

CONSERVATION AGREEMENT

Conservation Agreement for the
protection and conservation of the
Green and Golden Bell Frog

Crescent Head Biodiversity Offset
Area

Minister for the Environment and Water on
behalf of the Commonwealth of Australia

HV Operations Pty Ltd

Coal & Allied Operations Pty Ltd

Anotero Pty Ltd

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1. Minister for the Environment and Water (**Minister**) on behalf of the Commonwealth (**Commonwealth**)
2. HV Operations Pty Ltd (ACN 606 478 399) (**HVO**), Coal & Allied Operations Pty Ltd (ACN 000 023 656) (**CAO**) and Anotero Pty Ltd (ACN 618 503 674) (**Anotero**) (together, the **Interest Holder**)

Recitals

- A. Section 305(1)(a) of the EPBC Act provides that the Minister may, on behalf of the Commonwealth, enter into a conservation agreement for the protection and conservation of biodiversity in the Australian jurisdiction.
- B. Condition 4 of the Approval requires the person taking the action to enter into and comply with a conservation agreement under section 305 of the EPBC Act for each of the following offset areas as shown in Schedule 3 to the Approval:
 - i. Figure 1. The Wandewoi Biodiversity Area;
 - ii. Figure 2. The Hook Biodiversity Area;
 - iii. Figure 3A and 3B. The Mitchellhill Biodiversity Area;
 - iv. Figure 4. The Condon View Biodiversity Area;
 - v. Figure 5A and 5B. The Crescent Head Biodiversity Area.
- C. Pursuant to section 305(1A)(a) of the EPBC Act, the purpose of this Agreement is to provide for the protection and conservation of listed species and ecological communities, and their habitat by:
 - (a) protecting and conserving the Protected Matter within the Offset Area; and
 - (b) satisfying condition 4 and 12 of the Approval in respect of the Offset Area.
- D. The Minister, on behalf of the Commonwealth, has agreed to enter into this Agreement with the Interest Holder under section 305(1)(a) of the EPBC Act to give effect to the purpose described in Recital C in respect of the Offset Area.
- E. For the purposes of section 305(2) of the EPBC Act, the Minister is satisfied that:
 - (a) the implementation of this Agreement will result in a net benefit to the conservation of biodiversity; and
 - (b) this Agreement is not inconsistent with any recovery plan, threat abatement plan or wildlife conservation plan.
- F. Pursuant to section 307 of the EPBC Act, this Agreement is binding on the Commonwealth and the Interest Holder, and anyone else who is a successor to the whole or any part of the Interest Holder's respective Interests in the Offset Area.

Agreed terms

1. Definitions and interpretation

1.1 Definitions

In this Agreement, except where the contrary intention is expressed, terms have the meaning they are given in the EPBC Act or Approval and otherwise the following definitions are used:

Agreement	this agreement between the Minister and the Interest Holder, including its Schedules, as amended from time to time in accordance with section 308 of the EPBC Act or clause 9.2 of this Agreement.
Agreement Details	Schedule 1 of this Agreement.
Anotero	Anotero Pty Ltd (ACN 618 503 674)
Approval	the approval granted on 10 October 2016 under sections 130 and 133 of the EPBC Act in respect of EPBC 2016/7640 (a copy of which is included in Annexure 1 to this Agreement), and subject to the conditions of approval as varied from time to time.
Approval Period	means the period from the commencement of this Agreement until the earlier of: (a) the expiry date of the Approval (as may be extended by the Minister from time to time); (b) the date that the Approval is surrendered; and (c) the date that is 20 Business Days after the Approval is revoked, or if a request for reinstatement is made during that period and the Minister decides not to reinstate the Approval, the date that the Minister provides written notice of that decision.
BOMP	the Hunter Valley Operations Biodiversity Offset Management Plan – Crescent Head Biodiversity Area, version 5, dated 3 June 2025, which is included as Schedule 2 to this Agreement, or any subsequent version of that plan approved by the Minister from time to time.
Business Day	in relation to the doing of any action in a place, any day other than a Saturday, Sunday or public holiday in that place.
CAO	Coal & Allied Operations Pty Ltd (ACN 000 023 656)
Change in Control	a situation or occurrence where a party comes under the Control of a person who did not Control that party at the date of this Agreement.
Commonwealth	the Commonwealth of Australia.
Conservation Activity	the actions specified in clause 6.3.

Conservation Activity Objective	the objective specified in clause 6.2.
Control	has the meaning in section 50AA(1) of the <i>Corporations Act 2001</i> (Cth).
Department	the Commonwealth agency responsible for administering the EPBC Act, currently the Department of Climate Change, Energy, the Environment and Water.
Electronic Communication	has the same meaning as in the <i>Electronic Transactions Act 1999</i> (Cth).
EPBC Act	the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (Cth).
EPBC 2016/7640	the action described as “the continuation of open cut coal mining operations in areas that were previously approved by the State after the commencement of the <i>Environmental Protection and Biodiversity Conservation Act 1999</i> within the Hunter Valley Operations (HVO) mine complex, located 24 km north west of Singleton, NSW [See EPBC Act referral 2016/7640]” that was approved in accordance with the Approval.
HVO	HV Operations Pty Ltd (ACN 606 478 399).
HVO Joint Venture	the joint venture arrangement entered into between CAO and Anotero and, as at the date of this Agreement, managed by HVO.
Interest	each Interest Holder’s respective interest in the Offset Area at the date of this Agreement, being: (a) with respect to CAO and Anotero, as the registered proprietors of the Offset Area in fee simple; and (b) with respect to HVO, as the holder of the Approval and the manager of the HVO Joint Venture.
Interest Holder	each of HVO, CAO and Anotero, jointly and severally.
Interest Holder Invitee	any lessee, licensee or other invitee of the Interest Holder, including any contractor (of any tier) or consultant engaged by or on behalf of the Interest Holder, who accesses the Offset Area.
Law	any applicable statute, regulation, by-law, ordinance or subordinate legislation in force from time to time in Australia, whether made by a State, Territory, the Commonwealth, or a local government.
Minister	the Minister administering the EPBC Act or a delegate of the Minister pursuant to section 515(1) of the EPBC Act.
Offset Area	the land described in Item 1 of the Agreement Details.
Protected Matter	the species identified in Item 2 of the Agreement Details.

Security Interest

- (a) any mortgage, pledge, lien, charge or other preferential right, trust arrangement, agreement or arrangement of any kind given or created by way of security, including a security interest (as defined in the *Personal Property Securities Act 2009* (Cth)); and
- (b) any agreement to create or grant any arrangement described in paragraph (a) of this definition.

1.2 Interpretation

In this Agreement, except where the contrary intention is expressed:

- (a) the singular includes the plural and vice versa, and a gender includes other genders;
- (b) another grammatical form of a defined word or expression has a corresponding meaning;
- (c) the meaning of general words is not limited by specific examples introduced by meaning of, for example or similar expressions;
- (d) a reference to a clause, paragraph, Schedule or Annexure is to a clause or paragraph of, or Schedule or Annexure to, this Agreement;
- (e) a reference to a document or instrument includes the document or instrument as novated, altered, supplemented or replaced from time to time;
- (f) a reference to time is to the time in the place where the obligation is to be performed;
- (g) a reference to a party is to a party to this Agreement and:
 - (i) if the party consists of 2 or more persons, is a reference to each of those persons jointly and severally; and
 - (ii) includes the party's executors, administrators, successors and permitted assignees, delegates and substitutes;
- (h) a reference to a person includes a natural person, partnership, body corporate, association, governmental or local authority or agency or other entity;
- (i) a government agency or department includes any successor or replacement of that government agency or department;
- (j) a reference to a statute, ordinance, code or other law includes regulations and other instruments under it and consolidations, amendments, re-enactments or replacements of any of them;
- (k) a rule of construction does not apply to the disadvantage of a party because the party was responsible for the preparation of this Agreement or any part of it; and
- (l) the word 'includes' in any form is not a word of limitation.

2. Agreement Period

- (a) This Agreement commences on the date of execution by the last party.
- (b) This Agreement operates in perpetuity, unless:
 - (i) the parties agree in writing that this Agreement should end, or
 - (ii) the Agreement is terminated under clause 9, or
 - (iii) this Agreement is terminated under the EPBC Act.

3. Priority of documents

If there is any inconsistency between any of the documents forming part of this Agreement those documents will be interpreted in the following order of priority to the extent of the inconsistency:

- (a) the 'Agreed terms' of this Agreement (being clauses 1 through to 13) and Schedule 1 - Agreement Details;
- (b) Schedule 2 – BOMP;
- (c) any Annexure(s) in their order of appearance; and
- (d) documents incorporated by reference in this Agreement.

4. Acknowledgement

- (a) The parties acknowledge and agree that:
 - (i) this is a conservation agreement entered into under section 305(1)(a) of the EPBC Act for the protection and conservation of biodiversity in the Australian jurisdiction; and
 - (ii) the purpose of this Agreement is:
 - (A) the enduring protection of the Protected Matter within the Offset Area; and
 - (B) to satisfy condition 4 and 12 of the Approval in respect of the Offset Area.
- (b) The Minister acknowledges and agrees that:
 - (i) for the purposes of section 305(2)(a) of the EPBC Act, the Minister is satisfied that:
 - (A) this Agreement will result in a net benefit to the conservation of biodiversity; and
 - (B) this Agreement is not inconsistent with any recovery plan, threat abatement plan or wildlife conservation plan.
 - (ii) as required by section 305(3A) of the EPBC Act, in deciding whether to enter into this Agreement, the Minister has had regard to all approved conservation advices for the Protected Matter.

5. Registration of this Agreement

- (a) The Interest Holder must do all things reasonably necessary to have this Agreement registered or noted on each certificate of title for the land comprising the Offset Area as soon as practicable after commencement of this Agreement.
- (b) Without limiting clause 5(a), within 10 Business Days of the commencement of this Agreement, the Interest Holder must submit an application to the NSW Land Registry Services to have this agreement registered or noted on the relevant certificates of title using the form entitled 'Form 11R' or such other form as required by the NSW Land Registry Services.

6. Conservation Activity

6.1 Obligation to carry out the Conservation Activity

The Interest Holder must carry out the Conservation Activity:

- (a) as described in clause 6.3 of this Agreement;
- (b) to protect and conserve each Protected Matter within the Offset Area in accordance with the BOMP;
- (c) in accordance with all applicable Laws;
- (d) so as to deliver the Conservation Activity Objective and meet all reporting requirements, in accordance with the requirements of this Agreement; and
- (e) otherwise in accordance with the provisions of this Agreement.

6.2 Conservation Activity Objective

The Conservation Activity Objective is to:

- (a) protect and conserve each Protected Matter within the Offset Area; and
- (b) by the deadlines specified in the BOMP, ensure that the Offset Area meets the condition thresholds specified in the BOMP.

6.3 Conservation Activity particulars

During the term of this Agreement, the Interest Holder must:

- (a) comply with and implement, in full, the BOMP, including implementing all actions and requirements of the BOMP by the relevant timeframes specified therein;
- (b) comply with its monitoring and reporting obligations under clause 7.2; and
- (c) not take any action that would prevent or otherwise impede the implementation of the BOMP or this Agreement.

7. Review and monitoring of the Agreement

7.1 Review

- (a) The Minister may undertake, or direct the Interest Holder to undertake, a review of the operation of this Agreement, including the Schedules, at any time during the term of this Agreement, including if:
 - (i) in the opinion of the Minister:
 - (A) monitoring conducted in accordance with clause 7.2 indicates that any of the actions, requirements or outcomes of the BOMP are not likely to be achieved by the relevant timeframes therein; or
 - (B) any breach of the BOMP or this Agreement, is detected or is likely to occur; or
 - (ii) any of the conditions of the Approval are varied in accordance with section 143 of the EPBC Act.

- (b) Prior to a review being undertaken, the Minister will consult with the Interest Holder regarding:
 - (i) the terms of the review;
 - (ii) the scope of the review; and
 - (iii) the date by which the review will be completed.
- (c) A review may be linked to a report, document or audit prepared under clauses 7.2 or 7.3.
- (d) Failure to undertake the review contemplated by clause 7.1(a) does not invalidate this Agreement.
- (e) The Interest Holder must comply with any direction given by the Minister under clause 7.1(a) and provide all reasonable assistance to the Minister to enable a review contemplated by clause 7.1(a), including by promptly providing all requested information and data.
- (f) This clause does not limit the Minister's powers to terminate or vary this Agreement under section 308 of the EPBC Act.

7.2 Reporting

- (a) The Interest Holder must, unless otherwise agreed in writing by the parties:
 - (i) monitor and provide to the Minister on an annual basis, a report on compliance with, and the implementation and effectiveness of, this Agreement and the BOMP;
 - (ii) notify the Minister in writing of any non-compliance with this Agreement and the BOMP, promptly after becoming aware of the non-compliance; and
 - (iii) maintain accurate and complete records in relation to compliance with, and the implementation and effectiveness of this Agreement and the BOMP, and provide these to the Minister upon request.
- (b) To the extent that any of the Interest Holder's obligations under clause 7.2(a) may be satisfied through the provision of documents or reports in compliance with HVO's reporting requirements under conditions 21, 21A, 22, 22A and 22B of the Approval, the provision of such documents or reports in compliance with conditions 21, 21A, 22, 22A and 22B of the Approval will be taken to satisfy the Interest Holder's obligations under clause 7.2(a).

7.3 Independent audit of Agreement

- (a) At any time during the term of this Agreement, the Minister may, commission, or direct the Interest Holder to commission, an independent audit of this Agreement, its implementation and the Interest Holder's compliance with the Agreement.
- (b) If the Minister directs the Interest Holder to commission the audit in accordance with clause 7.3(a), the direction may specify:
 - (i) the terms of the audit;
 - (ii) the scope of the audit;

- (iii) the date by which the audit will be completed; and
 - (iv) the independent auditor who will carry out the audit and prepare the audit report, or that the Interest Holder is to propose an independent auditor for the Minister's approval by a nominated date.
- (c) The Minister or their representative, and the person conducting the audit, may at any time upon first giving reasonable notice to the Interest Holder, enter onto the Offset Area to inspect the condition of the Offset Area and carry out the audit.
- (d) The Interest Holder must:
 - (i) comply with any direction given by the Minister under clause 7.3(a); and
 - (ii) fully cooperate with any audit conducted under this clause 7.3, including by:
 - (A) providing any reasonable assistance requested by the Minister or the person conducting the audit;
 - (B) making sure that a representative of the Interest Holder is available to discuss compliance and other relevant matters during the audit with the person conducting the audit; and
 - (C) promptly complying with any requests for documents or other information by the auditor and ensuring that all Interest Holder Invitees promptly comply with such requests.
- (e) The Minister may cause the results of an audit to be published on the internet or through the general media, provided that the Interest Holder has been provided with an opportunity to respond to any adverse audit findings.

7.4 No restraint on powers in this Act

Nothing in this Agreement limits or constrains any inspection, entry or audit power any person may have under the EPBC Act.

7.5 Remedying non-compliance

- (a) If any non-compliance with this Agreement is identified in:
 - (i) a review carried out under clause 7;
 - (ii) any documents or reports submitted under clause 7.2; or
 - (iii) any audit carried out under clause 7.3,
 or is otherwise identified by the Minister acting reasonably, the Minister may, without limiting or affecting its other rights under this Agreement or the EPBC Act, issue a written notice to the Interest Holder requiring the Interest Holder to remedy the non-compliance within a specified period requested by the Minister (**Default Notice**).
- (b) If the Minister issues a Default Notice then the Interest Holder must comply with that notice.
- (c) If the Interest Holder fails to remedy the non-compliance identified in a Default Notice within the period specified in that notice (or such other period agreed

by the parties in writing), the Minister may take all reasonable action to remedy the non-compliance, and may recover the costs of doing so as a debt due from the Interest Holder.

- (d) Nothing in this Agreement, including this clause 7.5 affects or limits the Minister's ability to exercise powers and make any decisions authorised under the EPBC Act in relation to the Interest Holder's failure to comply with this Agreement.

7.6 Access to Offset Area

- (a) The Minister or their representatives may, at any time upon first giving reasonable notice to the Interest Holder, enter onto the Offset Area for the purpose of inspecting the condition of the Offset Area or to monitor compliance with this Agreement.
- (b) The Interest Holder must not, and must ensure that each Interest Holder Invitee does not, obstruct access by the Minister or their representatives to the Offset Area in accordance with clause 7.6(a).

8. Dispute Resolution

8.1 Dispute Notice

- (a) Unless otherwise expressly provided in this Agreement, the parties agree that any dispute between the parties in relation to this Agreement (**Dispute**) must be resolved in accordance with this clause 8.
- (b) If a Dispute arises then either party may give notice to the other party (**Dispute Notice**), which must:
 - (i) be in writing;
 - (ii) state that it is a notice under this clause 8.1; and
 - (iii) include or be accompanied by full details of the Dispute.

8.2 Meeting to discuss

Senior representatives of the Minister and the Interest Holder (Dispute Parties) must meet within 10 Business Days of the service of a Dispute Notice in accordance with clause 8.1 for the purpose of resolving the Dispute.

8.3 Expert determination

If a Dispute is not resolved within 20 Business Days after the service of the Dispute Notice, either party may give a written notice to the other party to refer the Dispute for expert determination (Notice of Referral).

8.4 Appointment of Expert

- (a) Only an expert (as defined in clause 8.4(b)) may conduct an expert determination under clause 8.3.
- (b) An expert is:
 - (i) a person agreed between the parties; or

- (ii) where the parties are unable to reach agreement within 10 Business Days of a Notice of Referral, a person appointed by the Chair of the Resolution Institute.

8.5 Not arbitration

An expert determination conducted under this clause 8 is not arbitration and the expert is not an arbitrator. The expert may reach a decision from his or her own knowledge and expertise.

8.6 Procedure for determination

The parties agree that the expert must give effect to this Agreement and must:

- (a) act as an expert and not as an arbitrator;
- (b) act fairly, impartially and independently of each party;
- (c) apply the expert's own knowledge and expertise;
- (d) determine and notify the parties of the procedure for conducting the expert determination as the expert thinks fit, and is not bound by the rules of evidence;
- (e) make any directions for conducting the expert determination as the expert thinks fit;
- (f) conduct investigations and enquiries, examine documents and interview persons to the extent the expert considers necessary or desirable to resolve the Dispute;
- (g) determine the Dispute as expeditiously as possible; and
- (h) give the parties a written determination with reasons, within 20 Business Days after the date of the engagement, or any later date the parties may agree in writing.

8.7 Legal representation

Each party is entitled to legal representation during the expert determination process set out in clauses 8.4 and 8.6.

8.8 Disclosure of interest

The expert must:

- (a) immediately disclose to the parties any interest he or she has in the outcome of the determination; and
- (b) not communicate with one party to the determination without the knowledge of the other.

8.9 Expert's determination

The determination of the expert:

- (a) shall be in writing;
- (b) will be final and binding, unless a party gives notice of appeal to the other party within 21 days of the determination; and

- (c) subject to clause 8.9(b), is to be given effect to by the parties unless and until it is reversed, overturned or otherwise changed under the procedure in clause 8.13.

8.10 Correction

Any party may make a written request to the expert to correct the determination for:

- (a) a minor mistake arising from an accident or omission; or
- (b) a defect in form.

8.11 Cooperation

Each party must:

- (a) cooperate in good faith with the expert and the other party in the conduct of the expert determination; and
- (b) use reasonable endeavours to comply with all requests and directions reasonably given by the expert.

8.12 Costs

Each party must:

- (a) bear its own costs in respect of any expert determination; and
- (b) unless determined otherwise by the expert, pay one-half of the expert's costs.

8.13 Condition precedent to litigation

- (a) If a Notice of Referral has been given under clause 8.3 in respect of a Dispute, then a party may not litigate the issues the subject of the Dispute unless the Dispute is not resolved within 30 Business Days of receipt of the Notice of Referral (or such later date as the parties may agree in writing).
- (b) Nothing in this clause 8 prejudices the right of a party to seek urgent injunctive or declaratory relief for any matter in connection with this Agreement, or to seek an order or injunction under section 476 of the EPBC Act.

8.14 Confidentiality

- (a) Subject to clause 8.14(b), the parties must, and must ensure that the Expert must, keep confidential and not disclose to any other person:
 - (i) all proceedings and submissions relating to an expert determination under clause 8.3, including the fact that any step in the expert determination is occurring; and
 - (ii) all documents and any other information (in any form) relating to the expert determination, including the Expert's determination.
- (b) A party may disclose confidential information referred to in clause 8.14(a):
 - (i) to an officer, employee, agent, contractor, or legal, financial or other professional advisor, if the disclosure is necessary to enable the party to perform its obligations or to exercise its rights under this Agreement, including to enable the party to receive advice in respect of and participate in an expert determination;
 - (ii) if that party obtains the prior written consent of the other party;

- (iii) as required by Law or any recognised stock exchange; or
- (iv) to the extent necessary to give effect to or to enforce a determination.

8.15 Obligations continue

- (a) Despite the existence of a Dispute, the Interest Holder must continue to perform its obligations under this Agreement, unless a direction is issued in accordance with clause 8.15(b).
- (b) If directed and notified in writing by the Minister to do so, the Interest Holder must cease performing the obligations under this Agreement which are specified in the Minister's notice until the Minister issues a further written notice to the Interest Holder directing it to resume performance of those obligations.

8.16 Subsequent proceedings

A party must not appoint the Expert as arbitrator, advocate or adviser in any arbitral, judicial or adjudication proceedings relating to the Dispute or any part of it, except with the other party's written consent.

9. Termination or variation

9.1 Termination and variation under section 308 of the EPBC Act

The parties acknowledge and agree that:

- (a) under section 308(3)(a) of the EPBC Act, the parties may agree to terminate this Agreement;
- (b) under section 308(4) of the EPBC Act, if the Minister is satisfied that this Agreement is not capable of achieving its purpose, the Minister may, by order published in the Gazette, terminate the Agreement or vary it in any way the Minister thinks necessary to ensure it becomes capable of achieving its purpose;
- (c) the Minister may make an order under section 308(4) of the EPBC Act without the agreement of the Interest Holder;
- (d) if this Agreement is varied by an order under section 308(4) of the EPBC Act, the Interest Holder may terminate the Agreement by written notice given to the Minister, under section 308(7) of the EPBC Act; and
- (e) if this Agreement is terminated or varied by the Minister by an order under section 308(4) of the EPBC Act or terminated by the Interest Holder under section 308(7) of the EPBC Act, the Interest Holder is not entitled to any compensation or damages in respect of the termination or variation, and the Interest Holder releases the Commonwealth and the Minister accordingly.

9.2 Variation by agreement

- (a) Without limiting clause 9.1, the parties may vary this Agreement by agreement.
- (b) No agreement or understanding varying or extending this Agreement is legally binding upon a party to this Agreement unless the agreement or understanding is in writing and signed by the parties.

10. Notices

10.1 Service of notices

- (a) A party giving notice or notifying under this Agreement must do so in English.
- (b) The notice must be given in writing or by Electronic Communication:
 - (i) directed to the other party's address for notices (as set out in Item 3 of the Agreement Details and as varied by any notice); and
 - (ii) hand delivered or sent by prepaid post or Electronic Communication to that address.
- (c) A party to this Agreement must ensure it provides current and correct contact details to the other party.

10.2 Effective on receipt

A notice given in accordance with clause 10.1 takes effect when it is taken to be received (or at a later time specified in it), and is taken to be received:

- (a) if hand delivered, on delivery;
- (b) if sent by prepaid post, on the sixth Business Day after the date of posting (or on the seventh Business Day after the date of posting if posted to or from a place outside Australia); or
- (c) if sent by Electronic Communication, at the time that would be the time of receipt under the *Electronic Transactions Act 1999* (Cth),

but if the delivery, receipt or transmission is not on a Business Day or is after 5.00pm on a Business Day, the notice is taken to be received at 9.00am on the next Business Day.

11. Representations and warranties

The Interest Holder represents and warrants to the Minister that:

- (a) CAO and Anotero are the registered proprietors of the Offset Area;
- (b) CAO and Anotero are participants in the HVO Joint Venture;
- (c) HVO is the manager of the HVO Joint Venture;
- (d) HVO is the holder of the Approval;
- (e) the Interest Holder has full power and authority to enter into, perform and observe its obligations under this Agreement;
- (f) the execution, delivery and performance of this Agreement has been duly and validly authorised by the Interest Holder; and
- (g) no litigation, arbitration, mediation, conciliation or administrative proceedings are taking place, pending, or to the knowledge of any of its officers after due inquiry, are threatened which if adversely decided, could have an adverse effect on the Interest Holder's ability to perform its obligations under this Agreement.

12. Change in ownership or control of the Offset Area or the authorisations

- (a) The parties acknowledge the effect of section 307(c) of the EPBC Act.
- (b) Except as permitted under clause 12(c), the Interest Holder must not sell, assign, novate, transfer, delegate, otherwise deal with, encumber or create a Security Interest over:
 - (i) the Offset Area;
 - (ii) the Approval; or
 - (iii) any of its rights or obligations under this Agreement,without the prior written consent of the Minister (which consent may be withheld in its absolute discretion).
- (c) Without limiting the Minister's discretion under clause 12(b), the Minister agrees to use its best endeavours to make a decision under clause 12(b), and notify the Interest Holder of that decision, within 20 Business Days of receipt of a written request for consent under that clause.
- (d) After the Approval Period, the Interest Holder may sell or transfer to another person (an **Incoming Party**) the Offset Area, provided that it first:
 - (i) notifies the Minister of the details of the proposed Incoming Party;
 - (ii) provides a copy of this Agreement to the Incoming Party; and
 - (iii) procures that the Incoming Party:
 - (A) execute a deed of novation whereby it agrees to assume the obligations, duties and liabilities of the Interest Holder under or in connection with this Agreement, on terms acceptable to the Minister (acting reasonably); and
 - (B) delivers a copy of that executed deed to the Minister.
- (e) For the purpose of clauses 12(b) and 12(d), a Change in Control of an Interest Holder will be deemed to be an assignment by that Interest Holder. Where a Change in Control occurs, clause 12(d)(iii) does not apply.

13. General clauses

13.1 Rights and powers of the Minister

The rights and powers of the Minister under this Agreement are in addition to any rights and powers the Minister has under the EPBC Act.

13.2 Ownership of Agreement

All copyright and other intellectual property rights that subsist in this Agreement remain the property of the Commonwealth.

13.3 Approvals and consents

Except where this Agreement expressly states otherwise, a party may, in its discretion, give conditionally or unconditionally or withhold any approval or consent under this Agreement.

13.4 Costs

- (a) Each party must pay its own costs of negotiating, preparing and executing this Agreement.
- (b) A party which is obliged or permitted to do anything under this Agreement must perform that obligation or exercise that power at its cost unless expressly stated otherwise.
- (c) In particular, except as expressly provided in this Agreement, HVO is responsible for all costs and expenses of complying with its obligations, duties and responsibilities (express or implied) under this Agreement.

13.5 Counterparts

This Agreement may be executed in counterparts. All executed counterparts constitute one document.

13.6 Electronic execution

Each party consents to the signing of this Agreement by electronic means. The parties agree to be legally bound by this Agreement signed in this way.

The Minister may provide the Interest Holder with the ability to sign this Agreement by electronic means, including by giving access to software or to an online service for this purpose.

13.7 Entire agreement

This Agreement constitutes the entire agreement between the parties in connection with its subject matter and supersedes all previous agreements or understandings between the parties in connection with its subject matter.

13.8 Further action

Each party must do, at its own expense, everything reasonably necessary (including executing documents) to give full effect to this Agreement and any transaction contemplated by it.

13.9 Severability

- (a) If a provision in this Agreement is held to be illegal, invalid, void, voidable or unenforceable, that provision must be read down to the extent necessary to ensure that it is not illegal, invalid, void, voidable or unenforceable.
- (b) If it is not possible to read down a provision as required in this clause, that provision is severable without affecting the validity or enforceability of the remaining part of that provision or the other provisions in this Agreement.

13.10 Waiver

Waiver of any provision of or right under this Agreement:

- (a) must be in writing signed by the party entitled to the benefit of that provision or right; and
- (b) is effective only to the extent set out in any written waiver.

13.11 Relationship

- (a) The parties must not represent themselves, and must ensure that their officers, employees, agents and subcontractors do not represent themselves as being an officer, employee, partner or agent of the other party, or as otherwise able to bind or represent the other party.
- (b) This Agreement does not create a relationship of employment, agency or partnership between the parties.

13.12 Governing law and jurisdiction

This Agreement is governed by the law of New South Wales and each party irrevocably and unconditionally submits to the non-exclusive jurisdiction of the courts of New South Wales, including for the avoidance of doubt, the Federal Court of Australia sitting in New South Wales.

13.13 No fetter

Nothing in this Agreement fetters or limits the ability, right, or discretion of the Minister or Department to use any power or make any decision under the EPBC Act or any other statute.

13.14 Publication

The parties note that the Minister will:

- (a) publish a notice of this Agreement in the Gazette and on its website; and
- (b) take reasonable steps to ensure that copies of this Agreement are available for purchase by the general public in accordance with s 309 of the EPBC Act.

13.15 No merger

The rights and obligations of the parties under this Agreement do not merge on completion of any transaction contemplated by this Agreement.

13.16 Operation of certain clauses

All clauses which are by their nature intended to operate or continue to operate after the termination of this Agreement will survive the termination or expiration of this Agreement including clauses 8, 9, 10 and 13.

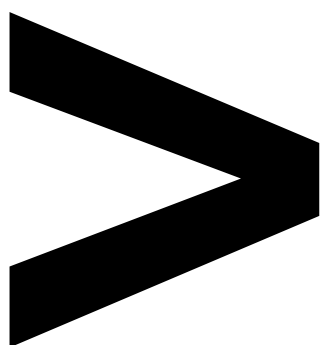
13.17 Joint and several liability

If the Interest Holder consists of 2 or more persons, this Agreement binds them jointly and each of them severally.

Schedule 1 – Agreement Details

Item No.	Description	Clause reference	Details
1.	Offset area	1.1	the Crescent Head Biodiversity Area comprising Lot 4 in DP1209840 and Lot 1152 in DP556364, as shown on the maps at Figures 5A and 5B of Schedule 3 of the Approval
2.	Protected Matter	1.1	Green and Golden Bell Frog
3.	Address for notices	10.1	Minister: Assessment Officer, Post Approval Section Environment Approvals Division Department of Climate Change, Energy, the Environment and Water Postal address: GPO Box 787, Canberra, ACT, 2601 Email: PostApproval@dcceew.gov.au The Interest Holder: Name: Michael Lloyd Position: Environment and Community Coordinator Postal address: PO Box 315 Singleton NSW 2330 Email: Michael.lloyd@hvo.com.au

Schedule 2 – Biodiversity Offset Management Plan



HUNTER VALLEY OPERATIONS

CRESCENT HEAD BIODIVERSITY AREA MANAGEMENT PLAN

DOCUMENT NUMBER

Crescent Head Biodiversity Area MP V5 2024

STATUS

Final

VERSION

5

EFFECTIVE

18/12/2024

REVIEW

18/12/2027

OWNER

Hunter Valley Operations

Uncontrolled when printed

Number: Crescent Head BAMP V5
2024
Owner: Hunter Valley Operations

Status: Final
Version: 5

Effective: 18/12/2024
Review: 18/12/2027

Page 1 of 132



Declaration of accuracy

I declare that:

1. To the best of my knowledge, all the information contained in, or accompanying this Biodiversity Area Management Plan is complete, current and correct.
2. I am duly authorised to sign this declaration on behalf of the approval holder.
3. I am aware that:
 - a. Section 490 of the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) makes it an offence for an approval holder to provide information in response to an approval condition where the person is reckless as to whether the information is false or misleading.
 - b. Section 491 of the EPBC Act makes it an offence for a person to provide information or documents to specified persons who are known by the person to be performing a duty or carrying out a function under the EPBC Act or the Environment Protection and Biodiversity Conservation Regulations 2000 (Cth) where the person knows the information or document is false or misleading.
 - c. The above offences are punishable on conviction by imprisonment, a fine or both.

