

To: Minister for the Environment (For Decision)

**APPROVAL DECISION (ASSESSMENT REPORT) – UNITED AND WAMBO OPEN CUT COAL MINE PROJECT, SINGLETON, NSW (EPBC 2015/7600)**

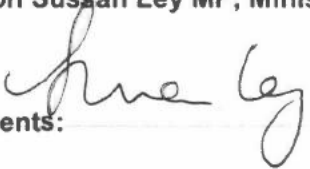
**Timing:** The statutory deadline is 18 December 2019

**Recommendations:**

1. Consider the information in this brief and the information in the Department's proposed approval decision briefing package (Attachment A) including the legal considerations and assessment reports.  
**Considered / Please discuss**
2. Consider the responses to the invitation for comment on the proposed decision at Attachment B.  
**Considered / Please discuss**
3. Approve, for the purposes of each controlling provision, the action as summarised in the table below.  
**Approved / Not approved**
4. Agree to attach the conditions of approval as set out in Attachment C.  
**Agreed / Not agreed**
5. If you approve recommendation 3 and agree to recommendation 4, accept the reasoning in the Departmental briefing package as the reasons for your decision.  
**Accepted / Not accepted**
6. Sign the notice of your decision at Attachment C.  
**Signed / Not signed**
7. Sign the letters at Attachment D advising the person proposing to take the action, and other relevant parties of your decision.  
**Signed / Not signed**

**Summary of recommendations on each controlling provision:**

Controlling provisions for the action	Recommendation	
	Approve	Refuse to Approve
Sections 18 and 18A (Listed threatened species and communities)	Approve	
Sections 24D and 24E (Water resources)	Approve	

The Hon Sussan Ley MP, Minister for the Environment		Date:	
 Comments:		5/12/19	
Clearing Officer: Sent 25/11/2019	Louise Vickery	Assistant Secretary Environment Approvals and Wildlife Trade Branch	Ph: s22 Mob: s22
Contact Officer:	s22	Director, Northern NSW Assessments Section	Ph: s22 Mob: s22

### Key Points:

1. The purpose of this submission is to seek your consideration of a final approval decision for the United and Wambo coal mine under Part 9 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).
2. United Collieries Pty Limited and Wambo Coal Pty Limited (United Collieries Pty Ltd being the proponent) propose to develop a single open cut coal mining operation that combines existing open cut operations<sup>1</sup> at the Wambo mine with a proposed new open cut coal mine on leases owned by United Collieries (the proposed action).
3. On 6 November 2019, you made your proposed decision on the proposed action and you wrote to the proponent and relevant Commonwealth Ministers seeking comments on your proposed decision. Under sections 130 and 133 of the EPBC Act you are now required to decide whether or not to approve the proposed action, and if you decide to approve, what conditions you will attach to the approval under section 134 of the EPBC Act.
4. The mandatory considerations which you must have regard to when deciding whether or not to approve the proposed action, and the Department's analysis of them, are within this brief and at Attachment A.

### Sensitivities and Handling

5. The Department conducted a new EPBC Act Environment Reporting Tool (ERT) protected matters search for the proposed action on 14 November 2019 (Attachment E1). The Department has compared this report with the report that supported the controlled action referral decision (made on 7 December 2015), to determine if any listed threatened species or ecological communities required further consideration. Based on the Department's comparison, additional listed threatened species and ecological communities were identified. These are discussed further in Attachment E2.

<sup>1</sup> On 23 November 2004, a proposal by Wambo Coal Pty Ltd to expand existing coal mining at the Wambo mine (open cut and underground mining) was approved under the EPBC Act with conditions (EPBC 2003/1138).

6. The Department confirmed on 19 November 2019 with the Department's Species Information and Policy Section that all relevant Conservation Advices, Recovery Plans and Threat Abatement Plans are still current from the date of your proposed approval decision. The Department's Species Information and Policy Section noted that a new conservation advice for the Swift Parrot (*Lathamus discolor*) is planned to be approved within the next six weeks and they have undertaken to provide advice one week before the new conservation advice for the Swift Parrot will be made. The Department will liaise with your office should this timeframe coincide with your consideration of this final approval decision brief, noting that, in accordance with the provisions of subsection 139(2) of the EPBC Act, you must have regard to the current approved conservation advice for the Swift Parrot at the time of deciding whether or not to approve the proposed action.

### Statutory Consultation

7. In accordance with sections 131 and 131AA, comments were sought from the following relevant Commonwealth Ministers and the proponent respectively on the decision you proposed to make:
- a. The proponent, United Collieries Pty Ltd.
  - b. The Minister for Resources and Northern Australia, Senator the Hon Matthew Canavan.
  - c. The Minister for Energy and Emissions Reduction, the Hon Angus Taylor MP.
  - d. The Minister for Indigenous Australians, the Hon Ken Wyatt AM MP.
  - e. The Minister for Agriculture, Senator the Hon Bridget McKenzie.
  - f. The Minister for Water Resources, Drought, Rural Finance, Natural Disaster and Emergency Management, the Hon David Littleproud MP.
8. The comments received in response to your proposed decision are at Attachment B. Summaries of these comments are outlined in Table 1 below.
9. On 11 November 2019, the proponent discussed the draft approval conditions with the Department via teleconference. The proponent sought clarification on the description of the action and definitions and terms in the conditions. The proponent made a range of suggestions in this regard and undertook to provide these in writing to the Department. The proponent provided written comments on 12 November 2019 (Attachment B1). Summaries of the proponent's comments are in Table 1.

Table 1

	Comment	Department's Response
<b>Proponent</b>	Glencore observed the wording of the title and the action had been used in the referral document and therefore cannot be changed.	The Department recommends not accepting this change.  The Department has reviewed the referral form and notes that both the

	<p>Glencore made an editorial observation about the word "operations" in the description of the action, noting, that in the referral application form, the word had appeared in the singular - "operation".</p>	<p>singular and plural are used in the short description of the action. The Department notes that the referral states:</p> <p><i>"The Joint Venture proposes to develop the United and Wambo Open Cut Project (the Proposed Action) as a single open cut operation that combines the existing open cut operations [Department's emphasis] at Wambo with a proposed new open cut coal mine at United."</i></p> <p>The Department notes, as per the referral description, the title of the action correctly refers to "existing operations at Wambo".</p>
	<p>Precursor text to <u>condition 1</u> - Glencore noted the word "conditions" should be in the singular.</p>	<p>The Department recommends accepting this change.</p>
	<p><u>Condition 10</u> - Glencore suggested inserting a clarifying statement with reference to the compliance reports which are required to be prepared and published.</p> <p>The condition, as drafted, may have implied that compliance reports (for EPBC Act purposes) would have to be prepared for all of the conditions in the State development consent, including those conditions which were not cited in the EPBC Act decision notice.</p>	<p>The Department recommends accepting this change. The Department considers this change clarifies the meaning of the condition by specifying the plans from the State development consent which are relevant to the EPBC Act (e.g. those which are referred to in the EPBC Act decision notice).</p> <p><u>Condition 10</u> has been updated to include the following <u>underlined words</u>:</p> <p>"The approval holder must prepare a compliance report addressing compliance with each of the conditions of this approval, including implementation of any management plans and</p>

		strategies from the State development consent <u>that are referred to in this approval...</u> "
	<u>Condition 11(a)</u> – Glencore suggested deleting the reference to conditions which the approval holder “may” be in breach of. Glencore noted the intent of condition 11 was to require notification of <i>actual</i> non-compliances, not <i>potential</i> non-compliances.	The Department recommends accepting this change. The Department considers this change clarifies the meaning of the condition by ensuring the sub point at 11(a) agrees with the precursor text, which refers to actual “non-compliance” and <u>not</u> to potential “non-compliance”.
	<u>Definition – Compliance report(s)</u> – Glencore suggested changing the word “include” to “including”.	The Department recommends accepting this change. This is a minor editorial change which will clarify the meaning of the definition and ultimately facilitate compliance with the conditions.
	<u>Definition – Incident</u> – Glencore suggested including the words “other than as authorised by this approval”. The definition would therefore read:  <b>Incident</b> means any event which has the potential to, or does, impact on one or more protected matter(s) <u>other than as authorised by this approval</u> .	The Department recommends accepting this change. The Department considers this change clarifies the meaning of the definition. The Department notes the purpose of the EPBC Act approval is to legally authorise Glencore to have impacts on the EPBC Act protected matters which have been the subject of the controlled action’s assessment and that an incident should correctly refer to impacts on protected matters which have not been envisaged or approved by this approval decision.
	<u>Definition – Protected matters</u> – Glencore suggested including the word “ecological” community. This would make the wording in this definition consistent with wording	The Department recommends accepting this change. This is a minor editorial change which will clarify the meaning of the definition and ultimately

	elsewhere in the decision notice.	facilitate compliance with the conditions.
<b>Proponent comment</b> on additional administrative conditions.	<u>Administrative conditions 20-25</u> – Revision of Action Management Plans.  By email dated 20 November 2019, Glencore stated they had reviewed the additions to the proposed approval and had no further comment.	Noted.
<b>Minister for Resources and Northern Australia, Senator the Hon Matthew Canavan</b>	<p>The delegated EPBC Act contact for the Minister for Resources and Northern Australia replied by email dated 20 November 2019 (<u>Attachment B2</u>).</p> <p>The Department of Industry, Innovation and Science stated it had no objections to the proposed action. They stated their support for the sustainable development of coal mining projects, subject to the proponent obtaining relevant environmental approvals. The reply provided an attachment from Geoscience Australia (GA):</p> <ul style="list-style-type: none"> <li>GA did not identify any significant concerns beyond those noted by the Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Developments (IESC).</li> <li>GA noted that if the proposed conditions are applied, the issues raised by the IESC should be addressed.</li> <li>GA noted the potential for cumulative groundwater impacts is</li> </ul>	<p>The Department notes the comments and GA's recommendation regarding groundwater cumulative impact data.</p> <p>The Department notes, the IESC's advice at point 6 stated "...the cumulative impact assessment undertaken in the groundwater modelling were completed to a reasonable standard."</p> <p>State condition B52(e) requires the drafting and implementation of a groundwater management plan that includes:</p> <ul style="list-style-type: none"> <li>- a program to periodically validate the groundwater model for the development, including an independent review of the model every 3 years, and comparison of monitoring results with modelled predictions</li> <li>- a protocol to report on the monitoring results and performance criteria, in the Annual Review required by State condition E11.</li> </ul> <p>The Department considers the State conditions provide</p>

	<p>not specifically addressed in the State conditions. GA suggested requiring the proponent to make groundwater data available to the Department and NSW Government for inclusion in any cumulative impact assessment.</p>	<p>for the preparation and implementation of a groundwater management plan that will validate the groundwater model (which the IESC noted was reasonable regarding cumulative impacts) and provides for reporting of these results in the Annual Review which will be provided to the NSW Government. On this basis, the Department considers that groundwater data will be made available to the NSW Government for future reference.</p> <p>The Department has not recommended any changes to the conditions as a result of the reply.</p>
<p><b>The Minister for Energy and Emissions Reduction, the Hon Angus Taylor MP</b></p>	<p>The delegated EPBC Act contact for the Minister for Energy and Emissions Reduction replied by email dated 21 November 2019 (<u>Attachment B3</u>) stating Minister Taylor has no comment on this proposal.</p>	<p>Noted</p>

10. No comments were received from:

- a. the Minister for Indigenous Australians, the Hon Ken Wyatt AM MP,
- b. the Minister for Agriculture, Senator the Hon Bridget McKenzie, and
- c. the Minister for Water Resources, Drought, Rural Finance, Natural Disaster and Emergency Management, the Hon David Littleproud MP.

**Additional Administrative Conditions**

11. The Department recommends inclusion of additional administrative conditions relating to variation of post-approval action management plans. Such variations are provided for under section 143A of the EPBC Act. The Department considers these additional conditions are necessary or convenient for repairing or mitigating damage that will be caused by the action for reasons set out below:

- a. Condition 3.a of the decision notice (Attachment C) requires the submission of a Biodiversity Offset Strategy (the Strategy). The Strategy will demonstrate, amongst other things, how the listed threatened species and ecological community significantly impacted by the proposed action will be appropriately offset. The Strategy must be submitted to you, or your Departmental delegate, for separate approval following your decision on whether or not to approve the proposed action. Accordingly, the Strategy will meet the definition of a post-approval action management plan within the meaning of section 143A of the EPBC Act.
  - b. To facilitate consideration of post-approval of action management plans, in 2015, the Department developed administrative conditions which have been standard since this time. The purpose of these conditions is to clarify and streamline the post-approval process for consideration of action management plans.
  - c. The new conditions the Department recommends be applied are conditions 20 – 25 (Attachment C). The conditions provide that the person taking the action can revise the Strategy, without having to submit it for approval under section 143A of the EPBC Act, if the revisions would not be likely to have a new or increased impact to that which has been agreed to in an earlier approved version of the Strategy. These conditions remove the administrative burden for the approval holder to submit the Strategy for minor revisions such as changes to the structure or layout unrelated to environmental impacts or risks, or a change to the Strategy, which does not affect EPBC Act protected matters.
  - d. Inclusion of the administrative conditions 20 – 25 has necessitated minor updates to conditions 3.a and 9, which relate to the approval, preparation and publication of the Strategy. These conditions have been updated to provide that the “Minister” is the approver of the Strategy. These updates ensure the terms of these conditions are consistent with the requirements of subsection 143A(3) of the EPBC Act, which states that the Minister is the approver of a variation to an action management plan.
12. In deciding whether to attach the Department’s recommended additional conditions to the approval, in accordance with subsection 134(4) of the EPBC Act, you must consider:
- a. any relevant conditions that have been imposed, or you consider are likely to be imposed, under a law of a State or self-governing Territory or another law of the Commonwealth on the taking of the action, and
  - b. information provided by the person proposing to take the action or by the designated proponent of the action, and
  - c. the desirability of ensuring as far as practicable that the condition is a cost-effective means for the Commonwealth and a person taking the action to achieve the object of the condition.

#### *Consideration*

13. The relevant State conditions are provided within (Attachment A). The Department notes that condition 3.a of your decision notice (Attachment C) requires the post-approval provision to you of the Biodiversity Offset Strategy, which is a requirement of the State conditions. The Department notes the NSW Government will also review and approve the Biodiversity Offset Strategy, and for this reason, the Department considers there is a



likelihood there will be NSW Government changes to the Biodiversity Offset Strategy which are unrelated to, and will not have a new or increased impact on, EPBC Act protected matters. To avoid the unnecessary requirement for the person taking the action to seek approval for such changes, the Department recommends administrative conditions 20 – 25 be applied.

14. Comments on proposed conditions 20 – 25 by the proponent are summarised in Table 1 and provided in full at ([Attachment B1](#)).
15. The Department considers these additional conditions to be a cost effective means for the Commonwealth and the proponent as the conditions will remove the requirement for the proponent to seek formal approval for minor changes to the Biodiversity Offset Strategy that are unrelated to matters protected by the EPBC Act.

### **Conditions at [Attachment C](#) – Overall Consideration**

16. For the reasons set out above, and in your proposed approval decision brief ([Attachment A](#)), the Department considers that the conditions, as amended, are necessary and convenient to protect or to repair or mitigate damage to a matter protected by a provision of Part 3 of the EPBC Act. Accordingly, the Department considers that you can be satisfied that the conditions at [Attachment C](#) are within the scope of your power in subsections 134(1) and (2) of the EPBC Act.
17. Consistent with the requirements in subsection 134(4), in amending the conditions of approval at [Attachment C](#), the Department has considered: relevant conditions that have been imposed under the State approval ([Attachment A](#)) and the information provided by the proponent at [Attachment B1](#). The Department considers that the amended conditions of approval achieve the correct balance between protection of matters protected by a provision of Part 3 of the EPBC Act and the likely costs to be borne by the person taking the action in implementing these conditions. The Department considers the conditions are as far as practicable a cost-effective means for the Commonwealth and the person taking the action to achieve the objects of the conditions.
18. Your other considerations for deciding on what conditions to attach to an approval remain as set out in your proposed approval decision brief at [Attachment A](#).
19. A track changes version of the notice of your decision demonstrating the alterations to the conditions following statutory consultation is at [Attachment F](#).

### **IESC Advice**

20. This project is a large coal development that has been referred to and received advice from the IESC. The IESC's advice and the Department's analysis regarding the advice is provided in the Department's proposed approval decision brief at [Attachment A](#).

### **Conclusion**

21. Except for the issues discussed in this brief, the matters for consideration and factors to be taken into account for your decision remain as set out in the proposed decision brief ([Attachment A](#)).
22. The Department recommends that you approve the proposed action as outlined in the notice of your decision at [Attachment C](#).

23. Under Subsection 133(3) of the EPBC Act you must give a copy of the approval to the person named in the approval. A letter to the proponent is at Attachment D1 for signature. Letters to provide advice of your final decision to relevant Commonwealth Ministers are at Attachments D2-D6 for signature. A courtesy letter to the relevant NSW Minister is at Attachment D7 for signature.
24. The Department's General Counsel Branch was consulted in the preparation of your proposed decision brief at Attachment A.

**ATTACHMENTS – All provided in hard copy**

- A:** Proposed approval decision brief package including all attachments cited in that brief
- B:** Responses to invitation for comment on proposed decision
- B1** – Comments - proponent
- B2** – Comments - Minister for Resources and Northern Australia
- B3** – Comments - Minister for Energy and Emissions Reduction
- C:** Decision Notice **FOR SIGNATURE**
- D:** Letters to relevant parties **FOR SIGNATURE**
- D1** – Inform - Person Taking the Action
- D2** – Inform - Minister for Resources and Northern Australia
- D3** – Inform - Minister for Energy and Emissions Reduction
- D4** – Inform - Minister for Indigenous Australians
- D5** – Inform - Minister for Agriculture
- D6** – Inform - Minister for Water Resources, Drought, Rural Finance, Natural Disaster and Emergency Management
- D7** – Inform - NSW Planning Minister
- E:** Department's Environment Reporting Tool (ERT)
- E1** – ERT 14 November 2019
- E2** – Department's ERT review
- F:** Track changes version of the decision notice showing recommended changes

To: Minister for the Environment (For Decision)

**PROPOSED APPROVAL DECISION (ASSESSMENT REPORT) – UNITED AND WAMBO OPEN CUT COAL MINE PROJECT, SINGLETON, NSW (EPBC 2015/7600)**

**Timing:** 15 November 2019 – to allow for the required 10 business day consultation under sections 131 and 131AA ahead of the statutory deadline of 18 December 2019.

**Recommendations:**

1. That you consider the information provided in this brief, including the state assessment reports and state development consent at Attachment A, the IESC advice at Attachment J and the legal considerations report at Attachment F.

**Considered / Please discuss**

2. That you have regard to the approved conservation advices relevant to the proposed action at Attachment E and confirm that you have done so.

**Confirmed / Please discuss**

3. That you agree that the recommended decision at Attachment B, and summarised in the table below, reflects your proposed decision.

**Agreed / Not agreed**

4. That you agree to the proposed conditions of approval as set out in Attachment B.

**Agreed / Not agreed**

5. If you agree with recommendations 3 and 4, that you sign the letters at Attachment C to consult with the person proposing to take the action and relevant Commonwealth Ministers on your proposed decision.

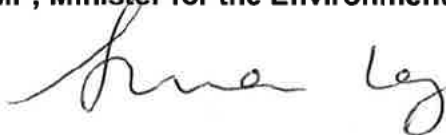
**Signed / Not signed**

6. That you agree to not publish the proposed decision (Attachment B) on the internet for public comment under section 131A.

**Agreed / Not agreed**

**Summary of recommendations on each controlling provision:**

Controlling provisions for the action	Recommendation	
	Approve	Refuse to Approve
Sections 18 and 18A (Listed threatened species and communities)	Approve	
Sections 24D and 24E (Water resources)	Approve	

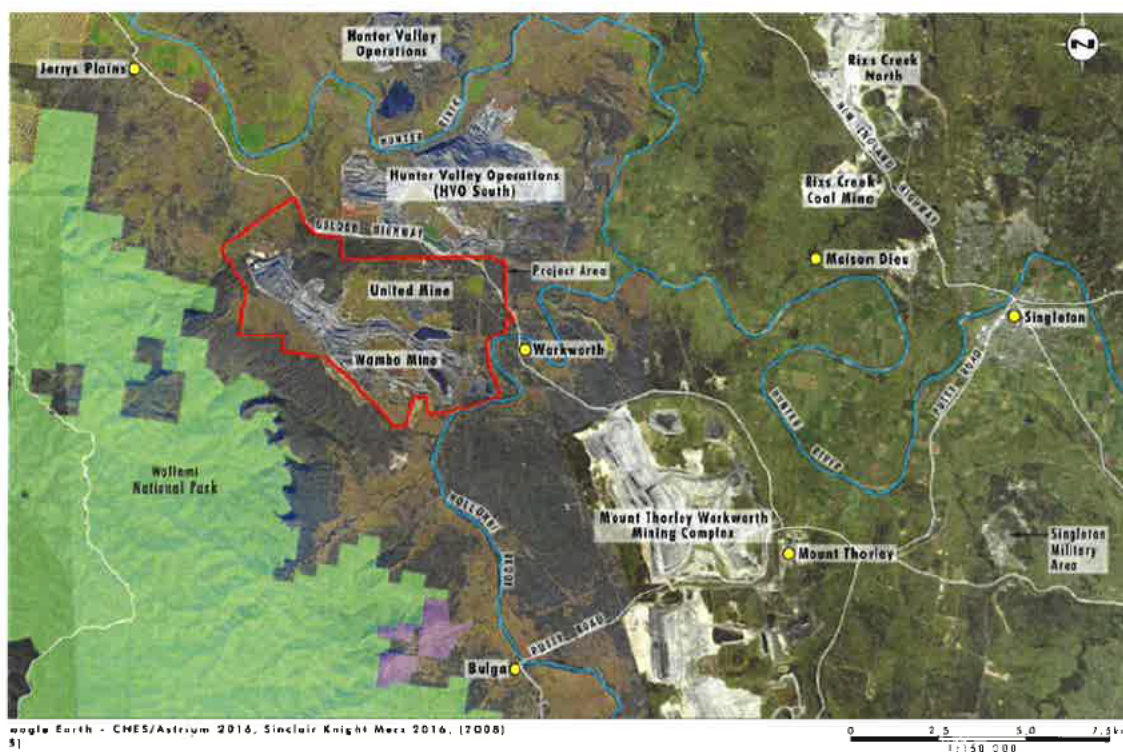
<b>The Hon Sussan Ley MP, Minister for the Environment</b>		Date: 6/11/19	
			
<b>Comments:</b>			
<b>Clearing Officer:</b> Sent 4/11/19	s22	Assistant Secretary (A/g), Environment Approvals and Wildlife Trade Branch	Ph: s22 Mob: s22
<b>Contact Officer:</b>	s22	Assistant Director, Northern NSW Assessments Section	Ph: s22

**Key Points:**

1. The purpose of this submission is to seek your consideration of a proposed approval decision under Part 9 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).
2. The proposed approval decision concerns the United and Wambo Open Cut Coal Mine Project, which is a 50:50 joint venture between United Collieries Pty Limited and Wambo Coal Pty Limited (United Collieries Pty Ltd being the proponent). United Collieries is 95 per cent owned by Glencore and Wambo Coal Pty Limited is a subsidiary of Peabody Energy Australia Pty Limited.
3. The proposed action is the development of a single open cut coal mining operation that combines existing open cut operations<sup>1</sup> at the Wambo mine with a proposed new open cut coal mine on leases owned by United Collieries (the proposed action), see [Figure 1](#).
4. The proposed action is 16 kilometres west of Singleton in the Upper Hunter Valley, NSW. The site is 500 metres from Wollemi National Park (Greater Blue Mountains World Heritage area) and adjacent to existing coal mining areas and a freehold property owned by the Hunter Valley Gliding Club (eastern boundary of the site).
5. The proposed action covers an area of approximately 3015 hectares (ha), disturbing 673 ha of land, including 527 ha of native vegetation. The proposed action will extract a total 176 million tonnes (Mt) of run-of-mine (ROM) coal at a rate of up to 10 Mt per annum over 21 years. The proposed action includes:
  - a. open cut mining in the new United Open Cut pit,
  - b. open cut mining in the Wambo Open cut mine,
  - c. extension to the Wambo Open cut beyond the existing approved Wambo Surface Development Area,
  - d. deepening the Wambo open cut mine,
  - e. progressive rehabilitation of the open cut mining area,

<sup>1</sup> On 23 November 2004, a proposal by Wambo Coal Pty Ltd to expand existing coal mining at the Wambo mine (open cut and underground mining) was approved under the EPBC Act with conditions (EPBC 2003/1138).

- f. use of existing approved coal handling processing plant, coal handling and train loading facilities and other existing and approved supporting mine infrastructure,
- g. rail transport of coal up to approximately 15 Mt per annum,
- h. mining and emplacement of overburden (including into mine voids),
- i. construction and operation of new ancillary infrastructure in the existing approved Wambo mining infrastructure area,
- j. relocation of a 330kV power transmission line currently traversing the United Collieries component of the site, and
- k. realignment of a section of the Golden Highway that currently traverses the United Collieries component of the site.



**Figure 1** United and Wambo mine (red outline). Other separate existing nearby open cut mines include: Hunter Valley Operations and Mount Thorley Warkworth Mining Complex. Indicated towns/localities include: Jerrys Plains, Warkworth, Bulga and Singleton.

### EPBC Act referral

6. On 30 October 2015, the proposed action was referred by the proponent under the EPBC Act. The proposed action was published on the Department's website on 2 November 2015 and public comments were invited. No public submissions were received.
7. On 10 November 2015, the NSW Department of Planning and Environment (DPE) advised that the proposal would be assessed in a manner specified in Schedule 1 to the Bilateral Agreement (February 2015) between the Commonwealth and NSW Governments.
8. On 7 December 2015, the delegate determined that the proposed action was a controlled action under the EPBC Act as it was likely to have a significant impact on listed threatened species and a water resource, and that the controlling provisions for the action were sections 18 and 18A and sections 24D and 24E of the EPBC Act. On

7 December 2015, the Delegate also noted that the proposed action would be assessed under the Bilateral Agreement.

### Bilateral assessment

9. Subsequent to the delegate's controlled action decision, the NSW Government undertook the assessment of the proposed action in accordance with the Bilateral Agreement. Key steps in the NSW assessment included, but were not limited to:
  - a. placing the proposed action's Environmental Impact Statement (EIS) on public exhibition
  - b. the completion, by the proponent, of a response to submissions document
  - c. preparation by the NSW Government of the proposed action's assessment reports
  - d. review and determination by the NSW Government's Independent Planning Commission.
10. By letter dated 6 September 2019 (Attachment A1), the NSW Department of Planning, Industry and Environment<sup>2</sup> (DPIE) notified the Department that the United and Wambo Open Cut Coal Mine Project, which was assessed under the Bilateral Agreement, was approved by the NSW Independent Planning Commission, subject to conditions outlined in the development consent, and provided the state assessment reports and the signed State approval (Attachment A).
  - a. The DPIE letter included a statement to the Commonwealth Minister in relation to the Matters of National Environmental Significance which had been assessed through the State assessment. Overall, DPIE considered that the likely impacts of the proposed action on listed threatened species and ecological communities and on water resources would not be unacceptable, provided the action was taken in a manner which was consistent with the avoidance, mitigation and offset measures proposed by the person taking the action, and in accordance with the State conditions.
  - b. The Department agrees with this conclusion.
11. Key issues raised during the NSW assessment included: impacts on biodiversity and water resources, final landforms and the use of mine site rehabilitation to meet offset targets, and economic and social benefits.
12. The assessment reports (Attachment A) conclude that the impacts of issues raised by stakeholders can be appropriately managed through the implementation of mitigation measures and safeguards required by the State approval.
13. On 8 January 2019, under the EPBC Act's cost recovery arrangements, the Department received the stage 3 and 4 payments from the proponent. The stage 4 fee relates to the preparation of this proposed decision brief. There are no outstanding cost recovery stages or payments.

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<sup>2</sup> In July 2019, following machinery of government changes in NSW, the former NSW Department of Planning and Environment (DPE) became the NSW Department of Planning, Industry and Environment (DPIE).

EPBC decision deadline extension

14. On 15 October 2019, the Delegate extended the statutory deadline for the decision on whether or not to approve the proposed action from 22 October 2019 to 18 December 2019 to enable additional time to consider the briefing material.

Listed threatened species and ecological communities (s18 and 18A)

15. The proposed action was determined to be a controlled action for likely significant impacts to the following threatened species and communities:
- Regent Honeyeater (*Anthochaera phrygia*) - critically endangered.
  - Swift Parrot (*Lathamus discolor*) – endangered (at the time the controlled action decision was made).
  - Spotted-tail Quoll (*Dasyurus maculatus maculatus* (SE mainland population) – endangered.
  - Central Hunter Valley Eucalypt Forest and Woodland (CHVEFW) ecological community - critically endangered.

