyllostachys aurea	Yellow Bamboo
Pinus radiata	Radiata Pine
Pistia stratiotes	Water Lettuce
Populus alba	White Poplar
Populus nigra "Italica"	Lombardy Poplar
Prunus cerasifera	Cherry Plum
Prunus serotina	Black Cherry
Pyracantha angustifloia	a Firethorn
Pyracantha coccinea	a Firethorn
Pyracantha fortuneana	a Firethorn
Robinia pseudoacica	False Acacia
Rosa rubiginosa	Briar Rose
Rubus fruticosus	Blackberry
Salix alba var. vitellina	Golden Upright Willow
Salix caprea	Pussy Willow
Salix cinerea	Grey Sallow
Salix fragilis	Crack Willow
Salix glaucophylloides	Willow
Salix matsudana "Pendula"	Matsudana Willow
Salix matsudana "Tortuosa"	Tortured Willows
Salix matsudana XS alba (all clones)	Matsudana Hybrid Willows
Salix nigra	Black Willow
Salix purpurea	Purple Osier
Salix viminalis	Common Osier



Scientific Name	Common Name
Salix X rubens (S. alba XS S.fragilis)	Golden Crack Willow
Salvinia molesta	Salvinia
Senecio madagascariensis	Fireweed
Solanum linnaeanum	Apple of Sodom
Sollya heterophylla	WA Bluebell Creeper
Sorbus domestica	Service Tree
Spartium junceum	Spanish Broom
Toxicodendron succedaneum	Rhus Tree
Tradescantia albiflora	Wandering Jew
Ulex europaeus	Gorse
Verbascum thapsus	Great Mullein
Vinca major	Periwinkle
Xanthium occidentale	Noogoora burr
Xanthium spinosum	Bathurst Burr