Signed

MICHAEL LLOYD

(Environment and Community Co-ordinator)

Full name (please print)

HUNTER VALLEY OPERATIONS

Organisation (please print)

03/06/2025

Date



Document Title	Version	Date effective	Comment
DRAFT Biodiversity Areas – Management Plan	1	October 2017	Submitted for approval to DoEE on 10 October 2017.
FINAL Biodiversity Areas – Management Plan	1.1	October 2019	Separate Management Plans for HVO Biodiversity Areas merged to create this document.
FINAL Biodiversity Areas – Management Plan	2	December 2020	Update to include reference to Intensive Weed Management Plan at Hook Biodiversity Area and Figure updates
FINAL Biodiversity Areas – Management Plan	3	May 2021	Update offset areas at Wandewoi and Mitchelhill Biodiversity Areas. Update revegetation area at Hook Biodiversity Area
FINAL Biodiversity Areas – Management Plan	3.1	October 2021	Updated to following consultation with the DAWE
Crescent Head Biodiversity Area – Management Plan	4	May 2022	A separate plan for Crescent Head Biodiversity Area extracted from the HVO Biodiversity Areas – Management Plan V3.1
Crescent Head Biodiversity Area – Management Plan	5	December 2024	Update to Section 2.2 – Information management

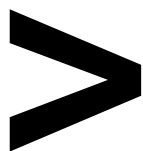
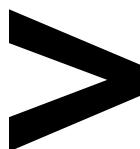


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Abbreviations and Definitions

Acronym	Description
AR	Annual Report
asl	Above sea level
BA	Biodiversity Area includes the Offset Area, infrastructure and other land.
BBAM	BioBanking Assessment Method
BC Act	NSW <i>Biodiversity Conservation Act 2016</i>
CEEC	Critically Endangered Ecological Community
CHVEFW	Central Hunter Valley eucalypt forest and woodland
Coal & Allied	Coal & Allied Operations Limited
COPs	Model Code of Practice
DBH	Diameter at Breast Height
DAWE	Australian Government Department of Agriculture, Water and the Environment (replaced by DCCEEW in July 2022)
DCCEEW	Australian Government Department of Climate Change, Energy, the Environment and Water
DoEE	Australian Government Department of the Environment and Energy (replaced by the DAWE in February 2020)
DP	Deposited Plan
EP&A Act	NSW <i>Environmental Planning and Assessment Act 1979</i>
EPBC Act	Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i>
GDP	Ground Disturbance Permit
ha	Hectare
NCLLS	North Coast Local Land Services
HVO	Hunter Valley Operations
IBRA	Interim Biogeographic Regionalisation of Australia
km	Kilometre
LLS Act	NSW <i>Local Land Services Act 2013</i>
MNES	Matters of National Environmental Significance
NPWS	NSW National Parks and Wildlife Service
NSW	New South Wales
OEH	NSW Office of Environment and Heritage
Offset Area	Area of vegetation and habitat to be secured by legally binding mechanism.
RCA	Rapid Condition Assessment
SOPs	Standard Operating Procedures
TEC	Threatened Ecological Community
WONS	Weeds of National Significance



1 Introduction

1.1 Background

The action is referred to as Hunter Valley Operations (HVO) – State-approved mining project (EPBC 2016/7640). It comprises the continuation of mining in areas approved by the New South Wales (NSW) State Government after the commencement of the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) on 16 July 2000 and prior to commencement of the *EPBC Amendment Bill 2013* (also known as the water trigger) on 22 June 2013. HVO is a joint venture operation located 24km north of Singleton. The action and required Biodiversity Areas (BAs) are shown on Figure 1.

The action was submitted for determination under the EPBC Act to the former Department of the Environment (DoE) (now the Department of Climate Change, Energy, the Environment and Water (DCCEEW)) on 29 January 2016. On 3 March 2016, the Minister determined that the action was a controlled action under Section 75 of the EPBC Act and was required to be assessed by preliminary documentation under Section 87 of the EPBC Act.

The preliminary documentation report was submitted to DoE on 5 May 2016. The preliminary documentation report concluded that the action was likely to result in significant impacts on the following protected matters:

- Central Hunter Valley eucalypt forest and woodland ecological community (CHVEFW);
- Regent Honeyeater (*Anthochaera phrygia*);
- Swift Parrot (*Lathamus discolor*); and
- Green and Golden Bell Frog (*Litoria aurea*).

The preliminary documentation report included a preliminary strategy to provide offsets for the above protected matters, in accordance with the EPBC Act Environmental Offsets Policy (SEWPaC 2012a).

The action was approved by the Acting Assistant Secretary on 10 October 2016, subject to conditions. The action commenced on 1 November 2016.

Due to the ongoing drought conditions that were experienced in NSW, the requirement to regenerate up to 230 ha of grassland at the Wandewoi BA presented a compliance risk and there were community concerns in relation to the loss of the agricultural landscape of Jerrys Plains. HVO proposed to vary the conditions of approval to substitute the majority of the grassland areas of the Wandewoi BA with equivalent habitats within the Hook BA in Belford, NSW.

It was determined by the Department that in order to facilitate an adequate offset swap for the CHVEFW, it must be demonstrated that the revised offset package meets the approved quantum of impact as calculated by the EPBC Offset Assessment Guide tool. It was also agreed that the calculations that have been accepted by the Department would not be altered, and only those calculations that are impacted by the proposed variation would be contemporised.

An assessment of the Hook BA using the Commonwealth-accredited BioBanking Assessment Methodology (BBAM) and the EPBC Offset Assessment Guide tool was undertaken to demonstrate that the offset swap provides the same or greater offset quantum outcome to the offset required.

In accordance with the approval, the Wandewoi and Hook BAs offset the majority of the action's impacts on CHVEFW and 100% of the action's offset requirements for the Swift Parrot. The Mitchelhill BA offsets 100% of the residual impacts on CHVEFW and 53.9% of the residual Regent Honeyeater impacts. Condon View BA will offset the remaining 46.6% of the residual



Regent Honeyeater impacts. Crescent Head BA will offset 100% of the residual significant impact on the Green and Golden Bell Frog when combined with the other compensatory measures.

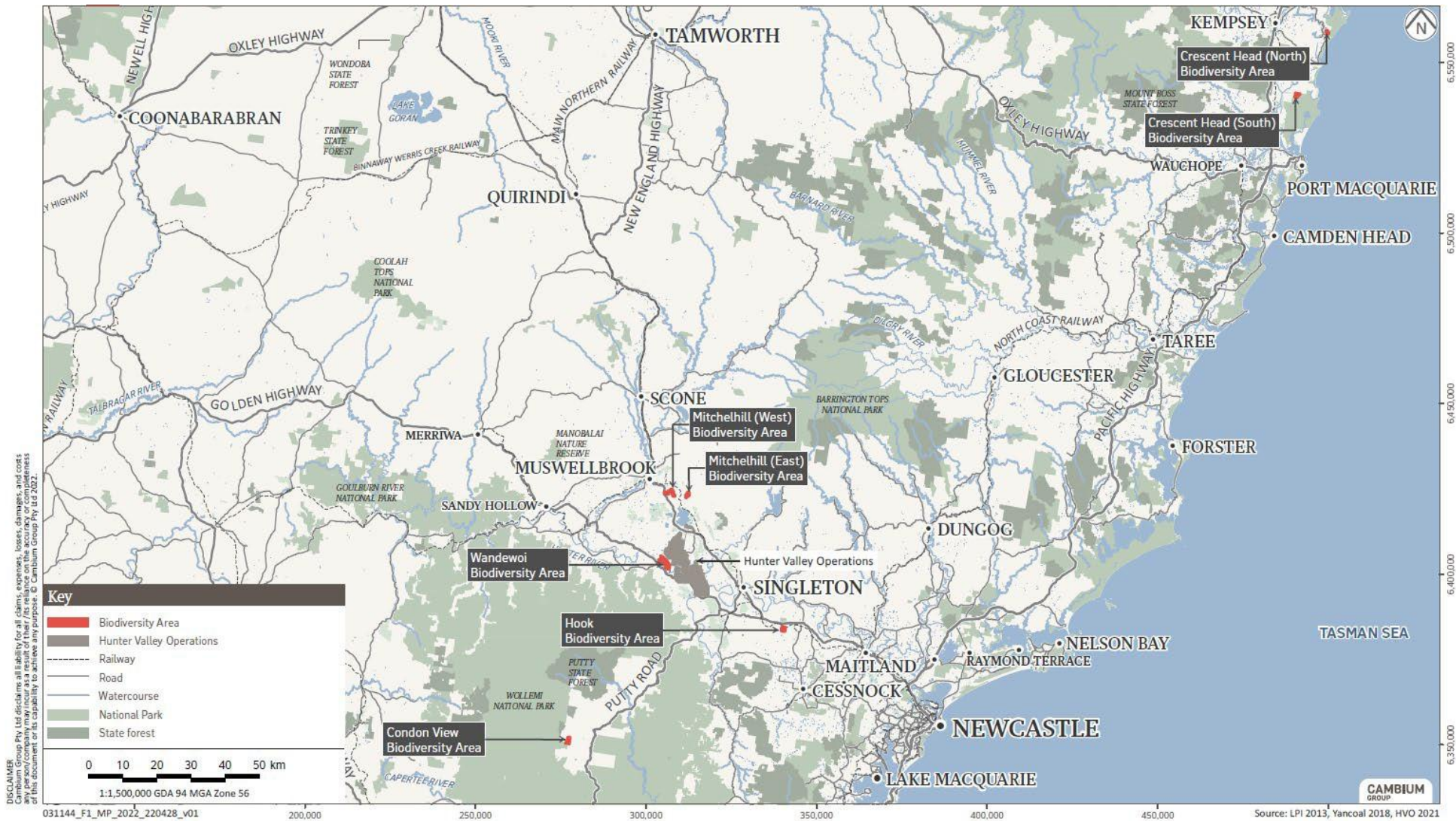


Figure 1 Location of the Hunter Valley Operations Biodiversity Areas

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1.2 Approval history

1.2.1 State

While HVO is managed as one operation, HVO North and HVO South have separate NSW planning approvals. Coal & Allied was granted Project Approval by the NSW Minister for Planning for HVO South on 24 March 2009. The approval was granted under the provisions of the *Environmental Planning and Assessment Act 1979* (EP&A Act), reference NSW PA 06_0261. The approval granted permission to clear 48 ha of remnant native vegetation and 92 ha of regrowth. To offset this impact, 140 ha of Narrow-leaved Ironbark Woodland is to be protected in perpetuity. The offset area to satisfy this condition is located within the Goulburn River BA.

1.2.2 Commonwealth

Referral

A review was undertaken as part of the referral process for EPBC 2016/7640 to identify any new or modified development consents granted under the EP&A Act after the commencement of the EPBC Act where the approved mining disturbance footprint had increased. The outcomes of the review identified the disturbance areas for the action, namely the West Pit, Carrington Pit, Riverview Pit and Cheshunt Pit extension areas. In May 2015, the Commonwealth Government listed the CHVEFW as a critically endangered ecological community (CEEC) under the EPBC Act. An area of approximately 61 hectares (ha) of CHVEFW was identified within the footprint of the action. Clearing of approximately 61 ha of CHVEFW equates to approximately 0.2% of the total occurrence of the CHVEFW as mapped by the listing and is likely to have a significant impact on the community.

The action will also result in the clearing of potential habitat for the Green and Golden Bell Frog, a vulnerable species under the EPBC Act. An area of approximately 105.3 ha of potential Green and Golden Bell Frog habitat was identified within the footprint of the action. Clearing of approximately 105.3 ha of potential Green and Golden Bell Frog habitat has the potential for a significant impact on this species. Approximately 68.4 ha of Regent Honeyeater and 68.1 ha of Swift Parrot habitat was also identified within the footprint of the action, and was deemed likely to result in a significant impact for these species.

Approval pathway

The action was assessed by preliminary documentation. The Commonwealth Minister for the Environment (Minister), under provisions of the EPBC Act, granted approval for HVO on the 10 October 2016 to disturb 61 ha of CHVEFW, 68.4 ha of Regent Honeyeater habitat, 68.1 ha of Swift Parrot habitat and 105.3 ha of Green and Golden Bell Frog habitat. The Commencement of the Action occurred on 1 November 2016.

To compensate for the significant residual impacts from this disturbance on Matters of National Environmental Significance, a Biodiversity Offset Strategy (EMM 2017a) was submitted and approved by the Minister. Following extensive ecological investigations and discussions with the then Department of Environment and Energy (DoEE) (now DAWE), the Biodiversity Offset Strategy has been revised (HVO 2021) to allow for the substitution of the majority of the

grassland offset areas at Wandewoi BA for habitats within the Hook and Mitchelhill BAs that will meet the approval requirements.

This Management Plan (Plan) meets the offset requirements for the Crescent Head BA in accordance with the Biodiversity Offset Strategy (HVO 2024) and EPBC 2016/7640.

HVO enforceable undertaking

Between May and December 2015, Coal & Allied inadvertently cleared vegetation that was later identified as CHVEFW at HVO. The action was undertaken as part of the pre-stripping operations in advance of the mine, within areas approved for mining by the State.

On 24 December 2015, Coal & Allied notified the DoEE of the action. Based on an initial desktop analysis of regional vegetation mapping (Peake 2006), the notification reported that 16.5 ha of CHVEFW was cleared. Following ecological field investigations, the area of CHVEFW cleared was revised to 31.5 ha.

An investigation report was prepared (EMM 2016) to document the extent of CHVEFW clearing and was provided with an updated notification to DoEE on 29 January 2016. The Minister's delegate determined that Coal & Allied undertook the action without approval, and that the action resulted or was likely to have resulted in a significant impact on CHVEFW.

Compensation for the action is provided in the form of an enforceable undertaking. An enforceable undertaking is a written undertaking provided by a person to the Minister that specifies that the person will pay an amount within a given period to the Commonwealth or to another party for the purpose of protection and conservation of a protected matter.

In relation to the HVO enforceable undertaking (the enforceable undertaking) Coal & Allied committed to the following:

- provision of an offset to compensate for the clearing of 31.5 ha of CHVEFW in accordance with the EPBC Act Environmental Offsets Policy (SEWPaC 2012a) within 12 months of the undertaking;
- securing the offset in perpetuity within a reasonable timeframe;
- provision of additional funds for ongoing management of the offset; and
- re-establishment of species consistent with CHVEFW on 31.5 ha of Derived Native Grassland at Mitchelhill.

The Minister will not pursue further action against Coal & Allied in relation to the action on the basis that the requirements of the enforceable undertaking are fulfilled.

A Biodiversity Offset and Rehabilitation Strategy has been prepared (EMM 2017b) to describe the offset and rehabilitation for the HVO enforceable undertaking. It is proposed that the Mitchelhill BA will offset 100% of the enforceable undertaking's impacts in addition to the offsets provided for EPBC 2016/7640, namely the clearing of 31.5 ha of CHVEFW, Regent Honeyeater and Swift Parrot habitat. Disturbed land (31.5 ha) at Mitchelhill BA will also be rehabilitated to CHVEFW, in accordance with the HVO enforceable undertaking.

Transfer of ownership

On 8 May 2018, Coal & Allied sought approval from the DoEE to transfer the EPBC approval from Coal & Allied Operations Pty Ltd to HV Operations Pty Ltd. This was required due to HVO becoming a joint venture operation. The Department accepted the request on 3 September 2018.

Conditions of approval

This Plan has been prepared in accordance with Condition 11 of the final approval decision notice for EPBC 2016/7640 and addresses all recommendations in the offset management plan checklist. Compliance with Condition 11 and the offset management plan checklist is demonstrated in Table 1 and Table 2, respectively. The conditions of approval are provided at Appendix A of the Plan.

This Plan has been prepared for the Crescent Head BA and specifically addresses the offsets that will be provided to compensate for the action's residual impacts on Green and Golden Bell Frog habitat in accordance with condition 9.



Table 1 Compliance with Condition 11

Condition	Page/section addressed in the Plan
11. To compensate for residual impacts to the protected matters , the person taking the action must submit to the Department , for the Minister's approval, a Biodiversity Offset Management Plan (BOMP) for each of the offset areas . Relevant offset attributes and shapefiles , must be provided to the Department at the time each BOMP is submitted. Each BOMP must:	
a. Detail the location, nature and boundaries of the relevant offset area, including textual descriptions and maps;	Section 1 and Figure 2 (Crescent Head (North)) and Figure 3 (Crescent Head (South))- describe the direct offset sites for Green and Golden Bell Frog relevant to Condition 9 of the approval
b. Include a survey and description of the current condition (prior to management activities commencing) of each offset site;	Section 3.2 describes the current condition of the Green and Golden Bell Frog habitat relevant to Condition 9 of the approval
c. Detail management actions to be undertaken at each offset site to protect and improve the habitat quality for the relevant protected matters. This must include but not be limited to weed management, feral animal management, erosion and sediment control, and fire management, as necessary;	Section 5 describes the detailed management actions, timing, performance criteria and completion criteria relevant to each offset site for the Green and Golden Bell Frog.
d. Include timeframes, interim performance targets and completion criteria for implementing all management measures and for achieving and demonstrating achievement of all required improvements in the condition of the offsets. These must include criteria for triggering corrective actions if interim performance targets and/or completion criteria are not met by the relevant timeframes;	Section 5 describes the detailed management actions, timing, performance criteria and completion criteria relevant to each offset site for the Green and Golden Bell Frog.
e. Include a program to monitor and report on the effectiveness of the management measures, and to assess and demonstrate progress against the interim performance targets and the completion criteria;	Section 6 describes the monitoring program.
f. Identify the potential risks to the successful implementation of the BOMP; and	Section 7 provides a description of potential risks and corrective actions.
g. Include measures that will be implemented to mitigate identified risks to successful BOMP implementation, monitoring to detect the likely realisation of those risks, and corrective measures that will be implemented if those risks are realised.	Section 7 provides a description of potential risks and corrective actions.



Table 2 Compliance of the Plan with the offset management plan checklist

Requirements for OMPs	Page/section addressed in the Plan
1. The plan includes an executive summary which states the relevant approval conditions, expands upon the purpose of the plan, and outlines the primary measures to manage key risks and achieve the plan's objectives.	N/A
2. The plan is required under EPBC Act approval conditions, and includes a table containing: a. approval condition requirements; b. section and page numbers which address the approval conditions; and c. key commitments for meeting each condition requirement.	Table 1 provides the approval conditions and where they are addressed in the Plan. The key commitments are provided in Section 5.
3. The plan is supported by an offset strategy. User inputs to the EPBC Offset Guide are the basis to management planning, specifically: a. completion criteria and interim performance targets are demonstrably based on start quality, future quality with offset and time until ecological benefit; and b. management measures are specifically related to attainment of completion criteria and interim performance targets.	This Plan is supported by the Biodiversity Offset Strategy for EPBC 2016/7640 (HVO 2021) that describes the user inputs to the EPBC Offset Guide.
4. The plan states the environmental outcomes to be achieved by implementing the plan. The plan defines environmental outcomes as measurable extent and condition targets, or circumstances of, the protected matter (e.g. water quality environmental values, ecological attributes/function).	Section 4
5. The plan includes performance targets. For the purpose of the plan, performance targets are time-bound short and medium term targets, for management interventions and environmental condition that are used to monitor, evaluate, review and improve the effectiveness of the plan.	Section 4 describes the objectives, time-bound performance criteria and completion criteria. A trigger, response and action plan is provided for each management action in Section 5.
6. The plan includes management measures that will be implemented to offset environmental impacts. Each management measure: a. has timeframes for implementation; b. is described sufficiently to avoid ambiguity and to inform plan implementation; c. is related to performance targets; and d. is derived from recognised principles, practice, or guidelines, and is justified - technically, scientifically and/or legally – as an effective and appropriate measure to attain and/or maintain the plan's performance targets.	Section 5 describes the management actions, their timeframes and performance targets.
7. The plan describes the purpose of monitoring and its functional relationship to operational decisions.	Section 6.2



8. The plan states monitoring objectives to meet operational decision-making. To this end: a. for each objective, the monitoring plan specifies the variables to be measured, the state and/or rate of change, the precision and confidence, the spatial resolution and time scales required to inform operational decision-making; and b. the monitoring objectives provide for 'early-control' (that management actions are effective) and 'early warning' (corrective actions are required) functions, so as inform timely decisions on corrective actions to ensure performance and completion criteria are achieved.	Section 6.2
9. The plan includes a monitoring program comprised of monitoring methods, a data handling strategy, arrangements for the periodic technical review and evaluation of the monitoring program and timeframes for implementing program components.	Section 6 describes the monitoring methods. Section 2.2 describes the data handling strategy. Section 2.4 describes review of the monitoring program. Table 14 provides the implementation timeframes for the monitoring program.
10. The plan describes the monitoring methods that will be implemented, and: a. includes quantitative (e.g. on-ground survey results) and qualitative baseline data (e.g. photos from photo-point monitoring sites) that establish the start quality/condition of the environment; b. describes the sampling strategy (including monitoring area, site selection and sampling intensity over space and time) and statistical analyses to be employed; c. justifies the sampling strategy/monitoring methods, including through the likely statistical power delivered by the strategy/method; d. justifies the monitoring methods to be used, including: e. an assessment of effectiveness and constraints to use; f. capacity to detect change in environmental condition due to management interventions; g. capacity to demonstrate attainment of performance targets and completion criteria; h. commits to engage appropriately qualified experts to design and conduct monitoring and survey activities, and analyse monitoring results; and i. the location, nature and number of monitoring sites, including benchmark/reference sites to evaluate management performance (c.f. seasonal variation) and that for offset management plans verify future condition without offset values used to determine offset requirements.	Section 6 describes the monitoring methods that will be implemented. Requirements (a.) to (i.) are addressed for each action.



11. The plan includes a data handling program for data storage and protection, data extraction, quality control, analysis, interpretation, reporting and presentation. Data ownership, and distribution, availability and licensing to the Department for compliance and recovery planning purposes, must be specified. Timelines for the data handling, analyses and delivery should be specified.	Section 2.2
12. The plan outlines a periodic technical review and evaluation of the plan and the likely composition of the review committee(s).	Section 2.4
13. The plan assesses the risk of failure to achieve the plan's performance targets. To this end the plan: a. states the plan's performance targets; b. identifies events or circumstances that prejudice attainment/maintenance of performance targets. The events or circumstances must address scientific/ecological uncertainty, stochastic events and legal/land use planning factors that may represent risks; c. includes a qualitative assessment of the likelihood and consequence of those events or circumstances, and the residual risk of failure to achieve those criteria due to identified events or circumstances (assuming management measures will be implemented); d. characterises risk as low, medium, high or severe, and derived from likelihood (highly likely, likely, possible, unlikely, rare) and consequence (minor, moderate, high, major and critical); and e. explains how consequence, likelihood and risk level for each risk have been determined.	Section 4 provides performance targets for the Plan. Section 7 provides a risk assessment for these performance targets.
14. The plan manages the risk of failure by: a. detailing management measures that will be implemented to achieve the performance targets; b. enhancing management measures for high risk events or circumstances, thereby providing a 'margin of safety' to avoid or mitigate the likelihood and/or impacts of the event or circumstance; c. specifying management triggers (measurable events or circumstances) that detect actual or potential issues in a timely manner to avoid, minimise or mitigate adverse impacts; d. ensuring the monitoring program includes activities to detect management triggers, and explaining how monitoring activities may inform the selection and implementation of corrective actions; and e. detailing effective contingency responses and corrective actions that may be implemented if a management trigger is realised.	Section 5 details the management measures. Each management measure has its own trigger, response and action plan that details contingency measures.



15. The plan identifies and manages uncertainty. To this end the plan specifies: a. key data/information used to formulate the plan; b. the limitations and/or uncertainty associated with the use of that data/information; and c. how limitations and/or uncertainty, and associated risks, are mitigated during plan implementation. For example, where a margin of safety is applied to management measures until uncertainty is reduced to an acceptable level or performance criteria are attained/maintained.	Section 7 provides a risk assessment that identifies and provides management for uncertainty.
16. The plan includes a schedule and triggers for auditing the implementation and effectiveness of the plan, and outlines auditable systems for recording plan implementation and the environmental outcomes achieved.	Section 2.4 describes the annual reporting and auditing measures.
17. The plan includes an adaptive implementation program to ensure uncertainty is reduced over time, and that performance targets and completion criteria are achieved. The plan therefore includes arrangements for: a. ensuring new data/information is collected and incorporated into the plan, as a result of implementing the plan and from new information derived from external sources (e.g. academic literature, EPBC policy statements); b. effectively coordinating, scheduling and/or triggering monitoring, risk management, auditing and reporting activities; c. periodically reviewing risks, including in response to the risk level, changing circumstances or the results from implementing contingency responses; d. frequent review of the effectiveness of management measures with significant levels of uncertainty, relatively long implementation timeframes, and upon which the plan is highly dependent; e. addressing the consequences of significant environmental incidents (pre-determined and unanticipated); and f. reviewing the plan under the following circumstances: g. performance reports indicate performance targets/completion criteria may not be achieved; h. according to approved timeframes; and i. the impacts of significant environmental incidents.	Section 5 details the management measures. Each management measure has its own trigger, response and action plan that details contingency measures. The Plan is reviewed annually and monitoring is undertaken to test the efficacy of management measures against performance targets.
18. The plan specifies reporting commitments, including: a. reporting required under EPBC conditions of approval; b. an outline of the standard report content; and c. a schedule and triggers for reporting.	Section 2.4
19. The plan specifies accountabilities for implementing the plan, including management measures, risk management, monitoring, reporting, review, auditing and contingency responses.	Section 2.3 provides responsibilities for the Plan.



20. Maps, plans, figures, images and sections used in the plan: a. are scaled to enable the reader to clearly identify, based on local landmarks (trees, fences, structures) the location of features shown on the map etc; b. shows the offset area in a regional context; c. environmentally sensitive areas on or near the project site, vegetation/habitats that require protection, are buffer or 'no-go' zones d. monitoring locations and/or where random monitoring/survey activities will be undertaken e. shows areas with differing environmental condition or quality; f. include appropriate standard metric scales to represent the information (for example 1:25 000, 1:10 000 and 1:5000). Datum – plans and cross sections refer to AHD; g. have metric measurements, graphic bar scales, local grid lines and standards and north point or orientation of sections (include a key) are used throughout; and h. include title blocks in the lower right hand corner with the following information: EPBC number and project name, title and number of the plan, author, scale, date, source and date of data.	All figures have been prepared in accordance with these mapping requirements.
21. The plan references scientific, legal or other claims or statements that support the effectiveness of the plan, e.g. references to scientific literature, published guidelines, legislation, conservation advice, recovery plans, threat abatement plans.	Section 5.11 describes the consistency of the Plan with statements that support its effectiveness. References for cited literature are provided in Section 8
22. The plan uses the terms 'will' and 'must' when committing to actions, instead of 'where possible', 'as required', 'to the greatest extent possible', 'should' or 'may'.	Applied throughout the Plan
23. The footer or header of each page of the plan states the name of the project, the date of the plan and sequential page numbering.	On each page of the Plan
24. The plan includes a glossary of terms comprised of acronyms, terms open to different interpretations, not in common use, technical or defined in the approval conditions.	Page 7
25. The plan includes as appropriate implementation, risk assessment and management, monitoring and reporting schedules prepared in accordance with Appendix A.	Section 7 provides risk assessment in accordance with Appendix A. Section 6 provides monitoring in accordance with Appendix A. Section 2.1 provides an outline of report contents.

26. The plan submitted for approval includes an Approval Holder Declaration signed by the approval holder.
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Page 2

1.3 Offsets at the Hunter Valley Operations Biodiversity Areas

The Biodiversity Offsets Strategy (HVO 2021) has been prepared in accordance with the approval conditions and the Offset Strategy Checklist.

The Biodiversity Offset Strategy has five objectives:

- to compensate for residual significant impacts to 54.4 ha of Class A condition CHVEFW from the Riverview Pit extension area;
- to compensate for residual significant impacts to 6.6 ha of Class B condition CHVEFW from the West Pit extension area
- to compensate for residual significant impacts to 68.4 ha of breeding and foraging habitat for the Regent Honeyeater;
- to compensate for residual significant impacts to 2.6 ha of breeding habitat and 102.7 ha of foraging habitat for the Green and Golden Bell Frog; and
- to compensate for residual significant impacts to 68.1 ha of winter foraging habitat for the Swift Parrot.

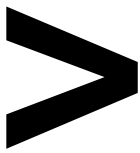
A staged process was originally implemented to identify offset sites that achieve the objectives of the BOS. The first stage comprised a detailed desktop analysis of previous local studies and GIS datasets to identify multiple potential offset sites that contain CHVEFW, Swift Parrot, Regent Honeyeater and/or Green and Golden Bell Frog habitat. A large number of potential offset sites were identified as part of the desktop analysis. The list of these sites was refined to landowners willing to enter into a contract and/or provide access for site assessment purposes.

Preliminary surveys were conducted to determine if the properties identified contained the required biodiversity values. HVO then selected suitable offset sites, namely Mitchelhill BA (comprising Mitchelhill East and Mitchelhill West), Condon View BA and Crescent Head BA (comprising Crescent Head (north) and Crescent Head (south)). Following proposed revisions to the Wandewoi BA boundaries, the Hook BA was surveyed and assessed using the NSW BioBanking Assessment Methodology (BBAM) for inclusion in the BOS. These offset sites were selected based on the results of the preliminary surveys, an assessment of land values and the practicality of ongoing management that would be required. Detailed surveys were completed at these sites to determine the extent of CHVEFW, Swift Parrot and Regent Honeyeater habitat, and targeted surveys and habitat assessment for the Green and Golden Bell Frog.

Following the completion of surveys, the Offset Assessment Guide (DSEWPaC 2012b) was completed for each of properties to determine the percentage of direct offset provided for CHVEFW, Swift Parrot, Regent Honeyeater and Green and Golden Bell Frog. The sites provide a 100% (or higher) direct offset for CHVEFW and Regent Honeyeater, and a 99.29% direct offset for the Green and Golden Bell Frog. The residual 0.71% offset for the Green and Golden Bell Frog has been provided through a contribution to a research program.

The primary measures to achieve the strategy's objectives include:

- the provision of Mitchelhill BA, Condon View BA, Crescent Head BA, Wandewoi BA and Hook BA as direct offsets for CHVEFW CEEC, Regent Honeyeater, Swift Parrot and Green and Golden Bell Frog;



- contribution to a research or conservation program to satisfy the 0.71% residual offset requirement for the Green and Golden Bell Frog;
- implementation of management measures at the direct offset sites, comprising:
 - strategic grazing and weed management to improve the quality of CHVEFW, Swift Parrot and Regent Honeyeater habitat;
 - revegetation of corridors through derived native grasslands to increase the area and resilience of CHVEFW, Swift Parrot and Regent Honeyeater habitat;
 - investigation of the need for Noisy Miner management in Swift Parrot and Regent Honeyeater habitat;
 - management of Mosquito Fish to create suitable conditions for Green and Golden Bell Frog breeding;
 - maintenance of vegetation structure in existing open areas as Green and Golden Bell Frog foraging habitat.

1.4 Intent of the Plan

The Plan provides the management framework for the Crescent Head BA with the aim to protect and enhance conservation values through the implementation of conservation management actions.

The intent of the Plan is to:

- comply with the EPBC 2016/7640 environmental approval;
- support the legally binding conservation mechanism by implementing the conservation management actions in Section 5 and monitoring in Section 6; and
- achieve the conservation objectives set out in Section 4.

The legally binding conservation mechanism must remain on the land title in perpetuity, for the land parcels listed in Section 3.1.

2 Management Plan framework

2.1 Structure of the Plan

For the Plan to be successful it needs to define the baseline ecological condition of the BA, provide clear conservation objectives, detail the conservation management actions and measure success.