*Impacts and offsets*

16. The calculation of offsets for impacts to the EPBC Act listed threatened species and ecological community impacted by the proposed action has been calculated in accordance the *NSW Framework for Biodiversity Assessment (FBA)* and the *NSW Biodiversity Offsets Policy for Major Projects*. Use of these NSW methodologies is in accordance with the provisions of the assessment bilateral agreement (26 February 2015) (between the NSW and Australian Governments under Part 5 of the EPBC Act), which endorses the *NSW Biodiversity Offsets Policy for Major Projects* and FBA as providing a basis for undertaking biodiversity assessments and offsetting for the purposes of EPBC Act approvals.
17. Impact and offset areas for the EPBC Act listed threatened species and the ecological community impacted by the proposed action are as follows:

Listed threatened species and ecological community	Impact area (ha)	Offset area (ha)
Regent Honeyeater ( <i>Anthochaera phrygia</i> )	203.7 (of potential habitat)	1407.3
Swift Parrot ( <i>Lathamus discolor</i> )	203.7 (of potential habitat)	1407.3
Spotted-tail Quoll ( <i>Dasyurus maculatus maculatus</i> )	352.9 (of potential habitat)	1507.3
Central Hunter Valley Eucalypt Forest and Woodland ecological community	246.8 (of known habitat)	1135.6

### *Swift Parrot impact and offset differences*

18. The Department notes the impact and offset area for the Swift Parrot presented in the NSW Government's Final Assessment Report (FAR) differ to those presented in the table above. The NSW FAR (Table 8 at Attachment A4) states the impact area to be 29.7 ha and the offset area to be 473.9 ha.
19. For the purposes of the EPBC Act, the Department considers the area of impacted habitat for the Swift Parrot is the same as the impacted area of habitat for the Regent Honeyeater (203.7 ha) because three of the four main eucalypt species in the Regent Honeyeater's habitat on the site provide important foraging habitat for the Swift Parrot. This is discussed further in the sections of the Legal Considerations (Attachment F) which address the impacts to the Swift Parrot.
20. For the purposes of the EPBC Act decision, the Department considers the impact and offset requirements for the Swift Parrot and Regent Honeyeater are the same.

### *Use of mine site rehabilitation to meet Central Hunter Valley Eucalypt Forest and Woodland ecological community (CHVEFW) offset requirements*

21. The proponent identified 1135.6 ha of the CHVEFW that will be secured in offset areas. The offset requirements for CHVEFW will be met through conserving existing areas of CHVEFW and creating new areas of CHVEFW. The NSW approval provides that the proponent may use up to 20 per cent mine site rehabilitation to meet a proportion of the offset requirements for the EPBC listed CHVEFW.
22. If rehabilitated CHVEFW survives in the long term and becomes self-propagating, the creation of additional areas of endangered and critically endangered ecological communities using mine site rehabilitation has the potential to be an important conservation measure.
23. The report at Attachment Q provides evidence that mine rehabilitation can conform to the CHVEFW as listed under the EPBC Act and concludes that, with a targeted effort, future mine rehabilitation in the Central Hunter Valley could establish additional areas of CHVEFW. The State conditions include a range of measures to ensure that mine rehabilitation is successfully undertaken. These conditions, and the Department's analysis of the use of mine site rehabilitation for the provision of offsets, is discussed further in the Legal Considerations (Attachment F) and the Department's analysis of the conditions of approval (Attachment G).

### *Proposed conditions of approval*

24. The State conditions require the proponent to provide offsets (referred to as 'retirement') and to have a strategy for their retirement which specifically describes how the significantly impacted EPBC Act species and communities will be suitably offset.
25. The Department considers that the State assessment has undertaken the calculation of impacts and offsets in accordance with the bilateral agreement and that the State conditions suitably provide for the provision of offsets for the significantly impacted EPBC Act species and communities.
26. The *EPBC Act Condition-setting Policy* (2015) (the Policy) outlines the Australian Government's approach to considering state and territory approval conditions when



approving a project under the EPBC Act. The Policy recognises there can be overlap between state conditions and the conditions applied by the Australian Government under the EPBC Act to manage impacts on matters of national environmental significance. This regulatory overlap can result in duplication and create confusion around regulatory responsibilities.

- a. To address the Policy, prior to applying conditions to a project, specifically where assessments have been undertaken through a bilateral agreement, the Department reviews state or territory conditions and considers their consistency with the requirements of the EPBC Act, related policies and guidelines.
- b. The Policy states, when considering what conditions (if any) to attach to a proposed approval, state or territory conditions should be relied on to the greatest extent possible. Where the state or territory conditions do not appropriately manage the impacts on EPBC Act protected matters it will be necessary to attach additional conditions.
- c. The Policy provides, where states and territories have a policy or guideline, which corresponds to a non-statutory Australian Government policy, the Australian Government Minister may choose to 'endorse' the state or territory policy where it is consistent with Australian Government standards. The *NSW Biodiversity Offsets Policy for Major Projects* is listed in the Policy as an endorsed state policy which is consistent with the standards of a non-statutory Australian Government policy.

27. In accordance with the *EPBC Act Condition-setting Policy (2015)*, the Department considers that it is appropriate to propose conditions that require the proponent to comply with relevant State conditions where they relate to managing the impacts of the proposed action on EPBC Act protected matters. These conditions will avoid unnecessary duplication of NSW and Australian Government conditions and allow the Department to retain an ongoing compliance role to ensure the offsets for the significantly impacted EPBC Act species and communities are delivered. The Department's analysis of the relevant State conditions' compliance with the Policy is at Attachment G. The proposed approval (Attachment B) includes the State conditions that are relevant to protecting threatened species and ecological communities under the EPBC Act approval. The conditions are discussed further in the Legal Considerations Attachment F.

28. The proposed approval (Attachment B) contains two EPBC Act specific conditions:
- a. Condition 2, which places a clearance limit on habitat for EPBC Act listed threatened species and the ecological community significantly impacted by the proposed action.
  - b. Condition 3a requiring that the approval holder must not commence specified construction works until a Biodiversity Offset Strategy has been approved by the Department. This additional condition will enable the Department to review the offsets to ensure they are appropriately calculated.
  - c. These conditions are discussed further in the Legal Considerations (Attachment F).

A water resource, in relation to a large coal mining development (s24D and s24E)

29. The proposed action was determined to be a controlled action for likely significant impacts to water resources, specifically, that there was potential for significant impacts

on groundwater-dependent ecosystems, a number of groundwater users and downstream water quality.

30. In accordance with section 131AB of the EPBC Act, advice was obtained in 2016 from the Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development (IESC), in relation to the proposed action's impacts on water resources ([Attachment J](#)).
31. The NSW assessment analysed the proposed action's impacts on water resources, including the issues which were determined as likely to be significantly impacted at the referral stage (groundwater-dependent ecosystems, groundwater users and downstream water quality). The NSW assessment also included consideration of the IESC's advice.
32. The Department's legal considerations ([Attachment F](#)) discusses the NSW assessment's findings regarding the IESC's advice and impacts on water resources. The State conditions require the proponent to implement a range of measures, which are detailed in the Legal Considerations Report ([Attachment F](#)) and includes the preparation and implementation of a water management plan. A table analysing how the NSW assessment and the conditions of approval have addressed the IESC's advice is at [Attachment K](#).

#### *Proposed conditions of approval*

33. In accordance with the *EPBC Act Condition-setting Policy (2015)*, the Department considers that it is appropriate to impose conditions that require the proponent to comply with the State conditions, where they relate to water resources. This will avoid unnecessary duplication of State conditions and allow the Department to retain an ongoing compliance role. The proposed approval ([Attachment B](#)) includes the State conditions that are relevant to protecting water resources under the EPBC Act approval.

#### *Conclusion*

34. Based on the NSW assessment, the IESC advice, and the matters discussed in the Legal Considerations Report ([Attachment F](#)), the Department is satisfied that the proposed action will not have unacceptable impacts on EPBC Act protected matters, provided that the action is undertaken in accordance with the recommended conditions at [Attachment B](#).

#### Mandatory considerations

35. A detailed analysis of the mandatory considerations for the EPBC Act approval decision is set out in the Legal Considerations Report at [Attachment F](#).

#### EPBC Act listed species and communities with updated distributions

36. The Department's Environmental Reporting Tool database (ERT) dated 16 September 2019 ([Attachment P](#)) identified additional listed threatened species and ecological communities that may occur within 5 km of the proposed action site that were not considered at the time of the EPBC Act section 75 controlled action decision on 7 December 2015.
37. Since the controlled action decision was made, new information indicates a number of listed species may be present in the vicinity of the proposed action. The Department's analysis at [Attachment P](#) shows that extensive surveys failed to record these species on

or near the site and therefore the proposed action is unlikely to have significant impacts on these species.

- a. The Swift Parrot (*Lathamus discolor*) was up-listed from endangered to critically endangered on 5 May 2016. In accordance with section 158A of the EPBC Act, the proposed approval decision is not affected by the up-listing of this species, as it was up-listed after the section 75 decision was made.

38. In accordance with section 158A of the EPBC Act, the proposed approval decision is not affected by the listing of new listed threatened species and ecological communities as the listings occurred after the section 75 controlled action decision.

#### Department's recommended decision

39. The Department considers, and recommends you agree, that you have sufficient information to make an informed decision on whether or not to make a proposed decision to approve the taking of the action for the purposes of the controlling provisions.
40. The Department recommends that your proposed decision should be to approve the proposed action until 31 December 2052 for the purposes of each controlling provision subject to the proposed conditions of approval at Attachment B. The Department considers that impacts to relevant matters of national environmental significance will not be unacceptable provided the action is undertaken in accordance with proposed approval conditions.
41. The Department advises that you can be satisfied that approval would not be inconsistent with relevant threat abatement and recovery plans (Attachment E) and international obligations (discussed in Attachment F).

#### Consultation on your proposed approval decision

42. Before you make your decision on whether or not to approve the proposed action, and what conditions (if any) to attach to an approval, you are required under section 131AA(1)(a) and section 131(1) of the EPBC Act to:
  - a. inform the proponent and any other Commonwealth Minister(s) whom you believe has administrative responsibilities relating to the proposed action of the decision which you propose to make
  - b. invite the proponent and relevant Commonwealth Minister(s) to comment on your proposed decision within 10 business days.
43. The Department recommends that you sign the letters at Attachment C to consult with the proponent and the following relevant Commonwealth Ministers and to inform the NSW State Planning Minister of your proposed decision:
  - The proponent, United Collieries Pty Ltd.
  - The Minister for Resources and Northern Australia, Senator the Hon Matthew Canavan.
  - The Minister for Energy and Emissions Reduction, the Hon Angus Taylor MP.
  - The Minister for Indigenous Australians, the Hon Ken Wyatt AM MP.
  - The Minister for Agriculture, Senator the Hon Bridget McKenzie.

- NSW Minister for Planning and Public Spaces, the Hon Robert Stokes MP.
  - The Minister for Water Resources, Drought, Rural Finance, Natural Disasters and Emergency Management, the Hon David Littleproud MP.
44. Under section 131A of the EPBC Act, you may invite public comments on your proposed decision and any conditions that you are proposing to attach to the approval, however, it is not a legal requirement to do so.
45. The Department considers that sufficient public consultation has occurred for the proposed action through the NSW assessment, and does not recommend that you release your proposed decision for public comment under section 131A of the EPBC Act.
46. Relevant threat abatement plans, recovery plans and conservation advices are at Attachment E and are considered further in the legal considerations (Attachment F).

*Public submissions on assessment documents*

Number	103	For	3	Against	72	Not specified	16
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47. The Environmental Impact Statement (EIS) (Attachment D) for the proposed action was placed on public exhibition by NSW DPE in 2016. According to the NSW Independent Planning Commission (IPC), a total of 103 public submissions were received during the public exhibition period, including submissions from the general public, special interest groups and government agencies. Of these, 72 objected to the proposed action, three supported the proposed action, and 16 provided comments. Twelve submissions were received from public authorities including from Singleton Shire Council. In general, objectors were concerned over issues including, but not limited to, potential air quality, noise and biodiversity impacts.

*Internal Departmental consultation*

48. On 8 October 2019, the Department's Species Information and Policy Section advised that there are no anticipated changes in the documents relating to the threatened species and ecological community identified in this brief in the coming six weeks with the exception of the conservation advice for the Swift Parrot (*Lathamus discolor*) (Attachment E9).
- a. A new conservation advice for the Swift Parrot is planned to be approved in the next three to five weeks (the new Conservation Advice).
  - b. Should the new Conservation Advice for the Swift Parrot be approved within this timeframe, the Department will provide the new Conservation Advice in the final decision briefing package for you to have regard to, in accordance with the requirements of subsection 139(2) of the EPBC Act.
  - c. The final decision briefing package will be provided to you following the required 10 business day consultation on your proposed decision with the proponent and Commonwealth Ministers under sections 131 and 131AA of the EPBC Act.
49. On 20 September 2019, the Compliance Section in the Department's Office of Compliance advised that a search of the Department's Compliance and Enforcement Management Systems database, and records held by the Department, indicate that

there is no adverse compliance history for the person proposing to take the action under the EPBC Act. This is discussed further in the Department's Legal Considerations (Attachment F).

50. The Department's General Counsel Branch was consulted in the preparation of this brief.

s22

Assistant Secretary (A/g)

Environment Approvals and Wildlife Trade Branch

Ph: s22

Mob: s22

4 November 2019

s22

Assistant Director

Northern NSW Assessments Section

Ph: s22

#### ATTACHMENTS – ALL PROVIDED IN HARD COPY

##### A:

**A1:** Statement to the Commonwealth Minister (6 September 2019)

**A2:** Statement of Reasons (SoR) (29 August 2019)

**A3:** Preliminary Assessment Report (PAR) (December 2017)

**A4:** Final Assessment Report (FAR) (November 2018)

**A5:** State approval conditions (29 August 2019)

##### B: Proposed approval decision

##### C: Letters to proponent, Commonwealth Ministers and NSW Planning Minister

**C1:** Consult proponent – **For signature**

**C2:** Consult Minister for Resources and Northern Australia – **For signature**

**C3:** Consult Minister for Energy and Emissions Reduction – **For signature**

**C4:** Consult Minister for Indigenous Australians – **For signature**

**C5:** Consult Minister for Agriculture – **For signature**

**C6:** Inform NSW Planning Minister – **For signature**

**C7:** Consult Minister for Water Resources Drought, Rural Finance, Natural Disasters and Emergency Management – **For signature**

##### D: EIS and attachments

##### E: National Recovery plans, threat abatement plans, conservation advices

**E1:** Recovery Plan for Spotted-tail Quoll (*Dasyurus maculatus maculatus*).

**E2:** Recovery Plan for Regent Honeyeater (*Anthochaera phrygia*).

**E3:** Recovery Plan for Swift Parrot (*Lathamus discolor*).

**E4:** Threat abatement plan for predation by feral cats.

**E5:** Threat abatement plan for predation by the European red fox.

**E6:** Threat abatement plan for competition and land degradation by rabbits.

**E7:** Threat Abatement plan for the biological effects, including lethal toxic ingestion, caused by cane toads.

**E8:** Conservation Advice for Regent Honeyeater (*Anthochaera phrygia*).

- E9:** Conservation Advice for Swift Parrot (*Lathamus discolor*).
- E10:** Conservation Advice for *Central Hunter Valley Eucalypt Forest and Woodland* ecological community.
- F:** Legal considerations
- G:** Analysis of proposed conditions meeting policy and statutory requirements
- H:** Compliance History
- I:** This attachment is deliberately blank
- J:** IESC Advice (14 October 2016)
- K:** Proponent's and DPIE's responses and the Department's conclusions regarding IESC Advice
- L:** IPC review report (26 March 2018)
- M:** Response to submissions (RTS)
  - M1:** Response to Submissions Part A (Glencore) (March 2017)
  - M2:** Response to Submissions Part B (Glencore) (May 2017)
- N:** Additional information provided by the proponent
  - N1:** Applicant Response to request for Additional Information (September 2017)
  - N2:** Applicant Additional Information on Ecological Community Mapping and Offsets (5 Dec 2017)
  - N3:** Applicant Additional Information on Ecological Community Mapping and Offsets - Excel (5 Dec 2017)
  - N4:** United Wambo DPE Response to IPC (17 April 2019)
  - N5:** United Wambo DPE Response to IPC (15 May 2019)
  - N6:** United Wambo Response to RFAI (11 October 2018)
- O:** Proponent's response to the IPC review (Glencore) (July 2018)
  - O1:** Main Text
  - O2:** Appendices
- P:** ERT and ERT Review
- Q:** Report - *Assessment of Mine Site Rehabilitation against Central Hunter Valley Eucalypt Forest and Woodland CEEC* (Prepared by Umwelt on behalf of the NSW Minerals Council) (August 2017)



Planning,  
Industry &  
Environment

Planning and Assessment  
Energy and Resources  
Contact: s22  
Phone: s22  
Email: s22

Ms Louise Vickery  
Assistant Secretary  
Assessments and Wildlife Branch  
Environment Approvals Division  
Commonwealth Department of the Environment and Energy  
GPO Box 787  
CANBERRA ACT 2601

Dear Ms Vickery

**Referral of United Wambo Coal Project (SSD 7142)**

I am writing to refer the United Wambo Coal Project application to you. The United Wambo Coal Project application has been assessed as an accredited assessment under the NSW *Environmental Planning and Assessment Act 1979* (the Act).

On 29 August 2019, the Independent Planning Commission, as the relevant consent authority, granted consent for this application under Part 4 of the Act, subject to the conditions outlined in the development consent.

The Commission, as delegate of the Minister for Planning and Public Spaces under the former section 75W of the Act, also approved the associated modification applications DA 177-8-2004 MOD 3 and DA 305-7-2003 MOD 16.

Copies of the Commission's determination report and copies of the signed development consent and notices of modification are enclosed. The complete assessment package, including the Applicant's Environmental Impact Statement, Response to Submissions and additional information, the Department's Assessment Reports and the Commission's Determination Report, can be found on the Department's website. These documents have been provided in accordance with section 87(4)d of the *Environment Protection and Biodiversity Conservation Act 1999*.

Should you have further enquiries, please do not hesitate to contact s22 Team Leader, Resource Assessments, at the Department.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Mike Young', with a date '6/9/19' written next to it.

Mike Young  
A/Executive Director  
Energy and Resources

**Statement to the Commonwealth Minister in relation to the determination of the United Wambo Coal Project (SSD 7142, EPBC 2012/6388) under the *Environmental Planning and Assessment Act 1979 (NSW) (EP&A Act)***

The project has been declared to be a controlled action under the *Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)* as it may impact on nationally-listed threatened species and water resources.

The United Wambo Coal Project has been assessed as an accredited assessment under NSW's EP&A Act.

The Independent Planning Commission (Commission), as the consent authority granted approval to this application under Part 4 of the EP&A Act, subject to the conditions outlined in the development consent.

A copy of the Assessment Reports prepared by the NSW Department of Planning, Industry and Environment (the Department) and a copy of the Commission's Determination Report have been provided in accordance with section 87(4)d of the EPBC Act.

The Department considers that the proposed action has sought to avoid impacts to EPBC-listed species and communities to the greatest extent practical and has proposed mitigation and offset measures that would mean the proposed action is unlikely to have significant residual impacts on Matters of National Environmental Significance.

The Department believes that the proposal is not inconsistent with approved Recovery Plans or Conservation Advice for the species and communities that have been identified as having the potential to be impacted. In particular, the Department is satisfied that the Applicant has, in response to submissions, reduced the significance of impacts to the Swift Parrot, Regent Honeyeater and Spotted-tailed Quoll and that appropriate mitigation measures and/or offsets have been proposed for the project's limited levels of impact. These offsets have been calculated in accordance with the NSW Framework for Biodiversity Assessment and that the Department's Biodiversity Conservation Division (formerly OEH) has confirmed its satisfaction with the credit calculations.

In summary, the Department considers in relation to biodiversity impacts that:

- the Applicant has avoided impacts on native vegetation where possible;
- the project would be unlikely to significantly increase impacts on groundwater dependent ecosystems (GDEs) in the surrounding area;
- the Applicant's offset strategy is sufficient to ensure there would not be a significant residual impact on the Swift Parrot, Regent Honeyeater, Spotted-tail Quoll or Koala and it is highly unlikely the project would place any of these species at risk of local extinction;
- the Applicant's offset strategy is sufficient to ensure there would not be significant residual impacts to the *Central Hunter Valley Eucalypt Forest and Woodland (CHVEFW) CEEC*;
- the project would be unlikely to cause significant residual impacts to threatened fauna or result in significant medium to long term impacts on the lifecycles or populations of threatened fauna species.

The Department considers that conditions B55 to B69 of Part B of the development consent, which require the provision of substantial biodiversity offsets, are necessary and appropriate for the protection of the impacted species and communities. Condition B71 of Part B of the development consent requires preparation of a Biodiversity Management Plan to manage impacts on native flora and fauna, including through the biodiversity offset strategy, appropriate preclearance surveys and management of vegetation and habitat on site.

These conditions provide an effective, reasonable and achievable method to manage and mitigate the likely impacts to the identified matters of national environmental significance and, where



impacts are unavoidable, provide a mechanism to secure biodiversity offsets to compensate for these impacts.

The project would result in minor residual effects on listed threatened species and CEECs, however the Department is satisfied with the Applicant's proposed offset and management measures. The Department concludes that impacts on Commonwealth-listed threatened species and CEECs are acceptable.

In relation to water resource impacts, the Department considered that the:

- surface water and groundwater models are appropriate and fit for purpose;
- project would result in some impacts related to depressurisation, drawdown, stream leakage, stream flows, GDEs and other vegetation, fauna (including aquatic biota) and flooding, but that these impacts would not be significantly greater than those associated with existing operations in the area; and
- project would not cause significant additional impacts to significant water resources (ie Wollombi Brook, Hunter River and their associated alluvia).

The Department considers that conditions B41 to B45, B49, B51 and B52 of Part B of the development consent are necessary to protect and manage impacts to water resources. These conditions require:

- provision of compensatory water supplies for any affected groundwater user;
- compliance with suitable water performance measures to manage impacts on water resources; and
- preparation and implementation of a Water Management Plan and GDE Study, to monitor, track and manage potential impacts to GDEs over time, monitor groundwater levels and surface and groundwater quality.

Overall, the Department considers that the likely impacts of the proposed action on listed threatened species and communities and water resources would not be unacceptable, provided the action is undertaken in a manner which is consistent with the avoidance, mitigation and offset measures proposed by the Applicant and in accordance with conditions of consent.

On this basis the Department recommends that the Commonwealth Minister for the Environment should approve the action. The Department recommends that the relevant conditions outlined above should be attached to the Commonwealth approval.



**PROPOSED APPROVAL**

**United and Wambo Open Cut Coal Mine Project, Singleton, NSW (EPBC 2015/7600)**

This decision is made under sections 130(1) and 133(1) of the *Environment Protection and Biodiversity Conservation Act 1999 (Cth)*. Note that section 134(1A) of the EPBC Act applies to this approval, which provides in general terms that if the approval holder authorises another person to undertake any part of the action, the approval holder must take all reasonable steps to ensure that the other person is informed of any conditions attached to this approval, and that the other person complies with any such condition.

**Details**

<b>Person to whom the approval is granted (approval holder)</b>	United Collieries Pty Ltd
<b>ACN or ABN of approval holder</b>	ACN: 001 990 209
<b>Action</b>	A joint venture between United Collieries Pty Ltd and Wambo Coal Pty Ltd to extract a total of 176 million tonnes of run-of-mine coal at a rate of up to 10 million tonnes per annum over 21 years from a single open cut mine that combines existing operations at Wambo with a new mine on leases owned by United Collieries, located 16 kilometres west of Singleton, NSW [See EPBC Act referral 2015/7600].

**Proposed Approval decision**

My decisions on whether or not to approve the taking of the action for the purposes of each controlling provision for the action are as follows.

**Controlling Provisions**

<b>Listed Threatened Species and Communities</b>	
Section 18	Approve
Section 18A	Approve
<b>Coal seam gas or large coal mining development impact on water resources</b>	
Section 24D	Approve
Section 24E	Approve

***Period for which the approval has effect***

This approval has effect until 31 December 2052.

## Decision-maker

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<b>Name and position</b>	The Hon Sussan Ley MP Minister for the Environment
<b>Signature</b>	<b>PROPOSED DECISION DO NOT SIGN</b>
<b>Date of decision</b>	<b>PROPOSED DECISION DO NOT DATE</b>

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## Conditions of approval

This approval is subject to the conditions under the EPBC Act as set out in ANNEXURE A.

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## ANNEXURE A – CONDITIONS OF APPROVAL

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### Part A – Conditions specific to the action

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#### Water Resources

The objective of Conditions 1 is to minimise the impacts of the **action** on a **Water Resource**.

1. The **approval holder** must comply with **State development consent** conditions B39, B40, B46, B49, B51, B52, B53 and B54.

#### Listed threatened species and ecological community

The objective of conditions 2 to 4 is to minimise the impacts of the **action** on **listed threatened species and an ecological community**.

2. Within the area shown at Annexure 1, the **approval holder** must not clear more than:
  - a. 203.7 hectares of Regent Honeyeater (*Anthochaera phrygia*) habitat,
  - b. 203.7 hectares<sup>1</sup> of Swift Parrot (*Lathamus discolor*) habitat,
  - c. 352.9 hectares of Spotted-tail quoll (*Dasyurus maculatus maculatus*) habitat,
  - d. 246.8 hectares of the Central Hunter Valley Eucalypt Forest and Woodland ecological community.
3. The **approval holder** must comply with the **State development consent** conditions B55, B56, B57, B58, B59, B60, B61, B62, B69, B71, B72 and B73.
  - a. To compensate for the loss of the **listed threatened species and ecological community** habitat identified at condition 2, the **approval holder** must submit the Biodiversity Offset Strategy **plan** (specified at condition B71(e) of the **State development consent**) to the **Department** for approval.
    - i. The **approval holder** must not commence **Phase 1A** until the Biodiversity Offset Strategy **plan** has been approved by the **Department**.

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<sup>1</sup> For the purposes of the EPBC Act, the clearance area of habitat for the Swift Parrot (*Lathamus discolor*) is the same as the clearance area of habitat for the Regent Honeyeater (*Anthochaera phrygia*) because the main eucalypt species that will be impacted in the Regent Honeyeater's habitat on the site also provide important foraging habitat for the Swift Parrot.

- ii. The approval holder must implement the Biodiversity Offset Strategy **plan** as approved by the **Department**.
4. The **approval holder** must comply with the **State development consent** conditions B97, B98, B100, B101, B102, B103, B104 and B105.

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## **Part B –Administrative conditions**

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### **Notification of date of commencement of the action**

5. The **approval holder** must notify the **Department** in writing of the date of **commencement of the action** within 10 **business days** after the date of **commencement of the action**.
6. If the **commencement of the action** does not occur within 5 years from the date of this approval, then the **approval holder** must not commence the **action** without the prior written agreement of the **Minister**.

### **Compliance records**

7. The **approval holder** must maintain accurate and complete **compliance records**.
8. If the **Department** makes a request in writing, the **approval holder** must provide electronic copies of **compliance records** to the **Department** within the timeframe specified in the request.

**Note: Compliance records** may be subject to audit by the **Department** or an independent auditor in accordance with section 458 of the **EPBC Act**, and or used to verify compliance with the conditions. Summaries of the result of an audit may be published on the **Department's website** or through the general media.

### **Preparation and publication of plans**

9. The **approval holder** must:
  - a. Submit the Biodiversity Offset Strategy **plan** at condition 3.a electronically to the **Department** for approval,
  - b. publish the Biodiversity Offset Strategy **plan** on the **website** within 20 **business days** of the date the Biodiversity Offset Strategy **plan** is approved by the **Department** or of the date a revised Biodiversity Offset Strategy **plan** is submitted to the **Department**, unless otherwise agreed to in writing by the **Department**,
  - c. exclude or redact **sensitive ecological data** from the Biodiversity Offset Strategy **plan** published on the **website** or provided to a member of the public, and
  - d. keep the Biodiversity Offset Strategy **plan** published on the **website** until the end date of this approval.

### **Annual compliance reporting**

10. The **approval holder** must prepare a **compliance report** addressing compliance with each of the conditions of this approval, including implementation of any management **plans** and strategies from the **State development consent**, for each 12 month period following the date of **commencement of the action**, or otherwise in accordance with an annual date that has been agreed to in writing by the **Minister**. The **approval holder** must:
  - a. publish each **compliance report** on a **website** within 60 **business days** following the relevant 12 month period,

- b. notify the **Department** by email that a **compliance report** has been published on the **website** and provide the **website's** link for the **compliance report** within five **business days** of the date of publication,
- c. keep all **compliance reports** publicly available on the **website** until this approval expires,
- d. exclude or redact **sensitive ecological data** from **compliance reports** published on the **website**, and
- e. where any **sensitive ecological data** has been excluded from the version published, submit the full **compliance report** to the **Department** within 5 **business days** of publication.

**Note:** **Compliance reports** may be published on the **Department's website**.

### **Reporting non-compliance**

11. The **approval holder** must notify the **Department** in writing of any: **incident**, or non-compliance with the conditions, or non-compliance with the commitments made in **plans**. The notification must be given as soon as practicable, and no later than two **business days** after becoming aware of the **incident** or non-compliance. The notification must specify:
  - a. any condition which is or may be in breach,
  - b. a short description of the **incident** and/or non-compliance, and
  - c. the location (including co-ordinates), date, and time of the **incident** and/or non-compliance. In the event the exact information cannot be provided, provide the best information available.
12. The **approval holder** must provide to the **Department** the details of any **incident** or non-compliance with the conditions or commitments made in **plans** as soon as practicable and no later than 10 **business days** after becoming aware of the **incident** or non-compliance, specifying:
  - a. any corrective action or investigation which the **approval holder** has already taken or intends to take in the immediate future,
  - b. the potential impacts of the **incident** or non-compliance, and
  - c. the method and timing of any remedial action that will be undertaken by the **approval holder**.