This Plan addresses the following:

- Crescent Head Biodiversity Area: describes the BA and baseline ecological condition of the vegetation communities and habitats;
- Conservation Objectives, Key Performance Indicators and Completion Criteria: outlines the conservation objectives for the Plan, conservation values and key performance indicators that have guided the development of conservation management actions and the monitoring program;
- Conservation Management Actions: lists the primary management actions to be implemented to increase the extent, connectivity and condition of the plant community types and habitats, including Trigger, Response and Action plans;
- Monitoring: details the approach to data collection, analysis and interpretation to measure the efficacy of the conservation management strategies, guide adaptive management, identify positive trends in conservation values and assess attainment and maintenance of Key Performance Indicators and Completion Criteria; and
- Risk Assessment: provides a matrix of key risks in the implementation of the Plan and attainment of the objectives.

2.2 Information management

To secure monitoring data and assist in the management of the BA, records are maintained in accordance with HVO's Environmental Management Strategy.



2.3 Key project stakeholders and roles

The key project stakeholders are identified by their roles in Table 3.

Table 3 *Key project stakeholders and roles*

Roles	Responsible entity	Details
Commonwealth Regulator: Administers approvals granted under the EPBC 2016/7640.	Australian Government Department of Climate Change, Energy, the Environment and Water (DCCEEW)	PostApproval@dcceew.gov.au (for submission of Plan and matters related to the EPBC approval) EPBCMonitoring@dcceew.gov.au (for submission of Annual Report and EPBC Annual Compliance reports)
Land owner: Holds the title for the land.	HVO Resources Pty Ltd whose operations are managed by Hunter Valley Operations.	Manager – Environment and Community
Project Proponent: Prepare and implement the Plan and complete reporting.	Hunter Valley Operations	Manager - Environment and Community
Biodiversity Auditor: Monitor improvement in condition of the biodiversity values and completes ecological monitoring.	Hunter Valley Operations	HVO to engage suitably qualified person/s.

2.4 Review and reporting

The Plan will be reviewed every four years from the date the Plan is approved by the Commonwealth approval authority. The review will incorporate suggestions from the Biodiversity Auditor after completing the threatened species and habitat monitoring, update information on the ecological condition and extent of the plant community types and habitats across the BAs and refine conservation management actions. The review will incorporate any updated National Recovery Plans and other literature to ensure that the management actions in the Plan are aligned and consistent with current science and conservation management practice.

Revisions of the Plan that reduce the management requirements will require approval from DCCEEW. Any other changes will require notification and a copy (electronic with marked up changes, explanation and the reasons for the changes, as well as the date of the proposed implementation of the revised Plan) to be provided to DCCEEW. Plan updates that will not require approval will be those not likely to have a new or increased impact on the Green and Golden Bell Frog (as per Section 143A of the EPBC Act).

Annual Reports will include a summary and analysis of monitoring data and notable management outcomes.

The Annual Report will be submitted to DCCEEW for the period the EPBC Act approval has effect and will report on the activities undertaken during the previous calendar year. The report will be prepared with input from a suitably qualified ecologist or environmental scientist and will include the following information as a minimum:

- the name and contact details of the Landholder and/or Leaseholder;
- identification of any required vegetation clearing that was undertaken;
- a list of conservation management actions undertaken, describing scope of works, skill and expertise of the responsible entity/ies completing the works and performance;
- monitoring results, with all relevant data correctly labelled with date, location and GPS points;
- an analysis of monitoring results with recommendations for modifications, if any, to the management or monitoring activities;
- an assessment of any new risks or potential threats to the BAs and actions to be undertaken to manage these threats and/or risks; and
- an assessment of the progress in attainment of the conservation objectives and key performance indicators.

3 Crescent Head Biodiversity Area

This section provides details on the location, cultural heritage values and vegetation communities at the Crescent Head BA. This BA is required to offset the Green and Golden Bell Frog as a MNES. The profile of the Green and Golden Bell Frog is provided in Appendix B.

3.1 Location and description

Crescent Head BA comprises two sites, namely Crescent Head (North) and Crescent Head (South). Crescent Head (North) comprises 52.8 ha of Green and Golden Bell Frog Habitat and is approximately 16 kilometres (km) east of Kempsey. Crescent Head (South) comprises 136.7 ha of Green and Golden Bell Frog habitat and is approximately 18 km north of Port Macquarie. Crescent Head (North) is accessible from Loftus Road and Crescent Head (South) from Illa Langi Road.

The Crescent Head BA is comprised of two separate cadastral parcels owned by Coal & Allied Operations Pty Ltd and Anotero Pty Limited (Table 4). Figure 2 and Figure 3 show the cadastral boundaries of Crescent Head (North) and Crescent Head (South), respectively.

Table 4 Biodiversity Area lot and deposited plan (DP)

Region	Lot	DP	Offset area (ha)
North	4	1209840	52.8
South	1152	556364	136.7
Total			189.5

The Crescent Head BA is located within the NSW North Coast Bioregion and Kempsey Shire local government area. Hat Head National Park is immediately east of Crescent Head (North) and Limeburners Creek National Park is immediately south of Crescent Head (South). The BA contributes to a south to north biodiversity corridor through the National Parks. Biodiversity corridors are connected or stepping stones of existing native vegetation that provide connectivity at a landscape scale for flora and fauna. They are important in the ongoing conservation and protection of flora and fauna, as they enable migration, improve resilience to environmental and climatic variability and support genetic diversity.

Crescent Head (North) has been historically grazed. Parts of Crescent Head (South) have been historically cleared with a tea tree plantation in the north of the site.

The biophysical context for the region is provided in Table 5.

Table 5 Regional biophysical context

Geographical Feature	Description
Bioregion	NSW North Coast
Local Land Services Region	North Coast
IBRA subregion	NSW North Coast
Mitchell Landscape	Manning – Macleay Barriers and Beaches (Crescent Head (North)) Brooms Head – Kempsey Coastal Ramp (Crescent Head (South))
Watercourses	Unnamed watercourses



Elevation	0-10 m
Geology	Carboniferous
Nearby conservation areas	Hat Head National Park (Crescent Head (North)) Limeburners Creek National Park (Crescent Head (South))

3.2 Regional conservation context

Crescent Head (North) is part of the Upper North population of Green and Golden Bell Frogs (DEC 2005). The population is centred on Hat Head National Park, to the east of Crescent Head (North).

Crescent Head (North) is part of an Office of Environment and Heritage (OEH) saving our species management site for the Green and Golden Bell Frog (Plate 1). The management site adjoins Hat Head National Park and comprises 6,725ha of privately-owned land. OEH has estimated the population size of Green and Golden Bell Frogs to be 1,000 within the management site.

Proposed OEH conservation actions within the management site comprise:

- determining the area of occupancy of the species;
- increasing the understanding of the species ecological requirements;
- investigating the presence, susceptibility and effects of the Chytrid fungus; and
- tracking the species abundance and condition over time.

Crescent Head (North) was identified as part of the Crescent Head species management site as it contains potential breeding and foraging habitat for the Green and Golden Bell Frog for the Upper North Green and Golden Bell Frog population, outside the formal conservation reserve of Hat Head National Park.

Management site map

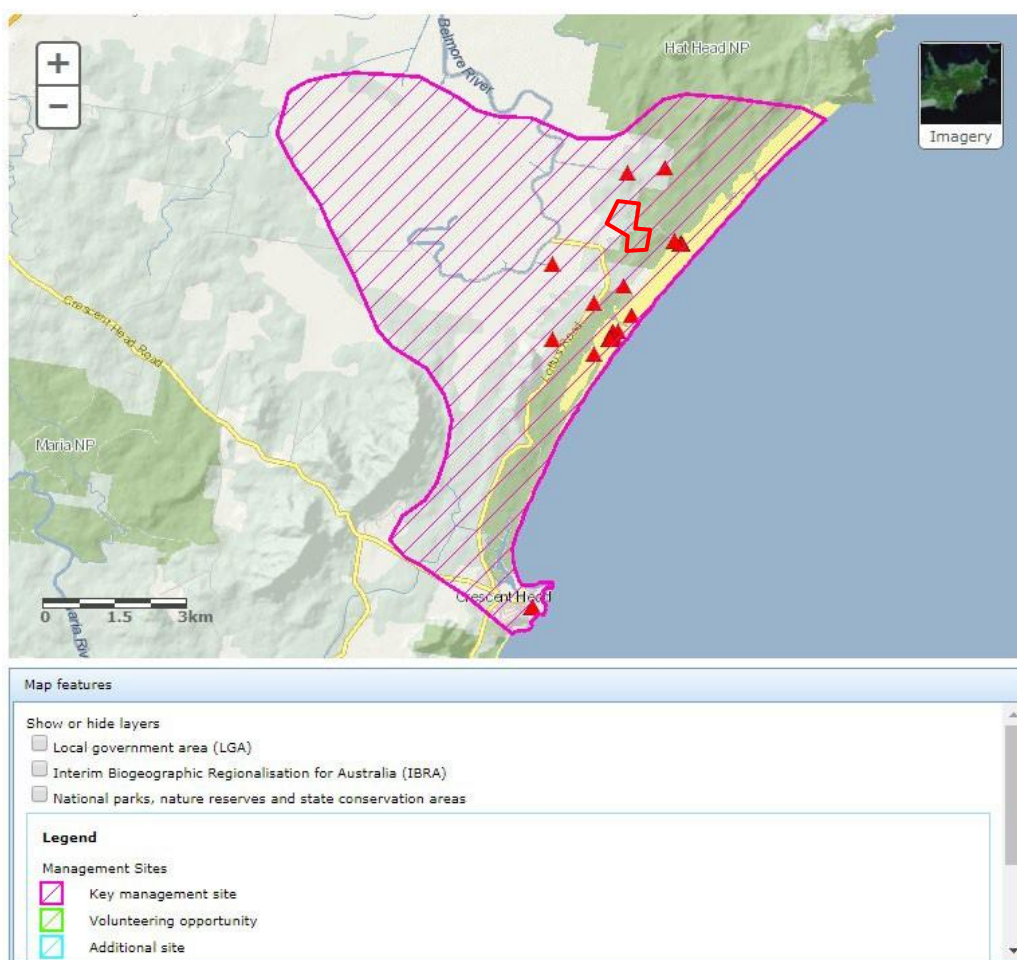


Plate 1 Crescent Head Green and Golden Bell Frog management site (location of Crescent Head (North) indicated by red polygon, red triangles indicate Green and Golden Bell Frog records) (source: OEH 2017a)

3.3 Existing environment

This section describes the existing Green and Golden Bell Frog breeding habitat, foraging habitat and movement corridors at the Crescent Head BA. Further details on the baseline condition of these habitats, as well as Green and Golden Bell Frog and Mosquito Fish surveys, can be found in the initial monitoring reports (Ecoplanning 2019b and c).

3.3.1 Breeding habitat

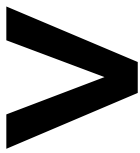
Crescent Head (North) contains three ponds (Pond A, B and C) that provide suitable Green and Golden Bell Frog breeding habitat (Figure 4).

Pond A (Photograph 1) is a large, still, permanent pond that is not heavily shaded. It contains aquatic vegetation and open areas around the pond suitable for male call broadcasting during the breeding season. The edges of the pond contain refuge habitats including logs and dense patches of low shrubs that would provide refuge habitat for the Green and Golden Bell Frog over winter when the species is less active.

Although suitable Green and Golden Bell Frog breeding habitat is present, Pond A had a very high abundance of Mosquito Fish. It is likely that the presence of the Mosquito Fish has substantially reduced or eliminated successful Green and Golden Bell Frog breeding events, particularly as there are limited aquatic refuge areas for tadpoles.



Photograph 1 Pond A, looking east



Pond C (Photograph 2) and Pond B are ephemeral shallow, still ponds that have fluctuating water levels. Pond B and C are surrounded by tall Tea Trees (*Leptospermum* spp.) that would provide habitat for afternoon basking and male call broadcasting. The ponds are also surrounded by dense groundcover vegetation that would provide suitable refuge habitat during winter. Shallow vegetation within the ponds would provide suitable refuge habitat for tadpoles and protection from predators.

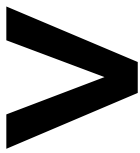
Although some Mosquito Fish are present in the ponds, it is likely that they would be periodically excluded during drying cycles, increasing the likelihood of successful Green and Golden Bell Frog breeding events.



Photograph 2 Pond C, looking north

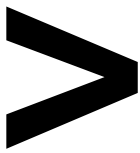
Crescent Head (South) contains six ponds scattered through the northern half of the site. Three of the ponds (Pond D, E and F) provide suitable Green and Golden Bell Frog habitat (Figure 5).

Pond D (Photograph 3) contains Green and Golden Bell Frog microhabitats including shallow areas of water to lay eggs, aquatic vegetation that would provide refuge habitat for tadpoles, and surrounding trees and rocks for afternoon basking and male call advertising. Numerous fallen logs and rocks surround the pond that would provide refuge habitat for the species during winter.



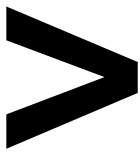
Photograph 3 Pond D, looking south-west

Pond E (Photograph 4) is a small, still, permanent pond. The northern edge of the pond contains a dense stand of Tea Trees that moderately shade the waterway and provide basking and call advertising habitat for male Green and Golden Bell Frogs. The pond contains aquatic vegetation that would provide refuge habitat for tadpoles. Mosquito Fish are present in the pond.



Photograph 4 Pond E, looking north

Pond F (Photograph 5) is a small, still pond. The edges of the pond are sparsely vegetated by Tea Trees and Eucalypts, providing afternoon basking and call advertising habitat for male Green and Golden Bell Frogs. The pond contains a high proportion of aquatic vegetation that would provide refuge habitat for tadpoles. The edges of the pond contain dense tussock-forming vegetation that would provide refuge habitat for the species during winter. Mosquito Fish are present in low abundance in this pond.



Photograph 5 Pond F, facing north-east

3.3.2 Foraging habitat and movement corridors

Crescent Head (North) is dominated by Swamp Sclerophyll Forest with smaller patches of Littoral Rainforest in areas of high relief. The majority of the site provides suitable foraging habitat for the Green and Golden Bell Frog. It contains high diversity of native flora species and likely a corresponding diversity and abundance of invertebrate prey for the Green and Golden Bell Frog. In particular, the cleared areas around the ponds, along tracks and the periphery of the site provide good quality foraging habitat. The cleared areas also provide suitable movement corridors for the Green and Golden Bell Frog.

The southern half of Crescent Head (South) is dominated by Coastal Heath Swamp, with the northern half containing a mosaic of Coastal Heath Swamp and Pink Bloodwood Blackbutt Shrubby Open Forest. Patches of Tea Tree and derived grassland also occur with exotic grass also present such as Pigeon Grass (*Setaria sp.*). Most of the site is likely to provide suitable foraging habitat for the Green and Golden Bell Frog, with a range of refuge present including woody debris, dense vegetation and more open areas for basking. Cleared areas along tracks and lot boundaries also provide suitable movement corridors for the Green and Golden Bell Frog.



Photograph 6 Foraging habitat at Pond D



Photograph 7 Foraging and dispersal habitat adjacent to Pond B

3.4 Starting condition and proposed change

The starting condition of the Green and Golden Bell Frog habitats present in Crescent Head (North) and Crescent Head (South) are summarised below in Table 6. This determination of condition was assessed where conditions can potentially range between 1 and 10 (with a condition of 1 comprising a poor condition grassland and 10 comprising an almost pristine unmodified remnant fragment).

Table 6 Starting condition and proposed changes

Starting condition	Justification	Future Quality	Justification
Crescent Head (North)			
5	- No known records of Green and Golden Bell Frog - Small area of south-east boundary shared with Hat Head NP - Site proximal to known records of Green and Golden Bell Frog - Three appropriate breeding ponds for the Green and Golden Bell Frog - Dominated by Swamp Sclerophyll Forest and small patches of Littoral Rainforest most of which is suitable for Green and Golden Bell Frog foraging - Some disturbed open areas along the western and southern boundary - Pond A has high presence of mosquito fish and low aquatic refuge - Pond B and C have low mosquito fish abundance- however are subject to periodic drying cycles - High native flora diversity - Areas surrounding ponds and along tracks and site periphery are cleared and provide good movement corridors	7	- Mosquito Fish control - Management of key weed species - Natural regeneration of disturbed areas

	Known occurrences of several weeds listed under the <i>Biosecurity Act 2015</i>.		
Crescent Head (South)			
6	- No known records of Green and Golden Bell Frog - Shared southern boundary with Limeburners Creek NP - Site proximal to known records of Green and Golden Bell Frog - Mosquito fish present in low abundance in Pond E and F - Three appropriate breeding ponds for the Green and Golden Bell Frog - Southern half dominated by Coastal Heath Swamp - Northern half mosaic of Coastal Heath Swamp and Pink Bloodwood Blackbutt Shrubby Forest - Range of refuge habitat, dense vegetation and open areas suitable for basking - Some disturbed open habitats present in the centre - Exotic grass patches common - Cleared tracks provide good movement corridors - Known occurrences of several weeds listed under the <i>Biosecurity Act 2015</i>.	8	- Mosquito Fish control - Management of key weed species - Natural regeneration of disturbed areas

The anticipated time for this gain in condition to be achieved is ten years.

3.5 Key threatening processes

Predation by Mosquito Fish is listed as a key threatening process under the NSW *Biodiversity Conservation Act 2016*. Although this process is not listed under the EPBC Act, it is directly relevant to the suitability of potential Green and Golden Bell Frog offset sites given its link to the decline of the species.

The Mosquito Fish is a small freshwater fish originally introduced into Australia in the 1920s. It was originally imported as an aquarium fish; however some were released into creeks around Sydney, Melbourne and Brisbane.

The Mosquito Fish is now widespread in NSW and is an aggressive and voracious predator of native fauna, particularly tadpoles of threatened frogs. The presence of Mosquito Fish has been linked to the decline of the Green and Golden Bell Frog. Breeding by the Green and Golden Bell Frog is almost completely restricted to water bodies lacking Mosquito Fish (NSWSC 1999).

Mosquito Fish were abundant in ponds and waterways of Crescent Head (North) and therefore would likely limit successful Green and Golden Bell Frog breeding. Smaller populations of Mosquito Fish were observed in the ponds at Crescent Head (South). While this would lower the potential for breeding, successful breeding events may be possible due to the aquatic vegetation that would provide refuge for tadpoles. There is also the potential that breeding may occur in the more ephemeral dams in which Mosquito Fish are likely to be periodically eliminated by wetting and drying cycles.

3.6 Cultural heritage

No cultural heritage sites have been identified in either the Crescent Head (North) or Crescent Head (South) BA. An AHIMS search of the Crescent Head (South) BA prior to the fencing works determined that no Aboriginal sites or places had been recorded or declared. HVO's GDP process will be implemented prior to the commencement of any ground disturbing management actions taking into account the provisions of this Plan. Any identified cultural heritage sites or values will be managed to ensure their protection.



Figure 2 Cadastral boundaries at the Crescent Head (North) Biodiversity Areas

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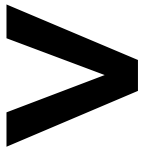
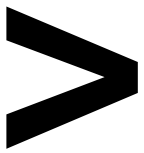


Figure 3 Cadastral boundaries at the Crescent Head (South) Biodiversity Area





Figure 5 Green and Golden Bell Frog habitat and offset at the Crescent Head (South) Biodiversity Area



4 Objectives, key performance measures and completion criteria

4.1 Conservation objectives

The conservation objective for this Plan is to protect and improve the ecological quality and extent of the conservation values of the BAs progressively over 10 years.

The conservation management actions described in Section 5 outline activities to achieve the conservation objectives. The methods to monitor the attainment of these objectives are described in Section 6. The monitoring data will be annually reviewed to adapt conservation management actions through continual improvement.

The key conservation outcomes from the long-term management and protection of the offset areas include:

- protection of the BAs under a legally binding conservation covenant;
- protect and improve the ecological quality and extent of 189.5 ha of Green and Golden Bell Frog breeding habitat (existing and supplementary), foraging habitat and habitat connectivity within the Crescent Head BAs;
- enhanced landscape connectivity within the surrounding landscape;
- improved fauna movement and flora dispersal opportunities within the surrounding landscape; and
- enhanced network of protected vegetation within the NSW North Coast.

4.2 Key performance indicators

The key performance indicators will measure:

- reduction of the Mosquito Fish population in the ponds;
- provision of suitable supplementary breeding habitat;
- maintenance of existing foraging habitat; and
- maintenance of connectivity between Green and Golden Bell Frog habitat components.

Table 7 lists the key conservation values within the BAs, key performance indicators and completion criteria. The monitoring program, outlined in Section 6, details the attributes to be measured to provide evidence and demonstrate achievement of the key performance indicators from the implementation of the conservation management actions detailed in Section 5.



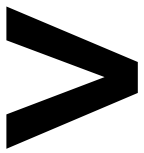
Table 7 Key performance indicators and completion criteria

Conservation value	Key performance indicator	Completion criteria
Green and Golden Bell Frog habitat	Improved condition of 189.5 ha of Green and Golden Bell Frog habitat over 10 years	Observed and measured increase in condition through monitoring over 10 years (from 5 to 7 in Crescent Head (North) and 6 to 8 in Crescent Head (South))
▪ Existing breeding habitat	Reduction of the Mosquito Fish population in the ponds where control methods are possible	Mosquito Fish control trials are completed and their success is evaluated by analysis of monitoring results.
▪ Supplementary breeding habitat	Provision of suitable supplementary breeding habitat	Offline ponds (Figure 4 and Figure 5) are designed with consideration of breeding habitat principles outlined in <i>Best Practice Guidelines for Green and Golden Bell Frog Habitat</i> .
▪ Foraging habitat	Maintenance of existing foraging habitat quality	Foraging habitat is managed with consideration of the principles outlined in <i>Best Practice Guidelines for Green and Golden Bell Frog Habitat</i> .
▪ Habitat connectivity	Maintenance of connectivity between Green and Golden Bell Frog habitat components	Open vegetation structure is maintained on existing tracks and fence lines.

4.3 Completion criteria

The objectives will be deemed to be attained when the completion criteria defined in Table 7 have been met. Monitoring and management will continue following attainment of the completion criteria as necessary until confirmation to cease is obtained from the Minister or delegate.

The monitoring schedule (Table 11) includes minimum monitoring frequencies post objective attainment.



5 Conservation management strategies

This section outlines the management actions to protect and increase the extent and improve the condition of the conservation values in the BAs. The conservation management strategies focus on addressing the key threats to the conservation values, such as unauthorised activity, clearing, altered fire regimes, weeds, feral animals, and overgrazing.

The following sections detail the purpose, scope and method for the actions. Each action has been assigned performance and completion criteria, and triggers for management intervention and corrective actions.

HVO is accountable for the implementation of the conservation management actions detailed in the following sections. This key responsibility rests with the Manager, Environment and Community. Qualified consultants and contractors will be engaged to carry out the monitoring, weed and pest animal control, supplementary planting, construction and maintenance of infrastructure and other works as described in the following sections.

5.1 Controlled activities

5.1.1 Prohibited actions

The BA will have legal protection. HVO will ensure that all employees or representatives, contractors, consultants and visitors are aware of these legal protections and penalties through a site induction prior to entering the BAs.

All actions are prohibited in the BA other than:

- the activities detailed in this Plan to manage and monitor the BA for conservation;
- emergency activities conducted by state authorities; and
- vegetation clearing for the maintenance of:
 - access tracks; and
 - a cleared area along permanent boundary fences with neighbouring properties, to a width of 3m.

Some areas of the BA are identified on the Native Vegetation Regulatory Map as 'land excluded from the LLS Act', while other parts are unclassified. These areas comprise the Coastal Heath Swamp along the lowland areas adjoining the Limeburners Creek National Park in the southern BA and the south western corner of the northern BA adjoining Hat Head National Park. The BA also contains rural (RU1 and RU2) and environmental zoning (E2). Maps showing the classification and zoning are provided in Appendix C.

The following activities are allowed at Crescent Head (North) subject to appropriate approvals and notifications:

- RU1 Zoning – Clearing is allowable under Schedule 5A Section 13 of the LLS Act for access tracks and fences. Clearing is allowed around dams in accordance with Schedule 5A Section 19 as it is classified as environmental protection works.
- E2 Zoning on excluded land – Clearing of access tracks is allowable under Schedule 5A Section 35 (2) Imminent risk. Clearing around dams is allowable if compliant with

Schedule 5A Section 35 (3) Environmental Protection Works (however as the areas surrounding dams provide Green and Golden Bell Frog basking and calling habitat, this will not be permitted). Clearing around boundaries is allowable under Schedule 5A Section 35 (5) as a permanent boundary fence, allowing a total clearing width of 6 m on the boundary. The total clearing width comprises a 3 m clear zone on either side of permanent boundary fences. Accordingly, where boundaries are shared with a neighbouring property, only 3 m can be cleared within Crescent Head BA.

The following activities are allowed at Crescent Head (South):

- RU2 Zoning - clearing is allowable under Schedule 5A Section 13 for access tracks and fences. Clearing is allowed around dams in accordance with Schedule 5A Section 19 as it is classified as environmental protection works.
- E2 Zoning on excluded land – clearing of access tracks is allowable under Schedule 5A Section 35 (2) Imminent risk. Clearing around boundaries is allowable under Schedule 5A Section 35(5) as a permanent boundary fence, allowing a total clearing width of 6 m. The total clearing width comprises a 3 m clear zone on either side of permanent boundary fences. Accordingly, where boundaries are shared with a neighbouring property, only 3 m can be cleared within Crescent Head BA.

5.1.2 Access

Access to the BAs will be controlled through locked gates, maintenance of existing boundary fences and signs at main access points to inform all visitors they are entering a protected area. Routine inspections (see Section 6.4.2) and maintenance of infrastructure (access/fire tracks, fence lines and gates) will be undertaken to ensure they are to standard and fit for purpose.

To minimise the impact of vehicles on the BA, vehicle access will be restricted to authorised personnel only and vehicle speed will be restricted to a maximum of 40km/h. This will be indicated via legible signage posted at entrance points.

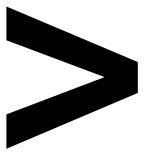
Where issues are identified with the integrity of locks, gates, fences and signage, they are to be rectified within 30 days.

The above will minimise the potential for unintentional damage to existing habitat values present.

5.1.3 Cultural heritage

No cultural heritage sites will be disturbed by any management actions implemented through the provisions of this Plan. An assessment of cultural heritage sites will occur prior to ground disturbing events. Any identified cultural heritage sites or values will be recorded and managed to ensure their protection. Consideration of the known and unknown sites will be given through the implementation of the Ground Disturbance Permit (GDP) process prior to ground disturbing works commencing within the BA.

Protective barricading will be erected and maintained around cultural heritage sites to prevent unintentional disturbance.



5.1.4 Waste

The waste occurring within the BA has been removed where it did not offer habitat for the Green and Golden Bell Frog. A small, neat stack of roof tiles remains as it provides basking and sheltering site for the frog adjacent to the pond at Crescent Head North. The use of roof tiles for this purpose is mentioned in 'Protecting and restoring green and golden bell frog habitat' (DECC 2008).

There are no other known areas of waste identified in the BA. Biannual Property Inspections will be undertaken which will identify any observed areas or items of waste (Section 6.4.2). New waste identified will be removed as necessary.

5.2 Management of grazing for conservation

Grazing will not be permitted within this BA.

5.3 Weed control

At Crescent Head BA, the aim of weed control is to maintain a suitable habitat structure in Green and Golden Bell Frog breeding, foraging and dispersal habitats.

Weed control will be utilised to keep un-infested areas clear of weeds and control the spread of existing weed infestations in the BA. Weed control will focus on species that exclude or have the potential to exclude native species, disrupt recruitment of native species, impede ecological processes, or impact native animals.

Herbicide use and other weed control measures are a recognised threat to the Green and Golden Bell Frog. As such, weed control will prioritise manual and targeted control methods. The use of herbicides will not be undertaken in sensitive areas (in particular around and near water bodies and targeted areas of Green and Golden Bell frog habitat), will be limited and applied strictly in accordance with relevant guidelines (particularly Section 6.1 of the Best practice guidelines for the Green and Golden Bell Frog (DECC 2008)). Herbicide application will be minimised and only utilised where alternative weed eradication processes are considered impractical to achieve the intended conservation outcome.

5.3.1 Control areas

Weed management containment zones of 50m from the tracks and BA boundaries will be maintained. Any weeds outside of these areas will be controlled based on the observations from the monitoring program and following five yearly weed mapping survey.

Key known weed management locations are provided in (Figure 6 and Figure 7).

5.3.2 Control methods and target weed species

An integrated weed management approach will be implemented utilising a range of suitable control methods. The preferred control methods are described in Table 8.

Areas identified during the monitoring and mapping surveys as containing weeds that pose a risk to native species management and habitat for the green and golden bell frog will receive a focus during the subsequent year. Areas that require attention will be ranked according to those

containing the noxious and priority weeds over other environmental weeds and/or exotic plants recorded during the surveys and inspections.

The noxious weeds given priority for weed control are those declared under the *Biosecurity Act 2015*. The full list of priority weeds for the Hunter Region are provided at Appendix D.

Table 9 lists the priority and environmental weed species detected at the site to date, their nomination as a Weed of National Significance (WONS), control methods, timing and intensity required to manage these weeds, based on the NSW Department of Primary Industries Noxious and Environmental Weed Control Handbook (NSW DPI 2014). The photos have been sourced from <http://weeds.dpi.nsw.gov.au/>.

Use of Chemicals

Use of chemicals will not be undertaken as a primary means of weed control, and if deemed necessary, will only be utilised in areas outside of riparian zones and waterways.

The use of chemicals in the BA will be undertaken by qualified personnel (bush regenerators) with suitable experience in native plant and weed identification and management. All chemical weed control will be in accordance with the registered label or current minor use permit, Safety Data Sheets and appropriate safety standards.

Broadscale spraying of herbicides within sensitive environments will not be undertaken at Crescent Head BA. In these areas, an integrated weed management approach will be implemented utilising a range of suitable control methods such as manual removal and targeted herbicide application.

5.3.3 Weed control methods

Table 8 **Weed control methods**

Control method	Potential use in control regime
Priority methods of control	
Biological control – is a long-term control technique.	This is a complementary strategy and alone it may not eradicate the weed. Any use of biological controls will be undertaken in conjunction with appropriate advice.
Slashing – mechanical cutting of weeds to prevent seed production	Areas heavily infested with exotic grasses can be treated with slashing equipment mounted on a tractor prior to flowering (likely to be late spring/ early summer).
Manual removal – removal of the weed plant and roots from the site.	Physical removal of new weeds, unearthing of root systems and containment and removal of seed.
Supplementary methods of control -outside of waterways and riparian zones	
Chemical control – is the application of chemicals to kill the weed by interfering in the plants growth processes.	Spot application of herbicide is the preferred method of application. Boom spray application is permissible as part of ground preparation for re-establishment activities. Areas that cannot be accessed safely by ground-based methods the use of Unmanned Aerial Vehicles (UAV) may be used.
	Herbicides: Only registered herbicides will be used for the control of the weed species and used in accordance with the directions on the label. Users have a legal obligation to read and follow the instructions on

	the label. Where appropriate, selective herbicides will be used to minimise impacts on native vegetation. Handling and application: • Herbicide is to be applied to actively growing plants. • Herbicides must be handled and applied with consideration of their toxic nature and potentially harmful effects on human health, livestock and the environment. Only accredited and trained in the identification of native plant operators are permitted to apply herbicides. • During application weather condition, nozzles, equipment and operator are to be closely monitored throughout application to reduce the risk of drift and subsequent off-target damage. Coarse to very coarse nozzles should be used to increase droplets size. • Suitable weather conditions for spraying are extremely important. • <u>Weather guidelines*</u> ▪ Read the product label and follow all label instructions. ▪ Spray when wind is steady and ideally 3–15 km/h. ▪ Avoid variable or gusty wind conditions. ▪ Avoid calm conditions - small droplets remain suspended for long periods. ▪ Spray when wind blows away from sensitive areas. ▪ Avoid spraying in temperatures above 28 °C. ▪ Aim to spray when Delta T is between 2 and 8 and not greater than 10. ▪ Do not spray when inversion conditions exist. ▪ Aim to spray when the atmosphere is neutrally stable. ▪ Most chemicals require a rain free period – check the label. ▪ Be aware of local topographic and convective influences on wind speed and direction. Record on-site weather conditions at spray time. Reporting: The Pesticides Regulation 2017 requires all commercial pesticide users (that includes farmers, leaseholders and spray contractors) to keep records on their pesticide application.
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* For more detail please refer to www.bom.gov.au/info/leaflets/Pesticide-Spraying.pdf

The impact of weeds and the frequency of control methods implemented will be assessed and determined through the ecological monitoring program in addition to observations gathered during the monthly and biannual property inspections. This information will be used to monitor the success of the weed control activities. program.

Table 9 *Priority and environmental weed species, treatment method, control period and intensity*

Species	Photo	Duty under Biosecurity Act 2015	WONS	Control method/s	Control period and intensity
WOODY WEEDS					
Small-leaved Privet (<i>Ligustrum sinense</i>)		General Biosecurity Duty		Chemical (only outside of waterways and riparian zones) – Spot spray, basal bark applications and stem injection with registered herbicide. Manual removal – hand weeding of small to medium sized plants	Year round. From Year 1 to Year 4, at least one control event per year with additional events as required. Ongoing maintenance, minimum of one control event per year if identified through monitoring events.
Lantana (<i>Lantana camara</i>)		General Biosecurity Duty Prohibition on dealings	✓	Chemical only outside of waterways and riparian zones) – Spot spray and cut stump method with registered herbicide. Manual removal – hand pulling small infestations, bulldozing or slashing for large infestations Biological control – 19 biological control agents are established in some areas, use concurrently with other methods	All year (small plants when actively growing) or between February and the first frost (mature plants >2m) From Year 1 to Year 4, at least one control event per year with additional events as required. Ongoing maintenance, minimum of one control event per year if identified through monitoring events.

Blackberry (<i>Rubus fruticosus</i>)		General Biosecurity Duty Prohibition on dealings	✓	Chemical only outside of waterways and riparian zones) - Spot spray (small infestations) with registered herbicide Biological control (Blackberry Rust <i>Phragmidium violaceum</i>)	Spring to autumn From Year 1 to Year 4, at least one control event per year with additional events as required. Ongoing maintenance, minimum of one control event per year if identified through monitoring events.
Bitou Bush (<i>Chrysanthemoide s monilifera</i> subsp. <i>rotundata</i>)		General Biosecurity Duty Prohibition on dealings Biosecurity zone	✓	Chemical only outside of waterways and riparian zones) – spot spray isolated plants or small infestation Manual removal of seedlings Slashing of mature plants Biological control – two insects are well established in Australia (bitou tip moth <i>Comostolopsis germana</i> and bitou seed fly <i>mesoclanis polana</i>)	Winter From Year 1 to Year 4, at least one control event per year with additional events as required. Ongoing maintenance, minimum of one control event per year if identified through monitoring events.

Duty under Biosecurity Act 2015**Measures**

General biosecurity duty

All plants are regulated with a general biosecurity duty to prevent, eliminate or minimise any biosecurity risk they may pose. Any person who deals with any plant, who knows (or ought to know) of any biosecurity risk, has a duty to ensure the risk is prevented, eliminated or minimised, so far as is reasonably practicable.

Prohibition on dealings

Must not be imported into the State or sold.

Biosecurity zone

Within the Biosecurity Zone this weed must be eradicated where practicable, or as much of the weed destroyed as practicable, and any remaining weed suppressed. The local control authority must be notified of any new infestations of this weed within the Biosecurity Zone



Figure 6 Key infrastructure to be retained and weeds at the Crescent Head (North) Biodiversity Area



Figure 7 Key infrastructure to be retained and weeds at the Crescent Head (South) Biodiversity Area

5.4 Management of fire for conservation

Bushfire prevention is required under the *Rural Fires Act 1997* and a fire regime is required to maintain ecological condition and reduce the risk of damage from wildfire. The absence of fire and the reduction of livestock grazing may lead to a build-up of fire fuel and risk of high intensity bushfire. The land manager is required to take practicable steps to prevent the occurrence of bush fires on the land and minimise the spread of bushfire.

HVO has prepared a Bushfire Management Plan (BFMP) for the Crescent Head BA in consultation with the Rural Fire Service. It identifies fire risks, control measures and communication procedures. The BFMP is subject to review by the RFS and is updated internally by HVO and reissued if significant change is undertaken.

The quick identification of a threatening bushfire, notification of the Rural Fire Service and suppression is the primary goal.

Key control measures comprise:

- documentation of access and water supply points for suppression activities;
- maintain safe and clear access tracks that also form fire breaks;
- slashing in appropriate areas to reduce fuel build-up along potential ignition sources, such as public roads, prior to the fire season;
- use of ecological burns in non-sensitive environments (with any required approvals and/or permits from Rural Fire Service) to reduce fuel build-up to protect the conservation values;
- establishment of asset protection zones around priority infrastructure
- investment in water and other fire suppression assets; and
- communication of the Bushfire Management Plan and response procedures with key stakeholders, including Leaseholders, neighbours, consultants, contractors and employees.

Key management and safety restrictions for total fire ban and very high fire danger rating days include:

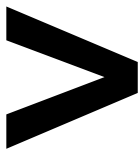
- communication of travel plans to HVO personnel, so personnel can be located in the case of an emergency; and
- no undertaking 'hot works', unless these activities are required for firefighting purposes.

Any fuel hazard reduction burns will be planned in accordance with the Bush Fire Environmental Assessment Code for New South Wales (Rural Fire Service, February 2006) and the guidelines contained in the Threatened Species Hazard Reduction Lists for the Bush Fire Environmental Assessment Code.

Recommendations under the Code are:

- in woodland vegetation, fire should not occur within 5 years of a previous fire and consideration should be given to burning within 40 years of any previous fire; and
- in grassland vegetation derived from the woodland vegetation, the recommended fire intervals are the same as woodland vegetation.

All ecological burns are dependent upon suitable climatic conditions and appropriate level of risk. The advice of a suitably qualified person experienced in ecological fire management will be



required to plan and implement the ecological fire management plan, including a post fire monitoring program to specifically assess the impact of the ecological burn. Any burns are to be scheduled to occur when conditions are suitable for a low intensity burn. Typically this is winter or early spring. Where possible, burning should be scheduled prior to a significant rain event to assist in extinguishing the fire.

Data is to be recorded for all ecological burns including the date and intensity of the fire, the area burnt (shown on a map) during fire, any canopy scorch, percentage of leaf litter remaining and any interactions with stakeholders. Any additional damage, including fire breaks or new tracks, must also be recorded.

5.5 Infrastructure maintenance and improvement

Improvements to existing infrastructure (such as access tracks/ fire breaks and fences) may be required to maintain safe access to undertake management and monitoring activities.

Relevant environmental approvals will be sought where areas of native vegetation supporting habitat for matters of national environmental significance must be cleared to implement infrastructure improvements.

Slashing and grading activities will be limited to existing track footprints unless existing basking and foraging habitats for the Green and Golden Bell Frog transition from open habitats to woodland areas.

Any ground disturbance will be carried out under the Ground Disturbance Permit (GDP) process and will include appropriate pre-clearing assessment to identify resident fauna, threatened flora or habitat features. Should these be identified, HVO will implement measures to minimise impacts on conservation values.

Any clearing required to be undertaken will be quantified and reported within the Annual Report (AR).

5.6 Retention of regrowth and remnant native vegetation

Remnant native vegetation and management of regrowth is important as it is the key component of the BA. The retention of this native vegetation and its regrowth is important to maintain and enhance the conservation value of the offset area.

Natural regrowth of remnant vegetation suitable for the green and golden bell frog will be retained to promote the recovery of habitats. Exceptions to this rule include maintenance of fence lines and management tracks associated with the BA (Section 5.1).

The Best Practice Guidelines for the Green and Golden Bell Frog (DECC 2008) state that to provide suitable foraging habitat for the Green and Golden Bell Frog, 20% of open, unshaded water should be maintained around ponds. Green and Golden Bell Frogs also favour ponds with approximately 20% of open, unshaded water to bask in (DECC 2008). The *draft Recovery Plan for the Green and Golden Bell Frog* states that the species favours grassy, open areas for foraging and dispersal (DEC 2005).

There are existing areas with an open vegetation structure around each pond and movement corridors on access tracks and lot boundaries. Accordingly, remnant native vegetation and regrowth will be managed in these locations to maintain suitable foraging, movement and breeding habitat for the Green and Golden Bell Frog. The remainder of vegetation within and



around ponds will be retained as it provides important refuge habitat for tadpoles and adult frogs, while the remaining foraging habitat will also be retained. Vegetation will be managed primarily by manual removal and slashing.

The following actions will be undertaken:

- ponds A to F: maintenance of aquatic vegetation such that 20% of open water is maintained in the ponds as suitable breeding habitat. This may not be possible in ephemeral ponds as waters will fluctuate; and
- movement corridors – maintenance of existing open grassed areas (ie periodic removal of tree and shrub saplings) to provide suitable movement corridors and foraging habitat.

As the site is being managed for the green and golden bell frog habitat and population, consideration will be given to reviewing the suitability of the existing firebreaks across the site should the risk of fire be exacerbated by the maturing existing vegetation and regrowth areas.

5.7 Re-establishment

No planting actions are currently required at Crescent Head BA. If ecological monitoring indicates a need for remedial action, the Plan shall be updated to include these actions for the BA.

5.8 Erosion control

There is moderate potential for erosion to occur within the BA. Management options for erosion control include controlling vehicle access, maintenance of tracks and rehabilitation of drainage lines, watercourses and riparian areas where erosion impacts are identified.

Erosion within the BA will be monitored during the site inspections along with other observations recorded during the ecological monitoring program. Should it be required, appropriate erosion remediation measures will be implemented.

5.9 Vertebrate pest animal control

Vertebrate pest species and overabundant native herbivores can pose a threat to native flora and fauna through degradation of habitat, competition for habitat resources, and direct predation.

The *draft Recovery Plan for the Green and Golden Bell Frog* (DEC 2005) states that Green and Golden Bell Frog remains have been identified within European Red Fox (*Vulpes vulpes*) scats in key populations of the species. Accordingly, local populations already under stress from the cumulative impacts of other threats could be further impacted by this key threatening process.

The *draft Recovery Plan* also identifies the Mosquito Fish (*Gambusia holbrooki*) as a key threat to tadpoles and spawn masses of the Green and Golden Bell Frog via predation.

This Plan will target the control of declared vertebrate pests and those causing environmental degradation at a regional and local level, and the opportunistic control of the species listed in Table 10. Other vertebrate pests and overabundant native herbivores will be managed as required following approval from relevant authorities prior to their control. All vertebrate pest control activities will be reported in the Annual Report. If a control event is required but conditions are unsuitable, justification will be presented in the Annual Report.

A population of pure breed dingos occur within Limeburners Creek National Park. Advice from the resident National Park manager is that the dingos assist to manage the feral pig and fox numbers within the Park, and it is their preference that dog baiting not occur within the BA. To date, wildlife cameras and inspections have not identified wild dogs, foxes or their scats within the BA and the need for the routine use of dog baiting events will be evaluated. This strategy will be subject to review should monitoring confirm their presence or transit through the property.

Under the LLS Act, species that are currently declared pests in NSW include rabbits, feral pigs and wild dogs. Pest Control Orders can be issued by the regulator to legally enforce land managers to control the species on their land. Land managers are defined as either owners or occupiers of the land. Occupiers of land in NSW are not obliged to control other vertebrate pest animals. However, these species may have significant negative impacts on the environment and agricultural production in many areas. The *NSW Game and Feral Animal Control Act 2002* requires the control of feral deer.

This Plan acknowledges that populations of vertebrate pests are determined by several factors such as topography, shelter, behaviour and food availability. Property fences do not restrict pests, and control actions will not therefore be limited to artificial boundaries. Most vertebrate pests are highly mobile and can readily replace those that are controlled on individual properties. A variety of control methods can be utilised provided they are:

- species specific (wherever possible);
- cause no or little damage to the natural environment;
- are humane;
- meet relevant Work, Health, Safety and Environment regulatory requirements; and
- are regularly monitored.

Control programs are likely to be far more effective when coordinated with multiple landholdings. HVO will endeavour to work with the North Coast Local Land Service on regional control programs and supported by local on ground control actions. Neighbours are to be notified on local on-ground actions to facilitate coordination of efforts and deliver more effective control.

Design and implementation of local controls will be guided by the Model Codes of Practice (COPs) and Standard Operating Procedures (SOPs) produced by the Commonwealth Department of the Environment (available online <http://www.pestsmart.org.au/animal-welfare/humane-codes/>). The COPs for each of the key pest animal species provides general information on best practice management, control strategies, species biology and impact, and the humaneness of current control methods. The SOPs describe management techniques and their application for these pest animal species, including a discussion of animal welfare impacts for target and non-target species. They also cover the health and safety aspects of management techniques.

The vertebrate pests identified in Table 10 have been recorded, or have the potential to occur, at the Crescent Head BA. Control methods, timing and intensity are also provided for these species. Where the species has not been identified as residing or traversing through the BA, control methods for that species will not be implemented. The frequency of the control methods will be determined from the monitoring results and may be repeated within a suitable timeframe if required.

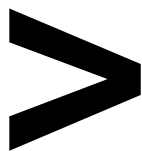
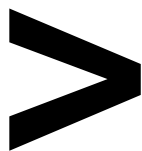


Table 10 Identified vertebrate pests control methods, timing and intensity

Pest*	Declared	Control methods	Control timing and intensity
Mosquito Fish (<i>Gambusia holbrooki</i>)	Yes	To be investigated following drainage survey (Section 5.10.1)	-
European rabbit (<i>Oryctolagus cuniculus</i>)	Yes	Baiting: 1080 / Pindone Trapping: cage trap Shooting: ground based Biological: Myxomatosis and / or Rabbit Haemorrhagic Disease(RHD) Other: Exclusion fencing / Warren fumigation / Warren ripping	Control event in Autumn and /or Spring. From Year 1 to Year 4, at least one control event per year with additional events as required. Ongoing maintenance, minimum of one control event per year if required.
Feral Deer (<i>Cervus timorensis</i>) (<i>Dama dama</i>) (<i>Cervus elaphus</i>)	Yes	Shooting: ground based	Control event in Autumn and /or Spring. From Year 1 to Year 4, at least one control event per year with additional events as required. Ongoing maintenance, minimum of one control event per year if required.
Feral cat (<i>Felis catus</i>)	No	Trapping: Wire mesh cage trap / Soft net trap/ Padded-jaw trap Shooting – ground based	Control event in Autumn and /or Spring From Year 1 to Year 4, at least one control event per year with additional events as required. Ongoing maintenance, minimum of one control event per year if required.
Feral cattle (<i>Bos taurus</i>)	No	Other - Exclusion fencing / Mustering	As required.
Feral Goat (<i>Capra hircus</i>)	No	Shooting – ground / aerial based Other - Exclusion fencing / Mustering	Control event in Autumn and /or Spring. From Year 1 to Year 4, at least one control event per year with additional events as required. Ongoing maintenance, minimum of one control event per year if required.

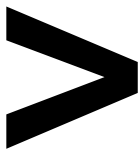


Feral pig (<i>Sus scrofa</i>)	Yes	Baiting – 1080 Trapping - Silo, panel or box traps Shooting – ground / aerial based Other - Exclusion fencing	Control event in Autumn and /or Spring. From Year 1 to Year 4, at least one control event per year with additional events as required. Ongoing maintenance, minimum of one control event per year if required.
Hares (<i>Lepus europaeus</i>)	No	Trapping – cage trap Shooting – ground based Other - Exclusion fencing / Habitat modification / Repellents	Control event in Autumn and /or Spring. From Year 1 to Year 4, at least one control event per year with additional events as required. Ongoing maintenance, minimum of one control event per year if required.
Red fox (<i>Vulpes vulpes</i>)	No	Baiting – 1080 Trapping - Wire mesh cage trap / Soft jaw leg hold trap Shooting – ground based Other - Den fumigation / Exclusion fencing / Ejectors / Habitat modification	Control event in Autumn and /or Spring. From Year 1 to Year 4, at least one control event per year with additional events as required. Ongoing maintenance, minimum of one control event per year if required.
Wild dog (<i>Canis lupus</i> spp.)	Yes	Baiting – 1080 / PAPP Trapping - Soft jaw leg hold trap Shooting – ground based Other - Exclusion fencing	Control event in Autumn and /or Spring. From Year 1 to Year 4, at least one control event per year with additional events as required. Ongoing maintenance, minimum of one control event per year if required.
* Note, the control methods stated would only be implemented should the species be identified as utilising or occurring within the BA			

5.9.1 Local control

Unless indicated otherwise, local on ground control measures including trapping, baiting and shooting (as appropriate) are to occur across the BA in Autumn and Spring, to coincide with breeding seasons of many of the vertebrate pest species. Reactive control may be undertaken at other times in response to reports of threatened species and/or livestock predation.

All control actions will be undertaken by appropriately qualified personnel and are required to complete a comprehensive job safety assessment prior to commencement of actions. Control actions must follow the COPs and SOPs for the humane control of pest animals.



5.10 Pond management and construction

The strategies to achieve the conservation objectives at Crescent Head BA are to:

- assess drainage patterns across the BA to gain a better understanding of how the ponds are filled (i.e. rainfall, overland flow, groundwater discharge from springs);
- understand the mechanism/s by which Mosquito Fish invade ponds;
- develop management options for each pond to prevent if possible subsequent Mosquito Fish infestations, depending on drainage patterns and Mosquito Fish invasion mechanisms;
- develop Mosquito Fish management/control methods for each pond depending on drainage patterns;
- improve the structure of breeding and foraging habitats and movement corridors for the Green and Golden Bell Frog;
- design and construct offline ponds to provide alternative Green and Golden Bell Frog habitat;
- monitor and manage habitats as required.

Pond A, B and C at Crescent Head (North) and Pond D, E and F at Crescent Head (South) will be managed to maintain or improve the ecological condition of breeding habitat for Green and Golden Bell Frog.

Pond management will consist of a drainage survey, identification of Mosquito Fish control methods where possible, and the design and construction of the offline ponds. These are described in the following sections.

5.10.1 Drainage survey

Prior to any work on the ponds, a detailed drainage survey will be completed. The purpose of the drainage survey will be to identify the source of the water in the ponds to assist in determining suitable control methods for Mosquito Fish. For example, chemical control methods for Mosquito Fish (i.e. Rotenone) may be unsuitable in a groundwater-fed pond due to the potential for contamination. It is possible, however, that chemical controls may be suitable for use in an isolated pond that is fed by rainfall.

5.10.2 Mosquito Fish control

The *draft Green and Golden Bell Frog Recovery Plan* (DEC 2005) identifies predation by the introduced Plague Minnow or Mosquito Fish as a key threatening process that has contributed to the decline of Green and Golden Bell Frog populations. Mosquito Fish are known to attack the tadpoles and spawn of Green and Golden Bell Frogs and other frog species. Mosquito Fish are present in Pond A to F at Crescent Head BA.

The drainage survey (Section 5.10.1, above) is likely to determine the mechanism by which Mosquito Fish have invaded the ponds. For example, if the ponds are fed by flooding/overland flow, Mosquito Fish may have invaded the ponds from source populations in nearby streams following high rainfall events. Conversely, if the ponds are isolated from overland flows and occur



through groundwater movement or rainfall, it is likely that the ponds may have been stocked with Mosquito Fish for the purpose of mosquito control or have been transferred via birds or other vectors. Following the identification of potential invasion mechanisms, options will be examined to reduce their numbers and prevent re-introduction.

Consultation will be undertaken with the appropriate Government agencies to develop the most appropriate Mosquito Fish control method for each pond in the BA (these may include manipulation of water levels and water flushing). Any licencing requirements associated with the Mosquito Fish management activities will be identified and obtained if necessary. Some ponds may not be suitable for control methods and offline ponds may be the only option to improve breeding habitat.

5.10.3 Design and construction of offline ponds

The guiding principles in Best Practice guidelines for the Green and Golden Bell Frog (DECC 2008) and other recent examples from Australian scientific literature will be considered in the design and construction of the offline ponds. Indicative locations for the offline ponds in the BA are shown in Figure 4 and Figure 5.

Consultation will be undertaken to identify any required approvals for offline pond construction. Construction of the ponds will commence following finalisation of the design and construction approval.

Pond construction will include riparian plantings of preferred endemic habitat species.

The success of the offline ponds will be monitored, with ongoing management as required.

5.11 Pre-clearing surveys

Pre-clearing surveys will be undertaken for any vegetation clearing prior to installing firebreaks or any ground disturbance of significant tree vegetation removal. These will be undertaken to identify any resident fauna, threatened flora or habitat features that need to be avoided or relocated. Clearance protocol and preclearance survey requirements are outlined in the HVO Vegetation Clearance Plan.

5.12 Summary of performance and completion criteria, triggers and corrective actions

A summary of all performance and completion criteria, accompanied by the Trigger, Actions, Response Plan is provided in Table 11 and 12 respectively.

Table 11 Summary of performance and completion criteria

Activity	Annual criteria Year 1	Annual criteria Year 2	Annual criteria Year 3	Annual criteria Year 4	Annual criteria Year 5	Annual criteria from Year 6 to Year 10	Completion Criteria
Overall condition of the 189.5 ha of Green and Golden Bell Frog Habitat is managed	Overall condition (based on vegetation integrity scores for composition, structure and function) of the 189.5 ha of Green and Golden Bell Frog Habitat is on an improving trajectory.	Overall condition (based on vegetation integrity scores for composition, structure and function) of the 189.5 ha of Green and Golden Bell Frog Habitat is on an improving trajectory.	Overall condition (based on vegetation integrity scores for composition, structure and function) of the 189.5 ha of Green and Golden Bell Frog Habitat is on an improving trajectory.	Overall condition (based on vegetation integrity scores for composition, structure and function) of the 189.5 ha of Green and Golden Bell Frog Habitat is on an improving trajectory.	Overall condition (based on vegetation integrity scores for composition, structure and function) of the 189.5 ha of Green and Golden Bell Frog Habitat is on an improving trajectory.	Overall condition (based on vegetation integrity scores for composition, structure and function) of the 189.5 ha of Green and Golden Bell Frog Habitat is improving.	Overall condition (based on vegetation integrity scores for composition, structure and function) of the 189.5 ha of Green and Golden Bell Frog Habitat in Crescent Head (North is now 7 and Crescent Head (South) is now 8.
Prohibited actions	HVO personnel, contractors, consultants or other agents of HVO are made aware of prohibited actions through the induction process.	HVO personnel, contractors, consultants or other agents of HVO are made aware of prohibited actions through the induction process.	HVO personnel, contractors, consultants or other agents of HVO are made aware of prohibited actions through the induction process.	HVO personnel, contractors, consultants or other agents of HVO are made aware of prohibited actions through the induction process.	HVO personnel, contractors, consultants or other agents of HVO are made aware of prohibited actions through the induction process.	HVO personnel, contractors, consultants or other agents of HVO are made aware of prohibited actions through the induction process.	No reported occurrences of prohibited actions undertaken by HVO, contractors, consultants or other agents of HVO.

Activity	Annual criteria Year 1	Annual criteria Year 2	Annual criteria Year 3	Annual criteria Year 4	Annual criteria Year 5	Annual criteria from Year 6 to Year 10	Completion Criteria
Exemption of clearing vegetation	Any clearing required is subject to appropriate approvals (including pre-clearing survey for habitat value), and notification is obtained and given. Any clearing of vegetation reported in the Annual Report (AR).	Any clearing required is subject to appropriate approvals (including pre-clearing survey for habitat value), and notification is obtained and given. Any clearing of vegetation reported in the AR.	Any clearing required is subject to appropriate approvals (including pre-clearing survey for habitat value), and notification is obtained and given. Any clearing of vegetation reported in the AR.	Any clearing required is subject to appropriate approvals (including pre-clearing survey for habitat value), and notification is obtained and given. Any clearing of vegetation reported in the AR.	Any clearing required is subject to appropriate approvals (including pre-clearing survey for habitat value), and notification is obtained and given. Any clearing of vegetation reported in the AR.	Any clearing required is subject to appropriate approvals (including pre-clearing survey for habitat value), and notification is obtained and given. Any clearing of vegetation reported in the AR.	Vegetation clearing is only undertaken when necessary to do so. Necessary vegetation clearing was subject to appropriate approvals and reported on in the AR.

Activity	Annual criteria Year 1	Annual criteria Year 2	Annual criteria Year 3	Annual criteria Year 4	Annual criteria Year 5	Annual criteria from Year 6 to Year 10	Completion Criteria
Access	Biannual Property Inspections completed and include assessment of physical condition of: - existing fencing, gates, signage and locks. - signs of disturbance such as fire and unauthorised access (including hunting firewood collections, new waste)	Biannual Property Inspections completed and include assessment of physical condition of: - existing fencing, gates, signage and locks. - signs of disturbance such as fire and unauthorised access (including hunting firewood collections, new waste)	Biannual Property Inspections completed and include assessment of physical condition of: - existing fencing, gates, signage and locks. - signs of disturbance such as fire and unauthorised access (including hunting firewood collections, new waste)	Biannual Property Inspections completed and include assessment of physical condition of: - existing fencing, gates, signage and locks. - signs of disturbance such as fire and unauthorised access (including hunting firewood collections, new waste)	Biannual Property Inspections completed and include assessment of physical condition of: - existing fencing, gates, signage and locks. - signs of disturbance such as fire and unauthorised access (including hunting firewood collections, new waste)	Biannual Property Inspections completed and include assessment of physical condition of: - existing fencing, gates, signage and locks. - signs of disturbance such as fire and unauthorised access (including hunting firewood collections, new waste)	Fences, gates, locks and signage were regularly assessed to ensure potential breaches were promptly identified and rectified.

Activity	Annual criteria Year 1	Annual criteria Year 2	Annual criteria Year 3	Annual criteria Year 4	Annual criteria Year 5	Annual criteria from Year 6 to Year 10	Completion Criteria
	Any issues with fences, gates, signage and locks are rectified within 30 days of identification.	Any issues with fences, gates, signage and locks are rectified within 30 days of identification.	Any issues with fences, gates, signage and locks are rectified within 30 days of identification.	Any issues with fences, gates, signage and locks are rectified within 30 days of identification.	Any issues with fences, gates, signage and locks are rectified within 30 days of identification.	Any issues with fences, gates, signage and locks are rectified within 30 days of identification.	All required boundary fences, gates, signage and locks are present and regularly monitored and maintained in appropriate condition
	Offset signage includes information of the Conservation status of the area as well as speed limit signage.	Offset signage is replaced as required so that necessary information is clearly displayed.	Offset signage is replaced as required so that necessary information is clearly displayed.	Offset signage is replaced as required so that necessary information is clearly displayed.	Offset signage is replaced as required so that necessary information is clearly displayed.	Offset signage is replaced as required so that necessary information is clearly displayed.	Offset signage is maintained and clearly legible.
	Waste identified during biannual Property inspections removed within the calendar year unless the waste presents a potential biodiversity issue (then 30 days of identification).	Waste identified during biannual Property inspections removed within the calendar year unless the waste presents a potential biodiversity issue (then 30 days of identification).	Waste identified during biannual Property inspections removed within the calendar year unless the waste presents a potential biodiversity issue (then 30 days of identification).	Waste identified during biannual Property inspections removed within the calendar year unless the waste presents a potential biodiversity issue (then 30 days of identification).	Waste identified during biannual Property inspections removed within the calendar year unless the waste presents a potential biodiversity issue (then 30 days of identification).	Waste identified during biannual Property inspections removed within the calendar year unless the waste presents a potential biodiversity issue (then 30 days of identification).	If relevant, newly identified waste was promptly removed.

Activity	Annual criteria Year 1	Annual criteria Year 2	Annual criteria Year 3	Annual criteria Year 4	Annual criteria Year 5	Annual criteria from Year 6 to Year 10	Completion Criteria
	The induction process in order to access or undertake work in Crescent Head BA includes briefing on the legal protections associated with the Green and Golden Bell Frog as well as the penalties associated with interference with these values.	Induction components in order to access or undertake work in Crescent Head BA are maintained.	Induction components in order to access or undertake work in Crescent Head BA are maintained.	Induction components in order to access or undertake work in Crescent Head BA are maintained.	Induction components in order to access or undertake work in Crescent Head BA are maintained.	Induction components in order to access or undertake work in Crescent Head BA are maintained.	No un-inducted personnel accessed or completed works within Crescent Head BA.
Protection of Cultural heritage	Areas of proposed ground disturbance subject to due diligence prior to commencing work. No Cultural heritage sites disturbed and any protective barricading erected and maintained.	Areas of proposed ground disturbance subject to due diligence prior to commencing work. No Cultural heritage sites disturbed and any protective barricading erected and maintained.	Areas of proposed ground disturbance subject to due diligence prior to commencing work. No Cultural heritage sites disturbed and any protective barricading erected and maintained.	Areas of proposed ground disturbance subject to due diligence prior to commencing work. No Cultural heritage sites disturbed and any protective barricading erected and maintained.	Areas of proposed ground disturbance subject to due diligence prior to commencing work. No Cultural heritage sites disturbed and any protective barricading erected and maintained.	Areas of proposed ground disturbance subject to due diligence prior to commencing work. No Cultural heritage sites disturbed and any protective barricading erected and maintained.	Identified Cultural heritage sites were protected through barricading for the duration of this plan.

Activity	Annual criteria Year 1	Annual criteria Year 2	Annual criteria Year 3	Annual criteria Year 4	Annual criteria Year 5	Annual criteria from Year 6 to Year 10	Completion Criteria
Waste Removal	Waste identified during biannual Property inspections removed within the calendar year unless the waste presents a possible biodiversity issue (then 30 days of identification).	Waste identified during biannual Property inspections removed within the calendar year unless the waste presents a possible biodiversity issue (then 30 days of identification).	Waste identified during biannual Property inspections removed within the calendar year unless the waste presents a possible biodiversity issue (then 30 days of identification).	Waste identified during biannual Property inspections removed within the calendar year unless the waste presents a possible biodiversity issue (then 30 days of identification).	Waste identified during biannual Property inspections removed within the calendar year unless the waste presents a possible biodiversity issue (then 30 days of identification).	Waste identified during biannual Property inspections removed within the calendar year unless the waste presents a possible biodiversity issue (then 30 days of identification).	No new waste is negatively impacting the condition of the vegetation present.
Monitoring	Two property inspections are undertaken that include recording details required in Section 6.4.2.	Two property inspections are undertaken that include recording details required in Section 6.4.2.	Two property inspections are undertaken that include recording details required in Section 6.4.2.	Two property inspections are undertaken that include recording details required in Section 6.4.2.	Two property inspections are undertaken that include recording details required in Section 6.4.2.	Two property inspections are undertaken that include recording details required in Section 6.4.2.	All Property Inspections (Section 6.4.2) completed.
Grazing	Grazing is not permitted to occur.	Grazing is not permitted to occur.	Grazing is not permitted to occur.	Grazing is not permitted to occur.	Grazing is not permitted to occur.	Grazing is not permitted to occur.	Grazing was omitted.