### **Independent audit**

13. The **approval holder** must ensure that **independent audits** of compliance with the conditions are conducted as requested in writing by the **Minister**.
14. For each **independent audit**, the **approval holder** must:
  - a. provide the name and qualifications of the independent auditor and the draft audit criteria to the **Department**,
  - b. only commence the **independent audit** once the audit criteria have been approved in writing by the **Department**, and
  - c. submit an audit report to the **Department** within the timeframe specified in the approved audit criteria.
15. The **approval holder** must publish the audit report on the **website** within 10 **business days** of receiving the **Department's** approval of the audit report and keep the audit report published on the **website** until the end date of this approval.

### **Completion of the action**

16. The **approval holder** must comply with the **State development consent** condition A9<sup>2</sup>.

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<sup>2</sup> Condition A9 states that the **State development consent** continues to apply (beyond 31 August 2042) until the rehabilitation of the site has been carried out.

17. Within 30 days after the **completion of the action**, the **approval holder** must notify the **Department** in writing and provide **completion data**.

#### **Changes to State development consent**

18. The **approval holder** must notify the **Department** in writing of any proposed change to the **State development consent** conditions referred to in these conditions within 10 **business days** of formally proposing a change or becoming aware of any proposed change.

19. The **approval holder** must notify the **Department** in writing of any change to the conditions of the **State development consent** referred to in these conditions, within 10 **business days** of a change to conditions being finalised.

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### **Part C - Definitions**

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**Action** means the United and Wambo Open Cut Coal Mine Project, Singleton, NSW (EPBC 2015/7600).

**Approval holder** means the person to whom the approval is granted as identified on the approval notice for EPBC 2015/7600, or to whom the approval is transferred under S145B of the **EPBC Act**, or a person who may take the **action** in accordance with section 133(2A) of the **EPBC Act**.

**Business day** means a day that is not a Saturday, a Sunday or a public holiday in the state or territory of the **action**.

**Commencement of the action** means the commencement of construction as defined in the **State development consent**.

**Completion data** means an environmental report and spatial data clearly detailing how the conditions of this approval have been met. The **Department's** preferred spatial data format is **shapefile**.

**Completion of the action** means the time at which all approval conditions (except condition 16) have been fully met.

**Compliance records** means all documentation or other material in whatever form required to demonstrate compliance with the conditions of approval in the **approval holder's** possession or that are within the **approval holder's** power to obtain lawfully.

**Compliance report(s)** means written reports:

- i. providing accurate and complete details of compliance, **incidents**, and non-compliance with the conditions and the **plans**,
- ii. consistent with the **Department's Annual Compliance Report Guidelines (2014)**,
- iii. include a **shapefile** of any clearance of any **protected matters**, or their habitat, undertaken within the relevant 12 month period, and
- iv. annexing a schedule of all **plans** prepared and in existence in relation to the conditions during the relevant 12 month period.

**Department** means the Australian Government agency responsible for administering the **EPBC Act**.

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

**Incident** means any event which has the potential to, or does, impact on one or more **protected matter(s)**.

**Independent audit:** means an audit conducted by an independent and **suitably qualified person** as detailed in the *Environment Protection and Biodiversity Conservation Act 1999 Independent Audit and Audit Report Guidelines* (2019).

**Listed threatened species and community:** Regent Honeyeater (*Anthochaera phrygia*), Swift Parrot (*Lathamus discolor*), Spotted-tail quoll (*Dasyurus maculatus maculatus*), Central Hunter Valley eucalypt forest and woodland ecological community.

**Minister** means the Minister administering the *Environment Protection and Biodiversity Conservation Act 1999* (Cth), and includes a delegate of the Minister.

**Phase 1A** is defined in the **State development consent**.

**Plan(s)** means any of the documents required to be prepared, and/or implemented by the **approval holder** and published on the **website** in accordance with these conditions.

**Protected matters** means a **water resource** (sections 24D and 24E), and, the **EPBC Act listed threatened species and community:** Regent Honeyeater (*Anthochaera phrygia*), Swift Parrot (*Lathamus discolor*), Spotted-tail quoll (*Dasyurus maculatus maculatus*), Central Hunter Valley eucalypt forest and woodland ecological community.

**Sensitive ecological data** means data as defined in the Australian Government Department of the Environment (2016) *Sensitive Ecological Data – Access and Management Policy V1.0*.

**Shapefile** means location and attribute information of the **action** provided in an Esri shapefile format. Shapefiles must contain '.shp', '.shx', '.dbf' files and a '.prj' file that specifies the projection/geographic coordinate system used. Shapefiles must also include an '.xml' metadata file that describes the shapefile for discovery and identification purposes.

**Site** is defined in the **State development consent**.

**State development consent** means the State development consent for application number SSD-7142 dated 29 August 2019.

**Suitably qualified person** means a person who has professional qualifications, training, skills and/or experience related to the nominated subject matter and can give authoritative independent assessment, advice and analysis on performance relative to the subject matter using the relevant protocols, standards, methods and/or literature.

**Website** means a set of related web pages located under a single domain name attributed to the **approval holder** and available to the public.

**Water Resource** has the same meaning as in the Commonwealth *Water Act 2007*.



Image Source: AAM (2012), United (2015)  
Data Source: Glencore (2014)

0 1.0 2.0 3.0 km  
1:60 000

- Legend**
- ▬ Project Area
  - ▬ Approved Wambo Surface Development Area
  - ▬ Existing 330kV Powerline
  - ▬ Proposed Extent of Open Cut Mining
  - ▬ Proposed Golden Highway Realignment
  - ▬ Proposed Relocated 330kV Powerline

File Name (A4): R02/3509\_025.dgn  
20150630 15:56

FIGURE 1.3  
The Project





**THE HON SUSSAN LEY MP  
MINISTER FOR THE ENVIRONMENT  
MEMBER FOR FARRER**

s47F

MS19-000867

Project Manager United Complex  
United Collieries Pty Ltd  
Private Mailbag 13  
SINGLETON NSW 2300

Dear s47F

**Invitation to comment on proposed approval decision  
United and Wambo Open Cut Coal Mine Project, Singleton, NSW (EPBC 2015/7600)**

I am writing to you in relation to a proposal to develop a single open cut coal mining operation that combines the existing open cut operations at Wambo with a proposed new open cut coal mine on leases owned by United Collieries. The proposal was referred and assessed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) for its impacts on listed threatened species and ecological communities (sections 18 and 18A), and a water resource, in relation to coal seam gas development and large coal mining development (sections 24D and 24E). I am proposing to approve this proposal subject to conditions. My proposed decision is attached.

In accordance with the EPBC Act, I invite you to provide comments on my proposed decision of approval, including the conditions which I propose to attach, within 10 business days of the date of this letter. Please quote the title of the action and EPBC reference, as shown at the beginning of this letter, in any correspondence. You can send comments by email to the project manager, or by letter to:

Northern NSW Assessments  
Environment Approvals and Wildlife Trade Branch  
Department of the Environment and Energy  
GPO Box 787  
CANBERRA ACT 2601

If you have any questions about this decision, please contact the project manager s22 by email to s22 or telephone s22 and quote the EPBC reference number (EPBC 2015/7600).

Yours sincerely

A handwritten signature in black ink, appearing to read 'Sussan Ley', written over a white background.

SUSSAN LEY

Enc



**THE HON SUSSAN LEY MP  
MINISTER FOR THE ENVIRONMENT  
MEMBER FOR FARRER**

MS19-000867

Senator the Hon Matthew Canavan  
Minister for Resources and Northern Australia  
Parliament House  
CANBERRA ACT 2600

Dear Minister

**Invitation to comment on proposed approval decision  
United and Wambo Open Cut Coal Mine Project, Singleton, NSW (EPBC 2015/7600)**

I am writing to you in relation to a proposal to develop a single open cut coal mining operation that combines the existing open cut operations at Wambo with a proposed new open cut coal mine on leases owned by United Collieries. The proposal was referred and assessed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) for its impacts on listed threatened species and ecological communities (sections 18 and 18A), and a water resource, in relation to coal seam gas development and large coal mining development (sections 24D and 24E). I am proposing to approve this proposal subject to conditions. My proposed decision is attached.

I understand you have administrative responsibilities relating to the proposal. In accordance with section 131 of the EPBC Act, I invite you to provide comments on my proposed decision within 10 business days of the date of this letter, including on any matters of economic or social concern that should be considered consistent with the principles of ecologically sustainable development.

If you have any questions about this decision, please contact the project manager, s22 by email to s22 or telephone s22 and quote the EPBC reference number (EPBC 2015/7600).

Yours sincerely

A handwritten signature in cursive script that reads 'Sussan Ley'.

SUSSAN LEY

Enc



**THE HON SUSSAN LEY MP  
MINISTER FOR THE ENVIRONMENT  
MEMBER FOR FARRER**

MS19-000867

The Hon Angus Taylor MP  
Minister for Energy and Emissions Reduction  
Parliament House  
CANBERRA ACT 2600

Dear Minister *Angus*

**Invitation to comment on proposed approval decision  
United and Wambo Open Cut Coal Mine Project, Singleton, NSW (EPBC 2015/7600)**

I am writing to you in relation to a proposal to develop a single open cut coal mining operation that combines the existing open cut operations at Wambo with a proposed new open cut coal mine on leases owned by United Collieries. The proposal was referred and assessed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) for its impacts on listed threatened species and ecological communities (sections 18 and 18A), and a water resource, in relation to coal seam gas development and large coal mining development (sections 24D and 24E). I am proposing to approve this proposal subject to conditions. My proposed decision is attached.

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If you have any questions about this decision, please contact the project manager, s22 by email to s22 or telephone s22 and quote the EPBC reference number (EPBC 2015/7600).

Yours sincerely

*Sussan Ley*  
SUSSAN LEY

Enc



**THE HON SUSSAN LEY MP  
MINISTER FOR THE ENVIRONMENT  
MEMBER FOR FARRER**

MS19-000867

The Hon Ken Wyatt AM MP  
Minister for Indigenous Australians  
Parliament House  
CANBERRA ACT 2600

Dear Minister

**Invitation to comment on proposed approval decision  
United and Wambo Open Cut Coal Mine Project, Singleton, NSW (EPBC 2015/7600)**

I am writing to you in relation to a proposal to develop a single open cut coal mining operation that combines the existing open cut operations at Wambo with a proposed new open cut coal mine on leases owned by United Collieries. The proposal was referred and assessed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) for its impacts on listed threatened species and ecological communities (sections 18 and 18A), and a water resource, in relation to coal seam gas development and large coal mining development (sections 24D and 24E). I am proposing to approve this proposal subject to conditions. My proposed decision is attached.

I understand you have administrative responsibilities relating to the proposal. In accordance with section 131 of the EPBC Act, I invite you to provide comments on my proposed decision within 10 business days of the date of this letter, including on any matters of economic or social concern that should be considered consistent with the principles of ecologically sustainable development.

If you have any questions about this decision, please contact the project manager, s22 by email to s22 or telephone s22 and quote the EPBC reference number (EPBC 2015/7600).

Yours sincerely

  
SUSSAN LEY

Enc



**THE HON SUSSAN LEY MP  
MINISTER FOR THE ENVIRONMENT  
MEMBER FOR FARRER**

MS19-000867

Senator the Hon Bridget McKenzie  
Minister for Agriculture  
Parliament House  
CANBERRA ACT 2600

Dear Minister *Bridget*

**Invitation to comment on proposed approval decision  
United and Wambo Open Cut Coal Mine Project, Singleton, NSW (EPBC 2015/7600)**

I am writing to you in relation to a proposal to develop a single open cut coal mining operation that combines the existing open cut operations at Wambo with a proposed new open cut coal mine on leases owned by United Collieries. The proposal was referred and assessed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) for its impacts on listed threatened species and ecological communities (sections 18 and 18A), and a water resource, in relation to coal seam gas development and large coal mining development (sections 24D and 24E). I am proposing to approve this proposal subject to conditions. My proposed decision is attached.

I understand you have administrative responsibilities relating to the proposal. In accordance with section 131 of the EPBC Act, I invite you to provide comments on my proposed decision within 10 business days of the date of this letter, including on any matters of economic or social concern that should be considered consistent with the principles of ecologically sustainable development.

If you have any questions about this decision, please contact the project manager, s22 by email to s22, or telephone s22 and quote the EPBC reference number (EPBC 2015/7600).

Yours sincerely

*Sussan Ley*  
SUSSAN LEY

Enc



**THE HON SUSSAN LEY MP  
MINISTER FOR THE ENVIRONMENT  
MEMBER FOR FARRER**

MS19-000867

The Hon Robert Stokes MP  
Minister for Planning and Public Spaces  
Parliament House  
6 Macquarie Street  
SYDNEY NSW 2000

Dear Minister *Rob*

**Proposed approval decision United and Wambo Open Cut Coal Mine Project, Singleton, NSW (EPBC 2015/7600)**

I am writing to you in relation to a proposal to develop a single open cut coal mining operation that combines the existing open cut operations at Wambo, near Singleton in New South Wales, with a proposed new open cut coal mine on leases owned by United Collieries.

The proposal was referred under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) for its impacts on listed threatened species and ecological communities (sections 18 and 18A), and a water resource, in relation to coal seam gas development and large coal mining development (sections 24D and 24E). The proposal has been assessed by the NSW Government on behalf of the Australian Government, in accordance with the provisions of the EPBC Act Bilateral Agreement (February 2015) between our Governments. I am intending to approve this proposal subject to conditions. My proposed decision is attached.

If you have any questions about this decision, please contact the project manager, s22 by email to s22 or telephone s22 and quote the EPBC reference number (EPBC 2015/7600).

Yours sincerely

*Sussan Ley*  
SUSSAN LEY

Enc



**THE HON SUSSAN LEY MP  
MINISTER FOR THE ENVIRONMENT  
MEMBER FOR FARRER**

MS19-000867

The Hon David Littleproud MP  
Minister for Water Resources, Drought, Rural Finance,  
Natural Disasters and Emergency Management  
Parliament House  
CANBERRA ACT 2600

Dear Minister *David*

**Invitation to comment on proposed approval decision  
United and Wambo Open Cut Coal Mine Project, Singleton, NSW (EPBC 2015/7600)**

I am writing to you in relation to a proposal to develop a single open cut coal mining operation that combines the existing open cut operations at Wambo with a proposed new open cut coal mine on leases owned by United Collieries. The proposal was referred and assessed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) for its impacts on listed threatened species and ecological communities (sections 18 and 18A), and a water resource, in relation to coal seam gas development and large coal mining development (sections 24D and 24E). I am proposing to approve this proposal subject to conditions. My proposed decision is attached.

I understand you have administrative responsibilities relating to the proposal. In accordance with section 131 of the EPBC Act, I invite you to provide comments on my proposed decision within 10 business days of the date of this letter, including on any matters of economic or social concern that should be considered consistent with the principles of ecologically sustainable development.

If you have any questions about this decision, please contact the project manager, s22 by email to s22 or telephone s22 and quote the EPBC reference number (EPBC 2015/7600).

Yours sincerely

*Sussan Ley*  
SUSSAN LEY

Enc

## CONSIDERATIONS RELATING TO DECISION-MAKING UNDER PART 9 OF THE EPBC ACT

### MANDATORY CONSIDERATIONS – MATTERS RELEVANT TO ANY MATTER PROTECTED BY A CONTROLLING PROVISION (SECTION 136(1)(a))

Under section 136, in deciding whether or not to approve an action and what conditions to attach to the approval, you **must** consider matters relevant to any matter protected by the controlling provisions for the action, so far as they are not inconsistent with any other requirement of Subdivision B, Division 1 of Part 9 of the EPBC Act:

The controlling provisions for the proposed action, identified at the time of the EPBC Act section 75 referral decision, are:

- sections 18 and 18A (listed threatened species and ecological communities), and
- sections 24D and 24E (water resources).

The proposed action was assessed by the NSW Department of Planning and Environment (DPE) (now the NSW Department of Planning, Industry and Environment<sup>1</sup> (DPIE)) in accordance with the EPBC Act Part 5 Assessment Bilateral Agreement (February 2015) between the NSW and Australian Governments.

On 6 September 2019, DPIE notified the Department that the assessment had been completed and that the proposed action had been approved under Part 4 of the *Environmental Planning and Assessment Act 1979* (NSW) (EP&A Act) (Attachment A1). DPIE also provided a copy of the NSW Government's Independent Planning Commission's (IPC) Statement of Reasons for Decision (SOR) (Attachment A2) and the signed IPC development consent (State approval) (Attachment A5). The DPIE letter stated that the remaining assessment documents were located on the DPIE web site.

The State's Preliminary Assessment Report (December 2017) is at (Attachment A3) and Final Assessment Report (November 2018) is at Attachment A4. The Independent Planning Commission (IPC) Statement of Reasons for Decision (SOR) is at (Attachment A2). These reports are the 'assessment reports' for the purposes of section 130(2) of the EPBC Act.

In preparing this report, the Department has considered the following State assessment documents and other information available on the NSW DPIE Major Projects website:

<https://www.planningportal.nsw.gov.au/major-projects/project/25271>

- Proponent's Environmental Impact Statement (EIS) (August 2016) (Attachment D).
- NSW Preliminary Assessment Report (December 2017) (Attachment A3).
- Proponent's response to submissions (RTS) (March and May 2017). (Attachments M1 & M2).
- NSW Final Assessment Report (November 2018) (Attachment A4).
- Additional information provided by the proponent in September 2017 (Attachment N1) and October 2018 (Attachment N6).
- IPC review report (26 March 2018) (Attachment L).
- The proponent's response to the IPC review (July 2018) (Attachments O).

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<sup>1</sup>In July 2019, following machinery of government changes in NSW, the former NSW Department of Planning and Environment (DPE) became the NSW Department of Planning, Industry and Environment (DPIE).



- The Independent Planning Commission (IPC) Statement of Reasons for Decision (SOR) (Attachment A2).
- Additional information provided by DPE following IPC review (Attachment N4 & N5)
- Additional documentation cited and attached to the briefing package.

The NSW reports make the following conclusions in relation to the proposed action's impacts on listed threatened species and water resources:

Table 1

Controlling Provision	Relevant Section of Report	Acceptability of Impacts
Listed threatened species and communities (s18 & 18A).	<p>Impacts to listed threatened species and communities are addressed in section 6.4 of the Preliminary Assessment Report (PAR), section 2.5 and Appendices D and E of the Final Assessment Report (FAR).</p> <p>The State assessment noted that the proposed action was determined to be a controlled action under the EPBC Act because it was likely to have a significant impact on the following EPBC Act listed threatened species and communities:</p> <ul style="list-style-type: none"> <li>• Regent Honeyeater (<i>Anthochaera phrygia</i>) - critically endangered.</li> <li>• Swift Parrot (<i>Lathamus discolor</i>) – endangered (at the time of the controlled action decision).</li> <li>• Spotted-tail quoll (<i>Dasyurus maculatus</i> (SE mainland population) –endangered.</li> <li>• <i>Central Hunter Valley Eucalypt Forest and Woodland</i> (CHVEFW) ecological community - critically endangered.</li> </ul> <p>Impacts to these species are discussed further below.</p> <p><u>Overview</u></p> <p>The proposed action will involve disturbance of 146 ha of previously cleared land and non-native vegetation and 527 ha of remnant and regenerating native vegetation communities. 246.8 ha of the native vegetation to be cleared is the EPBC listed critically endangered ecological community (CEEC), <i>Central Hunter Valley Eucalypt Forest and Woodland</i> (CHVEFW).</p> <p>Some areas of native vegetation that will be cleared also provide habitat and foraging resources for three</p>	Acceptable with proposed conditions.

EPBC listed threatened species: the Regent Honeyeater, Swift Parrot and Spotted-tail Quoll.

According to the PAR, the loss of habitat and key foraging resources through land clearing are identified as key threats in the Conservation Advice and Recovery Plans for the Regent Honeyeater and Swift Parrot. The proposed action has the potential to impact these species through the clearing of vegetation and associated loss of habitat, foraging resources and nest hollows. Habitat loss is the most common threat to these species in the Hunter Valley.

The State assessment noted that the proposed action will result in the direct loss of 203.7 ha of Regent Honeyeater habitat, 29.7 ha of Swift Parrot habitat and 352.9 ha of Spotted-tail Quoll habitat.

1407.3 ha of Regent Honeyeater, 473.9 ha of Swift Parrot habitat and 1507.3 ha of Spotted-tail Quoll potential habitat will be secured in offset areas.

Offsets were calculated in a Biodiversity Assessment Report, which was prepared in accordance with the *NSW Framework for Biodiversity Assessment (FBA)*, and was included as part of the proponent's RTS ([Appendix 4, Part B Attachment M2](#)). The report included calculations of the biodiversity credits required under the FBA to compensate for the impacts of the proposed action.

In response to recommendations made by the NSW Office of Environment and Heritage (OEH), the proponent provided further information about the biodiversity offset calculations on 5 December 2017 ([Attachment N2](#)).

The proponent further revised the biodiversity credit requirements in the proponent's *Response to Independent Planning Commission Recommendations* ([Attachment O2](#), Appendix 9, Offset Addendum Report) and again following further refinements to the disturbance areas ([Attachment N6](#)).

NSW OEH reviewed the proponent's credit calculation report and confirmed that it is satisfied with the biodiversity credit requirements for the Project.

Swift Parrot and Regent Honeyeater

The FBA notes that Regent Honeyeaters are known to migrate large distances and are often found in the Hunter Region during winter months, particularly in response to major eucalypt flowering events.

The PAR states that no Swift Parrots or Regent Honeyeaters were recorded within the proposed disturbance areas. However, both these species are known to occur within the broader region, with three Regent Honeyeater sightings recorded within 5 km of the site during 1987, 1991 and 2002.

The 1991 sighting was located in riparian vegetation adjacent to Wollombi Brook, very close to the 4.26 ha electricity transmission line area (see Figure 3.6 of Appendix 4 to RTS - Part B at Attachment M2).

*Impacts, avoidance, mitigation and offsets*

The NSW OEH initial submission on the proposed action identified the woodland (adjacent to Wollombi Brook) as being potential Regent Honeyeater habitat requiring further expert assessment. In response to this advice, the proponent relocated the transmission line easement to avoid disturbance of this area and provided a revised proposed action layout in the RTS.

Table 8 in the FAR contains habitat impact and offset figures for the Regent Honeyeater and Swift Parrot.

- 203.7 ha of Regent Honeyeater habitat to be impacted and 1407.3 ha of habitat to be secured in offset areas.
- 29.7 ha of Swift Parrot habitat to be impacted and 473.9 ha of habitat to be secured in offset areas.

DPE considered that the Biodiversity Offset Strategy is appropriately focused on compensating for impacts on listed threatened bird, bat, marsupial and placental mammal species, including the Swift Parrot and Regent Honeyeater.

DPE also concluded in the PAR that rehabilitated woodland areas to be established under the proposed action will provide a net increase in long-term habitat and foraging areas and may assist in

reversing the long-term decline of Swift Parrot and Regent Honeyeater populations.

Spotted-tail Quoll (*Dasyurus maculatus*)

*Impacts*

According to the PAR, Spotted-tail Quolls are known to occur in the surrounding landscape (a Quoll was sighted to the east of the site during a remote camera baiting survey in 2013). According to DPE's assessment the loss of 352.9 ha of potential forest and woodland habitat, derived native grasslands and foraging resources could cause some limited impacts by increasing competition over home ranges and disrupting dispersal pathways.

According to the NSW Bionet biodiversity database, Spotted-tail Quolls are regularly recorded in the wider Upper Hunter region.

The NSW FBA assessment concluded that there is a reasonable likelihood the Project's disturbance area falls within the home ranges of Spotted-tail Quolls and that habitat in this area may be used by Quolls from time to time.

*Avoidance, mitigation and offsets*

To address potential impacts on this species, the proponent proposed a biodiversity offset package that includes the conservation of the Wambo biodiversity offset area, adjacent to the proposed action area, and contiguous with large areas of remnant vegetation.

Table 8 in the FAR contains habitat impact and offset figures for the Spotted-tail Quoll – 352.9 ha of habitat will be impacted and 1507.3 ha of habitat will be secured in offset areas.

The proponent has also committed to actively enhance offset areas to increase the likelihood of them being used by threatened species by installing habitat structures, such as timber stockpiles and water bodies.

DPE noted that the proponent has been successful in recreating den structures and habitat features for Spotted-tail Quolls in other areas of the Hunter Valley and is satisfied that similar measures can be implemented for this proposed action.

DPE was satisfied that the proposed offset areas and other measures will satisfactorily address any impacts on Spotted-tail Quoll populations. DPE considered that improving habitat connectivity and creating habitat features in the post-mining rehabilitated landscape will increase the likelihood of future use by local Quoll populations as a dispersal corridor and habitat area.

DPE concluded that residual impacts on this species can be effectively managed through the Biodiversity Management Plan required by State approval condition B71.

*Central Hunter Valley Eucalypt Forest and Woodland (CHVEFW)*

*Impacts*

The proposed action will result in the clearing of 246.8 ha of CHVEFW.

*Avoidance, mitigation, offset*

Offsets for CHVEFW were developed during the State assessment. The offsets provide 1135.6 ha of CHVEFW that will be secured in offset areas. The offsets were developed in accordance with the Bilateral Agreement using the FBA.

*Offsets staging*

The proposed action has been assessed under the bilateral agreement between the NSW and Commonwealth Governments which provides for offsets to be determined in accordance with the FBA and the *NSW Biodiversity Offset Policy for Major Projects* (now Biodiversity Offsets Scheme).

The proponent is seeking to retire offset 'credits' in three stages, each linked with the progress of mining operations and progressive disturbance of native vegetation. The three stages of disturbance are approximately seven-year stages and are linked to the proposed action's commencement and construction (Stage 1), ongoing mining (Stage 2) and completion of mining and rehabilitation activities (Stage 3).

Condition B56 of the State approval requires that: *Within 12 months of commencing Phase 1A, or other timeframe agreed by the [NSW] Planning Secretary, the Applicant [proponent] must retire the Stage 1 credits as specified in Table 5, excluding*

*ecosystem credits to be satisfied using Ecological Mine Rehabilitation. The Applicant must notify the Planning Secretary of its intention to satisfy Stage 1 credits using Ecological Mine Rehabilitation and provide details of the particular ecosystem credits proposed to be satisfied in this manner within 12 months of commencing Phase 1A.*

*Condition B57 of the State approval states that: prior to commencement of any surface disturbance associated with both Stages 2 and 3, or other timeframe agreed by the [NSW] Planning Secretary, the Applicant must retire the credits for these Stages as specified in Table 5, excluding ecosystem credits to be satisfied using Ecological Mine Rehabilitation. The Applicant must notify the Planning Secretary of its intention to satisfy Stage 2 and/or Stage 3 credits using Ecological Mine Rehabilitation and provide details of the particular ecosystem credits proposed to be satisfied in this manner prior to commencing those Stages.*

DPE was satisfied that this approach provides certainty because the impacts of each stage will be fully offset prior to, or soon after the impacts occur, and it motivates the proponent to identify necessary credits to ensure the ongoing operation of the mine.

The proponent's RTS provides mapping which indicates the extent of the proposed disturbance footprint for each of the three stages. 85 per cent of land disturbance occurs in Stage 1, meaning that the majority of the biodiversity credits (80 per cent) will be required to be secured early in the proposed action's life. Stage 2 will involve 93 ha of disturbance and 18 per cent of the biodiversity credits, while Stage 3 will involve clearing of 10 ha of land and 2 per cent of the biodiversity credits.

Table 6 in the FAR (Attachment A4) provides the approximate timing, disturbance area, associated credit requirements and approximate area of rehabilitation that will occur within each stage. Both DPE and the then NSW OEH accepted the proponent's proposed staged approach.

The proponent undertook additional consultation with this Department and the then NSW OEH during the preparation of the Stage 1 Biodiversity Offset Strategy. This is described in detail in the RTS (Attachments M1 & M2).

The offset and rehabilitation areas have the potential to provide 20,165 ecosystem credits associated with native vegetation communities. A summary of how the proposed offset package satisfies the Stage 1 offsetting requirements for the proposed action is provided in Table 7 in the FAR (Attachment A4). OEH has indicated its satisfaction with the calculations contained in this table. The location of the five land-based offset sites and the proposed ecological mine rehabilitation area is shown in Figure 5 in the FAR.

As indicated in the last column of Table 7, 1281 biodiversity credits are still required to be secured by the proponent for Stage 1 of the proposed action.

The proponent proposes to use the options available under the *NSW Biodiversity Offset Policy for Major Projects* (now Biodiversity Offsets Scheme) to satisfy these remaining offset requirements for Stage 1. It is likely to include other land-based offset sites or payments into the Biodiversity Conservation Fund (BCF). DPE was satisfied that these residual credits can be readily retired within 12 months of commencement.

The proponent's additional information response (11 October 2018 Attachment N6) also demonstrates that the proposed Stage 1 Biodiversity Offset Strategy satisfies offsetting requirements for EPBC Act Matters of National Environmental Significance (MNES), including for the CHVEFW, Swift Parrot, Regent Honeyeater and Spotted-tail Quoll.

Table 8 in the FAR (Table 2 in this report) shows that suitable offsets for the MNES for Stage 1 have been identified through land-based offsets. Additional assessment of MNES is provided in Appendix E of the FAR.