Activity	Annual criteria Year 1	Annual criteria Year 2	Annual criteria Year 3	Annual criteria Year 4	Annual criteria Year 5	Annual criteria from Year 6 to Year 10	Completion Criteria
Weed management	At least one control event per year with additional events as required for species listed in Table 8 or Appendix D that are identified as needing control, and any other weeds needing control recorded from monitoring activities. All actions recorded in the Annual Report.	At least one control event per year with additional events as required for species listed in Table 8 or Appendix D that are identified as needing control, and any other weeds needing control recorded from monitoring activities. All actions recorded in the Annual Report.	At least one control event per year with additional events as required for species listed in Table 8 or Appendix D that are identified as needing control, and any other weeds needing control recorded from monitoring activities. All actions recorded in the Annual Report.	At least one control event per year with additional events as required for species listed in Table 8 or Appendix D that are identified as needing control, and any other weeds needing control recorded from monitoring activities. All actions recorded in the Annual Report.	At least one control event per year with additional events as required for species listed in Table 8 or Appendix D that are identified as needing control, and any other weeds needing control recorded from monitoring activities. All actions recorded in the Annual Report.	At least one control event per year with additional events as required for species listed in Table 8 or Appendix D that are identified as needing control, and any other weeds needing control recorded from monitoring activities. All actions recorded in the Annual Report.	Ecological monitoring data indicates a trajectory for reduction in weed plant cover over three consecutive monitoring events.
Weed monitoring	Complete condition assessment monitoring (Section 6.4.1), rapid condition assessment (Section 6.5.1) and property inspections (Section 6.5.2).	Complete condition assessment monitoring (Section 6.4.1), rapid condition assessment (Section 6.5.1) and property inspections (Section 6.5.2).	Complete condition assessment monitoring (Section 6.4.1), rapid condition assessment (Section 6.5.1) and property inspections (Section 6.5.2).	Complete condition assessment monitoring (Section 6.4.1), rapid condition assessment (Section 6.5.1) and property inspections (Section 6.5.2).	Complete condition assessment monitoring (Section 6.4.1), rapid condition assessment (Section 6.5.1) and property inspections (Section 6.5.2).	Complete condition assessment monitoring (Section 6.4.1), rapid condition assessment (Section 6.5.1) and property inspections (Section 6.5.2).	Weed monitoring is completed

Activity	Annual criteria Year 1	Annual criteria Year 2	Annual criteria Year 3	Annual criteria Year 4	Annual criteria Year 5	Annual criteria from Year 6 to Year 10	Completion Criteria
Bushfire Management Plan (BFMP)	Actions of BFMP implemented. BFMP reviewed and revised by HVO if required.	Actions of BFMP implemented. BFMP reviewed and revised if required.	Actions of BFMP implemented. BFMP reviewed and revised if required.	Actions of BFMP implemented. BFMP reviewed and revised if required.	Actions of BFMP implemented. BFMP reviewed and revised if required.	Actions of BFMP implemented. BFMP reviewed and revised if required.	All required actions of BFMP have been implemented. BFMP has been reviewed annually and revised if required.
Ecological burns	None required	None required	None required	None required	Review woodland area for suitability for ecological burn.	None required	The site's suitability for an ecological burn is reviewed.
Bushfire monitoring	If BA is subject to a fire event, documentation as Section 5.4, condition assessment monitoring (Section 6.4.1) and property inspections (Section 6.5.2) are completed.	If BA is subject to a fire event, documentation as Section 5.4, condition assessment monitoring (Section 6.4.1) and property inspections (Section 6.5.2) are completed.	If BA is subject to a fire event, documentation as Section 5.4, condition assessment monitoring (Section 6.4.1) and property inspections (Section 6.5.2) are completed.	If BA is subject to a fire event, documentation as Section 5.4, condition assessment monitoring (Section 6.4.1) and property inspections (Section 6.5.2) are completed.	If BA is subject to a fire event, documentation as Section 5.4, condition assessment monitoring (Section 6.4.1) and property inspections (Section 6.5.2) are completed.	If BA is subject to a fire event, documentation as Section 5.4, condition assessment monitoring (Section 6.4.1) and property inspections (Section 6.5.2) are completed.	Documentation of fire events and applicable monitoring has been completed.
Infrastructure improvements	If infrastructure improvement requiring ground disturbance is necessary, GDP process is completed.	If infrastructure improvement requiring ground disturbance is necessary, GDP process is completed.	If infrastructure improvement requiring ground disturbance is necessary, GDP process is completed.	If infrastructure improvement requiring ground disturbance is necessary, GDP process is completed.	If infrastructure improvement requiring ground disturbance is necessary, GDP process is completed.	If infrastructure improvement requiring ground disturbance is necessary, GDP process is completed.	All infrastructure improvements requiring ground disturbance completed were subject to the GDP process

Activity	Annual criteria Year 1	Annual criteria Year 2	Annual criteria Year 3	Annual criteria Year 4	Annual criteria Year 5	Annual criteria from Year 6 to Year 10	Completion Criteria
Monitoring of infrastructure	Infrastructure monitoring undertaken during biannual property inspections (Section 6.5.2). Any repairs undertaken as required.	Infrastructure monitoring undertaken during biannual property inspections (Section 6.5.2). Any repairs undertaken as required.	Infrastructure monitoring undertaken during biannual property inspections (Section 6.5.2). Any repairs undertaken as required.	Infrastructure monitoring undertaken during biannual property inspections (Section 6.5.2). Any repairs undertaken as required.	Infrastructure monitoring undertaken during biannual property inspections (Section 6.5.2). Any repairs undertaken as required.	Infrastructure monitoring undertaken during biannual property inspections (Section 6.5.2). Any repairs undertaken as required.	Monitoring has been completed as per the schedule.
Natural regeneration	Annual management activities include weed control, vertebrate pest and fire management actions as specified in this plan.	Annual management activities include weed control, vertebrate pest and fire management actions as specified in this plan.	Annual management activities include weed control, vertebrate pest and fire management actions as specified in this plan.	Annual management activities include weed control, vertebrate pest and fire management actions as specified in this plan.	Annual management activities include weed control, vertebrate pest and fire management actions as specified in this plan.	Annual management activities include weed control, vertebrate pest and fire management actions as specified in this plan.	Ecological monitoring demonstrates a trajectory to benchmark values for relevant attributes measured over three consecutive monitoring events (the average of all plots).
Retained aquatic vegetation (i.e. breeding habitat in structure ponds)	Complete annual inspection and (if required) manage aquatic vegetation such that 20% of open water is maintained in permanent ponds.	Complete annual inspection and (if required) manage aquatic vegetation such that 20% of open water is maintained in permanent ponds.	Complete annual inspection and (if required) manage aquatic vegetation such that 20% of open water is maintained in permanent ponds.	Complete annual inspection and (if required) manage aquatic vegetation such that 20% of open water is maintained in permanent ponds.	Complete annual inspection and (if required) manage aquatic vegetation such that 20% of open water is maintained in permanent ponds.	Complete annual inspection and (if required) manage aquatic vegetation such that 20% of open water is maintained in permanent ponds.	Annual inspections and aquatic vegetation maintenance are completed.

Activity	Annual criteria Year 1	Annual criteria Year 2	Annual criteria Year 3	Annual criteria Year 4	Annual criteria Year 5	Annual criteria from Year 6 to Year 10	Completion Criteria
Maintenance of movement corridors (i.e. existing open grassed areas along access tracks and lot boundaries)	Complete annual inspection and remove tree and shrub saplings as necessary.	Complete annual inspection and remove tree and shrub saplings as necessary.	Complete annual inspection and remove tree and shrub saplings as necessary.	Complete annual inspection and remove tree and shrub saplings as necessary.	Complete annual inspection and remove tree and shrub saplings as necessary.	Complete annual inspection and remove tree and shrub saplings as necessary.	Annual inspections and groundcover maintenance are completed.
Erosion control	Biannual property inspections include erosion assessment. Areas of erosion remediation completed as required and all actions recorded in Annual Report.	Biannual property inspections include erosion assessment. Areas of erosion remediation completed as required and all actions recorded in Annual Report.	Biannual property inspections include erosion assessment. Areas of erosion remediation completed as required and all actions recorded in Annual Report.	Biannual property inspections include erosion assessment. Areas of erosion remediation completed as required and all actions recorded in Annual Report.	Biannual property inspections include erosion assessment. Areas of erosion remediation completed as required and all actions recorded in Annual Report.	Biannual property inspections include erosion assessment. Areas of erosion remediation completed as required and all actions recorded in Annual Report.	No significant erosion that is detrimental to conservation objectives identified in Section 4.1 recorded during final property inspection.
Vertebrate pest – local control	At least one control event per year with additional events as required for species listed in Table 11, and any other species recorded from monitoring activities. All actions recorded in the Annual Report.	At least one control event per year with additional events as required for species listed in Table 11, and any other species recorded from monitoring activities. All actions recorded in the Annual Report.	At least one control event per year with additional events as required for species listed in Table 11, and any other species recorded from monitoring activities. All actions recorded in the Annual Report.	At least one control event per year with additional events as required for species listed in Table 11, and any other species recorded from monitoring activities. All actions recorded in the Annual Report.	At least one control events each year for species listed in Table 11, and any other species recorded from monitoring activities. All actions recorded in the Annual Report.	At least one control events each year for species listed in Table 11, and any other species recorded from monitoring activities. All actions recorded in the Annual Report.	Vertebrate pests not having a significant detrimental impact on conservation objectives.

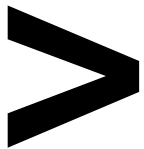
Activity	Annual criteria Year 1	Annual criteria Year 2	Annual criteria Year 3	Annual criteria Year 4	Annual criteria Year 5	Annual criteria from Year 6 to Year 10	Completion Criteria
Vertebrate pest – regional control	Active participation in program coordinated by North Coast LLS This may include local control actions.	Active participation in program coordinated by North Coast LLS This may include local control actions.	Active participation in program coordinated by North Coast LLS This may include local control actions.	Active participation in program coordinated by North Coast LLS This may include local control actions.	Active participation in program coordinated by North Coast LLS This may include local control actions.	Active participation in program coordinated by North Coast LLS This may include local control actions.	Active participation in control programs.
Vertebrate pest monitoring	Management monitoring program undertaken during biannual property inspections (Section 6.4.2).	Management monitoring program undertaken during biannual property inspections (Section 6.4.2).	Management monitoring program undertaken during biannual property inspections (Section 6.4.2).	Management monitoring program undertaken during biannual property inspections (Section 6.4.2).	Management monitoring program undertaken during biannual property inspections (Section 6.4.2).	Management monitoring program undertaken during biannual property inspections (Section 6.4.2).	Management monitoring program completed.
Mosquito Fish	Complete drainage survey Evaluation of likely entry points for Mosquito Fish access.	Assess whether control of Mosquito Fish in ponds is feasible.	Assess whether control of Mosquito Fish in ponds is feasible.	Assess whether control of Mosquito Fish in ponds is feasible.	Assess whether control of Mosquito Fish in ponds is feasible.	Assess whether control of Mosquito Fish in ponds is feasible.	Mosquito Fish-free breeding areas have been created
Drainage survey and pond construction (offline ponds)	Complete drainage survey	Prepare plan for construction. Construct ponds and water capture structure to fill ponds.	Prepare plan for construction. Construct ponds and water capture structure to fill ponds.	Prepare plan for construction. Construct ponds and water capture structure to fill ponds.	Review success (water quality and quantity, appropriateness of aquatic vegetation).	Review success (water quality and quantity, appropriateness of aquatic vegetation).	Drainage survey completed. Ponds have been constructed in accordance with design.

Activity	Annual criteria Year 1	Annual criteria Year 2	Annual criteria Year 3	Annual criteria Year 4	Annual criteria Year 5	Annual criteria from Year 6 to Year 10	Completion Criteria
Drainage Surveys (Ponds A to F)	Complete drainage survey	Prepare plan for pond refurbishment. Implement plan. Conduct Mosquito Fish control.	Prepare plan for pond refurbishment. Implement plan. Conduct Mosquito Fish Control.	Prepare plan for refurbishment. Implement plan. Conduct Mosquito Fish control.	Review success (water quality and quantity, appropriateness of aquatic vegetation).	Review success (water quality and quantity, appropriateness of aquatic vegetation).	Drainage survey completed. Ponds refurbished in accordance with plan. Mosquito fish control completed in suitable ponds in accordance with approved methods.
Monitoring of offline ponds and Ponds A to F	-	Monitor number of Mosquito Fish following initial control events. Monitor for the presence of Green and Golden Bell Frogs (Section 6.3.1.)	Monitor number of Mosquito Fish following initial control events. Monitor for the presence of Green and Golden Bell Frogs (Section 6.3.1.)	Monitor number of Mosquito Fish following initial control events. Monitor for the presence of Green and Golden Bell Frogs (Section 6.3.1.)	Follow- up monitoring and control of Mosquito Fish. Monitor for the presence of Green and Golden Bell Frogs (Section 6.3.1.)	Follow- up monitoring and control of Mosquito Fish. Monitor for the presence of Green and Golden Bell Frogs (Section 6.3.1.)	Mosquito Fish numbers have declined in Pond A to F where suitable. Mosquito Fish are absent from offline ponds. Suitable frog habitat has been established within managed areas.

Table 12 Summary of trigger, action response plan

Management aspect	Key Element	Trigger	Corrective action
Controlled Activities.	Protection of remnant vegetation	Damage to conservation values by persons undertaking controlled activities – reported through Management Monitoring (Section 6.5) or other visitors to the BA	Occurrences recorded by HVO personnel within 30 days of identification. Include occurrence in the Annual Report. Complete self-assessment of the significant residual impact from the damage. In situations where there is assessed to be a significant residual impact, active and or passive restoration works are to be implemented. Review security measures and offset induction procedure.
Access control	Protection of remnant vegetation	Unauthorised stock or personnel access	Identify access points and repair fences appropriately within 15 days. Communicate with agricultural managers and adjacent landholders to emphasise areas where stock are not permitted.
		Clearing outside of areas approved	Undertake supplementary planting to compensate for vegetation lost.
Grazing	Grazing excluded	Fence damaged and not excluding stock from neighbouring property – impact reported through Management Monitoring (Section 6.5) or visitor to BA.	Fence damaged and not excluding stock from neighbouring property – impact reported through Management Monitoring (Section 6.5) or visitor to BA.
Fire	High levels of biomass present	Bushfire assessment identifies extreme fire risk - observed high levels of biomass/grass prior to fire season.	Review property inspections, monitoring reports and Bushfire Management Plan. Discuss appropriate course of action with Rural Fire Service and/or any applicable experts or stakeholders. Update Bushfire Management Plan if required.

Management aspect	Key Element	Trigger	Corrective action
Weeds	Weed management	Weeds identified in Table 9 are increasing in abundance or cover during monitoring events. New weeds species specified under the <i>Biosecurity Act 2015</i> identified	Target the weed management actions to reduce the identified weed species. Suitably qualified and experienced person to review weed control action.
Fire management	Wildfire event	Unplanned wildfire event occurs.	Assess risks to conservation objectives from the fire. Update BFMP if necessary.
		Post fire monitoring results indicate a reduction in native plant cover and increase in weed cover.	Evaluate active regeneration, increase weed control if required and implement supplementary planting if necessary.
	Emergency vehicle access	Tracks are in a poor condition for emergency vehicle access.	Slash vegetation on existing tracks (with due diligence inspection prior). Undertake track remediation works.
Infrastructure maintenance and improvements	Unauthorised clearing	Unauthorised clearing of vegetation for the purpose of infrastructure improvements	Document unauthorised clearing, undertake MNES due diligence assessment, report event if necessary. Implement remedial action (active regeneration) and reporting as necessary.
	Fence replacement	Fencing continually damaged by flood waters (as determined by monitoring).	Replace fence with floating fences or re-align fence.
Natural regeneration	Excess vegetation cover contrary to habitat requirements of Green and Golden Bell Frog	Aquatic vegetation exceeds 80% cover in permanent pond	Review management strategies undertaken. Consider appropriate options to remove aquatic vegetation. Modify pond structure to prevent aquatic vegetation establishment in nominated areas.



Management aspect	Key Element	Trigger	Corrective action
		Tree and shrub saplings are present on access tracks and fence boundaries	Review management strategies undertaken. Shrubs and groundcovers are managed to maintain open vegetation structure for Green and Golden Bell Frog foraging and dispersal habitat on access tracks and fence boundaries.
Erosion control	Active erosion	Active erosion observed through monitoring.	Install erosion control measures, undertake monitoring of the area over 12 months post event to ensure the site is stabilised. Stability will be monitored during the annual inspection regime. All actions and observations will be reported in the Annual Report.
		Significant rainfall event causes erosion of Ponds A to F or offline ponds	Report occurrence to HVO personnel, within 30 days. HVO personnel to implement remedial action and reporting as necessary. Commence actions for erosion control within 30 days of identification, undertake monitoring of the area for 12 months post event to ensure the site is stabilised.
Vertebrate Pests	Vertebrate pest management	Management monitoring identifies vertebrate pest having detrimental impact on conservation values (e.g., grazing on regeneration and revegetation or damaging trees via rubbing, soil pugging, deceased bird presence etc.).	Increase the number of control events per year. Suitably qualified and experienced person to review control action. Revise the Plan.
		New vertebrate pest identified within the BA.	Targeted vertebrate pest control updated to include newly identified species.

Management aspect	Key Element	Trigger	Corrective action
			Notify Government Agency and neighbors, if required. Revise the Plan
	Mosquito Fish	Mosquito Fish population re-establishes in Ponds A to F following initial control events or establishment is discovered in offline ponds.	Review control options as required. Conduct follow-up Mosquito Fish control.

5.13 Consistency with recovery actions

Table 13 describes the consistency of conservation management strategies with recovery actions for Green and Golden Bell Frog.

Table 13 Consistency of conservation measures with recovery actions for the Green and Golden Bell Frog

Actions	Recovery Plan/Threat Abatement Plan	Alignment / Contribution
Pond management (Section 5.10)	Green and Golden Bell Frog Recovery Plan (DEC 2005). Best practice guidelines for the Green and Golden Bell Frog (DECC 2008). Predation by <i>Gambusia holbrooki</i> approved NSW Threat Abatement Plan (NPWS 2003).	Pond design guided by Section 5.2 and pest control guided by Section 6.2 of the guidelines. Control of Mosquito Fish, a key threatening process, guided by Section 6.2 of the recovery plan, Section 2.6 of the guidelines and the threat abatement plan.
Management of regrowth and remnant native vegetation (Section 5.6)	Best practice guidelines for the Green and Golden Bell Frog (DECC 2008).	Maintenance of open areas around ponds, guided by Section 6.1 of the guidelines.
Controlled activities (Section 5.1)	Best practice guidelines for the Green and Golden Bell Frog (DECC 2008).	Maintenance of open areas around ponds, guided by Section 6.1 of the guidelines.
Grazing management (Section 5.2)	Best practice guidelines for the Green and Golden Bell Frog (DECC 2008).	Maintenance of open areas around ponds, guided by Section 6.1 of the guidelines.
Weed control (Section 5.3)	Best practice guidelines for the Green and Golden Bell Frog (DECC 2008)	Targeted weed control, guided by Section 6.1 of the guidelines.
Bushfire management of fire for conservation (Section 5.4)	Best practice guidelines for the Green and Golden Bell Frog (DECC 2008). Green and Golden Bell Frog Recovery Plan (DEC 2005).	Restriction of fire to protect the species habitat, guided by with Section 6.4 of the guidelines and 8.2.6 of the recovery plan.
Infrastructure improvement (Section 5.5)	Green and Golden Bell Frog Recovery Plan (DEC 2005). Best practice guidelines for the Green and Golden Bell Frog (DECC 2008).	Maintenance of access for management and monitoring.
Terrestrial vertebrate pest and overabundant native animal control (Section 5.9)	Green and Golden Bell Frog Recovery Plan (DEC 2005). Best practice guidelines for the Green and Golden Bell Frog (DECC 2008).	Terrestrial vertebrate pest control, particularly for the European Red Fox, guided by Section 2.6 of the recovery plan and Section 6.2 of the guideline.



6 Monitoring program

6.1 Overview

This Section outlines the monitoring program designed to assess changes in the habitats of the offset areas at three different scales:

- threatened species monitoring to determine if the habitat management, Mosquito Fish management and construction of offline ponds have resulted in Green and Golden Bell Frog use of the BA;
- habitat monitoring to assess improvements in breeding, foraging and movement habitat structure by quantifying changes in vegetation structure; and
- management monitoring (short-term):
 - rapid condition assessments and property inspections to assess woodland and habitat condition and identify emerging threats;
 - Mosquito Fish monitoring to assess the presence and abundance in the ponds.

6.2 Monitoring objectives

The objectives of this monitoring program are to confirm (or otherwise) that the Plan is being effectively implemented and conservation objectives are being achieved.

Accordingly, the variables to be monitored are:

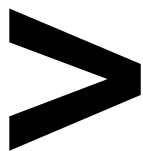
- the key performance and completion criteria, as described in Section 4;
- the performance criteria and the trigger events, as described in Section 5; and
- scenarios that represent risk to the attainment of the plans objectives, as assessed in Section 7.

Monitoring activities will have a clear relationship to operational decision-making such that:

- if the ecological (Section 6.3) and the management (Section 6.4) monitoring demonstrate an increase in habitat extent and enhanced habitat condition then the Plan is achieving the desired outcomes and should proceed without modification;
- if the monitoring indicates no increase in the extent of habitat and enhancement of ecological condition, then the corrective actions listed in risk assessment in Section 7 should be implemented; and
- if the monitoring indicates that the performance criteria for the conservation management actions are not achieved then the relevant Trigger, Action and Response plan should be enacted.

The Annual Reports will provide ongoing review of the monitoring results. This includes the annual management monitoring and the biennial ecological monitoring reports. These reports may include recommendations to amend the monitoring program and any recommendations will be considered and incorporated as part of the review of the Plan or immediately provided it does not diminish the monitoring effort.

The frequency of monitoring activities will vary according to the monitoring schedule provided in Table 14.



Note that offset monitoring has been ongoing according to the schedule in Table 14 since the EPBC approval in 2016, variation in 2017 and subsequent consultation and acceptance of the draft Biodiversity Areas Management Plan with the then DoEE. Compliance reporting with the commitments made in the Plan has been submitted annually. Additional monitoring events in response to environmental opportunities have been undertaken and reported.

Table 14 Monitoring schedule

Monitoring method	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	On
Ecological							
Green and Golden Bell Frog – threatened species monitoring	Sep-Mar			Sep-Mar			Repeat from Year 1
Green and Golden Bell Frog – habitat assessment	Spring	Spring		Spring		Spring	Biennial: Repeat from Year 3
Management							
Rapid Condition Assessment		Spring	Spring	Spring	Spring	Spring	Spring
Property inspection	Biannual						
Mosquito Fish	Biannual			Annual			If required

6.3 Ecological monitoring

6.3.1 Green and Golden Bell Frog – threatened species monitoring

Targeted monitoring commenced in 2018, and occurred again in 2021, and will be undertaken every four years to determine if the habitat and Mosquito Fish management have resulted in Green and Golden Bell Frog use of the Crescent Head BA. Monitoring will be undertaken in accordance with the Commonwealth *Survey Guidelines for Australia's threatened frogs* (DEWHA 2010b). The following sections describe the survey timing, methods and effort to be employed during Green and Golden Bell Frog monitoring events.

Surveys must be undertaken in September to March during optimum weather conditions. Optimum weather conditions are defined as warm and windless weather, within one week of heavy rainfall (i.e. > 50 mm in seven days). The monitoring locations are shown in Figure 8 and Figure 9.

These surveys will be undertaken at Ponds A to F as well as at constructed offline ponds.

The following survey methods will be used at each pond:



- call detection (including Song Meters), call playback and spotlighting of banks and emergent vegetation;
- habitat assessment by experienced personnel; and
- dip-netting for tadpoles and frog eggs (as signs of presence for frog breeding if not identifiable) in ponds.

A minimum of four nights' survey must be completed under optimum conditions. Small ponds that are less than 50 m at their greatest length (i.e., Pond B and C at Crescent Head (North) and Pond E and F at Crescent Head (South)) should be surveyed for at least an hour. Larger wetlands greater than 50 m in length (i.e., Pond A at Crescent Head (North) and Pond D at Crescent Head (South)) should be searched by sampling multiple units in a systematic manner. Reference sites (located outside of Crescent Head BA and known to contain Green and Golden Bell Frog records) should be surveyed on the same nights, where feasible.

During this time, any Green and Golden Bell Frogs encountered should be recorded.

Records should also be made of any other native frog species, to determine general value of habitats present for frogs as a general indication of habitat value.

6.3.2 Green and Golden Bell Frog – habitat monitoring

The objectives of the habitat restoration monitoring are to determine if:

- breeding habitat structure is maintained within permanent ponds (i.e. aquatic vegetation does not exceed 80% cover within each pond); and
- movement corridors and foraging habitats are maintained on access tracks and fence boundaries (ie tree and shrub saplings are periodically removed to maintain open grassed structure).

Twelve permanent monitoring plots across the Crescent Head BA have been established monitor the structure of vegetation, comprising:

- six plots around the existing ponds and two plots at the offline ponds (P1 to P3 and 01 at Crescent Head (North) and Crescent Head (South)); and
- six plots on access tracks and fence boundaries (T1 to T3 at Crescent Head (North) and Crescent Head (South)).

The locations of the monitoring plots are shown in Figure 8 and Figure 9. The first survey of all plots was completed in 2018, with a subsequent survey completed in 2019, and 2021 and will occur every two years during September.

The coverage of aquatic vegetation will be assessed by laying two transect tapes in a perpendicular direction (i.e. a cross) across each pond to form four quadrats, with each quadrat representing 25% cover of the pond. The aquatic vegetation cover of each quadrat should be estimated as a percentage for each quadrat, and then averaged across the four quadrats to provide the average percent cover of aquatic vegetation for each pond.

To assess movement and foraging habitat structure, the movement corridors identified in Figure 8 and Figure 9 will be traversed; and tree or shrub regrowth noted for removal.

6.3.3 Photo reference points

Photo reference points have been established and permanently marked within each habitat monitoring plot at the top of the middle 50m transect. During each monitoring event, a series of photos is taken from this point to provide a visual record of any changes in vegetation and habitat condition. Depending on the location of the monitoring plot, this might include:

- changes in vegetation structure (e.g. presence/ absence of canopy species, shrubs, tussock grasses);
- the presence/condition of special habitat features (e.g. rock outcrops, flowering/fruitlet species);
- changes in identified threatening processes (e.g. weed infestations, erosion); and
- changes in pond shading.

At each photo reference point, a minimum of five photos are taken, in the following directions:

- downslope;
- upslope;
- across the slope – left (when facing downslope);
- across the slope – right (when facing downslope); and
- directly down.

The photo records are displayed on the online data management system such that monitoring photos can be viewed against the baseline photo. This will provide an ongoing and gradual visual record of changes in habitats as the management strategies are implemented as well as changes in existing threats and early warning of emerging threats at monitoring sites.



Figure 8 Rapid condition assessment, Green and Golden Bell Frog, Mosquito Fish and habitat assessment monitoring plots at the Crescent Head (North) Biodiversity Area



Figure 9 Rapid condition assessment, Green and Golden Bell Frog, Mosquito Fish and habitat assessment monitoring plots at the Crescent Head (South) Biodiversity Area

6.4 Management monitoring

6.4.1 Rapid Condition Assessment

Each year, Rapid Condition Assessment (RCA) sites are conducted to record the presence or absence of key habitat components and threatening processes at fixed designated locations (four in Crescent Head (North) and four in Crescent Head (South)). Appendix E provides the RCA report template for assessment of condition of existing and proposed areas of native vegetation.

The results of the RCA, together with property inspections and photo reference points will be used to monitor habitat condition and identify emerging threats.

6.4.2 Property inspections

Regular property inspections will be undertaken to ensure that there is a systematic monitoring of the BA, to ensure its protection and to ensure early detection of potential threats or failures including:

- physical condition of fencing and gates;
- disturbance factors including fire and unauthorised access e.g. hunting, fire wood collection;
- condition of erosion;
- evidence of waste dumping;
- presence/activity of feral pest species;
- grazing pressure from over-abundant native herbivores;
- presence of exotic weed species; and
- assessment of fire fuel loads in winter.

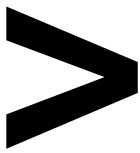
6.4.3 Mosquito Fish monitoring

The existing ponds and offline ponds will be monitored on a biannual basis in the short term and annual basis in the medium-term. Monitoring will aim to determine the presence and number of Mosquito Fish present in each pond to assess for changes in population size. Monitoring methods will include:

- dip-netting around the edge of ponds; and
- seine-netting, with several sweeps conducted at each pond.

6.5 Data analysis and interpretation

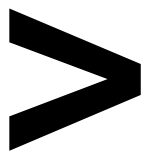
To assess the success of the management actions in meeting the Key Performance Indicators, data on the Green and Golden Bell Frog and its habitats will be analysed against the predicted changes in these groups associated with implementation of the actions. Univariate and multivariate techniques will be used, as appropriate, to analyse and visualise patterns in the data.



The ecological data will be analysed to assess the nature and extent of change through time, relative to monitoring objectives. It is expected that, in the medium to long term, the habitat condition will be maintained or improved. By demonstrating this improvement through time, it will be inferred that the proposed conservation management actions have been successful in maintaining and restoring Green and Golden Bell Frog habitat.

Annual reporting will therefore include (but not be limited to):

- for each condition assessment monitoring site:
 - whether the trajectory of native floristic composition and structure are improving or declining in comparison to baseline values;
 - whether habitat features are improving, declining or remain stable in comparison to baseline;
 - progress of natural recruitment (if natural success (i.e. saplings are present), is regeneration growing (as shown by increases in DBH))
- presence or absence of the Green and Golden Bell Frog and abundance;
- presence or absence of Mosquito Fish in each pond as well as changes in abundance over time;
- comparison of photo monitoring for progress;
- key threats observed that either are or could potentially limit the successful improvement of ecological condition (including factors assessed during property inspections (Section 6.5.2)); and
- recommendations for improvement of current management actions (if required).



7 Risk assessment

7.1 Risk ratings

The risk assessment is undertaken in accordance with the following risk framework, having regard for the likelihood and consequence definitions used below. A risk assessment and corrective actions are provided in Table 15. Most risks will be mitigated using regular monitoring and therefore early identification of any issues.

Likelihood	Consequence					
		Minor	Moderate	High	Major	Critical
	Highly Likely	Medium	High	High	Severe	Severe
	Likely	Low	Medium	High	High	Severe
	Possible	Low	Medium	Medium	High	Severe
	Unlikely	Low	Low	Medium	High	High
	Rare	Low	Low	Low	Medium	High

Qualitative measure of likelihood (how likely is it that this event/circumstances will occur after management actions have been put in place/are being implemented)	
Highly likely	Is expected to occur in most circumstances
Likely	Will probably occur during the life of the project
Possible	Might occur during the life of the project
Unlikely	Could occur but considered unlikely or doubtful
Rare	May occur in exceptional circumstances
Qualitative measure of consequences (what will be the consequence/result if the issue does occur)	
Minor	Minor risk of failure to achieve the Plan's objectives. Results in short term delays to achieving Plan objectives, implementing low cost, well characterised corrective actions.
Moderate	Moderate risk of failure to achieve the Plan's objectives. Results in short term delays to achieving Plan objectives, implementing well characterised, high cost/effort corrective actions.
High	High risk of failure to achieve the Plan's objectives. Results in medium-long term delays to achieving Plan objectives, implementing uncertain, high cost/effort corrective actions.
Major	The Plan's objectives are unable to be achieved, with significant legislative, technical, ecological and/or administrative barriers to attainment that have no evidenced mitigation strategies.
Critical	The Plan's objectives are unable to be achieved, may include widespread and severe environmental harm, with no evidenced mitigation strategies.

Table 15 *Risk assessment and corrective action matrix*

Objective	Scenario	Likelihood	Consequence	Risk level	Trigger	Corrective Action
To protect the conservation values of the offset area within 10 years at the BA.	Delay in securing the offset area under a legally binding mechanism	Likely	Minor	Low	NSW biodiversity reforms not providing a fit for purpose mechanism to practically and legally secure EPBC offset areas.	Additional consultation with DCCEEW
	Unable to attach the Plan to the land title.	Likely	Minor	Low	NSW government requires different plan to be attached to the land title.	Ensure that a new plan is equivalent to this Plan.
	Illegal access to offset area causing significant residual impact.	Unlikely	Moderate	Low	Failure in access control (Section 5.1.2) captured in management monitoring (Section 6.4) and reported in the Annual Report.	Review access control and improve security measures. Increase monitoring effort.
	Improper contractor vehicle use resulting in impacts such as soil compaction, weed dispersal or vegetation disturbance, on habitats	Possible	Moderate	Medium	Failure in access control (Section 5.1.2) captured in management monitoring (Section 6.4) and reported in the Annual Report.	Review access control and improve security measures. Increase monitoring effort. Undertake weed control or supplementary planting as necessary.

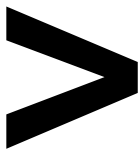
	Uncontrolled bushfire impacts BAs.	Possible	High	Medium	Bushfire on extreme or catastrophic fire danger day impacts offset area.	Implement Post Fire Event recovery with NSW Rural Fire Service. Complete post fire survey, map fire damaged areas, and revise the Plan.
To enhance the condition of conservation values of the offset area within 10 years at the BA.	No improvement in condition of the conservation values measured by the Ecological Monitoring (Section 6.3).	Possible	Moderate	Medium	Review of Annual Reports and Monitoring data.	Increase monitoring effort. Review management actions. Assess influence on success from other factors such as extreme climatic conditions.
	Decline in foraging and movement habitat structure for the Green and Golden Bell Frog	Possible	Moderate	Medium	Review of Annual Reports and monitoring data.	Increase monitoring effort. Consider new conservation management action/s and revise Plan if required. Assess influence of other factors such as extreme climatic conditions on success. Ensure offline ponds are operational.

	Decline in breeding habitat structure for the Green and Golden Bell Frog	Possible	Moderate	Medium	Review of Annual Reports and monitoring data.	Increase monitoring effort.
	No decrease in Mosquito Fish in BA ponds.	Likely	Moderate	Medium	Review of Annual Reports and monitoring data.	Consider new conservation management action/s and revise Plan if required. Assess influence of other factors such as extreme climatic conditions on success. Ensure offline ponds are operational.

8 References

- Department of Environment and Climate Change (DECC) (2008) *Best practice guidelines for the Green and Golden Bell Frog*, Department of Environment and Climate Change NSW, Sydney
- Department of Environment and Conservation (DEC) (2005) *Draft Green and Golden Bell Frog Recovery Plan*, Department of Environment and Conservation NSW, Hurstville
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- Department of Sustainability, Environment, Water, Population and Communities (SEWPaC) (2012a), *EPBC Act Environmental Offsets Policy*, Department of Sustainability, Environment, Water, Population and Communities, Canberra
- Ecoplanning (2019b) *Habitat Assessment and Photo Reference Points (Crescent Head Biodiversity Area)*. Report prepared for Hunter Valley Operations
- Ecoplanning (2019c) *Green and Golden Bell Frog and Mosquito Fish Monitoring (Crescent Head Biodiversity Area)*. Report prepared for Hunter Valley Operations
- EMM (2016) *HVO State-approved mining Investigation report*, report to Rio Tinto Coal Australia
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Appendix A Condition of approval EPBC 2016/7640



Appendix B Profile of the Green and Golden Bell Frog

B.1 Green and Golden Bell Frog habitat

The Green and Golden Bell Frog ranges in size from 45 to 100 mm long, with most individuals within the 60 to 80 mm size class. Individuals vary in colour, however are usually green with metallic brown or gold patches. The species is distinguished by a white to gold stripe that extends from the upper eyelids to the groin and blue to green thigh patches.



Photograph 8 Green and Golden Bell Frog (blogs.newcastle.edu.au)

The species has a number of habitat preferences and requirements that it utilises at different stages of its life cycle (DEC 2005). These comprise:

- breeding habitats in ponds and waterways;
- wide-ranging foraging habitat in forests, wetlands and woodlands surrounding breeding habitats;
- winter refuge habitat including fallen timber and rocks surrounding breeding habitats; and
- habitat corridors connecting the above habitat features.

Microhabitat requirements in breeding areas comprise shallow waterbodies that are still or slow flowing with fluctuating water levels, are unpolluted and are not heavily shaded. Other important microhabitats comprise extensive grassy areas for foraging; and rocks, logs, tussock-forming vegetation for refuge.

Appendix C Land classification and zoning

C.1 Crescent Head land classification and zoning

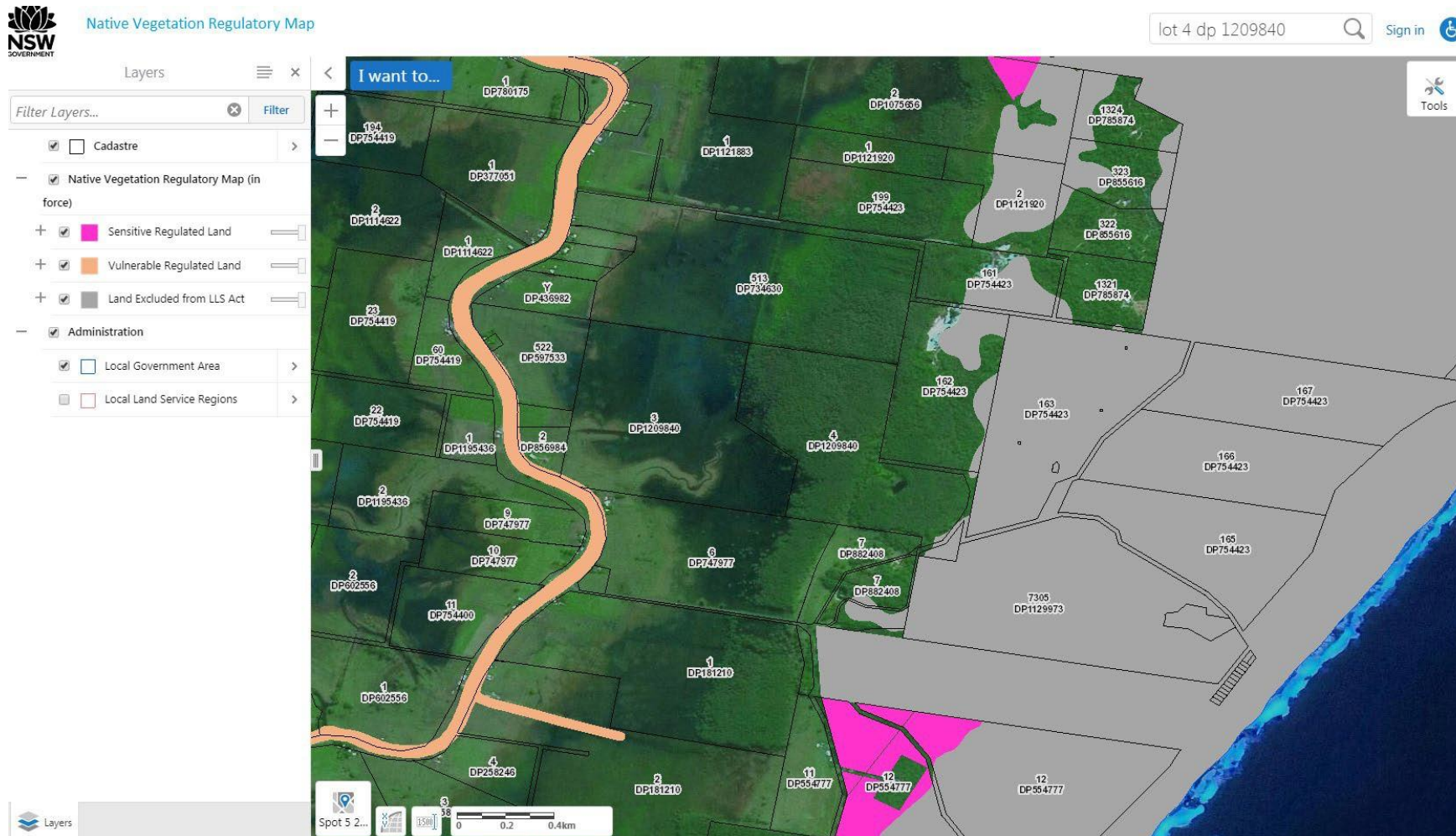


Plate 2 Native vegetation regulatory map output for Crescent Head (North)

Planning viewer



Plate 3 Zoning for Crescent Head (North) showing rural (RU1) zoning

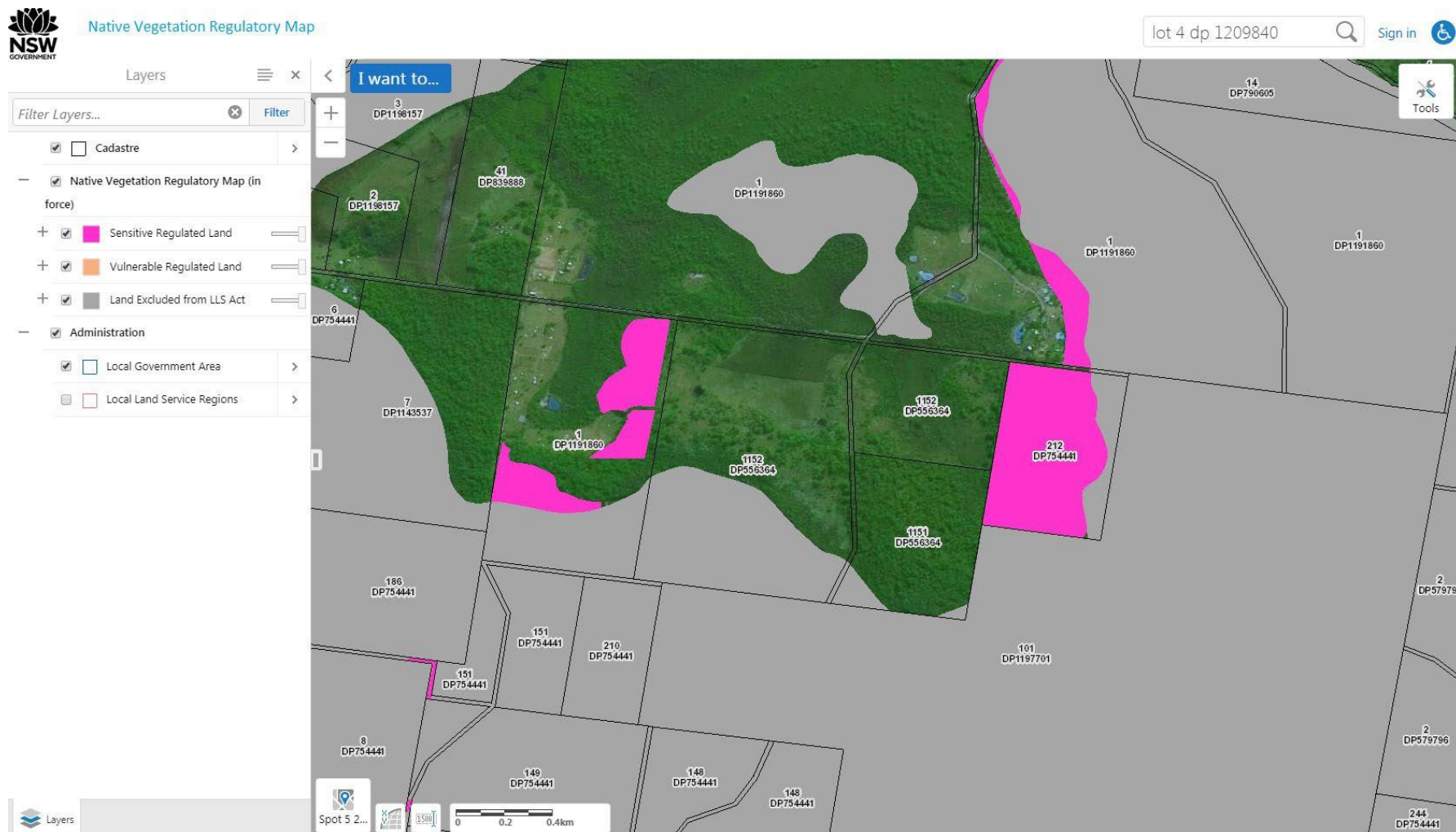


Plate 4 Native vegetation regulatory map output for Crescent Head (South)

Planning viewer



Plate 5 Zoning for Crescent Head (South) showing rural (RU2) and environmental (E2) zoning

Appendix D Priority weeds for the North Coast region

Priority Weeds for the Hunter – as of 24 May 2023

Note: This region includes the local council areas of Cessnock, Dugong, Lake Macquarie, Maitland, Mid-Coast, Muswellbrook, Newcastle, Port Stephens, Singleton and Upper Hunter

Weed	Duty
All plants	General Biosecurity Duty <i>All pest plants are regulated with a general biosecurity duty to prevent, eliminate or minimise any biosecurity risk they may pose. Any person who deals with any plant, who knows (or ought to know) of any biosecurity risk, has a duty to ensure the risk is prevented, eliminated or minimised, so far as is reasonably practicable.</i>
Aaron's beard prickly pear <i>Opuntia leucotricha</i>	Prohibition on certain dealings <i>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</i>
African boxthorn <i>Lycium ferocissimum</i>	Prohibition on certain dealings <i>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</i>
Aleman grass <i>Echinochloa polystachya</i>	Regional Recommended Measure <i>Land managers should mitigate the risk of the plant being introduced to their land. Land managers should eradicate the plant from the land and keep the land free of the plant. A person should not deal with the plant, where dealings include but are not limited to buying, selling, growing, moving, carrying or releasing the plant. Notify local control authority if found.</i>
Alligator weed <i>Alternanthera philoxeroides</i>	Prohibition on certain dealings <i>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</i>



<u>Alligator weed</u> <i>Alternanthera philoxeroides</i>	Biosecurity Zone The Alligator Weed Biosecurity Zone is established for all land within the state except land in the following regions: Greater Sydney; Hunter (but only in the local government areas of City of Lake Macquarie, City of Maitland, City of Newcastle or Port Stephens). <i>Within the Biosecurity Zone this weed must be eradicated where practicable, or as much of the weed destroyed as practicable, and any remaining weed suppressed. The local control authority must be notified of any new infestations of this weed within the Biosecurity Zone</i>
<u>Anchored water hyacinth</u> <i>Eichhornia azurea</i>	Prohibited Matter <i>A person who deals with prohibited matter or a carrier of prohibited matter is guilty of an offence. A person who becomes aware of or suspects the presence of prohibited matter must immediately notify the Department of Primary Industries</i>
<u>Asparagus fern</u> <i>Asparagus virgatus</i>	Regional Recommended Measure Exclusion (eradication) zone: Clarence Valley LGA, Lord Howe Island, Port Macquarie-Hastings LGA. Core infestation (containment) zone: Ballina Shire LGA, Bellingen Shire LGA, Byron Shire LGA, Coffs Harbour City LGA, Kempsey Shire LGA, Kyogle Shire LGA, Lismore City LGA, Nambucca Valley LGA, Richmond Valley LGA, Tweed Shire LGA. <i>Whole of region: Land managers should mitigate the risk of the plant being introduced to their land. A person should not buy, sell, move, carry or release the plant into the environment. Exclusion zone: Notify local control authority if found. Land managers should eradicate the plant from the land and keep the land free of the plant. Core infestation: Land managers should mitigate spread of the plant from their land. Land managers should reduce the impact of the plant on assets of high economic, environmental and/or social value.</i>
<u>Athel pine</u> <i>Tamarix aphylla</i>	Prohibition on certain dealings <i>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</i>



Bellyache bush <i>Jatropha gossypifolia</i>	Prohibition on certain dealings <i>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</i>
Bitou bush <i>Chrysanthemoides monilifera</i> subsp. <i>rotundata</i>	Prohibition on certain dealings <i>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</i>
Bitou bush <i>Chrysanthemoides monilifera</i> subsp. <i>rotundata</i>	Biosecurity Zone The Bitou Bush Biosecurity Zone is established for all land within the State except land within 10 kilometres of the mean high water mark of the Pacific Ocean between Cape Byron in the north and Point Perpendicular in the south. <i>Within the Biosecurity Zone this weed must be eradicated where practicable, or as much of the weed destroyed as practicable, and any remaining weed suppressed. The local control authority must be notified of any new infestations of this weed within the Biosecurity Zone</i>
Bitou bush <i>Chrysanthemoides monilifera</i> subsp. <i>rotundata</i>	Regional Recommended Measure Biosecurity Zone, which includes: Lord Howe Island, The entire Kyogle Shire, Lismore City and Tweed Shire LGAs. Byron Shire LGA (all land north of Cape Byron and all land outside of 10 km from the Pacific Ocean). All land outside of 10km from the Pacific Ocean in the following LGAs: Ballina Shire, Bellingen Shire, Clarence Valley, Coffs Harbour, Kempsey Shire, Nambucca Shire, Port Macquarie-Hastings, Richmond Valley. The core infestation includes all land outside the biosecurity zone. <i>Entire North Coast Local Land Services region: A person must not, import into the State or sell. Within the Bitou Bush Biosecurity Zone: If the weed is part of a new infestation of the weed on the land, notify the local control authority for the land as soon as practicable. Eradicate the weed or, if that is not practicable, destroy as much of the weed as is practicable and suppress the spread of any remaining weed. The core infestation: Land managers should mitigate spread of the plant from their land. Land managers should reduce the impact of the plant on assets of high economic, environmental and/or social value.</i>



<u>Black knapweed</u> <i>Centaurea x moncktonii</i>	Prohibited Matter <i>A person who deals with prohibited matter or a carrier of prohibited matter is guilty of an offence. A person who becomes aware of or suspects the presence of prohibited matter must immediately notify the Department of Primary Industries</i>
<u>Black locust</u> <i>Robinia pseudoacacia</i>	Regional Recommended Measure Exclusion (eradication) zone: Coffs Harbour City LGA, Lord Howe Island, Bellingen Shire LGA, Kempsey Shire LGA, Nambucca Valley LGA. Core infestation (containment) zone: Ballina Shire LGA, Byron Shire LGA, Clarence Valley LGA, Kyogle Shire LGA, Lismore City LGA, Port Macquarie-Hastings LGA, Richmond Valley LGA, Tweed Shire LGA. <i>Whole of region: Land managers should mitigate the risk of the plant being introduced to their land. A person should not buy, sell, move, carry or release the plant into the environment. Exclusion zone: Notify local control authority if found. Land managers should eradicate the plant from the land and keep the land free of the plant. Core infestation: Land managers should mitigate spread of the plant from their land. Land managers should reduce the impact of the plant on assets of high economic, environmental and/or social value.</i>
<u>Black willow</u> <i>Salix nigra</i>	Prohibition on certain dealings <i>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</i>
<u>Black willow</u> <i>Salix nigra</i>	Regional Recommended Measure Exclusion (eradication) zone: Ballina Shire LGA, Bellingen Shire LGA, Byron Shire LGA, Lord Howe Island, Port Macquarie-Hastings LGA, Richmond Valley LGA, Tweed Shire LGA. Core infestation (containment) zone: Clarence Valley LGA, Coffs Harbour City LGA, Kempsey Shire LGA, Kyogle Shire LGA, Lismore City LGA, Nambucca Valley LGA. <i>Whole of region: Land managers should mitigate the risk of the plant being introduced to their land. A person should not buy, sell, move, carry or release the plant into the environment. Exclusion zone: Notify local control authority if found. Land managers</i>



	<i>should eradicate the plant from the land and keep the land free of the plant. Core infestation: Land managers should mitigate spread of the plant from their land. Land managers should reduce the impact of the plant on assets of high economic, environmental and/or social value.</i>
Blackberry <i>Rubus fruticosus</i> species aggregate	Prohibition on certain dealings <i>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</i> All species in the <i>Rubus fruticosus</i> species aggregate have this requirement, except for the varieties Black Satin, Chehalem, Chester Thornless, Dirksen Thornless, Loch Ness, Murrindindi, Silvan, Smooth Stem, and Thornfree
Blind cactus <i>Opuntia rufida</i>	Prohibition on certain dealings <i>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</i>
Blue heliotrope <i>Heliotropium amplexicaule</i>	Regional Recommended Measure Exclusion (eradication) zone: Bellingen Shire LGA, Coffs Harbour City LGA, Kempsey Shire LGA, Lord Howe Island, Nambucca Valley LGA Port Macquarie-Hastings LGA. Core infestation (containment) zone: Ballina Shire LGA, Byron Shire LGA, Clarence Valley LGA, Kyogle Shire LGA, Lismore City LGA, Richmond Valley LGA, Tweed Shire LGA. <i>Whole of region: Land managers should mitigate the risk of the plant being introduced to their land. A person should not buy, sell, move, carry or release the plant into the environment. Exclusion zone: Notify local control authority if found. Land managers should eradicate the plant from the land and keep the land free of the plant. Core infestation: Land managers should mitigate spread of the plant from their land. Land managers should reduce the impact of the plant on assets of high economic, environmental and/or social value.</i>
Boneseed <i>Chrysanthemoides monilifera</i> subsp. <i>monilifera</i>	Prohibition on certain dealings <i>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</i>



<u>Boneseed</u> <i>Chrysanthemoides monilifera</i> subsp. <i>monilifera</i>	Control Order Boneseed Control Zone: Whole of NSW <i>Boneseed Control Zone (Whole of NSW):</i> <i>Owners and occupiers of land on which there is boneseed must notify the local control authority of new infestations; immediately destroy the plants; ensure subsequent generations are destroyed; and ensure the land is kept free of the plant. A person who deals with a carrier of boneseed must ensure the plant (and any seed and propagules) is not moved from the land; and immediately notify the local control authority of the presence of the plant.</i>
<u>Boxing glove cactus</u> <i>Cylindropuntia fulgida</i> var. <i>mamillata</i>	Prohibition on certain dealings <i>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</i>
<u>Bridal creeper</u> <i>Asparagus asparagoides</i>	Prohibition on certain dealings <i>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</i> *this requirement also applies to the Western Cape form of bridal creeper
<u>Bridal creeper</u> <i>Asparagus asparagoides</i>	Regional Recommended Measure <i>Land managers should mitigate the risk of the plant being introduced to their land. Land managers should eradicate the plant from the land and keep the land free of the plant. A person should not deal with the plant, where dealings include but are not limited to buying, selling, growing, moving, carrying or releasing the plant. Notify local control authority if found.</i>
<u>Bridal veil creeper</u> <i>Asparagus declinatus</i>	Prohibited Matter <i>A person who deals with prohibited matter or a carrier of prohibited matter is guilty of an offence. A person who becomes aware of or suspects the presence of prohibited matter must immediately notify the Department of Primary Industries</i>



<u>Broad-leaf pepper tree</u> <i>Schinus terebinthifolius</i>	Regional Recommended Measure Exclusion (eradication) zone: Bellingen Shire LGA, Coffs Harbour City LGA, Lord Howe Island, Nambucca Valley LGA Port Macquarie-Hastings LGA. Core infestation (containment) zone: Ballina Shire LGA, Byron Shire LGA, Clarence Valley LGA, Kempsey Shire LGA, Kyogle Shire LGA, Lismore City LGA, Richmond Valley LGA, Tweed Shire LGA. <i>Whole of region: Land managers should mitigate the risk of the plant being introduced to their land. A person should not buy, sell, move, carry or release the plant into the environment. Exclusion zone: Notify local control authority if found. Land managers should eradicate the plant from the land and keep the land free of the plant. Core infestation: Land managers should mitigate spread of the plant from their land. Land managers should reduce the impact of the plant on assets of high economic, environmental and/or social value.</i>
<u>Broomrapes</u> <i>Orobanche</i> species	Prohibited Matter <i>A person who deals with prohibited matter or a carrier of prohibited matter is guilty of an offence. A person who becomes aware of or suspects the presence of prohibited matter must immediately notify the Department of Primary Industries</i> All species of <i>Orobanche</i> are Prohibited Matter in NSW, except Clover broomrape, <i>Orobanche minor</i> and Australian broomrape, <i>Orobanche cernua</i> var. <i>australiana</i>.
<u>Bunny ears cactus</u> <i>Opuntia microdasys</i>	Prohibition on certain dealings <i>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</i>
<u>Cabomba</u> <i>Cabomba caroliniana</i>	Prohibition on certain dealings <i>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</i>
<u>Cane cactus</u> <i>Austrocyllindropuntia cylindrica</i>	Prohibition on certain dealings <i>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</i> All species in the <i>Austrocyllindropuntia</i> genus have this requirement



Cape broom <i>Genista monspessulana</i>	Prohibition on certain dealings <i>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</i>
Cape broom <i>Genista monspessulana</i>	Regional Recommended Measure <i>Land managers should mitigate the risk of the plant being introduced to their land. Land managers should eradicate the plant from the land and keep the land free of the plant. A person should not deal with the plant, where dealings include but are not limited to buying, selling, growing, moving, carrying or releasing the plant. Notify local control authority if found.</i>
Cat's claw creeper <i>Dolichandra unguis-cati</i>	Prohibition on certain dealings <i>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</i>
Cecropia <i>Cecropia</i> species	Regional Recommended Measure <i>Land managers should mitigate the risk of the plant being introduced to their land. Land managers should eradicate the plant from the land and keep the land free of the plant. A person should not deal with the plant, where dealings include but are not limited to buying, selling, growing, moving, carrying or releasing the plant. Notify local control authority if found.</i>
Cha-om <i>Senegalia pennata</i> subsp. <i>insuavis</i>	Regional Recommended Measure <i>Land managers should mitigate the risk of the plant being introduced to their land. Land managers should eradicate the plant from the land and keep the land free of the plant. A person should not deal with the plant, where dealings include but are not limited to buying, selling, growing, moving, carrying or releasing the plant. Notify local control authority if found.</i>
Chicken dance cactus <i>Opuntia schickendantzii</i>	Prohibition on certain dealings <i>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</i>
Chilean needle grass <i>Nassella neesiana</i>	Prohibition on certain dealings <i>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</i>



<u>Chinese celtis</u> <i>Celtis sinensis</i>	Regional Recommended Measure Exclusion (eradication) zone: Bellingen Shire LGA, Coffs Harbour City LGA, Lord Howe Island, Nambucca Valley LGA Port Macquarie-Hastings LGA. Core infestation (containment) zone: Ballina Shire LGA, Byron Shire LGA, Clarence Valley LGA, Kempsey Shire LGA, Kyogle Shire LGA, Lismore City LGA, Richmond Valley LGA, Tweed Shire LGA. <i>Whole of region: Land managers should mitigate the risk of the plant being introduced to their land. A person should not buy, sell, move, carry or release the plant into the environment. Exclusion zone: Notify local control authority if found. Land managers should eradicate the plant from the land and keep the land free of the plant. Core infestation: Land managers should mitigate spread of the plant from their land. Land managers should reduce the impact of the plant on assets of high economic, environmental and/or social value.</i>
<u>Chinese knotweed</u> <i>Persicaria chinensis</i>	Regional Recommended Measure <i>Land managers should mitigate the risk of the plant being introduced to their land. Land managers should eradicate the plant from the land and keep the land free of the plant. A person should not deal with the plant, where dealings include but are not limited to buying, selling, growing, moving, carrying or releasing the plant. Notify local control authority if found.</i>



<u>Chinese tallow tree</u> <i>Triadica sebifera</i>	Regional Recommended Measure Exclusion (eradication) zone: Bellingen Shire LGA, Coffs Harbour City LGA, Lord Howe Island, Nambucca Valley LGA. Core infestation (containment) zone: Ballina Shire LGA, Byron Shire LGA, Clarence Valley LGA, Kempsey Shire LGA, Kyogle Shire LGA, Lismore City LGA, Port Macquarie-Hastings LGA, Richmond Valley LGA, Tweed Shire LGA. <i>Whole of region: Land managers should mitigate the risk of the plant being introduced to their land. A person should not buy, sell, move, carry or release the plant into the environment. Exclusion zone: Notify local control authority if found. Land managers should eradicate the plant from the land and keep the land free of the plant. Core infestation: Land managers should mitigate spread of the plant from their land. Land managers should reduce the impact of the plant on assets of high economic, environmental and/or social value.</i>
<u>Chinese violet</u> <i>Asystasia gangetica</i> subsp. <i>micrantha</i>	Control Order <i>Owners and occupiers of land on which there is Chinese violet must notify the local control authority for the area if the Chinese violet is part of a new infestation on the land, destroy all Chinese violet on the land ensuring that subsequent generations of Chinese violet are destroyed; and keep the land free of Chinese violet. A person who deals with a carrier of Chinese violet must ensure the plant (and any seed and propagules) is not moved from the land; and immediately notify the local control authority of the presence of the plant on the land, or on or in a carrier.</i>
<u>Climbing asparagus</u> <i>Asparagus africanus</i>	Prohibition on certain dealings <i>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</i>
<u>Climbing asparagus fern</u> <i>Asparagus plumosus</i>	Prohibition on certain dealings <i>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</i>



<u>Cockspur coral tree</u> <i>Erythrina crista-galli</i>	Regional Recommended Measure Exclusion (eradication) zone: Bellingen Shire LGA, Clarence Valley LGA, Coffs Harbour City LGA, Kempsey Shire LGA, Lord Howe Island, Nambucca Valley LGA, Port Macquarie-Hastings LGA. Core infestation (containment) zone: Ballina Shire LGA, Byron Shire LGA, Kyogle Shire LGA, Lismore City LGA, Richmond Valley LGA, Tweed Shire LGA. <i>Whole of region: Land managers should mitigate the risk of the plant being introduced to their land. A person should not buy, sell, move, carry or release the plant into the environment. Exclusion zone: Notify local control authority if found. Land managers should eradicate the plant from the land and keep the land free of the plant. Core infestation: Land managers should mitigate spread of the plant from their land. Land managers should reduce the impact of the plant on assets of high economic, environmental and/or social value.</i>
<u>Common pear</u> <i>Opuntia stricta</i>	Prohibition on certain dealings <i>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</i>
<u>Devil's fig</u> <i>Solanum torvum</i>	Regional Recommended Measure Exclusion (eradication) zone: Bellingen Shire LGA, Clarence Valley LGA, Lord Howe Island, Port Macquarie-Hastings LGA. Core infestation (containment) zone: Ballina Shire LGA, Byron Shire LGA, Coffs Harbour City LGA, Kempsey Shire LGA, Kyogle Shire LGA, Lismore City LGA, Nambucca Valley LGA, Richmond Valley LGA, Tweed Shire LGA. <i>Whole of region: Land managers should mitigate the risk of the plant being introduced to their land. A person should not buy, sell, move, carry or release the plant into the environment. Exclusion zone: Notify local control authority if found. Land managers should eradicate the plant from the land and keep the land free of the plant. Core infestation: Land managers should mitigate spread of the plant from their land. Land managers should reduce the impact of the plant on assets of high economic, environmental and/or social value.</i>



<u>East Indian hygrophila</u> <i>Hygrophila polysperma</i>	Regional Recommended Measure Exclusion (eradication) zone: Bellingen Shire LGA, Clarence Valley LGA, Lord Howe Island, Nambucca Valley LGA, Port Macquarie-Hastings LGA. Core infestation (containment) zone: Ballina Shire LGA, Byron Shire LGA, Coffs Harbour City LGA, Kempsey Shire LGA, Kyogle Shire LGA, Lismore City LGA, Richmond Valley LGA, Tweed Shire LGA. <i>Whole of region: Land managers should mitigate the risk of the plant being introduced to their land. A person should not buy, sell, move, carry or release the plant into the environment. Exclusion zone: Notify local control authority if found. Land managers should eradicate the plant from the land and keep the land free of the plant. Core infestation: Land managers should mitigate spread of the plant from their land. Land managers should reduce the impact of the plant on assets of high economic, environmental and/or social value.</i>
<u>Eurasian water milfoil</u> <i>Myriophyllum spicatum</i>	Prohibited Matter <i>A person who deals with prohibited matter or a carrier of prohibited matter is guilty of an offence. A person who becomes aware of or suspects the presence of prohibited matter must immediately notify the Department of Primary Industries</i>
<u>Eve's needle cactus</u> <i>Austrocylindropuntia subulata</i>	Prohibition on certain dealings <i>Must not be imported into the state, sold, bartered, exchanged or offered for sale. All species in the Austrocylindropuntia genus have this requirement</i>
<u>Fireweed</u> <i>Senecio madagascariensis</i>	Prohibition on certain dealings <i>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</i>
<u>Flax-leaf broom</u> <i>Genista linifolia</i>	Prohibition on certain dealings <i>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</i>
<u>Foxtail fern</u> <i>Asparagus densiflorus</i>	Prohibition on certain dealings <i>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</i>