#### *State Conditions Relevant to MNES*

State condition B71 requires the proponent to describe how biodiversity credits will be identified, secured and retired in a Biodiversity Offsets Strategy and in a Biodiversity Management Plan and to identify potential risks to the successful implementation of the biodiversity offset strategy.

State condition B72 states that the proponent must not commence Phase 1A of the development until

	<p>the Biodiversity Management Plan is approved by the Planning Secretary.</p> <p>State condition B73 states that the proponent must implement the Biodiversity Management Plan as approved by the Planning Secretary.</p> <p>State condition B97 states that the proponent must rehabilitate the site to the satisfaction of the Resources Regulator. This rehabilitation must be generally consistent with the proposed rehabilitation activities described in the document/s listed in condition A2(c) (and shown conceptually in the <u>figure in Appendix 8 of the State conditions</u>), and must comply with the rehabilitation objectives in Table 6 of the State conditions. Table 6 specifies the rehabilitation objectives for the proposed action.</p> <p>State condition B98 states that the rehabilitation objectives in <u>Table 6</u> apply to the entire site, including all constructed landforms.</p> <p>State conditions B100, B101, B102, B103, B104 and B105 require the preparation of a Rehabilitation Strategy and the preparation and implementation of a Rehabilitation Management Plan.</p> <p><i>Stages 2 and 3 Biodiversity Offset Strategy</i></p> <p>The FAR notes that remaining credit requirements - for Stages 2 and 3 represent 20 per cent of the offset package and will not be required for 7-14 years.</p> <p>In the FAR, DPE expressed confidence that sufficient time and appropriate processes and mechanisms are in place to secure all remaining offsets required for the proposed action.</p> <p>In the FAR, OEH and DPE also expressed satisfaction that the proposed biodiversity offset strategy satisfies offsetting requirements for the key MNES, including the CHVEFW CEEC, Swift Parrot, Regent Honeyeater and Spotted-tail Quoll (see <u>Table E2</u> in the FAR).</p> <p><i>The New NSW Biodiversity Offsets Scheme</i></p> <p>With the commencement of the new <i>Biodiversity Conservation Act</i> (BC Act) on 25 August 2017, the NSW Government released the new Biodiversity Assessment Method which replaces the methodology used for this proposed action. As a</p>	
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result, the credit requirements outlined above and in the recommended conditions of consent may be converted to reasonably equivalent biodiversity credits under the new BC Act to facilitate retirement under the new legislation.

State Condition B55 states that the biodiversity credits specified in Table 5 in the State approval, or the equivalent number of credits (calculated in accordance with the BC Act) as set out in the Biodiversity Management Plan, must be offset, to offset the biodiversity impacts of the development. OEH has developed a calculator to assist with this conversion.

The new Biodiversity Offsets method essentially replaces the *NSW Biodiversity Offset Policy for Major Projects*. This method includes new offset rules to govern the types of offsets that can be used to meet offset obligations. These include funding a biodiversity conservation action or making a payment into a fund.

A footnote has been included in State condition B55 to clarify that the offsetting credits for the CHVEFW CEEC can only be discharged through payment into the BCF if this fund has been endorsed by the Commonwealth Minister responsible for administering the EPBC Act.

The Australian Government Department of the Environment and Energy informed DPE that currently payments into the BCF have not been endorsed and the shortfall will have to be provided by land based offsets.

*Other State conditions relevant to protecting listed threatened species and communities*

State Condition B55 requires the proponent to retire the biodiversity credits specified in Table 5 in the State approval to offset the biodiversity impacts of the development, including 14 477 credits for CHVEFW.

State Condition B58 allows the proponent to adjust the staging of surface disturbance and the associated credit retirements in Table 5, except in accordance with condition B59, the relevant credits must be retired, excluding credits to be satisfied using Ecological Mine Rehabilitation, prior to the

	<p>commencement of the associated surface disturbance.</p> <p>State condition B59 allows the proponent to carry over surplus retired credits to satisfy the credit requirements of a later stage. This may occur, for example, where approved clearing for an earlier stage was not undertaken, but the impact has already been offset.</p> <p>State Condition B60 allows the proponent to remove biodiversity credits associated with areas agreed under condition B59, which had not been subject to any surface disturbance, from the total credit obligations in <u>Table 5</u>.</p> <p><i>Acceptability of mine site rehabilitation</i></p> <p>State Condition B61 states that ecological mine rehabilitation may be used to satisfy up to 20 per cent of the CHVEFW CEEC ecosystem credit requirements.</p> <p>Paragraph 354 in the IPC SOR discusses the IPC's reasons for allowing up to 20 per cent of these ecosystem credit requirements to be met by ecological mine rehabilitation:</p> <p>"The Commission accepts the [NSW] Department's FAR that sufficient '<i>...protocols for progress reviews to demonstrate that the target vegetation communities are on track to being achieved</i>'. In addition, the Commission notes that draft condition B61 provides that ecological mine rehabilitation may be used to satisfy up to 25 per cent of the CEEC ecosystem credit requirements. The Commission finds that the Applicant [proponent] has adopted a precautionary approach and placed a high value on like-for-like offsets rather than seeking to use mine rehabilitation as an offset, albeit at a discounted rate, if appropriate offset sites are able to be secured. Noting the Applicant's current ecological mine rehabilitation requirements for the CEEC are now at 16 per cent, the Commission has amended Condition B61 to enable the Applicant to use ecological mine rehabilitation to satisfy up to 20 per cent of the CEEC credits required, still providing a degree of flexibility, which it considers is appropriate..."</p> <p>Paragraph 326 in the IPC SOR states: "<i>Additional areas beyond the proposed 878 ha of credit</i></p>	
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*generating ecological mine rehabilitation woodland are capable of being rehabilitated to an equivalent outcome...” and that selection of the 878 ha figure was based on “...the Project self-imposing a limit on the use of rehabilitation offset for the CEEC at 25 per cent of the total offset requirement based on stakeholder feedback, noting that the FBA does not impose a cap on the use of rehabilitation as an offset.” At its meeting with the Commission, the Applicant stated “...we took on board 25 per cent. We’re actually now at a point with just over five land-based offsets to limiting that to 17 per cent. When we add the South Wambo project, that number will reduce again and that will come under 15 per cent.”*

The FAR (section 2.3.4 Attachment A4) notes, that the proposed Stage 1 Biodiversity Offset Strategy for the Project requires regeneration of a large area (878 ha) of native vegetation communities, including 506 ha of CHVEFW.

On 17 April 2019, DPE wrote to the IPC in response to an additional information request regarding this issue. DPE stated that the 25 per cent limit was a self-imposed cap volunteered by the proponent. Neither, the State nor Commonwealth’s current offsetting policies include a formal cap on the use of mine site rehabilitation to offset biodiversity impacts. However, the use of rehabilitated lands as offsets is generally self-limited by the area of impacted land and the heavily discounted credits that can be generated from rehabilitation (generally a 75 per cent reduction compared to using remnant native vegetation).

The 25 per cent threshold came from the Draft Upper Hunter Strategic Assessment Biodiversity Plan. Due to delays in finalising this policy, the proponent subsequently provided a revised biodiversity assessment prepared in accordance with the NSW Biodiversity Offsets Policy for Major Projects and the FBA.

State Condition B69 requires the proponent to establish 1300 hectares of open woodland revegetation on the site. This condition specifies that the land used to satisfy condition B69 cannot be the same as land used to establish Ecological Mine Rehabilitation under condition B61 or open woodland revegetation under NSW DA 305-7-2003 [a separate action assessed by the NSW Government].

State Condition B62 states that within 10 years of the cessation of mining operations, or other timeframe agreed by the Planning Secretary, the proponent must retire the biodiversity credits generated from ecological mine rehabilitation. If the ecological mine rehabilitation areas do not comply with the residual credit requirements in [Table 5](#) and/or the relevant objectives in [Table 6](#) (in the State approval), then the proponent must retire the residual credit requirements in consultation with Biodiversity & Conservation Division within the NSW Department of Planning, Industry & Environment and in accordance with the *Biodiversity Offsets Scheme of the BC Act*, to the satisfaction of the Biodiversity Conservation Trust.

State Condition A9 states that mining operations may be carried out on the site until 31 August 2042. This condition notes that under the State approval, *the Applicant is required to decommission and rehabilitate the site and carry out other requirements in relation to mining operations. Consequently, [the State approval] will continue to apply in all respects other than to permit the carrying out of mining operations until the rehabilitation of the site and other requirements have been carried out to the required standard.*

State Condition B71 requires the proponent to prepare a Biodiversity Management Plan, including a Biodiversity Offsets Strategy.

#### NSW's Conclusion

In Appendix E6.1 of the FAR ([Attachment A4](#)) DPE concluded that the proposed action could have the potential to result in significant impacts on threatened species and communities listed under the EPBC Act (namely CHVEFW, Regent Honeyeater, Swift Parrot and Spotted-tail Quoll).

DPE considered that the impacts on threatened species and communities will be acceptable, subject to the avoidance, mitigation, offsetting and management measures described in the proponent's environmental assessment documents, and the requirements of DPE's recommended conditions of consent.

DPE stated that the proponent had identified suitable land-based offsets (Biobank Sites) with sufficient like-for-like offsets to address a majority of the first stage of development (Stage 1), including

	<p>impacts to threatened species and communities listed under the EPBC Act. The remaining offset requirements for Stages 2 and 3 will need to be satisfied prior to commencement of any disturbance associated with these stages.</p> <p>DPE recommended a condition requiring the proponent to prepare a detailed Biodiversity Management Plan. This plan will further describe the biodiversity offset strategy and describe the measures to be implemented to avoid and minimise impacts to threatened species and communities, including enhancing/ regenerating native vegetation and habitat features and controlling feral pests in accordance with the relevant Threat Abatement Plans (TAPs).</p> <p>DPE also recommended conditions to facilitate successful regeneration of CHVEFW CEEC through mine site rehabilitation.</p> <p>DPE recommended that the Commonwealth Minister require the proponent to implement the State's conditions, where they relate to the management of impacts on threatened species and communities listed under the EPBC Act.</p>	
<p>A water resource – in relation to coal seam gas developments and large coal mining developments (s24D &amp; s24E)</p>	<p>Impacts to a water resource are addressed in section 6.6 of the PAR, section 2.5 and Appendix D of the FAR (<u>Attachment A4</u>) and in the SOR (<u>Attachment A2</u>).</p> <p><u><i>Groundwater Dependent Ecosystems, Groundwater Users, Downstream Water Quality</i></u></p> <p>The proponent's Ecological Assessment identified six terrestrial flora species or communities in the area that may be partially dependent on groundwater, including the <i>Central Hunter Swamp Oak Forest</i> EEC, <i>Hunter Floodplain Red Gum Woodland Complex</i> EEC, <i>Hunter Valley River Oak Forest</i>, <i>River Flat Eucalypt Forest</i> EEC, <i>Warkworth Sands Woodland</i> EEC and isolated stands of River Red Gums.</p> <p>The proposed action will result in the disturbance of around 12.9 ha of these Groundwater Dependent Ecosystems (GDEs) situated along the riparian buffer zone of Redbank Creek and has the potential to cause further indirect impacts through cumulative changes in groundwater levels, shallow aquifer</p>	<p>Acceptable with proposed conditions.</p>

	<p>recharge rates and the volume of surface water flows.</p> <p>DPE noted that local surface and groundwater systems have already been modified by approved mining activities, consequently the assessment sought to ascertain if the proposed action is likely to increase these impacts to the extent that it will cause additional impacts to GDEs.</p> <p>The RTS concluded there will be some localised effects on GDEs due to drawdown in the alluvium and shallow overburden and additional groundwater drawdown.</p> <p><u>Figure 13</u> in the PAR depicts two areas within the zone of cumulative drawdown where GDE1 (the <i>Central Hunter Swamp Oak Forest</i> EEC), GDE2 (the <i>Hunter Valley River Oak Forest</i>) and individual River Red Gums may be present. However, the proposed action will only change the timing of impacts and will not result in any substantial changes to the overall magnitude of impacts already approved. In the PAR, DPE considered this slight change in timing to be acceptable.</p> <p>The proposed action will contribute to cumulative drawdown of alluvial aquifers beneath GDEs that occur along the riparian corridors of Wollombi Brook and Redbank Creek.</p> <p>GDE2 is predicted to experience reduced groundwater levels of around 1 metre as a result of cumulative mining operations in the area (approved mining and the proposed action).</p> <p>In the PAR, DPE acknowledged that the proposed action will contribute a limited degree of additional drawdown pressure in this area and would accelerate the desaturation of this alluvium by about one year. The EIS also considers that the proposed action would not result in any significant additional impacts to GDEs due to changing surface water flows, given that the mine plans incorporate setback distances from Wollombi Brook, the Hunter River and associated riparian GDEs.</p> <p>The PAR states that the combined dewatering effects of the proposed action, the existing Wambo underground mine and other mining operations in the region are likely to result in sustained groundwater depressurisation and reduced alluvial</p>	
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recharge rates in the locality for a long period of time. Therefore, consideration must be given to the extent and timeframe over which drought-tolerant GDEs can withstand prolonged dewatering and whether the incremental drawdown effects of the proposed action will increase cumulative drawdown sufficiently to affect the viability or composition of surrounding GDEs.

DPE considered that predicted impacts on GDEs can be appropriately managed through a comprehensive monitoring regime and adaptive management measures, including specific trigger levels for remedial action and/or offsetting.

The PAR consequently recommended the adoption of detailed monitoring and response plans to track and manage potential impacts to GDEs over time.

State Condition B51 therefore requires the proponent to, within 12 months of the commencement of development, undertake a Groundwater Dependent Ecosystem Study.

#### *IPC Review - Water Resource Recommendations*

The IPC made seven recommendations regarding water resources. These recommendations relate to final landform surface water catchments, available discharge licences, cumulative impacts, groundwater monitoring bores, monitoring of stygofauna and whether advice provided by the Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development (IESC) has been satisfactorily addressed.

DPE's responses to these recommendations are detailed below in the Department's discussion on impacts to water resources (commencing at paragraph 34).

#### *DPE's Conclusion*

DPE was satisfied that these issues had been adequately assessed, and conditioned for, during the State assessment of the proposed action.

In the FAR, DPE confirmed that it remained satisfied with the information provided by the proponent in relation to water resources and "that there would not be significant impacts on water resources in relation to the proposed action, above and beyond those already approved. The proposed action is unlikely to have significant impacts on groundwater and surface

	<p>water near the proposed mine and any impacts are able to be appropriately licensed, monitored and managed (page 50 of the FAR and page 88 of the FAR (<u>Attachment A4</u>)).</p> <p>The FAR considered the advice of the IESC and NSW Department of Industry – Lands and Water on surface water and groundwater impacts, including potential impacts on downstream watercourses, water users, groundwater dependent ecosystems (GDEs) and receiving environments.</p> <p>Based on these assessments, DPE was satisfied the proposed action can be undertaken:</p> <ul style="list-style-type: none"> <li>• using the existing surface water and groundwater models, which are considered appropriate and fit for purpose, and future revisions and updates of these models,</li> <li>• without causing significantly greater impacts than are already approved regarding depressurisation, drawdown, stream leakage stream flows, GDEs and other vegetation, fauna (including aquatic biota) and flooding,</li> <li>• without causing significant additional impacts to key water resources (i.e. Wollombi Brook, Hunter River and their associated alluvium).</li> </ul> <p>In the FAR, DPE concluded that there will be no significant impacts on water resources resulting from the proposed action, other than the impacts already approved for the existing United Colliery and Wambo Coal Mine. The FAR concluded the proposed action is unlikely to have significant impacts on groundwater and surface water near the proposed action site and any impacts can be appropriately licensed, monitored and managed. To ensure this is the case, DPE drafted conditions requiring:</p> <ul style="list-style-type: none"> <li>• the preparation and implementation of a Water Management Plan, including a program to monitor groundwater levels and surface and groundwater quality</li> <li>• the provision of compensatory water supplies for any affected groundwater user</li> <li>• compliance with water management performance measures, and</li> </ul>	
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- the implementation of suitable mitigation, management, monitoring and response measures to manage impacts on water resources.

*IPC's Conclusion*

The IPC found that the proponent addressed the IESC advice and provided a detailed and considered response to each of the recommendations in its RTS.

The proponent's Review Response (Attachments O) reiterated the response to each of the recommendations in the IPC Review Report and confirmed that it understood all water assessment issues to have been resolved.

The IPC accepted DPE's FAR in relation to the IESC advice (see paragraph 378 in the SOR) and acknowledged the detailed responses and additional commitments as set out in paragraph 366 in the SOR.

The IPC acknowledged the public's comments in paragraph 380 in relation to potential impacts of the proposed action on water resources. The IPC found, having considered the material, that the IPC Review Report recommendations and the public's comments had been adequately addressed and appropriately conditioned, for the reasons set out in paragraphs 360-379 of the SOR.

Paragraph 383 of the SOR states: "The Commission accepted the Applicant's assessment of cumulative impact on surface water and groundwater resources. The Commission also finds that the assessments have been undertaken in accordance with the Secretary's Environmental Assessment Requirements (SEARs) and the relevant legislative framework, including the NSW Water Management Act and the NSW Protection of the Environment Operations Act. The Commission finds that the Applicant's Review Response appropriately considered the various aspects of water resources in accordance with the Commonwealth's *Significant Impact Guidelines 1.3: Coal seam gas and large coal mining developments – impacts on water resources* as set out in paragraph 363".

Paragraph 384 of the SOR states: "The Commission accepts the Department's assessment in relation to the proposed Water Management System and that it has been designed to minimise impacts on

	<p>downstream water users. The Commission finds that draft condition B52 'Water Management Plan' provides the appropriate management framework for ensuring potential impacts on water resources are managed and minimised, including potential impacts on downstream water users (see paragraphs 370 and 371 of the SOR). The Commission supports draft condition B52 based on the Water Management Plan being prescriptive and including the following sub-components:</p> <ul style="list-style-type: none"><li>• Site water balance, including annual inflows and outflows, sources and security of water supply, water use and management and storage capacity, licensed discharge points and limits, and reporting procedures.</li><li>• Salt balance, including sources of saline material and on-site management, measures to minimise discharge of saline water and reporting procedures.</li><li>• Erosion and sediment control plan, including measures to minimise soil erosion and the potential for the transport of sediment to downstream waters as well as permanent measures and flood management structures, and maintenance regime.</li><li>• Surface water management plan, including detail baseline data on flows and quality of watercourses, description of the water management system, detail plans and design objectives for water management infrastructure, performance criteria including trigger levels for identifying potential adverse surface water impacts, a program for regular monitoring, reporting procedures, and a plan to respond to any exceedances of performance measures or criteria and to repair, mitigate or offset any identified adverse impacts.</li><li>• Groundwater management plan, including detail baseline data, yield and quality for groundwater resources, supply for other water users and GDEs, description of the water management system, performance criteria including trigger levels for identifying potential adverse groundwater impacts, a program to monitor and evaluate, reporting procedures, a plan to respond to any exceedances of performance measures or criteria and to repair, mitigate or offset any identified adverse impacts, and a program to periodically validate the groundwater model.”</li></ul>	
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State conditions relevant to protecting Water Resources

State conditions B39 and B40 require the proponent to ensure that sufficient water is available for all stages of the development (and if necessary, adjust the scale of the development to match its available water supply) and to report on water extracted from the site each year (direct and indirect) in an Annual Review (State condition E11).

State condition B46 requires the proponent to ensure that all surface discharges from the site comply with any discharge limits (both volume and quality) set for the development in any Environment Protection Licence or provisions of the NSW *Protection of the Environment Operations Act 1997* or NSW *Protection of the Environment Operations (Hunter River Salinity Trading Scheme) Regulation 2002*.

State Condition B49 requires the proponent to comply with the Water Management Performance Measures in Table 4 of the State approval.

State Condition B51 requires the proponent to, within 12 months of the commencement of development, undertake a Groundwater Dependent Ecosystem Study.

State Condition B52 requires the proponent to prepare a Water Management Plan.

State Condition B53 states that the proponent must not commence Phase 1A of the development until the Water Management Plan is approved by the Planning Secretary.

State Condition B54 requires the proponent to implement the Water Management Plan as approved by the Planning Secretary.

NSW's Conclusion

The State assessment considered that the proposed action's impacts to water resources will not be unacceptable, provided it is undertaken in accordance with the recommended approval conditions.

**NSW Overall Conclusions and statement to the Commonwealth Minister in relation to the determination of the United Wambo Coal Project (SSD 7142, EPBC 2015/7600) under the *Environmental Planning and Assessment Act 1979 (NSW) (EP&A Act)* (see letter at Attachment A1)**

[The **Department** in the text below refers to the ***NSW Department of Planning, Industry and Environment***]

The Independent Planning Commission (Commission), as the consent authority granted approval to this application under Part 4 of the EP&A Act, subject to the conditions outlined in the development consent.

A copy of the Assessment Reports prepared by the NSW Department of Planning, Industry and Environment (the Department) and a copy of the Commission's Determination Report have been provided in accordance with the EPBC Act.

The Department considers that the proposed action has sought to avoid impacts to EPBC listed species and communities to the greatest extent practical and has proposed mitigation and offset measures that would mean the proposed action is unlikely to have significant residual impacts on Matters of National Environmental Significance.

The Department believes that the proposal [proposed action] is not inconsistent with approved Recovery Plans or Conservation Advices for the species and communities that have been identified as having the potential to be impacted. In particular, the Department is satisfied that the Applicant [proponent] has, in response to submissions, reduced the significance of impacts to the Swift Parrot, Regent Honeyeater and Spotted-tail Quoll and that appropriate mitigation measures and/or offsets have been proposed for the project's [proposed action's] limited levels of impact. These offsets have been calculated in accordance with the NSW Framework for Biodiversity Assessment and that the Department's Biodiversity Conservation Division (formerly OEH) has confirmed its satisfaction with the credit calculations.

In summary, the Department considers in relation to biodiversity impacts that:

- the Applicant has avoided impacts on native vegetation where possible;
- the project would be unlikely to significantly increase impacts on groundwater dependent ecosystems (GDEs) in the surrounding area;
- the Applicant's offset strategy is sufficient to ensure there would not be a significant residual impact on the Swift Parrot, Regent Honeyeater, Spotted-tail Quoll or Koala and it is highly unlikely the project would place any of these species at risk of local extinction;
- the Applicant's offset strategy is sufficient to ensure there would not be significant residual impacts to the *Central Hunter Valley Eucalypt Forest and Woodland (CHVEFW) CEEC*;
- the project would be unlikely to cause significant residual impacts to threatened fauna or result in significant medium to long term impacts on the lifecycles or populations of threatened fauna species.

The Department considers that conditions B55 to B69 of Part B of the development consent, which require the provision of substantial biodiversity offsets, are necessary and appropriate for the protection of the impacted species and communities. Condition B71 of Part B of the development consent requires preparation of a Biodiversity Management Plan to manage impacts on native flora and fauna, including through the biodiversity offset strategy, appropriate preclearance surveys and management of vegetation and habitat on site.

These conditions provide an effective, reasonable and achievable method to manage and mitigate the likely impacts to the identified matters of national environmental significance and,

where impacts are unavoidable, provide a mechanism to secure biodiversity offsets to compensate for these impacts.

The project would result in minor residual effects on listed threatened species and CEECs, however the Department is satisfied with the Applicant's proposed offset and management measures. The Department concludes that impacts on Commonwealth-listed threatened species and CEECs are acceptable.

In relation to water resource impacts, the Department considered that the:

- surface water and groundwater models are appropriate and fit for purpose;
- project would result in some impacts related to depressurisation, drawdown, stream leakage, stream flows, GDEs and other vegetation, fauna (including aquatic biota) and flooding, but that these impacts would not be significantly greater than those associated with existing operations in the area; and
- project would not cause significant additional impacts to significant water resources (i.e. Wollombi Brook, Hunter River and their associated alluvia).

The Department considers that conditions B41 to B45, B49, B51 and B52 of Part B of the development consent are necessary to protect and manage impacts to water resources. These conditions require:

- provision of compensatory water supplies for any affected groundwater user
- compliance with suitable water performance measures to manage impacts on water resources, and
- preparation and implementation of a Water Management Plan and GDE Study, to monitor, track and manage potential impacts to GDEs over time, monitor groundwater levels and surface and groundwater quality.

Overall, the Department considers that the likely impacts of the proposed action on listed threatened species and communities and water resources would not be unacceptable, provided the action is undertaken in a manner which is consistent with the avoidance, mitigation and offset measures proposed by the Applicant and in accordance with conditions of consent.

On this basis the Department recommends that the Commonwealth Minister for the Environment should approve the action. The Department recommends that the relevant conditions outlined above should be attached to the Commonwealth approval.

## RECOMMENDATION

- 1) For the reasons set out in this report, the Department recommends that you approve the Project (now referred to as the *proposed action*) under sections 130 and 133 of the EPBC Act, subject to the proposed conditions specified in the approval notice (Attachment B).
- 2) The Department notes the State's conclusions in relation to the acceptability of impacts from the proposed action on listed threatened species and ecological communities and water resources. The Department considers there are some additional considerations and conditions required in relation to the protection of matters of national environmental significance, beyond those outlined in the State's Assessment Reports, to ensure the impacts are acceptable for EPBC Act approval purposes.

## BACKGROUND

- 3) On 30 October 2015, Umwelt (Australia) on behalf of United Collieries Pty Limited (the designated proponent) referred a joint venture between United Collieries Pty Ltd and Wambo Coal Pty Ltd to extract a total of 176 million tonnes of run-of-mine coal at a rate of up to 10 million tonnes per annum over 21 years from a single open cut mine that combines existing operations at Wambo with a new mine on leases owned by United Collieries, located 16 kilometres west of Singleton, NSW (the proposed action) under the EPBC Act.
- 4) The proposed action was published on the Department's website on 2 November 2015 and public comments were invited until 16 November 2015. No public submissions were received.
- 5) By letter dated 2 November 2015, the following ministers were invited to comment on the referral:
  - The Hon Barnaby Joyce MP, the then Minister for Agriculture and Water Resources.
  - The Hon Christopher Pyne MP, the then Minister for Industry, Innovation and Science.
  - Senator the Hon Nigel Scullion, the then Minister for Indigenous Affairs.
- 6) The delegate for the Minister for Agriculture and Water Resources responded on 18 November 2015 stating that the proposed action should be a controlled action and should be carefully assessed for its potential impact on water resources (both surface and groundwater).
- 7) The response also stated that:
  - The EIS should clearly detail water management plans for carrying out water assessments including the establishment of robust baseline data on surface and groundwater monitoring.
  - Land access and compensation agreements must adequately take into account short and long term impacts.
  - The approval conditions should require regular compliance monitoring and adequate rehabilitation following mine closure.
- 8) The delegate for the Minister for Industry, Innovation and Science responded on 17 November 2015 and noted that the Industry Department had consulted with Geoscience Australia who stated that "due to the nature and scale of the project the project should be classified as a controlled action under the water trigger as the project is likely to cause changes to the groundwater system".
- 9) The Minister for Indigenous Affairs did not respond to the invitation to comment.
- 10) On 2 November 2015, s22 [REDACTED] delegate for The Hon Rob Stokes MP, NSW Minister for Planning was invited to comment on the referral.
- 11) On 10 November 2015, the then NSW Department of Planning and Environment (DPE) advised that the proposed action could be assessed in the manner specified in Schedule 1 to the Bilateral Agreement (February 2015) between the Commonwealth and NSW Governments in relation to environmental assessment.
- 12) On 7 December 2015, the delegate determined that the proposed action was a controlled action under the EPBC Act as it was likely to have a significant impact on listed threatened species and a water resource, and that the controlling provisions for the action were sections 18 and 18A and sections 24D and 24E.

## Completion of the NSW Assessment Process

- 13) By letter dated 6 September 2019, the NSW Department of Planning, Industry and Environment (DPIE) notified the Department ([Attachment A1](#)) that the United and Wambo Open Cut Coal Mine Project application, which was assessed under the Bilateral Agreement, was approved by the NSW Independent Planning Commission (IPC), subject to conditions outlined in the development consent.
- 14) The Environmental Impact Statement (EIS) ([Attachment D](#)) for the proposed action was placed on public exhibition for a period of 44 days. According to the IPC Statement of Reasons (SOR), a total of 103 public submissions were received during the public exhibition period, including submissions from the general public, special interest groups and government agencies. Of these, 72 objected to the proposed action, three supported the proposed action and 16 provided comments. Twelve submissions were received from public authorities including from Singleton Shire Council.
- 15) The proponent submitted the Response to Submissions (RTS) to DPE, dated March and May 2017 ([Attachments M1 & M2](#)), and a response to an additional information request from DPE in September 2017 ([Attachment N1](#)) and a further response ([Attachments N2 & N3](#)).
- 16) In December 2017, DPE completed the Preliminary Assessment Report (PAR) (DPE's preliminary assessment of the environmental, social and economic aspects of the proposed action). At that stage, it was satisfied that it had sufficient information to determine the likely impacts of the proposed action and to make a preliminary judgement of its relative merits.
- 17) The NSW Minister for Planning then asked the IPC to review the development application and the associated Wambo modifications.
- 18) The NSW Minister also requested that the IPC hold a public hearing during the review. A public hearing was held in Singleton on 8 February 2018, with 10 individuals and special interest groups speaking. The Commission also received 24 written submissions following the public hearing.
- 19) The IPC review considered issues raised by the public and key NSW Government agencies at the public hearing and during the review process. The IPC completed its review on 26 March 2018 and its findings were published in the IPC Review Report ([Attachment L](#)).
- 20) The IPC agreed that the proposed action had merit, however, it also identified a range of aspects that remained unresolved and required further assessment or clarification before it could make a final determination. In its Review Report, the IPC made 47 recommendations regarding aspects that warranted additional clarification, further assessment, clearer justification or stronger conditioning to ensure that potential impacts are avoided, minimised and/or mitigated.
- 21) On 23 July 2018, the proponent submitted a response to the IPC recommendations ([Attachment O](#)).
- 22) Following assessment of the proponent's response, and further consultation with relevant agencies, DPE requested further information from the proponent to assist with developing the Final Assessment Report (FAR) and the draft conditions of consent. These additional information responses were provided to DPE on 11 October 2018.
- 23) On 12 November 2018, DPE completed its assessment of the proposed action and provided the FAR ([Attachment A4](#)) and recommended approval conditions to the IPC.

- 24) On 7 February 2019, the IPC held a public meeting at Singleton Civic Centre. The IPC received 35 requests to speak and all the requesters spoke at the public meeting. The IPC also indicated that public submissions would be received and 509 written public comments were received subsequent to the public meeting.
- 25) On 22 March 2019, the IPC wrote to DPE requesting further information in relation to the IPC Review Report Recommendation 30, with respect to a report on mine rehabilitation, commissioned by the NSW Minerals Council (NSWMC) and DPE's recommended draft conditions of consent (a copy of the letter has been available on the IPC's website since 26 March 2019). On 17 April 2019, the DPE provided a response to the IPC's 22 March 2019 letter ([Attachment N4](#)). On 15 May 2019, DPE provided further advice to the IPC ([Attachment N5](#)).
- 26) On 29 August 2019, the IPC approved the proposed action ([Attachment A5](#)).
- 27) On 6 September 2019, DPIE informed the Commonwealth (by letter) that the IPC had approved the proposed action under the EP&A Act. Links were provided to the IPC development consent, DPIE assessment reports and IPC SOR.
- 28) The assessment reports are available on the NSW DPIE Major Projects website: <https://www.planningportal.nsw.gov.au/major-projects/project/25271>
- 29) Paragraph 74 in the IPC SOR (pages 17-19) lists all the material considered by the IPC in making its determination to approve the proposed action.
- 30) Paragraph 75 in the IPC SOR states that copies of all information received, including written comments made to the IPC are available on the IPC website and full transcripts of all meetings held (including the public meeting) are available at the IPC's website at: <https://www.ipcn.nsw.gov.au/projects/2017/12/united-wambo-open-cut-coal-mine-project-mod-3-and-mod-16>

### **RECOMMENDATIONS REGARDING A WATER RESOURCE, IN RELATION TO A LARGE COAL MINING DEVELOPMENT (S24D AND S24E)**

- 31) In addition to the conclusions outlined in the State's Assessment Reports and summarised in [Table 1](#) of this Legal Considerations Report, the information below is relevant to the Department's analysis of the acceptability of impacts to water resources.

#### *IESC Advice*

- 32) On 30 August 2016, the Minister's delegate sought advice from the Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development (IESC). On 14 October 2016, the IESC provided advice ([Attachment J](#)) indicating that:
- Adequate mapping and delineation of the condition and extent of surface water and groundwater resources has not been provided.
  - The numerical modelling and analysis presented in the assessment documentation did not provide reasonable estimates of the likely impacts of the proposed action on water resources.
  - For both surface water and groundwater, site specific temporal and spatial variability of water quality was not shown for all analytes.



- Groundwater depths in the regolith should be shown and compared to the occurrence of potential groundwater dependent terrestrial vegetation.
- There was uncertainty in the water balance and flood modelling results due to the lack of information provided on the modelling methodology.
- The Wambo void lake base may be above the recovered groundwater levels meaning it could become a source of groundwater recharge. Given this lake is predicted to become hyper-saline, there is potential for contamination of the Permian groundwater system which could spread to the alluvial aquifers and from there to the surface waters.
- The approved Homestead and Main Tailings Storage Facilities (TSF) (located in existing mined-out voids), and the proposed South Bates TSF (located in underground workings) have the potential to become sources of groundwater recharge.
- The proposed action proposes to use the United Collieries underground workings as a potential mine water storage. This water store should be included in the numerical groundwater model to predict its potential effects on groundwater behaviour and allow an assessment of its potential impacts.
- Discussion of the groundwater behaviour of faults is needed and their inclusion in the numerical groundwater model should be considered.
- In relation to potential impacts on GDEs, further sampling of representative bores within the zone of drawdown should be considered.
- The geochemical analysis report should be provided to ascertain if the risks posed by leaching from the tailings storage facilities and waste rock dumps have been adequately addressed.
- Recommendations were made in relation to how surface water modelling could be improved and the identification of GDEs.
- Given that the Water Management Plan was not finalised, the IESC could not ascertain if the proposed water management strategies were reasonable.
- Further consideration was required regarding potential discharge sources and pathways.
- Uncertainty exists as to whether the proposed measures to prevent discharges to surface water features will be sufficient.
- A water quality assessment of the plan to reuse water from tailings should be undertaken to enable adequate management of potential risks.
- Exceedances of the Australian and New Zealand Environment and Conservation Council (ANZECC) guideline values for metals including cadmium, chromium, copper, lead, nickel and zinc have been reported in the surface water management system (EIS, Appendix 11, p. 25). As this water has been regularly discharged to Wollombi Brook it is important that its quality is understood and managed to prevent potential downstream impacts.

33) Attachment K demonstrates how the IESC's advice has been addressed by the proponent, the State assessment, the State conditions and the Department's conclusions.

## IPC Review, Water Resource Recommendations and Responses

- 34) The IPC Review ([Attachment L](#)) made seven recommendations regarding water resources. These recommendations relate to final landform surface water catchments, available discharge licences, cumulative impacts, groundwater monitoring bores, monitoring of stygofauna and whether advice provided by the IESC has been satisfactorily addressed. These recommendations were considered in section 2.5 of the FAR.
- 35) IPC Recommendation 37 - the proponent and DPIE must confirm the revised total catchment area of any final voids based on the revised final landforms presented in the proponent's RTS and provide details of impacts predicted to be associated with any net catchment loss.
- The proponent stated that the proposed final landform results in an increase of 53 ha of catchment flowing to final voids when compared to the currently approved final landform. This represents an overall 9 per cent increase in the area, all of which is from the main Wollombi Brook catchment.
  - The proponent considered that the impact on flows as a result of the change in the total Wollombi Brook catchment area will be negligible, primarily due to the large catchment area and highly regulated nature of the Hunter River.
  - In the FAR, DPIE acknowledged the proposed action will reduce the Wollombi Brook catchment area relative to currently approved final landforms but accepted that the proposed action is unlikely to cause unacceptable impacts to the system over the long-term.
- 36) IPC Recommendation 38 - the proponent and DPIE must confirm the extent of Hunter River Salinity Trading Scheme (HRSTS) credits held by the proposed action.
- The FAR states that the proponent will have to secure approximately 63 HRSTS credits to meet the proposed action's water needs. The FAR was satisfied that the required HRSTS credits are available in the market, and could be readily obtained, if needed.
- 37) IPC Recommendation 39 - the proponent and DPIE should provide additional information and assessment regarding the extent of any cumulative impact from both the proposed action and other mining operations on the downstream environment.
- The FAR states that cumulative impacts on flow regimes, water quality, groundwater drawdowns and bores, base-flows and downstream water users are not predicted to be significant and can be managed through the proposed water management system and licence requirements under relevant NSW Government Water Sharing Plans.
- 38) IPC Recommendation 40 - the proponent should confirm why only 27 of 77 bores and 11 of 24 vibrating wire piezometers are currently monitored under Groundwater Monitoring Programs. IPC Recommendation 41 - the proponent and DPIE should confirm the extent to which privately-owned bores and mine owned bores, located within the alluvial aquifers, will be impacted by the proposed action. IPC Recommendation 42 - the proponent should provide details of the proposed additional monitoring bores, including periodic sampling of stygofauna, to account for recommendations made in its EIS.
- According to the FAR, the proposed action is not predicted to impact any privately-owned bores located within alluvial aquifers. Groundwater levels within three mine-

owned bores within the alluvial aquifers are predicted to decrease by a maximum of 1.6 m during mining and 0.74 m post mining.

- The FAR also states that the proponent has committed to continue groundwater monitoring at the site and will install additional monitoring bores to provide a long-term groundwater monitoring network in all key groundwater bearing units. The proponent will also undertake periodic sampling of stygofauna.

### Stygofauna

- 39) In response to recommendations made by both DPE and the IPC, the proponent committed to a program of periodic sampling of stygofauna.
- 40) In the FAR, DPE noted that the Groundwater Impact Assessment completed as part of the EIS, and the additional Stygofauna Assessment included in the RTS, consider that the loss of stygofauna habitat as a result of groundwater drawdown associated with the proposed action will represent a low risk of threat to broader stygofauna populations and that these areas will be able to be recolonised in the long-term.
- 41) To ensure this is the case, the proponent will monitor stygofauna in the alluvial aquifers within or near the predicted drawdown areas prior to the commencement of mining and then every three years thereafter.
- 42) State condition B52e(v) requires the proponent to prepare a Groundwater Management Plan, which is consistent with *Groundwater Monitoring and Modelling Plans – Introduction for prospective mining and petroleum activities* (DPI Water, 2014) and the *National Water Quality Management Strategy* (DoEE, 2015) and includes groundwater performance criteria, including trigger levels for identifying and investigating any potentially adverse groundwater impacts associated with the development, on aquatic habitat and stygofauna.
- 43) DPE considered the IESC’s advice in detail as part of its PAR (Section 6.6.3). DPE indicated that “the response provided clarification on the IESC issues and a sound basis for a comprehensive assessment of the proposed action. DPE noted that the additional information provided did not change the overall water resource assessment outcomes as presented in the EIS” (p 87 of the PAR).
- 44) The PAR also provided detailed consideration of IESC’s issues and the proponent’s response in relation to:
- tailings and water storages,
  - additional geochemical assessment, and
  - groundwater, GDE monitoring and management strategies.
- 45) In the FAR, DPE stated that it was satisfied with the information provided by the proponent in relation to water resources. The FAR also stated that the proposed action is unlikely to have significant impacts on groundwater and surface water near the proposed mine and any impacts will be appropriately licensed, monitored and managed.
- 46) The FAR noted that advice from the IESC on the proposed action was provided on 14 October 2016. In response to IESC’s advice, the proponent provided detailed technical clarifications and undertook additional water-related work which was presented in its RTS. Additional information was also provided regarding the representation of water quality data, site-specific trigger values and modelling.

## Conclusions and recommended conditions of approval

- 47) Based on the 2016 IESC advice, the State assessment and State conditions, the Department does not consider that additional conditions are required in relation to the protection of water resources, beyond those outlined in the State conditions of approval.
- 48) To ensure the impacts of the proposed action are acceptable for EPBC Act approval purposes, the Department recommends that you attach conditions to your approval which require the approval holder to comply with relevant state water resource conditions (Attachment B). Below is a summary of those state conditions.

### Relevant State conditions

- 49) The Department recommends you impose a condition requiring the proponent to comply with State conditions B39 and B40 requiring the proponent to ensure that sufficient water is available for all stages of the development (and if necessary, adjust the scale of the development to match its available water supply) and to report on water extracted from the site each year (direct and indirect) in the Annual Review.
- 50) The Department recommends you impose a condition requiring the proponent to comply with State condition B46 requiring the proponent to ensure that all surface discharges from the site comply with:
- any discharge limits (both volume and quality) set for the development in any Environment Protection Licence; or
  - relevant provisions of the *Protection of the Environment Operations Act 1997* (NSW) or *Protection of the Environment Operations (Hunter River Salinity Trading Scheme) Regulation 2002*.
- 51) The Department recommends you impose a condition requiring the proponent to comply with State Condition B49 requiring the proponent to comply with the Water Management Performance Measures in Table 4 of the State approval.
- 52) The Department recommends you impose a condition requiring the proponent to comply with State Condition B51 that requires the proponent to undertake a Groundwater Dependent Ecosystem Study.
- 53) The Department recommends you impose a condition requiring the proponent to comply with State Condition B52 that requires the proponent to prepare a Water Management Plan for the development to the satisfaction of the NSW Planning Secretary.
- 54) The Department recommends you impose a condition requiring the proponent to comply with State Condition B53 stating that the proponent must not commence Phase 1A (as defined in the State approval) of the development until the Water Management Plan is approved by the NSW Planning Secretary.
- 55) The Department recommends you impose a condition requiring the proponent to comply with State Condition B54 requiring the proponent to implement the Water Management Plan as approved by the NSW Planning Secretary.
- 56) Further analysis regarding the recommended conditions of approval is provided below and is also discussed in Attachment G.

*Conclusion*

- 57) Following consideration of the information discussed above, the Department is satisfied that the proposed action will not have an unacceptable impact on water resources, provided it is taken in accordance with the proposed conditions listed above.
- 58) On this basis, the Department recommends approving the proposed action for the purposes of sections 24D and 24E of the EPBC Act.

**RECOMMENDATIONS REGARDING LISTED THREATENED SPECIES AND COMMUNITIES (S18 & 18A)**

- 59) The Department notes that the following EPBC Act listed species and communities were identified at the referral stage and during the State assessment as being impacted by the proposed action:
- Regent Honeyeater (*Anthochaera phrygia*) – Listed as critically endangered at the time of the referral decision.
  - Swift Parrot (*Lathamus discolor*) – Listed as endangered at the time of the referral decision.
  - Spotted-tail quoll (*Dasyurus maculatus maculatus* (SE mainland population) - Listed as endangered at the time of the referral decision.
  - *Central Hunter Valley Eucalypt Forest and Woodland* (CHVEFW) ecological community - Listed as critically endangered at the time of the referral decision.
- 60) Impact, avoidance and mitigation measures for these listed species and communities are discussed in Table 1 above and the EIS (2016) (Attachment D). The Department’s analysis in relation to threatened species is discussed in more detail below.
- 61) Table 2 below (Table 8 in the FAR) is a summary of impact and offset areas for these listed species and communities, as determined through the State assessment.

Table 2

MNES	Impact Area (ha)	Offset Area (ha)	Offset Ratio
<i>Central Hunter Valley Eucalypt Forest and Woodland</i> CEEC	246.8 (known habitat)	1135.6* (*includes areas of mine rehabilitation)	4.6:1
Regent Honeyeater ( <i>Anthochaera phrygia</i> )	203.7 (potential habitat)	1407.3	6.9:1
Swift Parrot ( <i>Lathamus discolor</i> )	29.7 (potential habitat)	473.9	16:1
Spotted-tail Quoll ( <i>Dasyurus maculatus maculatus</i> )	352.9 (potential habitat)	1507.3	4.3:1

- 62) The Department notes the impact and offset areas which were calculated in the FAR and presented in Table 2 for the Swift Parrot. For the purposes of the EPBC Act, the Department

considers the clearance area of habitat for the Swift Parrot (*Lathamus discolor*) is the same as the clearance area of habitat for the Regent Honeyeater (*Anthochaera phrygia*) (203.7 ha) because three of the four main eucalypt species in the Regent Honeyeater's habitat on the site (Narrow-Leaved Ironbark (*Eucalyptus crebra*), Spotted Gum (*Corymbia maculata* (syn. *Eucalyptus maculata*)) and Grey Box (*Eucalyptus moluccana*) provide important foraging habitat for the Swift Parrot. This is discussed further at paragraph 74).

- 63) The offset requirements for the Swift Parrot and Regent Honeyeater are therefore the same in terms of the eucalypt species, vegetation types, the ecological condition of the proposed offsets and the total offset area. For the purposes of the EPBC Act decision, the Department considers impact and offset areas for the Swift Parrot are as follows:

MNES	Impact Area (ha)	Offset Area (ha)	Offset Ratio
Swift Parrot ( <i>Lathamus discolor</i> )	203.7 (potential habitat)	1407.3	6.9:1

### **Regent Honeyeater (*Anthochaera phrygia*) – critically endangered**

- 64) The Regent Honeyeater (RH) mostly occurs in dry box-ironbark eucalypt woodland and dry sclerophyll forest vegetation communities, typically along creek flats, or in broad river valleys and foothills. It is highly mobile and capable of travelling large distances to forage. RH is a generalist forager, which mainly feeds on the nectar from a wide range of eucalypts and mistletoes.
- 65) The RH is endemic to south-east Australia and is widespread but with an extremely patchy distribution. The Department's Species Profile and Threats (SPRAT) database notes that the known population is uncertain, with recent estimates limited to up to 400 mature birds. The Capertee Valley, 90 kilometres to the south-west of the site, is one of the main areas known to be occupied by RH for breeding, foraging and shelter. Key threats to RH include clearance and fragmentation of good quality feeding trees, infection of feeding and breeding trees by disease such as dieback and over-gazing on native vegetation by livestock and rabbits.
- 66) The RH was recorded four times between 1987 and 2002 on the Atlas of NSW Wildlife within 10 km of the site. One of these records being on the adjacent Warkworth mine site. At least 72 Regent Honeyeaters, representing approximately 5 per cent of the then estimated total species population, were recorded near Cessnock (30 km from the action site) in August 2003.

#### Impacts

- 67) The proposed action will result in the clearing of 203.7 ha of RH habitat that contains eucalypt species that provide key winter foraging habitat for this species.

#### Avoidance, mitigation, offset

- 68) The EIS and RTS (Appendix 4 of Part B [Attachment M2](#)) describe a number of measures and refinements that have been made to the conceptual mine plans to reduce disturbance to EPBC listed threatened species, ecological communities and fauna habitat, to avoid direct impacts on fauna species.
- 69) For impacts within or close to the proposed action's disturbance boundary, where avoidance is not possible, the proponent will implement a range of targeted mitigation measures, including undertaking pre-clearance surveys, landform establishment, habitat augmentation and

enhancement and management of bushfires and domestic stock. Where the proposed action is considered likely to have indirect impacts on EPBC matters (i.e. from weeds and feral animals), the proponent will undertake a number of mitigation or management actions that will reduce the extent of these impacts.

- 70) To account for any residual impacts that cannot be addressed through the proposed avoidance and mitigation measures, offsets for the RH were developed during the State assessment. The proponent has identified 1407.3 ha of RH habitat that will be secured in offset areas. The FAR and Part B of the RTS include an assessment of the compliance of biodiversity offsets in accordance with the NSW FBA and the Biodiversity Offsets Scheme. Appendix 4 of Part B of the RTS ([Attachment M2](#)) also includes an analysis of the offset strategy for the RH against the offset requirements which are described in section 7 of the *EPBC Act Environmental Offsets Policy* (2012).

### **Swift Parrot (*Lathamus discolor*) – endangered**

- 71) The Swift Parrot is endemic to south-eastern Australia. It breeds in Tasmania, and migrates to mainland Australia in autumn. The area of occupancy appears to have declined significantly since European settlement. For example, 70 per cent of the box-ironbark habitat (the principal wintering habitat of the Swift Parrot on the mainland) has been cleared in NSW. The Swift Parrot feeds on eucalypt nectar, psyllid insects and lerps, seeds and fruit.
- 72) In some areas, such as the Hunter Valley, Swift Parrot numbers are significantly greater in areas outside public reserves. This increases the importance of remnant vegetation in areas such as the United Wambo lease areas.
- 73) The Swift Parrot was recorded three times between 2000 and 2002 within 10 km of the site. The species was recorded on the adjacent Warkworth mine site in 2002 but has not been recorded there since.

### Impacts

- 74) The Department notes the State assessment's findings regarding the Swift Parrot (as summarised in Tables 1 and 2 above), that the impact area would comprise 29.7 ha of potential habitat. The Department, however, considers the proposed action will result in the clearing of 203.7 ha of Swift Parrot habitat that contains eucalypt species that provide key winter foraging habitat for this species.
- 75) On 6 November 2018, after reviewing the draft assessment report for this proposed action the Department wrote to DPIE stating that: "*At the time of the EPBC Act controlled action decision, DoEE considered that the impact area for the Swift Parrot should be the same as the Regent Honeyeater because the flowering seasons of three of the four main eucalypt species on the site include the winter months when Swift Parrots may be present in the district. Eucalyptus crebra (narrow-leaved ironbark) flowers between May and January, Corymbia maculata (syn. Eucalyptus maculata) (spotted gum) flowers between May and September and Eucalyptus moluccana (grey box) flowers between February and August. These species provide important foraging habitat for the Swift Parrot. The Applicant [proponent] has taken a narrower interpretation of Swift Parrot habitat. The Department recognises this discrepancy but notes that it would not result in changes to the biodiversity offset strategy because the Applicant is required to provide the same number of offset hectares for the Regent Honeyeater.*"
- 76) The Department's position on Swift Parrot EPBC Act habitat and offset requirements is highlighted as a footnote at the end of [Table E1](#) in the FAR ([Attachment A4](#)). It is important to

note, however, that the proponent will not have to source additional offsets to meet EPBC Act offset requirements for the Swift Parrot because the Regent Honeyeater and Swift Parrot offset requirements are the same in terms of the eucalypt species, vegetation types, the ecological condition of the proposed offsets and the total offset area.

- 77) OEH advised that potential impacts on Swift Parrots and Regent Honeyeaters from clearing of habitat could be adequately addressed through retiring the proposed ecosystem credits.

#### Avoidance, mitigation, offset

- 78) The EIS and RTS (Appendix 4 of Part B Attachment M2) describe a number of measures and refinements that have been made to the conceptual mine plans to reduce disturbance to EPBC listed threatened species, ecological communities and fauna habitat, to avoid direct impacts on fauna species.
- 79) For impacts within or close to the proposed action's disturbance boundary, where avoidance is not possible, the proponent will implement a range of targeted mitigation measures, including undertaking pre-clearance surveys, landform establishment, habitat augmentation and enhancement and management of bushfires and domestic stock. Where the proposed action is considered likely to have indirect impacts on EPBC matters (i.e. from weeds and feral animals), the proponent will undertake a number of mitigation or management actions that will reduce the extent of these impacts.
- 80) To account for any residual impacts that cannot be addressed through the proposed avoidance and mitigation measures, offsets for the Swift Parrot were developed during the State assessment. This has identified 1407.3 ha of Swift Parrot habitat that will be secured in offset areas. The FAR and Part B of the RTS include assessments of the compliance of biodiversity offsets in accordance with the NSW FBA and Biodiversity Offsets Scheme. Appendix 4 of Part B of the RTS (Attachment M2) also includes an analysis of the offset strategy for the Swift Parrot against the offset requirements which are described in section 7 of the *EPBC Act Environmental Offsets Policy* (2012). As discussed above, the Department considers the impact and offset area for the Swift Parrot should be the same as the Regent Honeyeater because the flowering seasons of three of the four main eucalypt species on the site include the winter months when Swift Parrots may be present in the district (also discussed at paragraphs 62) and 63).

#### **Spotted-tail quoll (*Dasyurus maculatus maculatus* (SE mainland population) – endangered**

- 81) The Spotted-tail quoll is a primarily forest-dependent species that occupies a wide range of habitat types, although all habitats appear to be characterised by relatively high (> 600 mm/year) and predictable seasonal rainfall. The species has been recorded in rainforest, wet and dry sclerophyll forest, coastal heathland, scrub and dunes, woodland, heathy woodland, swamp forest, mangroves, on beaches and sometimes in grassland or pastoral areas adjacent to forested areas.
- 82) The Spotted-tail quoll was recorded on site in 2013, though it was not detected by camera traps in 2014. The species has also been identified on the valley floor in the Warkworth area south of the proposed site. The OEH Atlas of NSW wildlife contains four Spotted-tail quoll records within 10km of the site.

#### Impacts

- 83) The proposed action will result in impacts to 352.9 ha of woodland and grassland habitat for the Spotted-tail quoll.



### Avoidance, mitigation, offset

- 84) The Department notes that a large proportion of the woodland to be cleared that provides habitat for this species has recovered from seedbanks over the past 30-55 years, meaning that the establishment of alternative habitat resources and structures to replace this 'young' regeneration could be achieved relatively quickly and effectively. The RTS describes additional measures to mitigate the extent of impacts on threatened flora and fauna (including Quolls), such as artificial habitat features, early and progressive rehabilitation of exposed lands and retiring biodiversity offsets at key stages as mining progresses.
- 85) The PAR also noted that younger regenerated woodlands contain fewer habitat features than equivalent remnant woodlands. Establishing suitable complex habitat and foraging resources on rehabilitated land requires substantial time to allow for the development of tree hollows and flowering of rehabilitated Eucalyptus species. Therefore, while the adjacent national park and biodiversity offset areas provide alternative habitat and foraging resources in the short term, timely rehabilitation and the installation of supplementary habitat features will minimise the effects of delays in restoring removed habitat features.
- 86) The EIS and RTS (Appendix 4 of Part B Attachment M2) describe a number of measures and refinements that have been made to the conceptual mine plans to reduce disturbance and avoid impacts to EPBC Act protected matters.
- 87) For impacts within or close to the proposed action's disturbance boundary, where avoidance is not possible, the proponent will implement a range of targeted mitigation measures, including undertaking pre-clearance surveys, landform establishment, habitat augmentation and enhancement and management of bushfires and domestic stock. Where the proposed action is considered likely to have indirect impacts on EPBC matters (i.e. from weeds and feral animals), the proponent will undertake a number of mitigation or management actions that will reduce the extent of these impacts.
- 88) To account for any residual impacts that cannot be addressed through the proposed avoidance and mitigation measures, offsets for the Spotted-tail quoll were developed during the State assessment. The proponent has identified 1507.3 ha of Spotted-tail quoll habitat that will be secured in offset areas. The FAR and Part B of the RTS include an assessment of the compliance of biodiversity offsets in accordance with the NSW FBA and Biodiversity Offsets Scheme. Appendix 4 of Part B of the RTS (Attachment M2) also includes an analysis of the offset strategy for the Spotted-tail quoll against the offset requirements which are described in section 7 of the *EPBC Act Environmental Offsets Policy* (2012).

### **Central Hunter Valley Eucalypt Forest and Woodland**

- 89) The Central Hunter Valley Eucalypt Forest and Woodland ecological community (CHVEFW) is listed as Critically Endangered. It comprises eucalypt woodlands and open forests; typically with a shrub layer of variable density and/or a grassy ground layer. Across its range, one or more of a complex of four eucalypt tree species typically dominate the canopy.
- 90) The ecological community is an open forest or woodland, typically dominated by eucalypt species; it has an open to sparse mid-layer of shrubs and a ground layer of grasses, forbs and small shrubs. The composition of the ecological community at a particular site is influenced by the size of the site, recent rainfall and drought conditions and by its disturbance history (including clearing, grazing and fire).

### Impacts

91) The proposed action will result in the clearing of 246.8 ha of CHVEFW.

### Avoidance, mitigation, offset

92) The EIS and RTS (Appendix 4 of Part B at Attachment M2) describe a number of measures and refinements that have been made to the conceptual mine plans to reduce disturbance to EPBC listed threatened species and ecological communities.

93) For impacts within or close to the proposed action's disturbance boundary, where avoidance is not possible, the proponent will implement a range of targeted mitigation measures, including undertaking pre-clearance surveys, landform establishment, habitat augmentation and enhancement and management of bushfires and domestic stock. Where the proposed action is considered likely to have indirect impacts on EPBC matters (i.e. from weeds and feral animals), the proponent will undertake a number of mitigation or management actions that will reduce the extent of these impacts.

94) To account for any residual impacts that cannot be addressed through the proposed avoidance and mitigation measures, offsets for the CHVEFW were developed during the State assessment. The proponent identified 1135.6 ha of the CHVEFW that will be secured in offset areas. The FAR and Part B of the RTS include an assessment of the compliance of biodiversity offsets in accordance with the NSW FBA and Biodiversity Offsets Scheme and the. Appendix 4 of Part B of the RTS (Attachment M2) also includes an analysis of the offset strategy for the CHVEFW against the offset requirements which are described in section 7 of the *EPBC Act Environmental Offsets Policy* (2012).

### Use of mine site rehabilitation to meet CHVEFW offset requirements

95) The NSW Minerals Council engaged Umwelt Australia to assess the composition and condition of existing mine rehabilitation against key diagnostic characteristics of, and condition thresholds for, the CHVEFW ecological community. The report *Assessment of Mine Site Rehabilitation against Central Hunter Valley Eucalypt Forest and Woodland CEEC Final August 2017* (Attachment Q) provided evidence that mine rehabilitation can conform to the CHVEFW as listed under the EPBC Act and concluded that, with a targeted effort, future mine rehabilitation in the Central Hunter Valley could re-establish CHVEFW.

96) Section 3.4.3 of the Report found that one of the four United mine sites sampled conformed to the CHVEFW EPBC listing. The Report stated that this is encouraging because none of the four case study mine sites set out to regenerate CHVEFW in their rehabilitation areas. The report concluded that with a targeted effort future mine rehabilitation in the Central Hunter Valley could re-establish CHVEFW.

97) The Report acknowledged that there are some risks related to using mine rehabilitation and recommended a number of mechanisms to address these risks:

- Discounting the offsetting credit that applies to ecological mine rehabilitation.
- Providing clear objectives for offsetting, monitoring and reporting requirements.
- Requiring financial assurance in the form of a conservation bond.