Frogbit <i>Limnobium laevigatum</i>	Prohibited Matter <i>A person who deals with prohibited matter or a carrier of prohibited matter is guilty of an offence. A person who becomes aware of or suspects the presence of prohibited matter must immediately notify the Department of Primary Industries</i> All species of Limnobium are Prohibited Matter
Gamba grass <i>Andropogon gayanus</i>	Prohibited Matter <i>A person who deals with prohibited matter or a carrier of prohibited matter is guilty of an offence. A person who becomes aware of or suspects the presence of prohibited matter must immediately notify the Department of Primary Industries</i>
Giant devil's fig <i>Solanum chrysotrichum</i>	Regional Recommended Measure Exclusion (eradication) zone: Bellingen Shire LGA, Clarence Valley LGA, Lord Howe Island, Port Macquarie-Hastings LGA. Core infestation (containment) zone: Ballina Shire LGA, Byron Shire LGA, Coffs Harbour City LGA, Kempsey Shire LGA, Kyogle Shire LGA, Lismore City LGA, Nambucca Valley LGA, Richmond Valley LGA, Tweed Shire LGA. <i>Whole of region: Land managers should mitigate the risk of the plant being introduced to their land. A person should not buy, sell, move, carry or release the plant into the environment. Exclusion zone: Notify local control authority if found. Land managers should eradicate the plant from the land and keep the land free of the plant. Core infestation: Land managers should mitigate spread of the plant from their land. Land managers should reduce the impact of the plant on assets of high economic, environmental and/or social value.</i>



<u>Giant reed</u> <i>Arundo donax</i>	Regional Recommended Measure Exclusion zone: whole region excluding core infestation area of the Clarence Valley Council, Bellingen Shire Council and Coffs Harbour City Council. <i>Whole region: The plant or parts of the plant should not be traded, carried, grown or released into the environment. Exclusion zone: The plant should be eradicated from the land and the land kept free of the plant. Land managers should mitigate the risk of the plant being introduced to their land. Core infestation area: Land managers should reduce impacts from the plant on priority assets.</i>
<u>Glory lily</u> <i>Gloriosa superba</i>	Regional Recommended Measure Exclusion zone: whole region excluding the core infestation area of Kempsey Shire Council, Richmond Valley Council, Ballina Shire Council, Bellingen Shire Council, Clarence Valley Council, Coffs Harbour City Council, Lismore Council, Kyogle Council, Byron Shire Council and Tweed Shire Council. <i>Whole region: The plant or parts of the plant should not be traded, carried, grown or released into the environment. Exclusion zone: The plant should be eradicated from the land and the land kept free of the plant. Land managers should mitigate the risk of the plant being introduced to their land. Core infestation area: Land managers should reduce impacts from the plant on priority assets.</i>
<u>Gorse</u> <i>Ulex europaeus</i>	Prohibition on certain dealings <i>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</i>
<u>Gorse</u> <i>Ulex europaeus</i>	Regional Recommended Measure <i>Land managers should mitigate the risk of the plant being introduced to their land. Land managers should eradicate the plant from the land and keep the land free of the plant. A person should not deal with the plant, where dealings include but are not limited to buying, selling, growing, moving, carrying or releasing the plant. Notify local control authority if found.</i>



<u>Green cestrum</u> <i>Cestrum parqui</i>	Regional Recommended Measure Exclusion (eradication) zone: Clarence Valley LGA, Lord Howe Island, Port Macquarie-Hastings LGA. Core infestation (containment) zone: Ballina Shire LGA, Bellingen Shire LGA, Byron Shire LGA, Coffs Harbour City LGA, Kempsey Shire LGA, Kyogle Shire LGA, Lismore City LGA, Nambucca Valley LGA, Richmond Valley LGA, Tweed Shire LGA. <i>Whole of region: Land managers should mitigate the risk of the plant being introduced to their land. A person should not buy, sell, move, carry or release the plant into the environment. Exclusion zone: Notify local control authority if found. Land managers should eradicate the plant from the land and keep the land free of the plant. Core infestation: Land managers should mitigate spread of the plant from their land. Land managers should reduce the impact of the plant on assets of high economic, environmental and/or social value.</i>
<u>Grey sallow</u> <i>Salix cinerea</i>	Prohibition on certain dealings <i>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</i>
<u>Grey sallow</u> <i>Salix cinerea</i>	Regional Recommended Measure <i>Land managers should mitigate the risk of the plant being introduced to their land. Land managers should eradicate the plant from the land and keep the land free of the plant. A person should not deal with the plant, where dealings include but are not limited to buying, selling, growing, moving, carrying or releasing the plant. Notify local control authority if found.</i>
<u>Ground asparagus</u> <i>Asparagus aethiopicus</i>	Prohibition on certain dealings <i>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</i>



<u>Groundsel bush</u> <i>Baccharis halimifolia</i>	Regional Recommended Measure Exclusion (eradication) zone: Clarence Valley LGA, Lord Howe Island, Port Macquarie-Hastings LGA. Core infestation (containment) zone: Ballina Shire LGA, Bellingen Shire LGA, Byron Shire LGA, Coffs Harbour City LGA, Kempsey Shire LGA, Kyogle Shire LGA, Lismore City LGA, Nambucca Valley LGA, Richmond Valley LGA, Tweed Shire LGA. <i>Whole of region: Land managers should mitigate the risk of the plant being introduced to their land. A person should not buy, sell, move, carry or release the plant into the environment. Exclusion zone: Notify local control authority if found. Land managers should eradicate the plant from the land and keep the land free of the plant. Core infestation: Land managers should mitigate spread of the plant from their land. Land managers should reduce the impact of the plant on assets of high economic, environmental and/or social value.</i>
<u>Hawkweeds</u> <i>Pilosella</i> species	Prohibited Matter <i>A person who deals with prohibited matter or a carrier of prohibited matter is guilty of an offence. A person who becomes aware of or suspects the presence of prohibited matter must immediately notify the Department of Primary Industries</i> All species in the genera <i>Pilosella</i> and <i>Hieracium</i> are Prohibited Matter except for <i>Hieracium murorum</i>.



<u>Honey locust</u> <i>Gleditsia triacanthos</i>	Regional Recommended Measure Exclusion (eradication) zone: Bellingen Shire LGA, Clarence Valley LGA (except Mann catchment), Coffs Harbour City LGA, Kempsey Shire LGA, Lord Howe Island, Nambucca Valley LGA, Port Macquarie-Hastings LGA. Core infestation (containment) zone: Ballina Shire LGA, Byron Shire LGA, Clarence Valley LGA (Mann catchment only), Kyogle Shire LGA, Lismore City LGA, Richmond Valley LGA, Tweed Shire LGA. <i>Whole of region: Land managers should mitigate the risk of the plant being introduced to their land. A person should not buy, sell, move, carry or release the plant into the environment. Exclusion zone: Notify local control authority if found. Land managers should eradicate the plant from the land and keep the land free of the plant. Core infestation: Land managers should mitigate spread of the plant from their land. Land managers should reduce the impact of the plant on assets of high economic, environmental and/or social value.</i>
<u>Horsetails</u> <i>Equisetum</i> species	Regional Recommended Measure <i>Land managers should mitigate the risk of the plant being introduced to their land. Land managers should eradicate the plant from the land and keep the land free of the plant. A person should not deal with the plant, where dealings include but are not limited to buying, selling, growing, moving, carrying or releasing the plant. Notify local control authority if found.</i>
<u>Hudson pear</u> <i>Cylindropuntia pallida</i>	Prohibition on certain dealings <i>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</i>
<u>Hydrocotyl</u> <i>Hydrocotyle ranunculoides</i>	Prohibited Matter <i>A person who deals with prohibited matter or a carrier of prohibited matter is guilty of an offence. A person who becomes aware of or suspects the presence of prohibited matter must immediately notify the Department of Primary Industries</i>



<u>Hygrophila</u> <i>Hygrophila costata</i>	Regional Recommended Measure Exclusion (eradication) zone: Bellingen Shire LGA, Clarence Valley LGA, Coffs Harbour City LGA, Kempsey Shire LGA, Lord Howe Island, Port Macquarie-Hastings LGA, Nambucca Valley LGA. Core infestation (containment) zone: Ballina Shire LGA, Byron Shire LGA, Kyogle Shire LGA, Lismore City LGA, Richmond Valley LGA, Tweed Shire LGA. <i>Whole of region: Land managers should mitigate the risk of the plant being introduced to their land. A person should not buy, sell, move, carry or release the plant into the environment. Exclusion zone: Notify local control authority if found. Land managers should eradicate the plant from the land and keep the land free of the plant. Core infestation: Land managers should mitigate spread of the plant from their land. Land managers should reduce the impact of the plant on assets of high economic, environmental and/or social value.</i>
<u>Hymenachne</u> <i>Hymenachne amplexicaulis</i> and hybrids	Prohibition on certain dealings <i>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</i>
<u>Hymenachne</u> <i>Hymenachne amplexicaulis</i> and hybrids	Regional Recommended Measure <i>Land managers should mitigate the risk of the plant being introduced to their land. Land managers should eradicate the plant from the land and keep the land free of the plant. A person should not deal with the plant, where dealings include but are not limited to buying, selling, growing, moving, carrying or releasing the plant. Notify local control authority if found.</i>
<u>Japanese walnut</u> <i>Juglans ailantifolia</i>	Regional Recommended Measure <i>Land managers should mitigate the risk of the plant being introduced to their land. Land managers should eradicate the plant from the land and keep the land free of the plant. A person should not deal with the plant, where dealings include but are not limited to buying, selling, growing, moving, carrying or releasing the plant. Notify local control authority if found.</i>



<u>Job's tears</u> <i>Coix lacryma-jobi</i>	Regional Recommended Measure <i>Land managers should mitigate the risk of the plant being introduced to their land. Land managers should eradicate the plant from the land and keep the land free of the plant. A person should not deal with the plant, where dealings include but are not limited to buying, selling, growing, moving, carrying or releasing the plant. Notify local control authority if found.</i>
<u>Karoo acacia</u> <i>Vachellia karroo</i>	Prohibited Matter <i>A person who deals with prohibited matter or a carrier of prohibited matter is guilty of an offence. A person who becomes aware of or suspects the presence of prohibited matter must immediately notify the Department of Primary Industries</i>
<u>Kei apple</u> <i>Dovyalis caffra</i>	Regional Recommended Measure <i>Land managers should mitigate the risk of the plant being introduced to their land. Land managers should eradicate the plant from the land and keep the land free of the plant. A person should not deal with the plant, where dealings include but are not limited to buying, selling, growing, moving, carrying or releasing the plant. Notify local control authority if found.</i>
<u>Kidney-leaf mud plantain</u> <i>Heteranthera reniformis</i>	Regional Recommended Measure <i>An exclusion zone is established for all land in the North Coast region, except the core infestation zone in the Coffs Harbour City LGA. Whole of region: Land managers should mitigate the risk of the plant being introduced to their land. A person should not buy, sell, move, carry or release the plant into the environment. Exclusion zone: Notify local control authority if found. Land managers should eradicate the plant from the land and keep the land free of the plant. Core infestation: Land managers should mitigate spread of the plant from their land. Land managers should reduce the impact of the plant on assets of high economic, environmental and/or social value.</i>



<u>Kochia</u> <i>Bassia scoparia</i>	Prohibited Matter <i>A person who deals with prohibited matter or a carrier of prohibited matter is guilty of an offence. A person who becomes aware of or suspects the presence of prohibited matter must immediately notify the Department of Primary Industries</i> Excluding the subspecies <i>trichophylla</i>
<u>Koster's curse</u> <i>Clidemia hirta</i>	Prohibited Matter <i>A person who deals with prohibited matter or a carrier of prohibited matter is guilty of an offence. A person who becomes aware of or suspects the presence of prohibited matter must immediately notify the Department of Primary Industries</i>
<u>Kudzu</u> <i>Pueraria lobata</i>	Regional Recommended Measure Exclusion (eradication) zone: Clarence Valley LGA, Port Macquarie-Hastings LGA, Lord Howe Island. Core infestation (containment) zone: Ballina Shire LGA, Bellingen Shire LGA, Byron Shire LGA, Coffs Harbour City LGA, Kempsey Shire LGA, Kyogle Shire LGA, Lismore City LGA, Nambucca Valley LGA, Richmond Valley LGA, Tweed Shire LGA. <i>Whole of region: Land managers should mitigate the risk of the plant being introduced to their land. A person should not buy, sell, move, carry or release the plant into the environment. Exclusion zone: Notify local control authority if found. Land managers should eradicate the plant from the land and keep the land free of the plant. Core infestation: Land managers should mitigate spread of the plant from their land. Land managers should reduce the impact of the plant on assets of high economic, environmental and/or social value.</i>
<u>Lagarosiphon</u> <i>Lagarosiphon major</i>	Prohibited Matter <i>A person who deals with prohibited matter or a carrier of prohibited matter is guilty of an offence. A person who becomes aware of or suspects the presence of prohibited matter must immediately notify the Department of Primary Industries</i>



<u>Lantana</u> <i>Lantana camara</i>	Prohibition on certain dealings <i>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</i>
<u>Leaf cactus</u> <i>Pereskia aculeata</i>	Regional Recommended Measure <i>Land managers should mitigate the risk of the plant being introduced to their land. Land managers should eradicate the plant from the land and keep the land free of the plant. A person should not deal with the plant, where dealings include but are not limited to buying, selling, growing, moving, carrying or releasing the plant. Notify local control authority if found.</i>
<u>Leucaena</u> <i>Leucaena leucocephala</i>	Regional Recommended Measure Exclusion (eradication) zone: Bellingen Shire LGA, Clarence Valley LGA, Lord Howe Island, Nambucca Valley LGA, Port Macquarie-Hastings LGA. Core infestation (containment) zone: Ballina Shire LGA, Byron Shire LGA, Coffs Harbour City LGA, Kempsey Shire LGA, Kyogle Shire LGA, Lismore City LGA, Richmond Valley LGA, Tweed Shire LGA. <i>Whole of region: Land managers should mitigate the risk of the plant being introduced to their land. A person should not buy, sell, move, carry or release the plant into the environment. Exclusion zone: Notify local control authority if found. Land managers should eradicate the plant from the land and keep the land free of the plant. Core infestation: Land managers should mitigate spread of the plant from their land. Land managers should reduce the impact of the plant on assets of high economic, environmental and/or social value.</i>



<u>Long-leaf willow primrose</u> <i>Ludwigia longifolia</i>	Regional Recommended Measure Exclusion (eradication) zone: Bellingen Shire LGA, Clarence Valley LGA, Lord Howe Island. Core infestation (containment) zone: Ballina Shire LGA, Byron Shire LGA, Coffs Harbour City LGA, Kempsey Shire LGA, Kyogle Shire LGA, Lismore City LGA, Nambucca Valley LGA, Port Macquarie-Hastings LGA, Richmond Valley LGA, Tweed Shire LGA. <i>Whole of region: Land managers should mitigate the risk of the plant being introduced to their land. A person should not buy, sell, move, carry or release the plant into the environment. Exclusion zone: Notify local control authority if found. Land managers should eradicate the plant from the land and keep the land free of the plant. Core infestation: Land managers should mitigate spread of the plant from their land. Land managers should reduce the impact of the plant on assets of high economic, environmental and/or social value.</i>
<u>Ludwigia</u> <i>Ludwigia peruviana</i>	Regional Recommended Measure <i>Land managers should mitigate the risk of the plant being introduced to their land. Land managers should eradicate the plant from the land and keep the land free of the plant. A person should not deal with the plant, where dealings include but are not limited to buying, selling, growing, moving, carrying or releasing the plant. Notify local control authority if found.</i>
<u>Madeira vine</u> <i>Anredera cordifolia</i>	Prohibition on certain dealings <i>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</i>
<u>Mahonia</u> <i>Berberis lomariifolia</i>	Regional Recommended Measure <i>Land managers should mitigate the risk of the plant being introduced to their land. Land managers should eradicate the plant from the land and keep the land free of the plant. A person should not deal with the plant, where dealings include but are not limited to buying, selling, growing, moving, carrying or releasing the plant. Notify local control authority if found.</i>



<u>Mesquite</u> <i>Prosopis</i> species	Prohibition on certain dealings <i>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</i> All species in the genus <i>Prosopis</i> have this requirement
<u>Mexican feather grass</u> <i>Nassella tenuissima</i>	Prohibited Matter <i>A person who deals with prohibited matter or a carrier of prohibited matter is guilty of an offence. A person who becomes aware of or suspects the presence of prohibited matter must immediately notify the Department of Primary Industries</i>
<u>Miconia</u> <i>Miconia</i> species	Prohibited Matter <i>A person who deals with prohibited matter or a carrier of prohibited matter is guilty of an offence. A person who becomes aware of or suspects the presence of prohibited matter must immediately notify the Department of Primary Industries</i> All species of <i>Miconia</i> are Prohibited Matter in NSW
<u>Mikania vine</u> <i>Mikania micrantha</i>	Prohibited Matter <i>A person who deals with prohibited matter or a carrier of prohibited matter is guilty of an offence. A person who becomes aware of or suspects the presence of prohibited matter must immediately notify the Department of Primary Industries</i> *all species in the genus <i>Mikania</i> are Prohibited Matter in NSW
<u>Mimosa</u> <i>Mimosa pigra</i>	Prohibited Matter <i>A person who deals with prohibited matter or a carrier of prohibited matter is guilty of an offence. A person who becomes aware of or suspects the presence of prohibited matter must immediately notify the Department of Primary Industries</i>



Ming asparagus fern <i>Asparagus macowanii</i>	Regional Recommended Measure <i>Land managers should mitigate the risk of the plant being introduced to their land. Land managers should eradicate the plant from the land and keep the land free of the plant. A person should not deal with the plant, where dealings include but are not limited to buying, selling, growing, moving, carrying or releasing the plant. Notify local control authority if found.</i>
Monkey's comb <i>Pithecoctenium crucigerum</i>	Regional Recommended Measure <i>Land managers should mitigate the risk of the plant being introduced to their land. Land managers should eradicate the plant from the land and keep the land free of the plant. A person should not deal with the plant, where dealings include but are not limited to buying, selling, growing, moving, carrying or releasing the plant. Notify local control authority if found.</i>
Moonflower <i>Ipomoea alba</i>	Regional Recommended Measure Exclusion (eradication) zone: Bellingen Shire LGA, Lord Howe Island, Nambucca Valley LGA, Port Macquarie-Hastings LGA. Core infestation (containment) zone: Ballina Shire LGA, Byron Shire LGA, Clarence Valley LGA, Coffs Harbour City LGA, Kempsey Shire LGA, Kyogle Shire LGA, Lismore City LGA, Richmond Valley LGA, Tweed Shire LGA. <i>Whole of region: Land managers should mitigate the risk of the plant being introduced to their land. A person should not buy, sell, move, carry or release the plant into the environment. Exclusion zone: Notify local control authority if found. Land managers should eradicate the plant from the land and keep the land free of the plant. Core infestation: Land managers should mitigate spread of the plant from their land. Land managers should reduce the impact of the plant on assets of high economic, environmental and/or social value.</i>



<u>Mysore thorn</u> <i>Caesalpinia decapetala</i>	Regional Recommended Measure Exclusion (eradication) zone: Bellingen Shire LGA, Lord Howe Island, Nambucca Valley LGA, Port Macquarie-Hastings LGA. Core infestation (containment) zone: Ballina Shire LGA, Byron Shire LGA, Clarence Valley LGA, Coffs Harbour City LGA, Kempsey Shire LGA, Kyogle Shire LGA, Lismore City LGA, Richmond Valley LGA, Tweed Shire LGA. <i>Whole of region: Land managers should mitigate the risk of the plant being introduced to their land. A person should not buy, sell, move, carry or release the plant into the environment. Exclusion zone: Notify local control authority if found. Land managers should eradicate the plant from the land and keep the land free of the plant. Core infestation: Land managers should mitigate spread of the plant from their land. Land managers should reduce the impact of the plant on assets of high economic, environmental and/or social value.</i>
<u>Pampas grass</u> <i>Cortaderia species</i>	Regional Recommended Measure <i>Land managers should mitigate the risk of the plant being introduced to their land. Land managers should eradicate the plant from the land and keep the land free of the plant. A person should not deal with the plant, where dealings include but are not limited to buying, selling, growing, moving, carrying or releasing the plant. Notify local control authority if found.</i> This Regional Recommended Measure applies to <i>Cortaderia jubata</i> (pink pampas grass)
<u>Pampas grass</u> <i>Cortaderia species</i>	Regional Recommended Measure <i>Land managers mitigate the risk of the plant being introduced to their land. Notify the Local control authority if the plant is found on the land. The plant is eradicated from the land and the land is kept free of the plant. The plant or parts of the plant are not traded, carried, grown, or released into the environment.</i> This Regional Recommended Measure applies to <i>Cortaderia selloana</i>.



<u>Paper mulberry</u> <i>Broussonetia papyrifera</i>	Regional Recommended Measure <i>Land managers should mitigate the risk of the plant being introduced to their land. Land managers should eradicate the plant from the land and keep the land free of the plant. A person should not deal with the plant, where dealings include but are not limited to buying, selling, growing, moving, carrying or releasing the plant. Notify local control authority if found.</i>
<u>Parkinsonia</u> <i>Parkinsonia aculeata</i>	Prohibition on certain dealings <i>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</i>
<u>Parkinsonia</u> <i>Parkinsonia aculeata</i>	Control Order <i>Parkinsonia Control Zone: Whole of NSW Parkinsonia Control Zone (Whole of NSW): Owners and occupiers of land on which there is parkinsonia must notify the local control authority of new infestations; immediately destroy the plants; ensure subsequent generations are destroyed; and ensure the land is kept free of the plant. A person who deals with a carrier of parkinsonia must ensure the plant (and any seed and propagules) is not moved from the land; and immediately notify the local control authority of the presence of the plant.</i>
<u>Parthenium weed</u> <i>Parthenium hysterophorus</i>	Prohibited Matter <i>A person who deals with prohibited matter or a carrier of prohibited matter is guilty of an offence. A person who becomes aware of or suspects the presence of prohibited matter must immediately notify the Department of Primary Industries</i>



<u>Parthenium weed</u> <i>Parthenium hysterophorus</i>	Prohibition on certain dealings <i>The following equipment must not be imported into NSW from Queensland: grain harvesters (including the comb or front), comb trailers (including the comb or front), bins used for holding grain during harvest operations, augers or similar for moving grain, vehicles used to transport grain harvesters, support vehicles driven in paddocks during harvest operations, mineral exploration drilling rigs and vehicles used to transport those rigs, unless set out as an exception in Division 5, Part 2 of the Biosecurity Order (Permitted Activities) 2017</i>
<u>Pond apple</u> <i>Annona glabra</i>	Prohibited Matter <i>A person who deals with prohibited matter or a carrier of prohibited matter is guilty of an offence. A person who becomes aware of or suspects the presence of prohibited matter must immediately notify the Department of Primary Industries</i>
<u>Prickly acacia</u> <i>Vachellia nilotica</i>	Prohibited Matter <i>A person who deals with prohibited matter or a carrier of prohibited matter is guilty of an offence. A person who becomes aware of or suspects the presence of prohibited matter must immediately notify the Department of Primary Industries</i>
<u>Prickly pears - Austrocyllindropuntias</u> <i>Austrocyllindropuntia</i> species	Prohibition on certain dealings <i>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</i> All species in the Austrocyllindropuntia genus have this requirement
<u>Prickly pears - Cyllindropuntias</u> <i>Cyllindropuntia</i> species	Prohibition on certain dealings <i>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</i> All species in the Cyllindropuntia genus have this requirement
<u>Prickly pears - Opuntias</u> <i>Opuntia</i> species	Prohibition on certain dealings <i>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</i> For all Opuntia species except for Opuntia ficus-indica (Indian fig).



Red cestrum <i>Cestrum elegans</i>	Regional Recommended Measure <i>Land managers should mitigate the risk of the plant being introduced to their land. Land managers should eradicate the plant from the land and keep the land free of the plant. A person should not deal with the plant, where dealings include but are not limited to buying, selling, growing, moving, carrying or releasing the plant. Notify local control authority if found.</i>
Riverina pear <i>Opuntia elata</i>	Prohibition on certain dealings <i>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</i>
Rope pear <i>Cylindropuntia imbricata</i>	Prohibition on certain dealings <i>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</i> All species in the Cylindropuntia genus have this requirement
Rubber vine <i>Cryptostegia grandiflora</i>	Prohibited Matter <i>A person who deals with prohibited matter or a carrier of prohibited matter is guilty of an offence. A person who becomes aware of or suspects the presence of prohibited matter must immediately notify the Department of Primary Industries</i>
Sagittaria <i>Sagittaria platyphylla</i>	Prohibition on certain dealings <i>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</i>
Salvinia <i>Salvinia molesta</i>	Prohibition on certain dealings <i>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</i>
Scotch broom <i>Cytisus scoparius</i> subsp. <i>scoparius</i>	Prohibition on certain dealings <i>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</i>



<u>Scotch broom</u> <i>Cytisus scoparius</i> subsp. <i>scoparius</i>	Regional Recommended Measure <i>Land managers should mitigate the risk of the plant being introduced to their land. Land managers should eradicate the plant from the land and keep the land free of the plant. A person should not deal with the plant, where dealings include but are not limited to buying, selling, growing, moving, carrying or releasing the plant. Notify local control authority if found.</i>
<u>Sea spurge</u> <i>Euphorbia paralias</i>	Regional Recommended Measure <i>Land managers should mitigate the risk of the plant being introduced to their land. Land managers should eradicate the plant from the land and keep the land free of the plant. A person should not deal with the plant, where dealings include but are not limited to buying, selling, growing, moving, carrying or releasing the plant. Notify local control authority if found.</i>
<u>Seeded banana</u> <i>Musa</i> species	Regional Recommended Measure <i>Land managers should mitigate the risk of the plant being introduced to their land. Land managers should eradicate the plant from the land and keep the land free of the plant. A person should not deal with the plant, where dealings include but are not limited to buying, selling, growing, moving, carrying or releasing the plant. Notify local control authority if found.</i>
<u>Senegal tea plant</u> <i>Gymnocoronis spilanthoides</i>	Regional Recommended Measure <i>Land managers should mitigate the risk of the plant being introduced to their land. Land managers should eradicate the plant from the land and keep the land free of the plant. A person should not deal with the plant, where dealings include but are not limited to buying, selling, growing, moving, carrying or releasing the plant. Notify local control authority if found.</i>
<u>Serrated tussock</u> <i>Nassella trichotoma</i>	Prohibition on certain dealings <i>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</i>



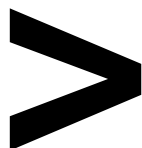
<u>Shoebutton ardisia</u> <i>Ardisia elliptica</i>	Regional Recommended Measure <i>Land managers should mitigate the risk of the plant being introduced to their land. Land managers should eradicate the plant from the land and keep the land free of the plant. A person should not deal with the plant, where dealings include but are not limited to buying, selling, growing, moving, carrying or releasing the plant. Notify local control authority if found.</i>
<u>Siam weed</u> <i>Chromolaena odorata</i>	Prohibited Matter <i>A person who deals with prohibited matter or a carrier of prohibited matter is guilty of an offence. A person who becomes aware of or suspects the presence of prohibited matter must immediately notify the Department of Primary Industries</i>
<u>Sicklethorn</u> <i>Asparagus falcatus</i>	Regional Recommended Measure <i>Land managers should mitigate the risk of the plant being introduced to their land. Land managers should eradicate the plant from the land and keep the land free of the plant. A person should not deal with the plant, where dealings include but are not limited to buying, selling, growing, moving, carrying or releasing the plant. Notify local control authority if found.</i>
<u>Silverleaf nightshade</u> <i>Solanum elaeagnifolium</i>	Prohibition on certain dealings <i>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</i>
<u>Skunk vine</u> <i>Paederia foetida</i>	Regional Recommended Measure <i>Land managers should mitigate the risk of the plant being introduced to their land. Land managers should eradicate the plant from the land and keep the land free of the plant. A person should not deal with the plant, where dealings include but are not limited to buying, selling, growing, moving, carrying or releasing the plant. Notify local control authority if found.</i>
<u>Smooth tree pear</u> <i>Opuntia monacantha</i>	Prohibition on certain dealings <i>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</i>



Snakefeather <i>Asparagus scandens</i>	Prohibition on certain dealings <i>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</i>
Spongeplant <i>Limnobia spongia</i>	Prohibited Matter <i>A person who deals with prohibited matter or a carrier of prohibited matter is guilty of an offence. A person who becomes aware of or suspects the presence of prohibited matter must immediately notify the Department of Primary Industries</i> All species of <i>Limnobia</i> are Prohibited Matter
Spotted knapweed <i>Centaurea stoebe</i> subsp. <i>micranthos</i>	Prohibited Matter <i>A person who deals with prohibited matter or a carrier of prohibited matter is guilty of an offence. A person who becomes aware of or suspects the presence of prohibited matter must immediately notify the Department of Primary Industries</i>
Sticky nightshade <i>Solanum sisymbriifolium</i> <i>Regional recommended measure for Central Tablelands from February 2020</i>	Regional Recommended Measure <i>Land managers should mitigate the risk of the plant being introduced to their land. Land managers should eradicate the plant from the land and keep the land free of the plant. A person should not deal with the plant, where dealings include but are not limited to buying, selling, growing, moving, carrying or releasing the plant. Notify local control authority if found.</i>
Tiger pear <i>Opuntia aurantiaca</i>	Prohibition on certain dealings <i>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</i>
Tobacco weed <i>Elephantopus mollis</i>	Regional Recommended Measure <i>Land managers should mitigate the risk of the plant being introduced to their land. Land managers should eradicate the plant from the land and keep the land free of the plant. A person should not deal with the plant, where dealings include but are not limited to buying, selling, growing, moving, carrying or releasing the plant. Notify local control authority if found.</i>



<u>Tropical soda apple</u> <i>Solanum viarum</i>	Control Order Tropical Soda Apple Control Zone: Whole of NSW <i>Tropical Soda Apple Control Zone (Whole of NSW): Owners and occupiers of land on which there is tropical soda apple must notify the local control authority of new infestations; destroy the plants including the fruit; ensure subsequent generations are destroyed; and ensure the land is kept free of the plant. A person who deals with a carrier of tropical soda apple must ensure the plant (and any seed and propagules) is not moved from the land; and immediately notify the local control authority of the presence of the plant on the land, or on or in a carrier.</i>
<u>Velvety tree pear</u> <i>Opuntia tomentosa</i>	Prohibition on certain dealings <i>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</i>
<u>Water caltrop</u> <i>Trapa species</i>	Prohibited Matter <i>A person who deals with prohibited matter or a carrier of prohibited matter is guilty of an offence. A person who becomes aware of or suspects the presence of prohibited matter must immediately notify the Department of Primary Industries</i> All species in the <i>Trapa</i> genus are Prohibited Matter in NSW
<u>Water hyacinth</u> <i>Eichhornia crassipes</i>	Prohibition on certain dealings <i>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</i>



Water hyacinth <i>Eichhornia crassipes</i>	Biosecurity Zone The Water Hyacinth Biosecurity Zone applies to all land within the State, except for the following regions: Greater Sydney or North Coast, North West (but only the local government area of Moree Plains), Hunter (but only in the local government areas of City of Cessnock, City of Lake Macquarie, MidCoast, City of Maitland, City of Newcastle or Port Stephens), South East (but only in the local government areas of Eurobodalla, Kiama, City of Shellharbour, City of Shoalhaven or City of Wollongong). <i>Within the Biosecurity Zone this weed must be eradicated where practicable, or as much of the weed destroyed as practicable, and any remaining weed suppressed. The local control authority must be notified of any new infestations of this weed within the Biosecurity Zone</i>
Water lettuce <i>Pistia stratiotes</i>	Regional Recommended Measure <i>Land managers should mitigate the risk of the plant being introduced to their land. Land managers should eradicate the plant from the land and keep the land free of the plant. A person should not deal with the plant, where dealings include but are not limited to buying, selling, growing, moving, carrying or releasing the plant. Notify local control authority if found.</i>
Water mimosa <i>Neptunia oleracea</i>	Regional Recommended Measure <i>Land managers should mitigate the risk of the plant being introduced to their land. Land managers should eradicate the plant from the land and keep the land free of the plant. A person should not deal with the plant, where dealings include but are not limited to buying, selling, growing, moving, carrying or releasing the plant. Notify local control authority if found.</i> This Regional Recommended Measure also applies to <i>Neptunia plena</i>
Water soldier <i>Stratiotes aloides</i>	Prohibited Matter <i>A person who deals with prohibited matter or a carrier of prohibited matter is guilty of an offence. A person who becomes aware of or suspects the presence of prohibited matter must immediately notify the Department of Primary Industries</i>



<u>Water star grass</u> <i>Heteranthera zosterifolia</i>	Regional Recommended Measure <i>Land managers should mitigate the risk of the plant being introduced to their land. Land managers should eradicate the plant from the land and keep the land free of the plant. A person should not deal with the plant, where dealings include but are not limited to buying, selling, growing, moving, carrying or releasing the plant. Notify local control authority if found.</i>
<u>Wheel cactus</u> <i>Opuntia robusta</i>	Prohibition on certain dealings <i>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</i>
<u>White blackberry</u> <i>Rubus niveus</i>	Regional Recommended Measure An exclusion zone is established for all land in the North Coast region, except the core infestation (containment) zone in the Coffs Harbour City LGA. <i>Whole of region: Land managers should mitigate the risk of the plant being introduced to their land. A person should not buy, sell, move, carry or release the plant into the environment. Exclusion zone: Notify local control authority if found. Land managers should eradicate the plant from the land and keep the land free of the plant. Core infestation: Land managers should mitigate spread of the plant from their land. Land managers should reduce the impact of the plant on assets of high economic, environmental and/or social value.</i>
<u>Willows</u> <i>Salix</i> species	Prohibition on certain dealings <i>Must not be imported into the state, sold, bartered, exchanged or offered for sale.</i> All species in the <i>Salix</i> genus have this requirement, except <i>Salix babylonica</i> (weeping willows), <i>Salix x calodendron</i> (pussy willow) and <i>Salix x reichardtii</i> (sterile pussy willow)



<u>Witchweeds</u> <i>Striga</i> species	Prohibited Matter <i>A person who deals with prohibited matter or a carrier of prohibited matter is guilty of an offence. A person who becomes aware of or suspects the presence of prohibited matter must immediately notify the Department of Primary Industries</i> All species in the <i>Striga</i> genus are Prohibited Matter in NSW, except the native <i>Striga parviflora</i>
<u>Yellow bells</u> <i>Tecoma stans</i>	Regional Recommended Measure Exclusion (eradication) zone: Clarence Valley LGA, Lord Howe Island, Port Macquarie-Hastings LGA. Core infestation (containment) zone: Ballina Shire LGA, Bellingen Shire LGA, Byron Shire LGA, Coffs Harbour City LGA, Kempsey Shire LGA, Kyogle Shire LGA, Lismore City LGA, Nambucca Valley LGA, Richmond Valley LGA, Tweed Shire LGA. <i>Whole of region: Land managers should mitigate the risk of the plant being introduced to their land. A person should not buy, sell, move, carry or release the plant into the environment. Exclusion zone: Notify local control authority if found. Land managers should eradicate the plant from the land and keep the land free of the plant. Core infestation: Land managers should mitigate spread of the plant from their land. Land managers should reduce the impact of the plant on assets of high economic, environmental and/or social value.</i>
<u>Yellow burrhead</u> <i>Limnocharis flava</i>	Prohibited Matter <i>A person who deals with prohibited matter or a carrier of prohibited matter is guilty of an offence. A person who becomes aware of or suspects the presence of prohibited matter must immediately notify the Department of Primary Industries</i>



Appendix E Rapid condition assessment – report template

The Rapid Condition Assessment (RCA) is derived from the 'Save the Bush Toolkit' technique (Wakefield and Goldney, 1997), which identifies the presence or absence of key habitat components and threatening processes. This technique is not applicable to all types of native vegetation (e.g. native grasslands, wetlands or pastures) but is a quick and reliable way to assess the condition of woodland communities.