98) The Department notes that these risks are addressed through a range of State conditions:

- a) Mechanism one is addressed through the FBA which recognises risks and timeframes associated with the use of mine site rehabilitation to achieve offsetting objectives by applying a discount to ecosystem credits generated by rehabilitation.
- b) Mechanism two - clear objectives for offsetting, monitoring and reporting requirements is addressed in the State Conditions, including conditions B62 and B97 that state that if the ecological mine rehabilitation areas are not self-sustaining and do not comply with EPBC listing criteria for the CHVEFW, then the proponent must retire the residual credit requirements for CHVEFW in consultation with the Biodiversity & Conservation Division within the NSW Department of Planning, Industry & Environment and in accordance with the *Biodiversity Offsets Scheme of the BC Act*, to the satisfaction of the Biodiversity Conservation Trust. State Condition B97 also states that the proponent must rehabilitate the site to the satisfaction of the Resources Regulator. State condition A9 requires that the State approval will apply until the rehabilitation of the site has been undertaken to the standards required (by the State approval) to provide regulatory coverage by the NSW Government for the rehabilitation of the mine site to re-establish CHVEFW.
- i. A footnote has been included in State condition B55 to clarify that the offsetting credits for the CHVEFW CEEC can only be discharged through payment into the BCF if this fund has been endorsed by the Commonwealth Minister responsible for administering the EPBC Act. This Department has informed DPIE that currently payments into the BCF have not been endorsed by the Department and the shortfall will have to be provided by land based offsets.
  - ii. The Department notes that it can take many years to restore self-sustaining native woodland ecosystems that are resilient and functional. Vegetation generally needs to go through one lifecycle to demonstrate that it is capable of self-recruitment/natural generation.
  - iii. The Department notes that if rehabilitation is not trending towards a successful outcome as measured against rehabilitation offset performance and completion criteria that are required to be developed and included in the Rehabilitation Management Plan required under State condition B103 then the proponent will have time to change rehabilitation techniques or implement remedial actions.
  - iv. The Department understands that the proponent will be required to develop indicators in the Rehabilitation Management Plan to quantifiably measure rehabilitation success.
- c) Mechanism three - requiring financial assurance in the form of a conservation bond is addressed in the Conservation Bond requirement at conditions B63, B64, B65, B66, B67 and B68 of the State approval. The Department notes that if the proponent elects to undertake ecological mine site rehabilitation, the Conservation Bond provides the NSW Government with financial leverage, to ensure the rehabilitation is successfully implemented or to enable the securing of offsets to compensate for the areas of rehabilitation which have not been successful.
- i. State Condition B103 requires drafting and implementation of the Rehabilitation Management Plan referred to at Condition B66(a). This plan includes a protocol for progress reviews to demonstrate that vegetation communities are on track to being achieved and for triggering any necessary remedial action.

- ii. Table 6 at Condition B97 states that the objective for areas proposed for ecological mine rehabilitation (under Condition B61) is restoration of self-sustaining native woodland ecosystems that: align with reference sites in the local area and use State-recognised plant community types to meet the applicable EPBC Act or NSW Biodiversity Conservation Act listing criteria for the CEEC or EEC in Table 5 in the State approval.
- iii. The processes discussed at d(i) and d(ii) ensure the progress of ecological mine rehabilitation is tracked and assessed against specific criteria. Condition B67 ensures that the Conservation Bond will only be released when proof is provided to the NSW Planning Secretary that all biodiversity credits required to be satisfied by ecological mine rehabilitation have been retired.

### *Conclusion*

- 99) The Department notes that the State is allowing the proponent to use mine site rehabilitation to meet a proportion of the offset requirements for the EPBC listed CHVEFW. The Department is satisfied that the State approval conditions, including the monitoring, performance and completion criteria that will be developed in the Rehabilitation Management Plan required under State condition B103 will ensure that timely and effective remedial action is taken if the CHVEFW objectives are not met. The Department therefore considers that the use of mine site rehabilitation to meet a proportion of the CHVEFW offset requirements for this proposed action is acceptable.

### *Recommended conditions of approval*

#### *Relevant State conditions*

- 100) The Department recommends you impose a condition requiring the proponent to comply with State Condition B55 that requires the proponent to retire the biodiversity credits specified in Table 5 in the State approval to offset the biodiversity impacts of the development, including 14 477 credits for CHVEFW.
- 101) The Department recommends you impose a condition requiring the proponent to comply with State conditions B56-B60 that specify the requirements for the staged retirement of credits.
- 102) The Department recommends you impose a condition requiring the proponent to comply with State Condition B69 that requires the proponent to establish 1300 ha of open woodland revegetation on the site.
- 103) The Department recommends you impose a condition requiring the proponent to comply with State Condition B61 that states that ecological mine rehabilitation may be used to satisfy up to 20 per cent of the CEEC ecosystem credit requirements.
- 104) The Department recommends you impose a condition requiring the proponent to comply with State Condition B62 that states that within 10 years of the cessation of mining operations, or other timeframe agreed by the NSW Planning Secretary, the proponent must retire the biodiversity credits generated from ecological mine rehabilitation. If the ecological mine rehabilitation is not successful, the proponent must retire the residual credit requirements in consultation with Biodiversity & Conservation Division within the NSW Department of Planning, Industry & Environment and in accordance with the *Biodiversity Offsets Scheme of the BC Act*, to the satisfaction of the Biodiversity Conservation Trust.

- 105) The Department recommends you impose a condition requiring the proponent to comply with State Condition B71 that requires the proponent to prepare a Biodiversity Management Plan that will incorporate management and mitigation measures to control weeds, feral pests, and other threats to EPBC Act protected species. This condition is particularly relevant to managing the threats from feral pests to the Spotted-tail Quoll.
- 106) State Condition B71(e) requires the Biodiversity Management Plan to include a Biodiversity Offset Strategy that describes how the biodiversity credits in Table 5 in the State approval will be identified, secured and retired and describes how significantly impacted threatened species and communities listed under the EPBC Act will be suitably offset.
- 107) State Condition B71(i) requires the Biodiversity Management Plan to identify the potential risks to the successful implementation of the Biodiversity Offset Strategy and include a description of the contingency measures to be implemented to mitigate against these risks.
- 108) The Department recommends you impose a condition requiring the proponent to comply with State condition B72 that states that the proponent must not commence Phase 1A of the development until the Biodiversity Management Plan is approved by the NSW Planning Secretary.
- 109) The Department recommends you impose a condition requiring the proponent to comply with State condition B73 that states that the proponent must implement the Biodiversity Management Plan as approved by the NSW Planning Secretary.
- 110) The Department recommends you impose a condition requiring the proponent to comply with State condition B97 that states that the proponent must rehabilitate the site to the satisfaction of the Resources Regulator. This rehabilitation must be generally consistent with the proposed rehabilitation activities described in the document/s listed in condition A2(c) (and shown conceptually in the figure in Appendix 8), and must comply with the rehabilitation objectives in Table 6 of the State conditions. Table 6 specifies the rehabilitation objectives for the proposed action.
- 111) The Department recommends you impose a condition requiring the proponent to comply with State condition B98 that states that the rehabilitation objectives in Table 6 apply to the entire site, including all constructed landforms.
- 112) The Department recommends you impose a condition requiring the proponent to comply with State conditions B100, B101, B102, B103, B104 and B105, which require the preparation and implementation of a Rehabilitation Strategy and the preparation and implementation of a Rehabilitation Management Plan.
- 113) The Department recommends that you attach the above conditions to the EPBC Act approval (Attachment B) as they are necessary or convenient to ensure outcomes for EPBC Act protected matters are acceptable. Further analysis of these conditions and why they are necessary for achieving outcomes for EPBC Act protected matters is discussed in Attachment G and in Appendix 1 to this Legal Considerations (which addresses recovery plans, conservation advices and relevant threat abatement plans).

Additional EPBC Act conditions

- 114) The Department recommends you impose the following conditions to the approval in order to minimise the impacts of the proposed action on listed threatened species.

- 115) The Department recommends you apply condition 2 stating the approval holder must not clear more than:
- a. 203.7 hectares of Regent Honeyeater habitat
  - b. 203.7 hectares of Swift Parrot habitat
  - c. 352.9 hectares of Spotted-tail Quoll (*Dasyurus maculatus maculatus*) habitat
  - d. 246.8 hectares of the *Central Hunter Valley Eucalypt Forest and Woodland* (CHVEFW) ecological community.
- 116) This condition draws on the outcome of the State assessment. This condition will ensure that the areas of impact remain as specified in the State assessment.

*Approval of NSW Biodiversity Offset Strategy*

- 117) The calculation of offsets for impacts to the Regent Honeyeater, Swift Parrot, Spotted-tail Quoll and the CHVEFW has been calculated in accordance the *NSW Framework for Biodiversity Assessment* (FBA) and the *NSW Biodiversity Offsets Policy for Major Projects*. Use of these NSW methodologies is in accordance with the provisions of the assessment bilateral agreement (26 February 2015) (between the NSW and Australian Governments under Part 5 of the EPBC Act), which endorses the *NSW Biodiversity Offsets Policy for Major Projects* and FBA as providing a basis for undertaking biodiversity assessments and offsetting.
- 118) State condition B55 requires the proponent to provide the offsets (referred to as 'retirement'). The Department considers that the State assessment has undertaken the calculation of impacts and offsets in accordance with the bilateral agreement. The Department notes, however, that condition B55 of the State approval provides that the proponent may retire the equivalent number of 'credits' calculated in accordance with the NSW Government's *Biodiversity Conservation Act 2016* (BC Act) which was introduced after the assessment bilateral agreement was implemented, and has not been endorsed under the bilateral agreement with the NSW and Australian Governments. A footnote has been included to this effect in State condition B55 to clarify that the offsetting credits for the CHVEFW CEEC can only be discharged through payment into the BCF if this fund has been endorsed by the Commonwealth Minister responsible for administering the EPBC Act.
- 119) State condition B71(e) requires the proponent to have a strategy for the retirement of biodiversity credits which includes a sub-condition (B71(e)(iv)) that specifically requires a description how the significantly impacted EPBC Act species and communities will be suitably offset.
- 120) To address the possibility that the proponent may seek to retire credits in accordance with the BC Act, the Department recommends you apply EPBC condition 3a at ([Attachment B](#)), requiring that the approval holder must not commence Phase 1A (relating to the commencement of certain construction works) until the Biodiversity Offset Strategy, required by State approval condition B71(e)(iv), has been approved by the Department.
- 121) This additional EPBC Act condition will enable the Department to review the Biodiversity Offset Strategy to ensure that, if the credits relating to the EPBC Act protected matters are calculated in accordance with the BC Act, the calculations will provide for equivalent outcomes to those which have been calculated by the State assessment of the proposed action under the assessment bilateral agreement.

### *Conclusion*

- 122) Following consideration of the State assessment, the State conditions and the information set out above, the Department considers that the proposed action will not have an unacceptable impact on these listed threatened species and ecological communities provided it is taken in accordance with the recommended conditions of approval.
- 123) On this basis, the Department recommends approving the proposed action for the purposes of sections 18 and 18A of the EPBC Act.

### Greenhouse Gas Emissions

- 124) Section 6.1.8 of the NSW PAR (Attachment A3) states the EIS (Attachment D) included a Greenhouse Gas (GHG) and Energy Assessment that assessed direct and indirect emissions associated with the Project. The NSW PAR and the EIS addressed Scope 1-3 GHG emissions. The NSW IPC's SOR (Attachment A2) also discusses GHG emissions at Section 5.8.3.
- 125) The NSW Government, through the State conditions (Attachment A5), require a range of measures to be put in place to address GHG emissions. These conditions include the preparation of an Air Quality and Greenhouse Gas Management Plan (State condition B29) and the preparation of a GHG Export Management Plan (State condition B32).
- 126) GHG Scope 1 emissions are direct emissions as a result of activities undertaken at the facility. Scope 2 emissions include emissions such as the generation of purchased electricity consumed by a facility. Scope 3 (indirect) emissions would occur after the produced coal has been exported overseas and are largely associated with downstream electricity generation.

### *Conclusion*

- 127) The Department notes the State assessment has identified the quantity of GHG emissions that are likely to result from the proposed action. Having regard to the scale of past, present and future global GHG emissions, the Department is not satisfied the contribution of Scope 1-3 GHG emissions that are likely to result from the proposed action to the global level of GHG emissions will be a substantial cause of impacts to listed threatened species and ecological communities and water resources.

### **MANDATORY CONSIDERATIONS – ECONOMIC AND SOCIAL MATTERS (SECTION 136(1)(b))**

- 128) In deciding whether or not to approve the proposed action and what conditions to attach to the approval, you must consider economic and social matters, so far as they are not inconsistent with any other requirement of Subdivision B, Division 1 of Part 9 of the EPBC Act.
- 129) Information on economic and social matters was primarily obtained from the following State assessment documentation: PAR (Attachment A3), FAR (Attachment A4) and the IPC SOR (Attachment A2). The key issues are discussed below.
- 130) According to the proponent, the proposed action is a brownfields mine extension generating additional royalties estimated at \$370 million.
- 131) The FAR states that the proposed action will employ 500 full time equivalent personnel (250 existing and 250 additional), involve \$381 million (undiscounted) of capital investment and

provide \$414 million (net present value) of economic benefits to NSW over the life of the proposed action.

- 132) The IPC SOR ([Attachment A2](#)), noted that the FAR stated the proposed action will offer continued employment for employees whose jobs may end if the proposed action does not proceed, stating: *“The additional jobs the Project would create, both short term (through 120 construction jobs) and long term (through 250 operational jobs), would also have a substantial local impact, given the relatively high percentage of unemployment in the area.”*
- 133) According to the IPC SOR, following publication of the RTS, DPIE commissioned the Centre for International Economics (CIE) to undertake an expert review of the proponent’s Economic Impact Analysis (EIA) and cost-benefit assessment (CBA), which was prepared by Deloitte Access Economics (DAE). According to the PAR, this expert review identified that the CBA had been undertaken in a reasonable manner and was broadly consistent with relevant guidelines.
- 134) Given the influence of royalty streams on the quantum of net benefits generated by the proposed action, the CIE undertook sensitivity analysis to consider the likely effects of fluctuations in future coal prices and production quantity assumptions, which provided slightly lower estimates of predicted royalties ranging from \$304 to \$359 million. Based on this analysis, the CIE sought to quantify the minimum net benefits to NSW under a conservative ‘lower bound’ scenario. Even under this highly conservative scenario, the proposed action will still be expected to generate a positive net present value of around \$257 million (which equates to an incremental benefit to cost ratio of somewhere between 2.0 and 7.5 to 1).
- 135) According to the PAR, this analysis supports the CIE’s overall conclusion that even if “very conservative” assumptions are adopted, the proposed action will still generate a material net benefit to NSW. In the PAR, DPIE stated that they were confident the proposed action could deliver a material net benefit to NSW.
- 136) Impacts of the proposed action on the local community were considered as part of the State Assessment.
- 137) According to the IPC SOR, the IPC heard from speakers at the public meeting and received written comments regarding potential economic and social impacts (both negative and positive) as a result of the proposed action, including:
- Company tax calculations are inaccurate.
  - Loss of social amenity and community cohesion due to mining operations.
  - Timing of requirement for the social impact management plan (SIMP) to be prepared and approved.
  - Cumulative social impacts, including loss of privately owned land and loss of agricultural land.
  - Stress related conditions resulting from the proposed action and existing mines in the area.
  - The proposed action will enable the continuation of employment for many employees that may be out of a job if the joint venture is not approved.
  - The proposed action will generate many direct and indirect employment opportunities for local service providers and businesses.
  - The proposed action will generate significant financial benefits through royalties and company taxation to NSW.



- The joint venture partners currently support local community organisations, including sporting teams and events.
  - The proponent financially assists community service providers and organisations to support their continued work.
- 138) The PAR stated that the proposed action will impact on the local community and that social dynamics and community cohesion have experienced changes as a result of other mining projects in the area. The PAR noted that some benefits have also been identified in the form of:
- Economic benefits - through generation of local employment, opportunities for local commercial contracts and social investment.
  - Incoming workforce - anticipated increase in participation in community life through volunteering, schools, sporting and community groups and informal social networks.
  - Sense of community - largely limited to Jerrys Plains, perceptions that the proposed action may improve the sense of community.
- 139) The IPC SOR noted that while the PAR acknowledges the proposed action will have some social impact on the local community, it considers that these impacts can be managed to acceptable levels through management plans and standard conditions that require:
- Independent review, if a private landowner considers the relevant criteria has been exceeded on their land.
  - An environmental management strategy that keeps the local community and relevant agencies informed about the proposed action's operation, including making information publicly available on the proponent's website.
  - Protocols for managing and responding to complaints.
  - Operation of a community consultative committee.
- 140) State condition B108 requires the proponent to prepare a Social Impact Management Plan (SIMP) for the proposed action to the satisfaction of the NSW Planning Secretary. State condition B109 states that the proponent must not commence Phase 1B (as defined in the State approval) of the proposed action until the SIMP is approved by the NSW Planning Secretary.
- 141) The purpose of the SIMP is to build on the Social Impact and Opportunities Assessment undertaken as part of the EIS and to manage and mitigate social impacts over the life of the proposed action. As part of the SIMP, the proponent is required to further identify negative social impacts resulting from the proposed action, specify adaptive management and mitigation measures to avoid, minimise, and/or mitigate negative social impacts, identify opportunities to secure and enhance positive social impacts, include a program to monitor, review, and report on the effectiveness of these measures and include a Stakeholder Engagement Plan to guide the evaluation and implementation of social impact management and mitigation measures.
- 142) The Department notes the application of State conditions B41 to B45, which relate to the provision of compensatory water to any landowner of privately-owned land whose rightful water supply is adversely and directly impacted (other than an impact that is minor or negligible) as a result of the development (see State conditions at [Attachment A5](#)).
- 143) The Department notes that the State assessment (both DPE/DPIE and IPC) determined that the proposed action will not have an unacceptable social impact.

## Conclusion

144) Overall, the IPC found that the proposed action will generate significant social and economic benefits (paragraph 487 in the SOR). The Department agrees with this conclusion.

### **FACTORS TO BE TAKEN INTO ACCOUNT - THE PRINCIPLES OF ECOLOGICALLY SUSTAINABLE DEVELOPMENT AND THE PRECAUTIONARY PRINCIPLE (SECTION 136(2)(a) AND SECTION 391(2) OF THE EPBC ACT)**

145) In considering the matters discussed in this document, you must take into account the principles of ecologically sustainable development. In deciding whether to approve the proposed action, you must take into account the precautionary principle.

146) In recommending that you approve the proposed action subject to conditions, the Department has taken into account the principles of ecologically sustainable development, including the precautionary principle, in the following ways:

- i. decision-making processes should effectively integrate both long-term and short-term economic, environmental, social and equitable considerations.*

This report and the assessment documentation provide information for your consideration on the long-term and short-term economic, environmental, social and equitable considerations that are relevant to the proposed decision. The Department has taken these matters into account when preparing this report.

- ii. if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation (also the precautionary principle - section 391(2))*

In recommending approval of the proposed action, the Department concluded that there is sufficient scientific information to know of, and understand, the likely impacts of the proposed action on listed threatened species and ecological communities and water resources. Any lack of certainty related to the potential impacts of the proposed action is addressed by conditions that restrict environmental impacts, impose strict monitoring and adopt environmental standards which, if not achieved, require the application of response mechanisms in a timely manner to avoid adverse impacts.

- iii. the principle of inter-generational equity: that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations*

Impacts to the health, diversity and productivity of the environment have been considered in the proponent's EIS and subsequent supporting documentation, the State Assessment and IESC advice. Based on this information, the Department has concluded that the proposed action will result in only minor impacts to the health, diversity and productivity of the environment as it is unlikely to result in local extinction of species or ecological communities or reduce/degrade habitat to the extent that the landscape can no longer support threatened species or ecological communities. The Department recommends you attach conditions of approval requiring compliance with relevant State conditions to ensure the overall health of the environment is maintained. These conditions will ensure protection and management of EPBC listed species and ecological communities and water resources and allow for the proposed action to be

delivered and operated in a sustainable way and to protect the environment for future generations.

- iv. *the conservation of biological diversity and ecological integrity should be a fundamental consideration in decision-making*

The conservation of biological diversity and ecological integrity has been a fundamental consideration in the decision-making process for this proposed action. The Department has recommended conditions that require compliance with relevant State conditions that allow for the proposed action to be delivered and operated in a sustainable way to protect the environment and water resources for future generations and to offset habitat for the:

- Spotted-tail Quoll (*Dasyurus maculatus maculatus* (SE mainland population))
- Regent Honeyeater (*Anthochaera phrygia*)
- Swift Parrot (*Lathamus discolor*)
- *Central Hunter Valley Eucalypt Forest and Woodland* ecological community.

- v. *improved valuation, pricing and incentive mechanisms should be promoted.*

The valuation principle requires the promotion of improved valuation, pricing and incentive mechanisms. The Department's advice, informed by the State's assessment reports, includes reference to, and consideration of, a range of information on the economic costs, benefits and impacts of the proposed action. The mitigation and offset measures proposed to be implemented reflect that improved valuation, pricing and incentive mechanisms are being promoted by placing a financial cost upon the proponent to mitigate and offset the environmental impacts the proposed action will generate.

- 147) In the SOR, the IPC found that the proposed action is consistent with the principles of ESD, because it will achieve an appropriate balance between relevant environmental, economic and social considerations. The IPC's reasons in this regard are principally set out in (but not limited to) paragraphs 529, 530, 536 and 537 of the SOR (Attachment A2). The Department agrees with the State's conclusion.

#### **FACTORS TO BE TAKEN INTO ACCOUNT – ASSESSMENT REPORT (SECTION 136(2)(b))**

- 148) In considering the matters set out in section 136(1) of the EPBC Act – matters relevant to protected matters and economic and social matters – you must take into account the assessment report relating to the proposed action. The State assessment reports relating to the proposed action are at Attachment A.

#### **FACTORS TO BE TAKEN INTO ACCOUNT – ANY OTHER INFORMATION THE MINISTER HAS ON THE RELEVANT IMPACTS OF THE ACTION – (SECTION 136(2)(e))**

- 149) In considering the matters set out in section 136(1) of the EPBC Act – matters relevant to protected matters and economic and social matters – you must take into account any other information you have on the relevant impacts of the proposed action (including information in a report on the impacts of actions taken under a policy, plan or program under which the action is to be taken that was given to the Minister under an agreement under Part 10 (about strategic assessments)):

- a) There are no strategic assessment reports that are relevant to the proposed action. The Department notes that, on 20 September 2012, the Australian Government entered into an agreement with the NSW Government to undertake a strategic assessment of a biodiversity plan for coal mining in the Upper Hunter Valley, NSW. Currently, there has been no report given to the Minister on the impacts of actions taken under the policy, plan or program, subject to the 20 September 2012 agreement under Part 10 of the EPBC Act, relevant to the Upper Hunter Strategic Assessment.
- b) In addition to the attachments cited in this brief, the Department has also considered documents relevant to the State assessment process, available on the NSW DPIE Major Projects website. These are available at:  
<https://www.planningportal.nsw.gov.au/major-projects/project/25271>
- c) The Bioregional Assessment for the Hunter Region available at:  
<https://www.bioregionalassessments.gov.au/assessments/hunter-subregion>
- i. In May 2018, the Bioregional Assessment for the Hunter Region (the BA) was released with potentially relevant information on water resources. The BA considered the potential cumulative impacts on water and water-dependent assets in the Hunter subregion in NSW. The BA is a regional overview of potential impacts on, and risks to, water-dependent ecological, economic and sociocultural assets. The BA provides contextual information for Governments, industry and the community to further focus on the areas that are potentially impacted, so that local-scale modelling can then be applied when making regulatory, water management and planning decisions.
  - ii. The BA focused on the potential cumulative impact between 2013 and 2102 of additional coal resource developments. Some additional coal resource developments were not modelled at all in the BA, including Wambo. The BA states that around the Wambo mine, which was not represented in the groundwater model, the modelled drawdowns could be under predicted. The BA further states that surface water hydrological changes cannot be ruled out as a possibility around proposed expansions of the Wambo underground mine.
  - iii. The Department notes the BA was a regional scale water modelling assessment with the specific objective of focusing on areas for further local scale modelling. The Department considers the extensive site specific water impact assessments undertaken during the State assessment of the proposed action (as summarised in Table 1), and the IESC advice (Attachment J), provides a finer scale assessment of the proposed action's impacts on water resources and therefore can provide greater certainty with regard to decision making in respect to impacts on water resources. As outlined in the Department's conclusions in this Legal Considerations attachment, the Department is satisfied that the proposed action will not have an unacceptable impact on water resources, provided it is undertaken in accordance with the recommended conditions of approval.

**FACTORS TO BE TAKEN INTO ACCOUNT – ANY RELEVANT COMMENTS GIVEN TO THE MINISTER IN ACCORDANCE WITH AN INVITATION UNDER SECTION 131 OR 131AA AND 131A (SECTION 131AA(6) AND SECTION 136(2)(f))**

- 150) In considering the matters set out in section 136(1) of the EPBC Act – matters relevant to protected matters and economic and social matters – you must take into account any

relevant comments given to you under sections 131 (from other Commonwealth Ministers) and 131A (from members of the public).

- 151) In deciding whether or not to approve the proposed action you must also take into account relevant comments provided by the proponent and person proposing to take the action under section 131AA.
- 152) Letters inviting comments from the following parties are provided for your signature at (Attachment C):
- The proponent, United Collieries Pty Ltd.
  - The Minister for Resources and Northern Australia, Senator the Hon Matthew Canavan.
  - The Minister for Energy and Emissions Reduction, the Hon Angus Taylor MP.
  - The Minister for Indigenous Australians, the Hon Ken Wyatt AM MP.
  - The Minister for Agriculture, Senator the Hon Bridget McKenzie.
  - The Minister for Water Resources, Drought, Rural Finance, Natural Disasters and Emergency Management, the Hon David Littleproud MP.
- 153) The Department will brief you on responses to these letters when recommending whether to approve the proposed action in your final decision.
- 154) Seeking comments from the public under section 131A of the EPBC Act at the proposed decision stage is discretionary, and is not recommended in this case. The Department considers that the views of the public in relation to the proposed action are well understood, noting the extensive consultation undertaken through the State assessment process (including consultation by the IPC) and that public consultation on a proposed decision is unlikely to raise new issues.

**FACTORS TO BE TAKEN INTO ACCOUNT - ANY INFORMATION GIVEN TO THE MINISTER IN ACCORDANCE WITH A NOTICE UNDER SECTION 132A (SECTION 136(2)(g))**

- 155) Section 132A of the EPBC Act provides that, for certain actions, before you decide whether or not to approve the taking of the action for the purposes of a controlling provision, and what conditions (if any) to attach to an approval, you may request the appropriate Minister of the State or Territory to give you a notice stating the method that has been used to assess the certain and likely impacts of the action on things other than matters protected by the controlling provisions for the action.
- 156) Section 132A of the EPBC Act is not relevant to the proposed action as the Department has not sought any information under this Section.

**FACTORS TO BE TAKEN INTO ACCOUNT - ANY RELEVANT ADVICE OBTAINED BY THE MINISTER FROM THE INDEPENDENT EXPERT SCIENTIFIC COMMITTEE ON COAL SEAM GAS AND LARGE COAL MINING DEVELOPMENT IN ACCORDANCE WITH SECTION 131AB (SECTION 136(2)(fa))**

- 157) In considering the matters set out in section 136(1) of the EPBC Act – matters relevant to protected matters and economic and social matters – you must take into account any relevant advice obtained from the IESC.

- 158) On 30 August 2016, the Minister's delegate sought advice from the IESC. A summary of the IESC advice (dated 14 October 2016) is provided in the discussion on water resources section of this document and a copy of the IESC advice is at [Attachment J](#).
- 159) A table analysing how the State assessment and conditions of approval have addressed the IESC's advice is at [Attachment K](#).

#### **PERSON'S ENVIRONMENTAL HISTORY - SECTION 136(4)**

- 160) In deciding whether or not to approve the taking of the proposed action, and what conditions to attach to the approval, you may consider whether the person proposing to take the action is a suitable person to be granted an approval, having regard to the person's history in relation to environmental matters and if the person is a body corporate, the history of its executive officers and if relevant, the history of its parent body and the parent body's executive officers in relation to environmental matters.
- 161) At the time of referral in 2015, the proponent indicated it had not been subject to proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources.
- 162) On 20 September 2019, the Compliance Section in the Department's Office of Compliance advised that a search of the Department's Compliance and Enforcement Management Systems database and records held by the Department indicate that there is no adverse compliance history for the person proposing to take the action under the EPBC Act ([Attachment H](#)).
- 163) The Department considers there is no evidence to suggest the person proposing to take the action is an unsuitable person to be granted an approval, or, that additional conditions are required (beyond those already outlined), to address concerns arising from the person's environmental history.

#### **MINISTER NOT TO CONSIDER OTHER MATTERS - SECTION 136(5)**

- 164) Under subsection 136(5) of the EPBC Act, in deciding whether or not to approve the taking of the proposed action, and what conditions to attach to an approval, you must not consider any matters that you are not required or permitted by Division 1, Part 9 of the EPBC Act, to consider.
- 165) The Department has based its recommendations to approve the proposed action with conditions on information relevant to the impacts of the proposed action and other considerations as set out in the EPBC Act.

#### **REQUIREMENTS FOR DECISIONS ABOUT LISTED THREATENED SPECIES AND COMMUNITIES – SECTION 139**

- 166) In deciding whether or not to approve for the purposes of a subsection of section 18 or section 18A the taking of an action, and what conditions to attach to such an approval, you must not act inconsistently with:
- (a) Australia's obligations under:
- (i) the Biodiversity Convention; or
  - (ii) the Apia Convention; or

(iii) CITES; or

(b) a recovery plan or threat abatement plan.

Section 139(2) states, if:

(a) you are considering whether to approve, for the purposes of a subsection of section 18 or section 18A, the taking of an action; and

(b) the action has or will have, or is likely to have, a significant impact on a particular listed threatened species or a particular listed threatened ecological community;

you must, in deciding whether to so approve the taking of the action, have regard to any approved conservation advice for the species or community.

### The Biodiversity Convention

- 167) The Biodiversity Convention is available at:  
<http://www.austlii.edu.au/au/other/dfat/treaties/ATS/1993/32.html>
- 168) The objectives of the Biodiversity Convention, to be pursued in accordance with its relevant provisions, are the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilisation of genetic resources, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding.

### Consideration

- 169) The Biodiversity Convention promotes environmental impact assessment to avoid and minimise adverse impacts to biological diversity. The proposed action was subject to an environmental impact assessment process under the (NSW) EP&A Act.
- 170) The assessment report(s) identify the likely impacts of the proposed action on listed threatened species and ecological communities, and recommend measures to avoid, mitigate and offset those impacts. These measures are reflected in the conditions attached to the State development consent.
- 171) The Department has recommended that you approve the proposed action subject to the conditions discussed in this Legal Considerations attachment that seek to mitigate and offset the proposed action's impacts on listed threatened species and communities.
- 172) The Department considers that the proposed action will not have unacceptable impacts on listed threatened species and communities if it is taken in accordance with the recommended conditions and considers that you should be satisfied that approving the proposed action, subject to conditions, is not inconsistent with Australia's obligations under the Biodiversity Convention.

### Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)

- 173) The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) is available at: <http://www.austlii.edu.au/au/other/dfat/treaties/ATS/1976/29.html>  
CITES is an international agreement between governments. Its aim is to ensure that international trade in specimens of wild animals and plants does not threaten their survival.

### Consideration

- 174) The Department considers that you should be satisfied that approving the proposed action, subject to conditions, is not inconsistent with Australia's obligations under CITES as the proposed action does not involve international trade in specimens of wild animals and plants.

### Convention on the Conservation of Nature in the South Pacific (APIA Convention)

- 175) The Convention on the Conservation of Nature in the South Pacific (APIA Convention) is available at: <http://www.austlii.edu.au/au/other/dfat/treaties/ATS/1990/41.html>
- 176) The APIA Convention encourages the creation of protected areas which together with existing protected areas will safeguard representative samples of the natural ecosystems occurring therein (particular attention being given to endangered species), as well as superlative scenery, striking geological formations, and regions and objects of aesthetic interest or historic, cultural or scientific value.

### Consideration

- 177) The APIA Convention was suspended with effect from 13 September 2006. While this Convention has been suspended, Australia's obligations under the Convention have been taken into consideration.
- 178) The proposed action has undergone a rigorous environmental assessment which concluded that the proposed action will result in relatively minor impacts to biodiversity. In addition, the proposed conditions of approval place restrictions on the extent of impacts the action can have on biodiversity. The proposed conditions also require ongoing monitoring of potential impacts and obligations for the person taking the action to implement mitigation and corrective actions, and to offset significant residual impacts. As such, the Department considers that you could be satisfied that approving the proposed action, subject to conditions, is not inconsistent with Australia's obligations under the Convention.

### **RECOVERY PLANS AND THREAT ABATEMENT PLANS – SECTION 139(1)(b)**

- 179) Section 139(1)(b) requires you, when deciding whether to approve the taking of an action for the purposes of sections 18 and 18A, and what conditions to attach to any approval, to not act inconsistently with a recovery plan or a threat abatement plan.
- 180) As set out in the analysis above, the following listed threatened species and communities were identified at either the controlled action stage or the assessment stage as potentially impacted by the proposed action for the purposes of sections 18 and 18A:
- Spotted-tail Quoll (*Dasyurus maculatus maculatus*) (SE mainland population).
  - Regent Honeyeater (*Anthochaera phrygia*).
  - Swift Parrot (*Lathamus discolor*).
  - Central Hunter Valley Eucalypt Forest and Woodland ecological community.
- 181) The following recovery plans are relevant for the above listed species:
- National recovery plan for the Spotted-tail Quoll (*Dasyurus maculatus*).
  - National recovery plan for the Regent Honeyeater (*Anthochaera phrygia*).
  - National recovery plan for the Swift Parrot (*Lathamus discolor*).



- 182) These recovery plans are also discussed in Appendix 1 of this Legal Considerations Report and are also provided at Attachments E1-E3. There is no recovery plan for the Central Hunter Valley Eucalypt Forest and Woodland ecological community.
- 183) The Department considers that the following threat abatement plans are relevant for the above listed species and communities:
- Threat abatement plan for predation by feral cats.
  - Threat abatement plan for predation by the European red fox.
  - Threat abatement plan for competition and land degradation by rabbits.
  - Threat Abatement plan for the biological effects, including lethal toxic ingestion, caused by cane toads.
- 184) These threat abatement plans are also discussed in Appendix 1 of this Legal Considerations Report and are also provided at Attachments E4-E7.
- 185) For the reasons provided in Appendix 1 of this Legal Considerations Report, the Department considers that you should be satisfied that approving the proposed action, subject to the recommended conditions, will not be inconsistent with a relevant recovery plan or threat abatement plan.

#### **CONSERVATION ADVICES – SECTION 139(2)**

- 186) Section 139(2) requires you, when considering whether to approve the taking of action for the purposes of section 18 and 18A, to have regard to any approved conservation advice for a listed threatened species or community that is likely to be significantly impacted by the proposed action.
- 187) There is no approved conservation advice for the Spotted-tail Quoll. The conservation advices relevant to the Regent Honeyeater, Swift Parrot and Central Hunter Valley Eucalypt Forest and Woodland ecological community are discussed in Appendix 1 of this Legal Considerations Report and provided for you at Attachments E8-E10.
- 188) The Department has had regard to the approved conservation advice relevant to the proposed action and has given consideration to the likely impacts of the proposed action on listed threatened species and ecological communities. The Department is of the view that approval of this proposed action will not be inconsistent with the conservation advices at Attachment E.

#### **BIOREGIONAL PLANS – SECTION 176(5)**

- 189) In accordance with section 176(5), you are required to have regard to a bioregional plan in making any decision under the Act to which the plan is relevant.
- 190) The proposed action is not located within or near an area designated by a bioregional plan. The Department considers that there is no bioregional plan relevant to your decision.

#### **CONSIDERATIONS IN DECIDING ON CONDITIONS**

- 191) Under subsection 134(1) of the EPBC Act, you may attach a condition to the approval of an action if you are satisfied that the condition is necessary or convenient for:
- a) protecting a matter protected by a provision of Part 3 for which the approval has effect (whether or not the protection is protection from the action); or

- b) repairing or mitigating damage to a matter protected by a provision of Part 3 for which the approval has effect (whether or not the damage has been, will be or is likely to be caused by the action).
- 192) Under subsection 134(2) you may attach a condition to the approval of an action if you are satisfied that the condition is necessary or convenient for:
- a) protecting from the action any matter protected by a provision of Part 3 for which the approval has effect; or
  - b) repairing or mitigating damage that may or will be, or has been, caused by the action to any matter protected by a provision of Part 3 for which the approval has effect.
- 193) For the reasons outlined in this brief, all recommended conditions attached to the proposed approval are necessary or convenient to protect a matter protected by provision of Part 3 for which this proposed approval has effect, or to repair or mitigate damage to such a protected matter.
- 194) Subsection 134(3A) states certain conditions cannot be attached to the approval of an action unless the holder of the approval has consented to the attachment of the condition. A letter to the proposed approval holder for the proposed action seeking consent to the recommended conditions is at Attachment B.
- 195) Subsection 134(3C) states certain conditions may require a person taking the action to comply with conditions specified in an instrument, such as conditions imposed on the proposed action through the State assessment process. The Department has recommended conditions of this nature.
- 196) In accordance with subsection 134(4), in deciding whether to attach a condition to an approval, you must consider the following:
- a) any relevant conditions that have been imposed, or you consider are likely to be imposed, under a law of a State or self-governing territory or another law of the Commonwealth on the taking of the action,
  - b) information provided by the person proposing to take the action or by the designated proponent of the action,
  - c) the desirability of ensuring as far as practicable that the condition is a cost effective means for the Commonwealth and the person taking the action to achieve the object of the condition.

#### Relevant State conditions

- 197) The conditions of approval imposed by the State are at Attachment A5. The Department has paid close attention to, and required compliance with, the State conditions that are relevant to EPBC Act protected matters, where such conditions are necessary and convenient for their protection.

#### Information provided by the proponent

- 198) Information provided by the proponent includes the Environmental Impact Statement at Attachment D, the proponent's RTS (Attachments M1 & M2), additional information provided by the proponent (Attachments N), and the proponent's responses to the IPC's recommendations in July 2018 (Attachments O).

- 199) Information was also provided by the proponent to the Department on 10 October 2019 and 21 October 2019 clarifying the proponent's responses to issues raised by the IESC, this information has been included in the Table at Attachment K.
- 200) The Department has considered this information in forming its conclusions and recommending the proposed conditions.

#### Cost effectiveness of conditions

- 201) The Department considers that the conditions proposed are a cost effective means of achieving their purpose. The conditions are based on the assessment material provided by the proponent that was prepared for the State assessment.
- 202) As far as possible, the Department has recommended conditions that rely on the commitments made by the proponent and/or on measures already required under the State conditions.
- 203) The Department recommends that you attach approval conditions that will require the proponent to comply with applicable State conditions. This approach will avoid unnecessary duplication or supplementation of State conditions (which the Department considers are largely adequate to protect relevant matters of national environmental significance), but will still allow the Department to retain an ongoing compliance role for the proposed action.
- 204) The proposed approval contains two EPBC Act specific conditions:
- a) Condition 2, which places a clearance limit on habitat for EPBC Act listed threatened species and the ecological community significantly impacted by the proposed action.
  - b) Condition 3a requiring that the approval holder must not commence Phase 1A (as defined in the State approval - relating to the commencement of various construction works) until the Biodiversity Offset Strategy has been approved by the Department.
- 205) The Department considers that it is necessary and convenient to apply these additional conditions because they provide additional protections and safeguards for the matters protected by the EPBC Act which are being significantly impacted by the proposed action.
- 206) With respect to EPBC condition 3a (which requires submission to the Commonwealth and approval of the Biodiversity Offset Strategy) the Department has recommended the attachment of standard EPBC Act administrative conditions relating to the preparation, modification and publication of this post-approval management plan. The Department considers that, in this circumstance, it is necessary or convenient to apply these standard administrative conditions to EPBC condition 3a.
- 207) The Department considers that the conditions proposed are a cost effective means of achieving their purpose.

#### Consideration of condition-setting policy

- 208) In applying this analysis, the Department has had regard to the *EPBC Act Condition-setting Policy (2015)* (the Policy). The Policy outlines the Australian Government's approach to considering state and territory approval conditions when approving a project under the EPBC Act. The *NSW Biodiversity Offsets Policy for Major Projects* is listed in the Policy as an endorsed state policy which is consistent with the standards of a non-statutory Australian Government policy.

- 209) In accordance with the *EPBC Act Condition-setting Policy* (2015), the Department considers that it is appropriate to propose conditions that require the proponent to comply with relevant State conditions where they relate to offsetting arrangements for EPBC Act protected matters. These conditions will avoid unnecessary duplication of State and Australian Government conditions and allow the Department to retain an ongoing compliance role to ensure the outcomes for the significantly impacted EPBC Act matters are delivered. The proposed approval ([Attachment B](#)) includes the relevant State conditions. The table at [Attachment G](#) analyses the proposed conditions of approval against the requirements of the *EPBC Act Condition-setting Policy*.

#### Approval timeframe

- 210) State Condition A9 requires the proponent to cease mining operations by 31 August 2042. State Condition A9 notes that the State approval will continue to apply in all respects (other than to carry out mining operations) until the rehabilitation of the site has been undertaken to the standards required by the State approval. The Department therefore recommends that the EPBC Act approval have effect until 31 December 2052, to provide an extra 10 years for regulatory coverage, to ensure the rehabilitation of the mine site to re-establish CHVEFW.

#### **Attachments**

- 211) The attachments cited in this report are attachments to this briefing package and are identified in the proposed decision brief. This legal considerations report is [Attachment F](#).

## Appendix 1

### **SECTION 139(1)(b) CONSIDERATIONS – LISTED THREATENED SPECIES AND COMMUNITIES**

#### **Recovery Plans**

As set out at paragraph 179) of this Legal Considerations Report, when deciding whether to approve the taking of the proposed action, and what conditions to attach to the approval, you must not act inconsistently with any of the recovery plans discussed below.

There is no recovery plan for the Central Hunter Valley Eucalypt Forest and Woodland ecological community.

#### **Spotted-tail Quoll (*Dasyurus maculatus maculatus*) (SE Mainland population)**

##### National recovery plan for the Spotted-tail Quoll *Dasyurus maculatus*

Department of Environment, Land, Water and Planning (2016). *National Recovery Plan for the Spotted-tailed Quoll* *Dasyurus maculatus*. Australian Government, Canberra. Available from: <http://www.environment.gov.au/biodiversity/threatened/recovery-plans/spotted-tail-quoll>.

The overall objective of the recovery plan is to reduce the rate of decline of the Spotted-tail Quoll, and ensure that viable populations remain throughout its current range in eastern Australia.

According to the recovery plan, the main threats to this species are: habitat loss, modification and fragmentation on private land; timber harvesting; introduced predators (foxes, cats, wild dogs) and predator control practices (poison baiting); inappropriate fire regimes; deliberate killings; road mortality; and cane toads.

The proposed EPBC Act conditions of approval (Attachment B) require compliance with the State condition B71 (preparation of a Biodiversity Management Plan, including the control of weeds, and feral pests (with consideration of actions identified in relevant threat abatement plans)) and State conditions B100, B101, B102, B103, B104 and B105, which require the preparation of a Rehabilitation Strategy and the preparation and implementation of a Rehabilitation Management Plan (re-establishment of native ecosystems).

State condition B71e, requires the proponent to prepare, as part of the Biodiversity Management Plan, a Biodiversity Offset Strategy that retires the credits specified in Table 5 in the State approval conditions. The proponent must submit the offset strategy to the Department for approval and, once it has been approved by the Department, implement the offset strategy. State conditions B55, B56, B57, B58, B59 and B60 specify the requirements for the staged retirement of credits. State condition B69 requires the proponent to establish rehabilitation offsets totalling 1300 hectares of open woodland revegetation on the site. The proposed EPBC Act conditions of approval require the person taking the action to comply with these conditions.

The Biodiversity Management Plan, Biodiversity Offset Strategy and Rehabilitation Strategy will ensure that, in the long term, additional foraging and breeding habitat is created for the species. This will contribute to the objective in the Recovery Plan – to reduce the rate of decline of the Spotted-tail Quoll.

EPBC condition 2 states that the approval holder must not clear more than:

- 352.9 hectares of Spotted-tail Quoll (*Dasyurus maculatus maculatus*) habitat.

This condition limits impacts to those habitat areas which were assessed, for the purposes of calculating impacts and offsets in the State assessment, and therefore ensures that impacts are properly compensated for (such as through offsets). The Department considers that limiting the amount of habitat to be cleared will contribute towards reducing the rate of decline of the Spotted-tail Quoll, in accordance with the objectives of the recovery plan.

The Department considers that the proposed action will not increase the rate of decline of the Spotted-tail Quoll nor reduce the viability of populations of this species.

## **Conclusion**

For these reasons, the Department considers that approving the proposed action, subject to the recommended conditions, will not be inconsistent with this recovery plan.

## **Regent Honeyeater (*Anthochaera phrygia*)**

### National recovery plan for the Regent Honeyeater (*Anthochaera phrygia*)

Department of the Environment (2016). *National Recovery Plan for the Regent Honeyeater (Anthochaera phrygia)*. Canberra, ACT: Commonwealth of Australia. Available from: <http://www.environment.gov.au/biodiversity/threatened/recovery-plans/national-recovery-plan-regent-honeyeater-anthochaera-phrygia-2016>

The overall objectives of the recovery plan are to:

- Reverse the long-term population trend of decline and increase the numbers of regent honeyeaters to a level where there is a viable, wild breeding population, even in poor breeding years.
- Enhance the condition of habitat across Regent Honeyeater's range to maximise survival and reproductive success, and provide refugia during periods of extreme environmental fluctuation.

According to the recovery plan, the main threats to this species are: a small population size, habitat loss and fragmentation, habitat degradation and competition for nectar with noisy miners, noisy friarbirds, red wattlebirds and introduced honeybees (*Apis mellifera*).

The probable major cause of long-term decline is the clearing and fragmentation of woodland and forest habitat containing the bird's preferred eucalypt species. The major continuing threat is habitat degradation, particularly on-going reductions in habitat quality, lack of regeneration of key habitat types, and potentially altered flowering patterns of preferred habitat. The species also faces increased competition from larger, more aggressive nectivores, such as the noisy friarbird (*Philemon corniculatus*), red wattlebird (*Anthochaera carunculata*) and the noisy miner (*Manorina melanocephala*). Nest predation is impacting the species' ability to recruit sufficiently in favourable years. Improvement in the extent and quality of preferred regent honeyeater habitat is the key conservation objective of this recovery plan.

The National Recovery Plan for the Regent Honeyeater notes that the Hunter Valley is one of four key breeding areas, where the species has been regularly recorded breeding during the spring and summer months.

The proposed EPBC Act conditions of approval (Attachment B) require compliance with the State condition B71 (preparation of a Biodiversity Management Plan, including the control of weeds, and feral pests (with consideration of actions identified in relevant threat abatement plans)) and State conditions B100, B101, B102, B103, B104 and B105, which require the

preparation of a Rehabilitation Strategy and the preparation and implementation of a Rehabilitation Management Plan (re-establishment of native ecosystems).

State condition B71e, requires the proponent to prepare, as part of the Biodiversity Management Plan, a Biodiversity Offset Strategy that retires the credits specified in Table 5 in the State approval conditions. The proponent must submit the offset strategy to the Department for approval and, once it has been approved by the Department, implement the offset strategy. State conditions B55, B56, B57, B58, B59 and B60 specify the requirements for the staged retirement of credits. State condition B69 requires the proponent to establish rehabilitation offsets totalling 1300 hectares of open woodland revegetation on the site. The proposed EPBC Act conditions of approval require the person taking the action to comply with these conditions.

The Biodiversity Management Plan, Biodiversity Offset Strategy and Rehabilitation Strategy will ensure that, in the long term, additional foraging and breeding habitat is created for the species. This will contribute to the objective in the Recovery Plan - to enhance the condition of habitat across Regent Honeyeater's range.

EPBC condition 2 states that the approval holder must not clear more than:

- 203.7 hectares of Regent Honeyeater habitat.

This condition limits impacts to those habitat areas which were assessed, for the purposes of calculating impacts and offsets in the State assessment, and therefore ensures that impacts are properly compensated for (such as through offsets). The Department considers that limiting the amount of habitat to be cleared will contribute to reversing the long-term population trend of decline of the species, and increase the numbers of Regent Honeyeaters, in accordance with the objectives of the recovery plan.

The Department considers that the proposed action has the potential to ultimately enhance the condition of habitat across the Regent Honeyeaters' range through mine site rehabilitation. The Department considers that the proposed action will not increase the rate of decline of the Regent Honeyeater nor reduce the viability of populations of this species.

## **Conclusion**

For these reasons, the Department considers that approving the proposed action, subject to the recommended conditions, will not be inconsistent with this recovery plan.

## **Swift Parrot (*Lathamus discolor*)**

### National recovery plan for the Swift Parrot (*Lathamus discolor*)

Saunders, D.L. & C.L. Tzaros (2011). *National Recovery Plan for the Swift Parrot* (*Lathamus discolor*). Birds Australia, Melbourne. Available from:

<http://www.environment.gov.au/biodiversity/threatened/recovery-plans/national-recovery-plan-swift-parrot-lathamus-dicolor>

The overall objective of the recovery plan is to prevent further population decline of the Swift Parrot and to achieve a demonstrable sustained improvement in the quality and quantity of Swift Parrot habitat to increase carrying capacity.

According to the recovery plan, the major threats to the survival of the Swift Parrot population include the loss and alteration of foraging and nesting habitat through forestry activities, including firewood harvesting, and residential, industrial and agricultural development, attrition

of old growth trees in the agricultural landscape, suppression of forest regeneration, and frequent fire.

The proposed EPBC Act conditions of approval ([Attachment B](#)) require compliance with the State condition B71 (preparation of a Biodiversity Management Plan, including the control of weeds, and feral pests (with consideration of actions identified in relevant threat abatement plans)) and State conditions B100, B101, B102, B103, B104 and B105, which require the preparation of a Rehabilitation Strategy and the preparation and implementation of a Rehabilitation Management Plan (re-establishment of native ecosystems).

State condition B71e, requires the proponent to prepare, as part of the Biodiversity Management Plan, a Biodiversity Offset Strategy that retires the credits specified in [Table 5](#) in the State approval conditions. The proponent must submit the offset strategy to the Department for approval and, once it has been approved by the Department, implement the offset strategy. State conditions B55, B56, B57, B58, B59 and B60 specify the requirements for the staged retirement of credits. State condition B69 requires the proponent to establish rehabilitation offsets totalling 1300 hectares of open woodland revegetation on the site. The proposed EPBC Act conditions of approval require the person taking the action to comply with these conditions.

The Biodiversity Management Plan, Biodiversity Offset Strategy and Rehabilitation Strategy will ensure that, in the long term, additional foraging and breeding habitat is created for the Swift Parrot. This will contribute to the objective in the Recovery Plan - to achieve a demonstrable sustained improvement in the quality and quantity of Swift Parrot habitat.

EPBC condition 2 states that the approval holder must not clear more than:

- 203.7 hectares of Swift Parrot habitat.

This condition limits impacts to those habitat areas which were assessed, for the purposes of calculating impacts and offsets in the State assessment, and therefore ensures that impacts are properly compensated for (such as through offsets). Limiting habitat clearing in this way will contribute towards the longer term stabilisation in the amount of habitat available for the Swift Parrot, and, deliver on the objective in the Recovery Plan of Swift Parrot recovery.

The Department considers that the proposed action will not increase the rate of decline of the Swift Parrot nor reduce the viability of populations of this species. The Department considers that the proposed action has the potential to ultimately enhance the condition of habitat across the species' range through mine site rehabilitation.

## **Conclusion**

For these reasons, the Department considers that approving the proposed action, subject to the recommended conditions, will not be inconsistent with this recovery plan.

## **Threat Abatement Plans**

As set out at paragraph 179) of this Legal Considerations Report, when deciding whether to approve the taking of the proposed action, and what conditions to attach to the approval, you must not act inconsistently with any of the threat abatement plans discussed below.

### Threat abatement plan for predation by feral cats

Department of the Environment (2015). *Threat abatement plan for predation by feral cats*. Canberra, ACT: Commonwealth of Australia. Available from:



<http://www.environment.gov.au/biodiversity/threatened/publications/tap/threat-abatement-plan-feral-cats>.

This threat abatement plan is relevant to the conservation of the Spotted-tail Quoll, the Swift Parrot and Regent Honeyeater, all of which may be killed by feral cats. In addition, a key threatening process identified in the conservation advice for the CHVEFW is predation by feral cats. Feral cats can also have indirect impacts on native predators, such as Quolls, as the two species may compete for the same food resources.

The objectives of the *Threat abatement plan for predation by feral cats* (2015) are to effectively control feral cats in different landscapes, improve effectiveness of existing control options for feral cats, develop or maintain alternative strategies for threatened species recovery, increase public support for feral cat management and promote responsible cat ownership. These objectives are to be achieved through a range of control measures and related activities.

The EPBC Act conditions require compliance with the State condition B71 (preparation of a Biodiversity Management Plan). State condition B71(g)(ix) requires the Plan to describe the measures to be implemented on the site to control feral pests (with consideration of actions identified in relevant threat abatement plans). For this reason, the Department concludes that the proposed action is unlikely to increase:

- the risk of the Spotted-tail Quoll, the Swift Parrot or the Regent Honeyeater being preyed upon by feral cats nor increase the likelihood of predation by feral cats on any other EPBC listed mammals, reptiles, amphibians or birds that occur in the CHVEFW ecological community,
- competition between the Spotted-tail Quoll and feral cats for the same food resources.

For these reasons, the Department considers that approving the proposed action, subject to the recommended conditions, will not be inconsistent with the threat abatement plan for predation by feral cats.

#### Threat abatement plan for predation by the European Red Fox

Department of the Environment, Water, Heritage and the Arts (DEWHA) (2008). *Threat abatement plan for predation by the European red fox*. DEWHA, Canberra. Available from: <http://www.environment.gov.au/biodiversity/threatened/publications/tap/predation-european-red-fox>.

This threat abatement plan is relevant to the conservation of the Spotted-tail Quoll as there are strong similarities in diet between Foxes and Quolls, and Quoll populations may be threatened by Foxes competing with them for food. In addition, predation by European Red Foxes is a very high risk for Quolls.

A threatening process identified in the conservation advice for the CHVEFW is predation by the European Red Fox.

The objective of the *Threat abatement plan for predation by European red fox* (2008) is to minimise the impact of foxes on biodiversity in Australia and its territories.

The EPBC Act conditions require compliance with the State condition B71 (preparation of a Biodiversity Management Plan). State condition B71(g)(ix) requires the Plan to describe the measures to be implemented on the site to control feral pests (with consideration of actions identified in relevant threat abatement plans). For this reason, the Department concludes that the proposed action is unlikely to increase the risk of the Spotted-tail Quoll being impacted by

the European red fox, and is unlikely to increase the likelihood of predation by the European red fox on any other EPBC listed mammals, reptiles, amphibians or birds that occur in the CHVEFW ecological community.

For this reason, the Department considers that approving the proposed action, subject to the recommended conditions, will not be inconsistent with the threat abatement plan for predation by the European Red Fox.

#### Threat abatement plan for competition and land degradation by rabbits

Department of the Environment and Energy (2016). *Threat abatement plan for competition and land degradation by rabbits*. Canberra, ACT: Commonwealth of Australia. Available from: <http://www.environment.gov.au/biodiversity/threatened/publications/tap/competition-and-land-degradation-rabbits-2016>

This threat abatement plan is relevant to the conservation of the Regent Honeyeater, as remaining Regent Honeyeater habitat faces ongoing degradation and loss of quality in part due to the actions of rabbits. Loss of mature trees occurs through senescence, eucalypt dieback, harvesting for fence posts or firewood, or drought-induced stress. Grazing of livestock and rabbits (*Oryctolagus cuniculus*), and the associated soil compaction, simplifies the structural diversity of remnant vegetation by removing or severely restricting shrub and sapling regrowth, leading to the reduction of suitable habitat quality. In addition, a threatening process identified in the conservation advice for the CHVEFW is detrimental grazing by feral herbivores, including rabbits.

The EPBC Act conditions require compliance with the State condition B71 (preparation of a Biodiversity Management Plan). State condition B71(g)(ix) requires the Plan to describe the measures to be implemented on the site to control feral pests (with consideration of actions identified in relevant threat abatement plans). For this reason, the Department concludes that the proposed action is unlikely to increase the risk of rabbits degrading Regent Honeyeater habitat or CHVEFW.

For these reasons, the Department considers that approving the proposed action, subject to the recommended conditions, will not be inconsistent with the threat abatement plan for competition and land degradation by rabbits.

#### Threat abatement plan for the biological effects, including lethal toxic ingestion, caused by Cane Toads

Department of Sustainability, Environment, Water, Population and Communities (2011). *Threat abatement plan for the biological effects, including lethal toxic ingestion, caused by cane toads*. Canberra, ACT: Commonwealth of Australia. Available from: <http://www.environment.gov.au/resource/threat-abatement-plan-biological-effects-including-lethal-toxic-ingestion-caused-cane-toads>.

This threat abatement plan is relevant to the conservation of the Spotted-tail Quoll, as it is a marsupial predator that can suffer lethal toxic poisoning through ingestion of Cane Toads.

The objectives of the *Threat abatement plan for the biological effects, including lethal toxic ingestion, caused by cane toads* are to identify priority native species and ecological communities at risk from the impact of Cane Toads, reduce the impact on populations of native species and ecological communities and communicate information about Cane Toads, their impacts, and the threat abatement plan.

The EPBC Act conditions require compliance with the State condition B71 (preparation of a Biodiversity Management Plan). State condition B71(g)(ix) requires the Plan to describe the measures to be implemented on the site to control feral pests (with consideration of actions identified in relevant threat abatement plans). For this reason, the Department concludes that the proposed action is unlikely to increase the likelihood of Cane Toad occurrence, and is therefore unlikely to increase the risk to the Spot-tail Quoll.

For these reasons, the Department considers that approving the proposed action, subject to the recommended conditions, will not be inconsistent with the threat abatement plan for the biological effects, including lethal toxic ingestion, caused by Cane Toads.

## **SECTION 139(2) CONSIDERATIONS – LISTED THREATENED SPECIES AND COMMUNITIES**

### **Conservation advices**

As set out in paragraph 186) of this Legal Considerations Report, section 139(2) provides, when deciding whether to approve the taking of the proposed action, you must have regard to the following approved conservation advices, being approved conservation advices for species likely to be significantly impacted by the proposed action.