The RCA requires answering true or false to a series of questions, with a tally of the "True" scores indicating woodland health. Where answers are false, improved management in these areas may be required. Sites scoring 16 - 20 "trues" are generally considered to be areas of healthy vegetation that are sustainable under current management. Sites scoring 10 - 15 "trues" are generally considered to be areas of moderately disturbed bushland that have key elements missing and need improved management. Scores lower than 10 are highly disturbed, have many key elements missing, and are generally unsustainable under the current management regime. These RCA attributes are listed in with an example score for relatively undisturbed woodland.

Table 16 Rapid Condition Assessment attributes

Remnant attribute	Site
Remnant attribute	Site
Low grazing intensity - never farmed	True
Tree and shrub regeneration present (<2m)	True
Infrequent fire regime (<5year intervals)	True
Healthy mature trees (no dieback)	False
Little to no evidence of rabbits	True
Little to no evidence of foxes/cats	True
Low abundance of weeds (most remnants contain some weeds)	True
No evidence of firewood collection	False
No obvious signs of erosion or salinity	True
Not susceptible to fertiliser application, herbicide or pesticide drift	True
Less than 20% trees with Mistletoe (NB some mistletoe is healthy)	True
Few tracks, trails or fence lines	True
Presence of native shrubs	True
Presence of large, old growth trees with hollows	True
Dead timber is left standing	True
Fallen timber and logs are left on the ground	True
Abundance of native ground flora	True
Presence of litter, cryptogams, cracks and rocks	True
Remnant is large (> 5ha is optimum)	True
Connected to or in close proximity to other remnant vegetation	True
Total No. True answers	18/20

Execution page

EXECUTED as a Conservation Agreement under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth)

SIGNED for and on behalf of the
Commonwealth of Australia as
represented by the delegate of the
Minister for the Environment and Water

Rachel Short

Name
Branch Head - EAVTPAS

Position


Signature

22.12.2025

Date

Tony Richards

Name of witness (print)
Acting Director - PAS (NSW,ACT,Vic, Tas)



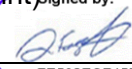
Signature of witness

27.01.2026

Date

SIGNED by HV Operations Pty Ltd (ACN 606 478 399) in accordance with section 127 of the *Corporations Act 2001* (Cth) by

David Foster

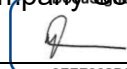
Name of Director (print)


Signature of Director
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Date

Michael Pajkovic

Name of Director / Company Secretary (print)


Signature of Director / Company Secretary
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29-Nov-25 | 11:28 AEDT

Date

SIGNED by Coal & Allied Operations Pty Ltd (ACN 000 023 656) in accordance with section 127 of the *Corporations Act 2001* (Cth) by

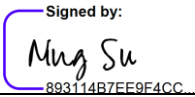
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Name of Director (print)

Signature of Director

01 December 2025

Date

Signed by:

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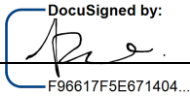
Sharif Burra

Name of Director / ~~Company Secretary~~ (print)

Signature of Director / ~~Company Secretary~~

01 December 2025

Date

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SIGNED by Anotero Pty Ltd (ACN 618 503 674) in accordance with section 127 of the *Corporations Act 2001* (Cth) by

Name of Director (print)

Signature of Director

Date

Name of Director / Company Secretary (print)

Signature of Director / Company Secretary

Date

SIGNED by Coal & Allied Operations Pty Ltd (ACN 000 023 656) in accordance with section 127 of the *Corporations Act 2001* (Cth) by

Name of Director (print)

Signature of Director

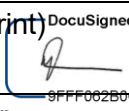
Date

Name of Director / Company Secretary (print)

Signature of Director / Company Secretary

Date

SIGNED by Anotero Pty Ltd (ACN 618 503 674) in accordance with section 127 of the *Corporations Act 2001* (Cth) by
Michael Pajkovic

Name of Director (print)


Signature of Director
29-Nov-25 | 11:28 AEDT

Date

Nicholas Talintyre

Name of Director / Company Secretary (print)


Signature of Director / Company Secretary
28-Nov-25 | 20:04 AEDT

Date

Annexure 1 – Approval



Approval

Hunter Valley Operations - State approved mining, Hunter Valley, NSW (EPBC 2016/7640)

This decision is made under sections 130(1) and 133 of the *Environment Protection and Biodiversity Conservation Act 1999*.

Proposed action

person to whom the approval is granted Coal & Allied Operations Pty Ltd

proponent's ACN (if applicable) ACN 000 023 656

proposed action The continuation of open cut coal mining operations in areas that were previously approved by the State after the commencement of the *Environment Protection and Biodiversity Conservation Act, 1999* within the Hunter Valley Operations (HVO) mine complex, located 24 km north west of Singleton, NSW [See EPBC Act referral 2016/7640].

Approval decision

Controlling Provision	Decision
Listed threatened species and communities (sections 18 & 18A)	Approved

conditions of approval

This approval is subject to the conditions specified below.

expiry date of approval

This approval has effect until 31 December 2030.

Decision-maker

name and position Mike Smith
Acting Assistant Secretary

signature

date of decision

10.10.16

Conditions attached to the approval

1. The **person taking the action** must not clear more than 54.4 hectares of the Central Hunter Valley Eucalypt Forest and woodland (CHVEF) ecological community from the Riverview Pit and 6.6 ha of the CHVEE ecological community from within the West Pit and must limit all vegetation clearing to within the project disturbance boundaries defined at Schedule 1, Figures 1 - 4.
2. The **person taking the action** must prepare and submit a Vegetation Clearance Plan (VCP) for the **Minister's** approval to mitigate impacts of the action on the CHVEF ecological community, the Regent Honeyeater (*Anthochaera phrygia*), Swift Parrot (*Lathamus discolor*) and the Green and Golden Bell Frog (*Litoria aurea*). The VCP must include:
 - a. Clear delineation of vegetation to be cleared, as per the disturbance boundary shown in Schedule 1 Figures 1 - 4, and vegetation that is to be retained.
 - b. Pre-clearance survey methods, which must include but not be limited to the following requirements:
 - i. A **qualified ecologist** must undertake a pre-clearance survey within 24 hours prior to the removal of potential foraging, nesting or breeding habitat for the Regent Honeyeater or foraging habitat for the Swift Parrot in areas identified in Schedule 2, Figures 1 - 5.
 - ii. If during pre-clearance surveys, Regent Honeyeater or Swift Parrot individuals are identified within the clearance area the VCP must specify the use of a two stage clearing protocol where **non-habitat trees** are cleared 24 hours prior to any **habitat trees** being cleared, to encourage fauna to move out of a habitat area.
 - iii. In the event an **active Regent Honeyeater nest** is identified during pre-clearance surveys, vegetation clearing and overburden removal within 100 m of the active nest should be delayed up until the **Regent Honeyeater nest is no longer actively being used**.
 - iv. A qualified ecologist must undertake pre-clearance surveys within a 2 week period prior to the removal of potential breeding habitat for the Green and Golden Bell Frog. Surveys are to be undertaken within all potential breeding habitat areas identified in Schedule 2, Figure 2 as well as a 200m buffer around each potential breeding habitat area.
 - v. Pre-clearance survey methods for the Green and Golden Bell Frog must meet the survey effort requirements for the Green and Golden Bell Frog stipulated in the *Survey Guidelines for Australia's threatened frog (2010) Commonwealth of Australia*.
 - vi. In the event Green and Golden Bell Frog individuals, metamorphs or tadpoles are located during pre-clearance surveys, they are to be handled and translocated in accordance with the *Hygiene protocols for the control of diseases in frogs (2008) Department of Environment and Climate Change (NSW)*.

- c. Include measures to avoid, suppress and control the spread of plant pathogens (such as *Phytophthora cinnamomi*) and chytrid fungus that may degrade habitat for **protected matters**.

The action must not commence until the Vegetation Clearance Plan, required by Condition 2, has been approved by the **Minister**.

3. The approved Vegetation Clearance Plan must be implemented.
4. To compensate for residual impacts to **protected matters** the **person taking the action** must, under a **legally binding agreement**, secure in perpetuity 405.8 ha at the **Wandewoi Biodiversity Area**, described in 4(a)(b) and (c) within three (3) years from the date of this approval. The **Wandewoi Biodiversity Area** must include:
 - a. 405.8 hectares of the CHVEF ecological community;
 - b. 175.8 hectares of foraging habitat for the Swift Parrot; and
 - c. 40 ha of regenerating foraging habitat for the Swift Parrot.
5. To compensate for residual significant impacts to 22.7 ha of Class A condition CHVEF from the Riverview Pit extension area the **person taking the action** must identify a **direct offset site** that meets requirements of the **EPBC Act Offset Policy** and secure the offset in perpetuity under a **legally binding agreement** within 12 months from the date of this approval.
6. To compensate for residual significant impacts to 68.4 ha of breeding and foraging habitat for the Regent Honeyeater the **person taking the action** must identify a **direct offset site** that meets requirements of the **EPBC Act Offset Policy** and secure the offset in perpetuity under a **legally binding agreement** within 12 months from the date of this approval.
7. To compensate for residual significant impacts to 2.6 ha of breeding habitat and 102.7 ha of foraging habitat for the Green and Golden Bell Frog the **person taking the action** must identify an **offset package** that meets requirements of the **EPBC Act Offset Policy** and secure a **direct offset site** in perpetuity under a **legally binding agreement** within 12 months from the date of this approval.
8. Prior to securing the direct offsets required by Conditions 4, 5, 6 and 7 the **direct offset sites** and **legally binding agreements** must be agreed to by the **Minister**.
9. The action cannot continue for more than 12 months from the date of the **commencement of the action** unless the **direct offset sites** required by Conditions 5, 6 and 7 have been secured in perpetuity under a **legally binding agreement** by the **person taking the action**.
10. Within six (6) months from the **commencement of the action** the **person taking the action** must prepare and submit an Offset Strategy for the **Minister's** approval. The Offset Strategy must specify the development of the offset package and how **direct offset sites** required by Conditions 5, 6 and 7 will be identified, secured and managed in perpetuity. The Offset Strategy must:
 - a. Describe the development of the offset package and identify the proposed **direct offset sites** required by Conditions 5, 6 and 7, include a detailed description of the **direct offset sites** and demonstrate how the **direct offset sites** meet the **EPBC Act Offset Policy** and provide an adequate offset for the residual significant impacts to **protected matters**.

- b. Include proposed timeframes in which the **direct offset sites** will be secured by a **legal binding agreement** and a detailed description of how the **legally binding agreement** will secure the **direct offset sites** in perpetuity.
- c. Proposed measures for the long term management of the **direct offset sites**.

The Offset Strategy approved by the **Minister** must be implemented. —

11. For the protection of the CHVEF as well as habitat for the Regent Honeyeater, Swift Parrot and Green and Golden Bell Frog the **person taking the action** must prepare and submit a Biodiversity Offset Management Plan (BOMP) for the **Minister's** approval within 12 months from the date of this approval. At a minimum, the BOMP must:
 - a. Clearly identify the **direct offset sites** described in Conditions 4, 5, 6 and 7. This must include **offset attributes, shapefiles**, textual descriptions and maps to clearly define the location and boundaries of the **direct offset sites**.
 - b. Provide a description of the offset attributes for each **protected matter** and how the offset site meets the offset requirements under Conditions 4, 5, 6 and 7.
 - c. Provide a survey and description of the current condition (prior to any management activities) of the **direct offset sites** identified in Conditions 4, 5, 6 and 7.
 - d. Include detailed management actions, including regeneration and revegetation strategies to be undertaken at the **direct offset sites** to improve the ecological quality of these areas. The BOMP must also include:
 - (i) Management actions relating to improving habitat quality for **protected matters** including but not limited to: weed management, feral animal management, erosion and sediment control and fire management.
 - (ii) A description and timeframes that management measures would be implemented to improve the condition of CHVEF and habitat for the Regent Honeyeater, Swift Parrot and the Green and Golden Bell Frogs on the **direct offset sites**.
 - (iii) Performance and completion criteria for evaluating the management of the **direct offset sites**, and criteria for triggering remedial action.
 - (iv) A program to monitor and report on the effectiveness of these measures, and progress against the performance and completion criteria.
 - (v) A description of potential risks to the successful implementation of the plan, a description of the measures that will be implemented to mitigate against these risks and a description of the contingency measures that will be implemented if defined triggers arise.
 - (vi) Details of who would be responsible for monitoring, reviewing, and implementing the plan.
12. The BOMP approved by the **Minister** must be implemented at the **direct offset sites** required to meet the requirements of Conditions 5, 6 and 7 within three (3) months from the date the offsets are secured under a **legally binding agreement**.
13. To ensure timely compensation for significant impacts to **protected matters**, the approved BOMP must be implemented at the **Wandewoi Biodiversity Area** within one (1) month from the date the BOMP is approved, regardless if the **Wandewoi Biodiversity Area** has been secured under a **legally binding agreement**.

14. The person taking the action may choose to revise a management plan approved by the **Minister** without submitting it for approval under Section 143A of the **EPBC Act**, if the taking of the action in accordance with the revised management plan would not be likely to have a **new or increased impact** on a **protected matter** under the conditions of this approval. If the **person taking the action** makes this choice, they must:
- notify the Department in writing that the approved management plan has been revised and provide the Department with an electronic copy of the revised management plan;
 - implement the revised management plan from the date that it is submitted to the Department; and
 - for the life of this approval, maintain a record of the reasons the person taking the action considers that taking the action in accordance with the revised management plan would not be likely to have a new or increased impact on a protected matter under the conditions of this approval.
15. The person taking the action may revoke its choice under Condition 14 at any time by notice to the **Department**. If the person taking the action revokes the choice to implement a revised management plan, without approval under Section 143A of the EPBC Act, the management plan approved by the **Minister** must be implemented.
16. Condition 14 does not apply if the revisions to the approved management plan include changes to offsets provided under the management plan in relation to a matter protected by a controlling provision for the action, unless otherwise agreed in writing by the **Minister**. This does not otherwise limit the circumstances in which the taking of the action in accordance with a revised management plan would, or would not, be likely to have **new or increased impacts**.
17. If the **Minister** gives a notice to the **person taking the action** that the **Minister** is satisfied that the taking of the action in accordance with the revised management plan would be likely to have a **new or increased impact** on a **protected matter** by the conditions of this approval, then:
- Condition 14 does not apply, or ceases to apply, in relation to the revised management plan; and
 - The person taking the action must implement the previous management plan most recently approved by the Minister.
- To avoid any doubt, this condition does not affect any operation of conditions 14, 15 and 16 in the period before the day the notice is given.
- At the time of giving the notice the **Minister** may also notify that for a specified period of time that Condition 14 does not apply for one or more specified plans required under the approval.
18. If, at any time after 5 years from the date of this approval, the person taking the action has not **substantially commenced** the action, then the person taking the action must not **substantially commence** the action without the written agreement of the Minister.
19. Within 30 days after the commencement of the action, the person taking the action must advise the **Department** in writing of the actual date of **commencement**.
20. Unless otherwise agreed to in writing by the **Minister**, the person taking the action must publish all management plans, referred to in these conditions of approval on their website.

Each management plan must be published on the website within 1 month of being approved by the **Minister** or being submitted under Condition 14.a.

21. The person taking the action must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval, including measures taken to implement the VCP, Offset Strategy and Biodiversity Offset Management Plan required by this approval, and make the available upon request to the **Department**. Such records may be subject to audit by the **Department** or an independent auditor in accordance with section 458 of the EPBC Act, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on the Department's website. The results of audits may also be publicised through the general media.
22. Within three months of every 12 month anniversary of the commencement of the action, the person taking the action must publish a report on their website addressing compliance with each of the conditions of this approval, including implementation of any management plans as specified in the conditions. Documentary evidence providing proof of the date of publication and non-compliance with any of the conditions of this approval must be provided to the **Department** at the same time as the compliance report is published. Reports must remain on the website for the period this approval has effect. The approval holder may cease preparing and publishing compliance reports required by this condition with written agreement of the **Minister** to do so.
23. Upon the direction of the **Minister**, the **person taking the action** must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to the **Minister**. The independent auditor must be approved by the **Minister** prior to the commencement of the audit. Audit criteria must be agreed to by the **Minister** and the audit report must address the criteria to the satisfaction of the **Minister**.

Definitions

Active Regent Honeyeater nest is present when adult Regent Honeyeater birds are observed flying to and from, or sitting on a nest.

Commencement of the action means earthworks, vegetation removal or construction of any infrastructure, excluding fences and signage, associated with the proposed action. Commencement does not include:

- ▶ physical disturbance necessary to undertake pre-clearance surveys or establish monitoring programs; or
- ▶ activities that are associated with mobilisation of plant and equipment, materials, machinery and personnel prior to the start of development only if such activities will have no adverse impact on matters of national environmental significance.

The **Department** means the Australian Government Department or any other agency that is responsible for administering the *Environment Protection and Biodiversity Conservation Act 1999* (Cth).

Direct offset site means an offset site that is required by Conditions 4, 5, 6, and 7 that will protect and improve habitat for the relevant **protected matter**.

EPBC Act means the *Environment Protection and Biodiversity Conservation Act 1999*.

EPBC Act offset Policy means the Australian Government Department of Sustainability, Environment, Water Population and Communities (2012) *Environment Protection and Biodiversity Conservation Act 1999 Environmental Offsets Policy*. Commonwealth of Australia, Canberra.

Habitat trees are to be determined by qualified fauna spotter catcher or ecologist prior to vegetation clearance works.

Legally binding agreement means a legal mechanism that has been agreed by the Minister to secure and protect an offset site in perpetuity under NSW State legislation.

The **Minister** is the Commonwealth minister responsible for administering the *Environment Protection and Biodiversity Conservation Act 1999* and includes a delegate of the **Minister**.

New or increased impact means a new or increased impact on any matter protected by the controlling provisions for the action, when compared to the plan that has been approved by the Minister.

Non-habitat trees are to be determined by qualified fauna spotter catcher or ecologist prior to vegetation clearance works.

Offset attributes means an '.xls' file capturing relevant attributes of the Offset site, including the EPBC reference ID number, the physical address of the offset site, coordinates of the boundary points in decimal degrees, the EPBC protected matters that the offset compensates for, any additional EPBC protected matters that are benefiting from the offset, and the size of the offset in hectares.

Offset package means a combination of direct and indirect offsets that has been approved by the Minister.

Person taking the action is the person to whom the approval is granted as identified on the approval notice for EPBC 2016/7640.

Protected matter/s means any matter protected under the provisions of the *Environment Protection and Biodiversity Conservation Act 1999* for which this approval applies. These are: Central Hunter Valley eucalypt forest and woodland ecological community, Regent Honeyeater (*:Antnocffaera Phrygta*), Swift Parrot (*Lalhamus cfiscoror*) and the Green and Golden Bell Frog (*Litoria aurea*).

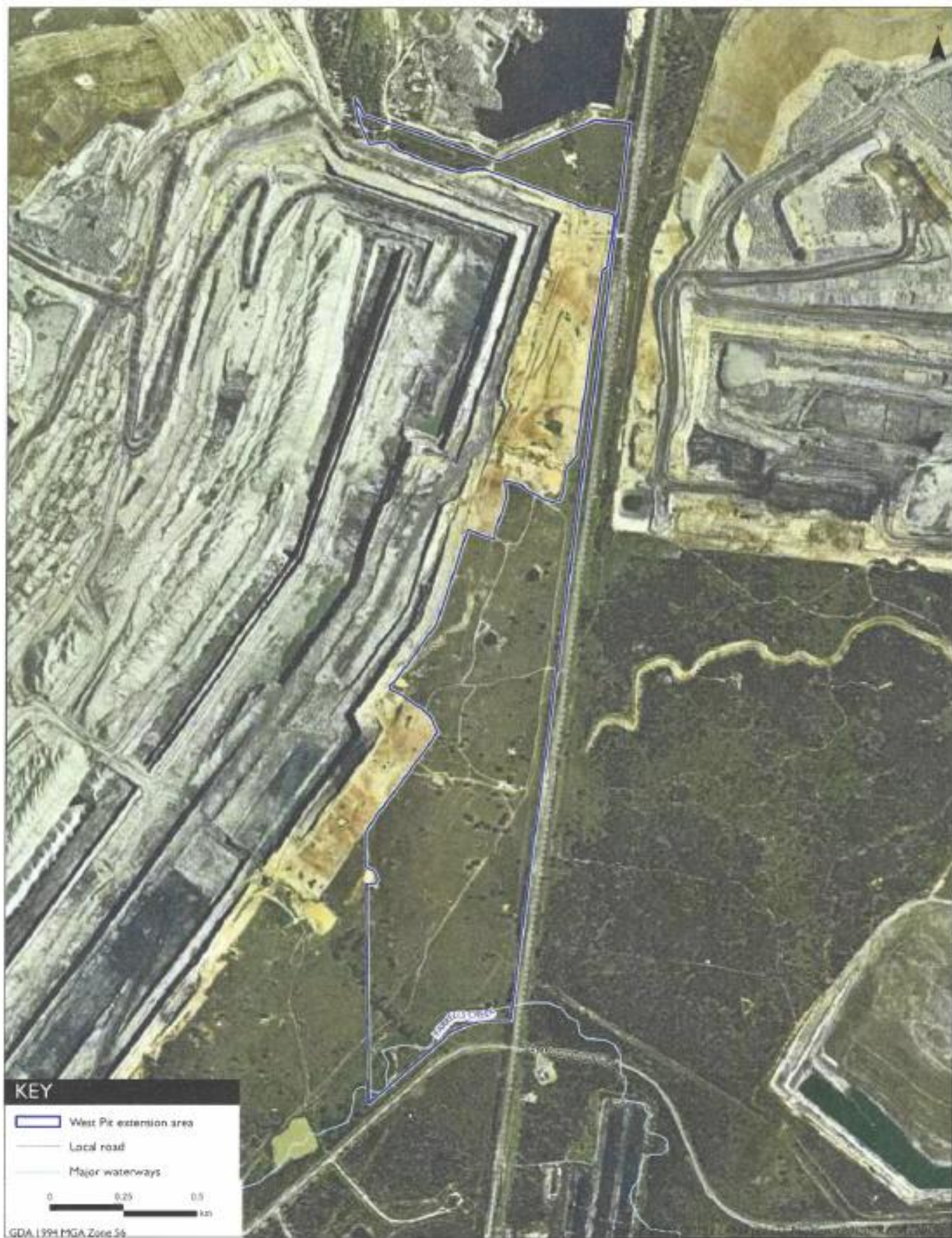
Regent Honeyeater nest is no longer actively being used is present when the young have left the nest and Regent Honeyeaters are no longer seen coming or going from the nest for 2 days.

Shapefiles means an ESRI Shapefile containing '.shp', '.shx' and '.dbf' files and other files capturing attributes of the Offset sites, including the shape, EPBC reference ID number and EPBC protected matters present at the relevant site. Attributes should also be captured in '.xis' format.

Substantially commence(d) the action means commencement of vegetation clearing.

Qualified ecologist means a person who has a minimum of 5 years experience in locating, capturing, handling, caring for and the safe release of native animals.

Wandewoi Biodiversity Area means the **direct offset site** identified in Schedule 3.



West Pit extension area
 Hunter Valley Operations - State-approved mining
 Schedule 1

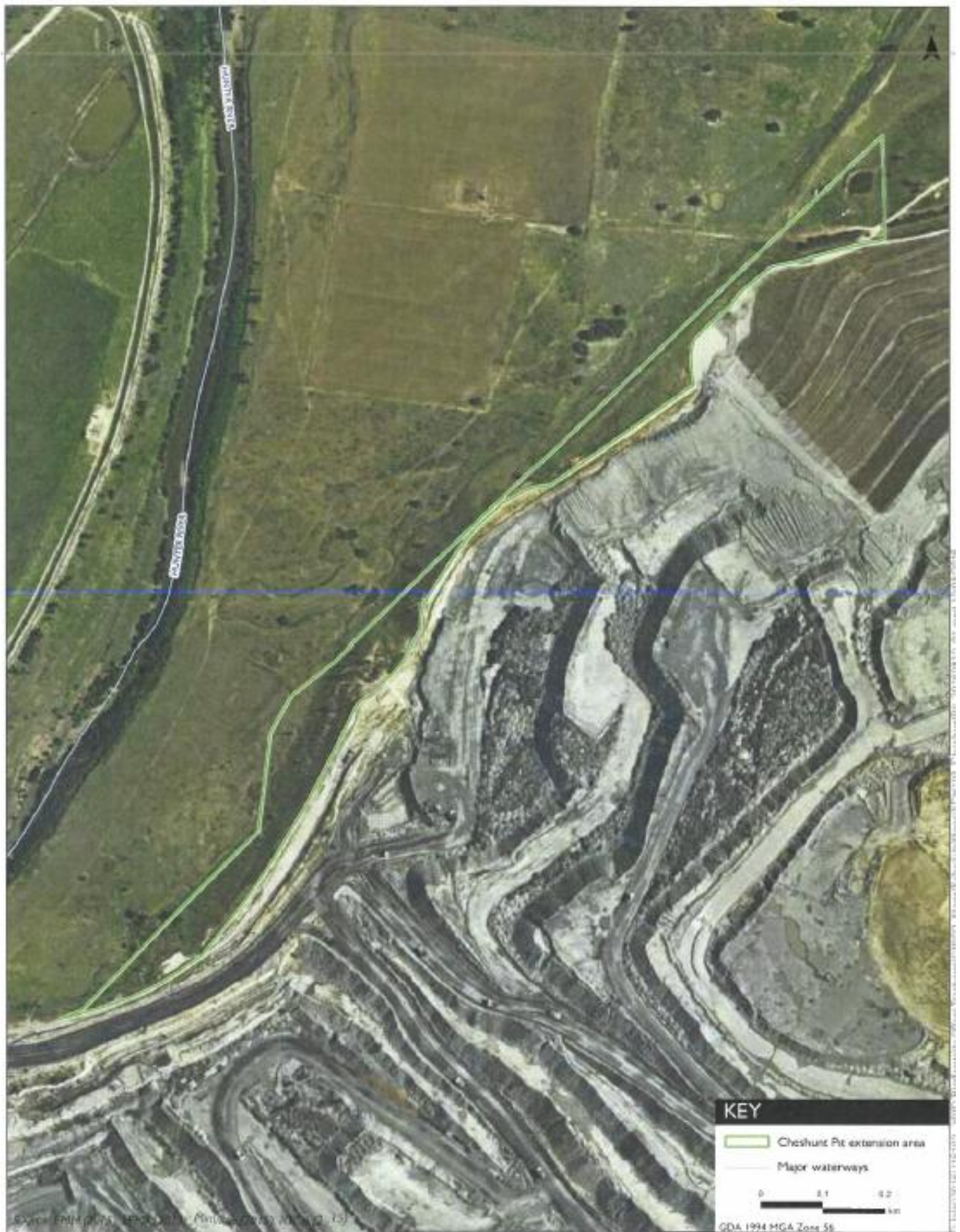
Figure 1





Riverview Pit extension area
Hunter Valley Operations - State-approved mining
Schedule 1

Figure 3







Potential Green and Golden Bell Frog in the
West Pit extension area

Hunter Valley Operations - State-approved mining
Schedule 2
Figure 2



Potential Regent Honeyeater and Swift Parrot habitat in the West Pit extension area

Hunter Valley Operations - State-approved mining

Schedule 2

Figure 3



Potential Regent Honeyeater and Swift Parrot habitat in the Carrington Pit extension area

Hunter Valley Operations - State-approved mining
Schedule 2

Figure 4



Potential Regent Honeyeater and Swift Parrot habitat in the Cheshunt Pit extension area
 Hunter Valley Operations - State-approved mining
 Schedule 2
 Figure 5