There is no approved conservation advice for the Spotted-tail quoll *Dasyurus maculatus maculatus* (SE mainland population).

### **Regent Honeyeater (*Anthochaera phrygia*)**

#### Conservation Advice for *Anthochaera phrygia*

Department of the Environment (2015). *Conservation Advice Anthochaera phrygia regent honeyeater*. Canberra: Department of the Environment. Available from: <http://www.environment.gov.au/biodiversity/threatened/species/pubs/82338-conservation-advice.pdf>

The key threatening processes for this species are clearing, fragmentation and degradation of habitat. Woodlands have been widely cleared for agriculture and development, or replaced by plantations, resulting in a fragmented landscape. Fragmentation exposes woodlands to increased degradation. Many remnant areas are in poor health and are continuing to be degraded by the removal of trees for timber and firewood, invasive weeds, inappropriate fire regimes, and grazing by livestock and rabbits which prevent regeneration. Eucalypt dieback has also resulted in habitat degradation and loss.

The main priority actions recommended in the conservation advice include actions to: reverse the long-term population trend of decline and increase the numbers of Regent Honeyeaters to a level where there is a viable, wild breeding population, even in poor breeding years; maintain key Regent Honeyeater habitat in a condition that maximises survival and reproductive success, and provides refugia during periods of extreme environmental fluctuation; improve the extent and quality of Regent Honeyeater habitat and bolster the wild population with captive-bred birds until the wild population becomes self-sustaining.

The proposed EPBC Act conditions of approval (Attachment B) place a clearing restriction of 203.7 ha on Regent Honeyeater habitat, require compliance with the State condition B71 (preparation of a Biodiversity Management Plan, including the control of weeds, and feral pests (with consideration of actions identified in relevant threat abatement plans)) and State conditions B100, B101, B102, B103, B104 and B105, which require the preparation of a

Rehabilitation Strategy and the preparation and implementation of a Rehabilitation Management Plan.

The Rehabilitation Strategy and Rehabilitation Management Plan will ensure that, in the long term, additional foraging and breeding habitat is created for the Regent Honeyeater. This will contribute to the priority actions in the species' conservation advice.

State condition B71e, requires the proponent to prepare, as part of the Biodiversity Management Plan, a Biodiversity Offset Strategy that retires the credits specified in Table 5 in the State approval conditions. Under EPBC Act condition 3a, the Biodiversity Offset Strategy must be submitted to the Australian Government Department administering the EPBC Act for approval and, once it has been approved by the Department, the proponent must implement the offset strategy. State conditions B55, B56, B57, B58, B59 and B60 specify the requirements for the staged retirement of credits. State condition B69 requires the proponent to establish rehabilitation offsets totalling 1300 hectares of open woodland revegetation on the site. The proposed EPBC Act conditions of approval require the person taking the action to comply with these conditions.

The Biodiversity Management Plan and Biodiversity Offset Strategy required by the conditions will ensure that, in the long term, additional foraging and breeding habitat is created for the Regent Honeyeater. This will contribute to the priority actions in the species' conservation advice.

The conditions discussed above place a clearing restriction on the total area of Regent Honeyeater habitat that can be cleared, and through offsetting and rehabilitation, substantially increase the area of Regent Honeyeater foraging and breeding habitat (over and above the area that will be cleared). This is consistent with one of the main priority actions in the conservation advice for the Regent Honeyeater - improving the extent and quality of Regent Honeyeater habitat.

## **Conclusion**

The Department has had regard to the approved conservation advice for the Regent Honeyeater and considers that impacts have been sufficiently addressed, and approval of the proposed action, with conditions, provides for the management and conservation of this species.

## **Swift Parrot (*Lathamus discolor*)**

### Approved Conservation Advice for *Lathamus discolor*

Threatened Species Scientific Committee (2016). *Conservation Advice Lathamus discolor swift parrot*. Canberra: Department of the Environment. Available from: <http://www.environment.gov.au/biodiversity/threatened/species/pubs/744-conservation-advice-05052016.pdf>

The key threatening processes for this species are predation by sugar gliders, habitat loss and alteration, collision mortality, competition for resources from both large, aggressive honeyeaters within altered habitats and from introduced birds and bees, competition with honeybees (*Apis mellifera*) and starlings (*Aplonis metallica*) for tree cavities, psittacine beak and feather disease and illegal wildlife capture and trading.

The main priority action recommended in the conservation advice is to prevent further habitat destruction from land clearance, grazing and forestry activities in high quality Swift Parrot

summer nesting and breeding habitat (because ongoing habitat loss, particularly within the primary breeding areas in Tasmania, represents the single biggest threat to the survival of the Swift Parrot in the wild, as it enhances nest predation by introduced sugar gliders).

Other priority actions include reviewing and updating management prescriptions in Forest Practices Systems and Local Government land use planning and approvals processes across the breeding and non-breeding range of Swift Parrots; developing and implementing strategies to reduce predation from sugar gliders; installing nesting boxes suitable for Swift Parrots in areas of low sugar glider predation to enhance Swift Parrot breeding success and encouraging and supporting the protection, conservation management and restoration of Swift Parrot nesting and foraging habitat through agreements with landowners, incentive programs and community projects.

The proposed EPBC Act conditions of approval ([Attachment B](#)) place a clearing restriction of 203.7 ha on Swift Parrot habitat, require compliance with the State condition B71 (preparation of a Biodiversity Management Plan, including the control of weeds, and feral pests (with consideration of actions identified in relevant threat abatement plans)) and State conditions B100, B101, B102, B103, B104 and B105, which require the preparation of a Rehabilitation Strategy and the preparation and implementation of a Rehabilitation Management Plan.

The Rehabilitation Strategy and Rehabilitation Management Plan will ensure that, in the long term, additional foraging and breeding habitat is created for the Swift Parrot. This will contribute to the priority actions in the species' conservation advice.

State condition B71e, requires the proponent to prepare, as part of the Biodiversity Management Plan, a Biodiversity Offset Strategy that retires the credits specified in [Table 5](#) in the State approval conditions. The proponent must submit the offset strategy to the Department for approval and, once it has been approved by the Department, implement the offset strategy. State conditions B55, B56, B57, B58, B59 and B60 specify the requirements for the staged retirement of credits. State condition B69 requires the proponent to establish rehabilitation offsets totalling 1300 hectares of open woodland revegetation on the site. The proposed EPBC Act conditions of approval require the person taking the action to comply with these conditions.

The Biodiversity Management Plan and Biodiversity Offset Strategy will ensure that, in the long term, foraging and breeding habitat is maintained and enhanced for the Swift Parrot. The conditions discussed above place a clearing restriction on the total area of Swift Parrot habitat that can be cleared, and through offsetting and rehabilitation, substantially increase the area of Swift Parrot foraging and breeding habitat (over and above the area that will be cleared). This is consistent with one of the priority actions in the conservation advice for the Swift Parrot, supporting the protection, conservation management and restoration of Swift Parrot foraging habitat.

## **Conclusion**

The Department has had regard to the approved conservation advice for the Swift Parrot and considers that impacts have been sufficiently addressed, and approval of the proposed action, with conditions, provides for the management and conservation of this species.

## Central Hunter Valley eucalypt forest and woodland ecological community

### Approved Conservation Advice for Central Hunter Valley eucalypt forest and woodland ecological community

Department of the Environment (2015). *Approved Conservation Advice (including listing advice) for the Central Hunter Valley eucalypt forest and woodland ecological community*. Canberra: Department of the Environment. Available from:

<http://www.environment.gov.au/biodiversity/threatened/communities/pubs/130-conservation-advice.pdf>

The key threatening processes for this ecological community are: clearing of native vegetation, alteration of habitat following subsidence due to longwall mining, invasion of native plant communities by African olive, loss and degradation of native plant and animal habitat by invasion of escaped garden plants, including aquatic plants, competition and land degradation by rabbits, loss of hollow-bearing trees and removal of dead wood and dead trees, ecological consequences of high-frequency fires, competition from feral honeybees, predation by the European red fox (*Vulpes vulpes*) and feral cats.

The main priority actions recommended in the conservation advice include actions to:

- avoid further clearance and fragmentation of the ecological community and of surrounding native vegetation (e.g. during mining and infrastructure development),
- minimise unavoidable impacts from any developments or other activities in areas adjacent to the ecological community that might result in their further degradation (for example by applying recommended buffer zones around the ecological community),
- regeneration, revegetation and rehabilitation of the ecological community; with an appropriate mix of species,
- implement effective control and management techniques for invasive species (e.g. African olive),
- strategically manage grazing,
- ensuring that patches of particularly high quality or importance in a landscape context are considered for inclusion in formal reserve tenure or other land tenure for biodiversity conservation purposes.

The proposed EPBC Act conditions of approval (Attachment B) place a clearing restriction of 246.8 ha on the CHVEFW ecological community, require compliance with the State condition B71 (preparation of a Biodiversity Management Plan, including the control of weeds, and feral pests (with consideration of actions identified in relevant threat abatement plans)) and State conditions B100, B101, B102, B103, B104 and B105, which require the preparation of a Rehabilitation Strategy and the preparation and implementation of a Rehabilitation Management Plan.

The Rehabilitation Strategy and Rehabilitation Management Plan will ensure that, in the long term, additional areas of CHVEFW are created. These will contribute to the recommended recovery action in the conservation advice - to contribute to regeneration, revegetation and rehabilitation of the ecological community; with an appropriate mix of species.

State condition B71e, requires the proponent to prepare, as part of the Biodiversity Management Plan, a Biodiversity Offset Strategy that retires the credits specified in Table 5 in the State approval conditions. The proponent must submit the offset strategy to the Department

for approval and, once it has been approved by the Department, implement the offset strategy. State conditions B55, B56, B57, B58, B59 and B60 specify the requirements for the staged retirement of credits. State condition B69 requires the proponent to establish rehabilitation offsets totalling 1300 hectares of open woodland revegetation on the site. The proposed EPBC Act conditions of approval require the person taking the action to comply with these conditions.

The Biodiversity Management Plan and Biodiversity Offset Strategy will ensure that, in the long term, areas of CHVEFW are maintained and enhanced.

### **Conclusion**

The Department has had regard to the approved conservation advice for the Central Hunter Valley eucalypt forest and woodland ecological community and considers that impacts have been sufficiently addressed, and approval of the proposed action, with conditions, provides for the management and conservation of this ecological community.

**Attachment G**

**Analysis of conditions meeting the requirements of: The *EPBC Act Condition Setting Policy* and Subsections 134(1) and (2) of the EPBC Act.**

<p><b>EPBC Act Condition (see <u>Attachment B</u>).</b></p>	<p><b>Subsections 134(1) and (2) - You may attach a condition to the approval of the action if you are satisfied that the condition is necessary or convenient.<sup>1</sup></b></p> <p><b>Recommendations in regard to Subsections 134(1) and (2).</b></p>	<p><b>The <i>EPBC Act Condition-setting Policy (2015)</i> (the Policy) outlines the Australian Government's approach to considering state and territory approval conditions when approving a project under the EPBC Act.</b></p> <p><b>Recommendation regarding consistency with the Policy.</b></p>
<p>The objective of EPBC Act Conditions 1 is to minimise the impacts of the action on a Water Resource (controlling provision sections 24D and 24E).</p> <p>1. The approval holder must comply with State development consent conditions B39, B40, B46, B49, B51, B52, B53 and B54 (summarised below).</p>		
<p>State conditions B39 and B40 ensure that sufficient water is available for all stages of the development and to report on water extracted from the site each year (direct and indirect).</p>	<p>The Department considers these conditions are necessary or convenient for protecting and or mitigating damage to a water resource because they require the proponent to manage, and report on, the water resources extracted from the site each year.</p>	<p>The Department considers these State conditions are consistent with the Policy because they will appropriately manage the impacts of the proposed action on water resources. The Department recommends these conditions be attached to the proposed approval.</p> <p>The Department considers these conditions appropriately address the impacts to water resources which are likely to arise in relation to water availability for the stages of the development, and as such, no</p>

<sup>1</sup>Generally

134(1) *The Minister may attach a condition to the approval of the action if he or she is satisfied that the condition is necessary or convenient for:*

(a) *protecting a matter protected by a provision of Part 3 for which the approval has effect (whether or not the protection is protection from the action); or*

(b) *repairing or mitigating damage to a matter protected by a provision of Part 3 for which the approval has effect (whether or not the damage has been, will be or is likely to be caused by the action).*

Conditions to protect matters from the approved action

134(2) *The Minister may attach a condition to the approval of the action if he or she is satisfied that the condition is necessary or convenient for:*

(a) *protecting from the action any matter protected by a provision of Part 3 for which the approval has effect; or*

(b) *repairing or mitigating damage that may or will be, or has been, caused by the action to any matter protected by a provision of Part 3 for which the approval has effect.*

*This subsection does not limit subsection (1).*



		additional EPBC Act conditions of approval are required.
State condition B46 ensures that all surface water discharges from the site comply with discharge limits (both volume and water quality) set for the development.	<p>The Department considers this condition is relevant to addressing the Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development's (IESC) comments numbered 16, 17, 18, and 20 which are discussed further in <a href="#">Attachment K</a>.</p> <p>The Department considers this condition is necessary or convenient for protecting and or mitigating damage to a water resource because it regulates the water discharges from the site and the quality of those discharges.</p>	<p>The Department considers this State condition is consistent with the Policy because it will appropriately manage the impacts of the proposed action on water resources. The Department recommends this condition be attached to the proposed approval.</p> <p>The Department considers this condition appropriately addresses the impacts to water resources which are likely to arise in relation to surface water discharges, and as such, no additional EPBC Act conditions of approval are required.</p>
State condition B49 specifies water management performance measures including for aquifers, erosion control, water storage, flood levees, sediment dams, tailings storage, overburden emplacements, chemical storage, creek diversions and aquatic riparian and groundwater dependent ecosystems. The condition ensures that the development complies with the specified water management performance measures.	<p>The Department considers this condition is relevant to addressing the IESC comment numbers 1, 2, 3, 5, 8, 9, 11, 12, 13, 14, 15, 16, 17, 18, 19, and 21 which are discussed further in <a href="#">Attachment K</a>.</p> <p>The Department considers this condition is necessary or convenient for protecting and or mitigating damage to a water resource because it specifies water management performance measures and requires compliance with these. These measures will ensure water quality is maintained for the potentially impacted water resource and that appropriate standards will be met.</p>	<p>The Department considers this State condition is consistent with the Policy because it will appropriately manage the impacts of the proposed action on water resources. The Department recommends this condition be attached to the proposed approval.</p> <p>The Department considers this condition appropriately addresses the impacts to water resources which are likely to arise in relation to setting and applying appropriate performance measures for water resources, and as such, no additional EPBC Act conditions of approval are required.</p>
State condition B51 requires the Applicant (approval holder) to undertake a Groundwater Dependent Ecosystem Study.	<p>The Department considers this condition is relevant to addressing the IESC comment numbers 1, 2, 4, 8, 11, 13, and 20 which are discussed further in <a href="#">Attachment K</a>.</p> <p>The Department considers this condition is necessary or convenient for protecting and or mitigating damage to a water resource because it requires the undertaking of a Groundwater Dependent Ecosystem (GDE) Study. This</p>	<p>The Department considers this State condition is consistent with the Policy because it will appropriately manage the impacts of the proposed action on water resources. The Department recommends this condition be attached to the proposed approval.</p> <p>The Department considers this condition appropriately addresses the impacts to water resources which are</p>

	<p>study will assist in the understanding, and protection of, the GDEs (which are a water resource) which will be potentially impacted by the proposed action.</p>	<p>likely to arise in relation to GDEs, and as such, no additional EPBC Act conditions of approval are required.</p>
<p>State condition B52 requires the approval holder to prepare a Water Management Plan.</p>	<p>The Department considers this condition is relevant to addressing the IESC comment numbers 1, 2, 3, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 20, and 21 which are discussed further in <u>Attachment K</u>.</p> <p>The Department considers this condition is necessary or convenient for protecting and or mitigating damage to a water resource. The Water Management Plan includes elements which relate to the potentially impacted water resources, including: a site water balance, salt balance, erosion and sediment control plan, surface water management plan and ground water management plan. The Water Management Plan will ensure that the potentially impacted water resources will be appropriately monitored and managed, and that impacts to water resources will be minimised throughout the life of the proposed action.</p>	<p>The Department considers this State condition is consistent with the Policy because it will appropriately manage the impacts of the proposed action on water resources. The Department recommends this condition be attached to the proposed approval.</p> <p>The Department considers this condition appropriately addresses the impacts to water resources which are likely to arise in relation to monitoring, managing and reducing impacts, and as such, no additional EPBC Act conditions of approval are required.</p>
<p>State conditions B53 and B54 require that the Water Management Plan (specified in State condition B52) be approved by the NSW Government's Planning Department Secretary, that the approval holder must not commence certain construction activities before the Water Management Plan has been approved, and that the approved Water Management Plan must be implemented.</p>	<p>The Department considers these conditions are necessary or convenient for protecting and or mitigating damage to a water resource because they require that the Water Management Plan be prepared, approved by the NSW regulator, and implemented.</p>	<p>The Department considers these State conditions are consistent with the Policy because they will appropriately manage the impacts of the proposed action on water resources. The Department recommends these conditions be attached to the proposed approval.</p> <p>The Department considers these conditions appropriately address the impacts to water resources which are likely to arise by requiring preparation and approval of a Water Management Plan, and as such,</p>

		no additional EPBC Act conditions of approval are required.
<p><u>Listed threatened species and ecological community</u></p> <p>The objective of conditions 2 to 4 is to minimise the impacts of the action on listed threatened species and an ecological community (controlling provision sections 18 and 18A).</p>		
<p>2. Within the area shown at Annexure 1, the approval holder must not clear more than:</p> <ol style="list-style-type: none"> <li>a. 203.7 hectares of Regent Honeyeater (<i>Anthochaera phrygia</i>) habitat,</li> <li>b. 203.7 hectares of Swift Parrot (<i>Lathamus discolor</i>) habitat,</li> <li>c. 352.9 hectares of Spotted-tail Quoll (<i>Dasyurus maculatus maculatus</i>) habitat,</li> <li>d. 246.8 hectares of the Central Hunter Valley Eucalypt Forest and Woodland ecological community.</li> </ol>	<p>The Department considers that limiting the amount of habitat to be cleared in conjunction with conditions that ensure impacts are properly compensated for (such as through offsets) will contribute towards:</p> <ul style="list-style-type: none"> <li>• reducing the rate of decline of the Spotted-tail Quoll, in accordance with the objectives of the recovery plan</li> <li>• reversing the long-term decline in the Regent Honeyeater population and increase the number of Regent Honeyeaters, in accordance with the objectives of the recovery plan</li> <li>• the longer term stabilisation in the amount of habitat available for the Swift Parrot, and, deliver on the objective in the Recovery Plan of Swift Parrot recovery.</li> </ul> <p>The Department considers this condition is necessary or convenient for protecting and or mitigating damage to the listed threatened species and the ecological community impacted by the proposed action because it places a clearing limit in hectares on the amount of habitat for these species. This condition will ensure that the approval holder can only clear the habitat areas which were assessed for the purposes of calculating offsets in the State assessment.</p>	<p>The Policy states that if the relevant protected matters require a greater level of protection, or specificity in conditioning, other than set out in the proposed state or territory conditions, additional 'custom' conditions may be applied.</p> <p>The Department considers this additional EPBC Act condition is consistent with the Policy because it places a specific clearing limit on the EPBC Act protected matters which were assessed under the bilateral agreement in the State assessment.</p>

3. The approval holder must comply with the State development consent conditions B55, B56, B57, B58, B59, B60, B61, B62, B69, B71, B72 and B73.		
State condition B55 requires the approval holder to provide offsets (referred to as 'retiring credits') for the clearing impacts which were assessed in the State assessment and which are specified in EPBC condition 2 above. Condition B55 specifically refers to EPBC Act protected matters.	The Department considers this condition is necessary or convenient for protecting and or mitigating damage to the listed threatened species and the ecological community impacted by the proposed action because it provides for offsets to compensate for the impacts of the proposed action on the EPBC Act protected matters' habitat that will be cleared.	<p>The Department considers this State condition is consistent with the Policy because it provides offsets for the listed threatened species and the ecological community impacted by the proposed action. The Department recommends this condition be attached to the proposed approval.</p> <p>The Department considers this condition appropriately addresses the impacts of the proposed action by requiring the provision of compensatory offsets. The Department considers that additional EPBC Act conditions of approval are required with respect to this condition, which is discussed below in respect to State condition B71.</p>
State conditions B56, B57, B58, B59, B60 relate to the staging of the offsets required by State condition B55. There are three stages of development of the mine. The 'retirement' of offset 'credits' have been linked to each stage. State conditions B56, B57, B58, B59, B60 specify the timeframe for providing offsets for each stage, enable the adjustment of staging of surface disturbance and the associated offset requirements and enables the carry-over of surplus offsets from one stage to another.	The Department considers these conditions are necessary or convenient for protecting and or mitigating damage to the listed threatened species and the ecological community impacted by the proposed action because they provide timeframes for the delivery of offsets to compensate for the impacts of the proposed action on the EPBC Act protected matters' habitat that will be cleared.	<p>The Department considers these State conditions are consistent with the Policy because they provide timeframes for the delivery of offsets for the listed threatened species and the ecological community impacted by the proposed action. The Department recommends these conditions be attached to the proposed approval.</p> <p>The Department considers these conditions appropriately address the impacts of the proposed action by specifying the provision of compensatory offsets, and as such, no additional EPBC Act conditions of approval are required.</p>
State condition B61 places a 20 per cent limit on the amount of ecological mine rehabilitation which can contribute towards offsets for the EPBC Act Central	The Department considers these conditions are necessary or convenient for protecting and or mitigating damage to the listed threatened species and the ecological community impacted by the proposed action because they	The Department considers these State conditions are consistent with the Policy because they place a considered limit on the amount of offsets for the EPBC Act Central Hunter Valley Eucalypt Forest and

<p>Hunter Valley Eucalypt Forest and Woodland ecological community.</p> <p>Condition B62 places a time limit on when ecological mine rehabilitation offsets can be 'retired'.</p>	<p>place a considered limit on the amount of offsets for the EPBC Act Central Hunter Valley Eucalypt Forest and Woodland ecological community that can be provided through ecological mine rehabilitation and provide timeframes for the delivery of offsets to compensate for the impacts of the proposed action on the EPBC Act protected matter's habitat that will be cleared.</p> <p>Allowing the proponent to meet up to 20 per cent of CHVEFW offset requirements by using ecological mine rehabilitation substantially increases the total area of CHVEFW conserved by the Project in the long term.</p>	<p>Woodland ecological community that can be provided through ecological mine rehabilitation and provide timeframes for the delivery of offsets to compensate for the impacts of the proposed action. The Department recommends these conditions be attached to the proposed approval.</p> <p>The Department considers these conditions appropriately address the impacts of the proposed action by specifying the provision of compensatory offsets, and as such, no additional EPBC Act conditions of approval are required.</p>
<p>State condition B69 requires the establishment of 1300 hectares of open woodland revegetation on the site during the life of the proposed action.</p>	<p>This condition ensures that, in the long term, additional foraging and breeding habitat is created for EPBC listed species.</p> <p>This will contribute to the objectives in the:</p> <ul style="list-style-type: none"> <li>• National recovery plan for the Spotted-tail Quoll <i>Dasyurus maculatus</i> – to reduce the rate of decline of the Spotted-tail Quoll</li> <li>• National recovery plan for the Regent Honeyeater (<i>Anthochaera phrygia</i>) - to enhance the condition of habitat across Regent Honeyeater's range</li> <li>• National recovery plan for the Swift Parrot (<i>Lathamus discolor</i>) - to achieve a demonstrable sustained improvement in the quality and quantity of Swift Parrot habitat.</li> </ul> <p>The Department considers this condition is necessary or convenient for protecting and or mitigating damage to the listed threatened species and the ecological community impacted by the proposed action because it provides for revegetation on the site. The Department notes this open</p>	<p>The Department considers this State condition is consistent with the Policy because it requires the establishment of 1300 hectares of open woodland revegetation on the site during the life of the proposed action. The Department recommends this condition be attached to the proposed approval.</p> <p>The Department considers this condition appropriately addresses the impacts of the proposed action, and as such, no additional EPBC Act conditions of approval are required.</p>

	<p>woodland will provide general habitat for the EPBC Act listed species impacted by the proposed action, including, but not limited to the Spotted-tail Quoll.</p>	
<p>State condition B71 requires the approval holder to prepare a Biodiversity Management Plan (BMP). The BMP includes specific requirements which relate to EPBC Act protected matters including:</p> <ul style="list-style-type: none"> <li>• a biodiversity offset strategy which specifically describes how EPBC Act protected matters will be offset,</li> <li>• conditions for the control of weeds and feral pests – with consideration of relevant threat abatement plans,</li> <li>• Condition B71(g)(ix) requires the BMP to describe the measures to be implemented on the site to control feral pests (with consideration of actions identified in relevant threat abatement plans).</li> </ul>	<p>Condition B71(g)(ix) requires the BMP to describe the measures to be implemented on the site to control feral pests (with consideration of actions identified in relevant threat abatement plans).</p> <p>This condition also ensures that, in the long term, additional foraging and breeding habitat is created for EPBC Act listed species.</p> <p>This will contribute to the objectives in the:</p> <ul style="list-style-type: none"> <li>• National recovery plan for the Spotted-tail Quoll <i>Dasyurus maculatus</i> – to reduce the rate of decline of the Spotted-tail Quoll.</li> <li>• National recovery plan for the Regent Honeyeater (<i>Anthochaera phrygia</i>) - to enhance the condition of habitat across Regent Honeyeater’s range.</li> <li>• National recovery plan for the Swift Parrot (<i>Lathamus discolor</i>) - to achieve a demonstrable sustained improvement in the quality and quantity of Swift Parrot habitat.</li> </ul> <p>This condition, in conjunction with State condition B61 (allowing the proponent to meet up to 20 per cent of CHVEFW offset requirements by using ecological mine rehabilitation), will substantially increase the total area of CHVEFW conserved by the Project in the long term.</p> <p>Sub-condition B71(g)(ix) requires the BMP to describe the measures to be implemented on the site to control feral pests (with consideration of actions identified in relevant threat abatement plans). Control of these threats to EPBC</p>	<p>The Department considers this State condition is consistent with the Policy because it requires the development of a BMP and includes specific measures for the EPBC Act protected matters impacted by the proposed action – including for offsets and consideration of relevant threat abatement plans. The Department recommends this condition be attached to the proposed approval.</p> <p>The Department considers this condition addresses the impacts of the proposed action. The Department notes, however, that condition B55 of the State approval provides that the proponent may retire the equivalent number of offset ‘credits’ calculated in accordance with the NSW Government’s <i>Biodiversity Conservation Act 2016</i> (BC Act) which was introduced after the NSW-Commonwealth assessment bilateral agreement was implemented.</p> <p>State condition B71(e) requires the proponent to have a strategy for the retirement of biodiversity credits which includes a sub-condition (B71(e)(iv)) that specifically requires a description how the significantly impacted EPBC Act species and communities will be suitably offset. Should the proponent retire credits in accordance with the BC Act, the Department recommends applying EPBC condition 3a (discussed below), requiring that the approval holder must not commence Phase 1A (relating to the commencement of certain construction works) until the Biodiversity Offset Strategy, required by State approval condition</p>

	<p>Act listed species and the ecological community will ensure that the proposed action is not inconsistent with threat abatement plans in accordance with the requirements of the EPBC Act.</p> <p>The Department considers this condition is necessary or convenient for protecting and or mitigating damage to the listed threatened species and the ecological community impacted by the proposed action because it requires the development of a BMP and includes specific measures for the EPBC Act protected matters impacted by the proposed action – including for offsets and consideration of relevant threat abatement plans.</p>	<p>B71(e), has been approved by the Department. This additional EPBC Act condition will enable the Department to review the Biodiversity Offset Strategy to ensure that, if the credits relating to the EPBC Act protected matters are calculated in accordance with the BC Act, the calculations will provide for equivalent outcomes to those which have been calculated by the NSW assessment under the assessment bilateral agreement. The Department recommends attaching the additional EPBC Act condition 3a (see below) to the approval.</p>
<p>State conditions B72 and B73 require that the approval holder must not commence certain construction activities before the BMP has been approved, and that the approved BMP must be implemented.</p>	<p>The Department considers these conditions are necessary or convenient for protecting and or mitigating damage to the species and ecological community impacted by the proposed action because they require that the BMP be prepared, approved by the NSW regulator, and implemented.</p>	<p>The Department considers these State conditions are consistent with the Policy because they will appropriately manage the impacts of the proposed action on EPBC Act protected matters. The Department recommends these conditions be attached to the proposed approval.</p> <p>The Department considers these conditions appropriately address the impacts of the proposed action, and as such, no additional EPBC Act conditions of approval are required.</p>
<p>3 a. To compensate for the loss of the listed threatened species and ecological community habitat identified at EPBC Act condition 2, the approval holder must submit the Biodiversity Offset Strategy plan (specified at condition B71(e) of the State development consent) to the Department for approval.</p> <ul style="list-style-type: none"> <li>i. The approval holder must not commence Phase 1A until the Biodiversity Offset Strategy plan has been approved by the Department.</li> <li>ii. The approval holder must implement the Biodiversity Offset Strategy plan as approved by the Department.</li> </ul>		

	<p>This condition ensures that, in the long term, additional foraging and breeding habitat is created for EPBC listed species.</p> <p>This will contribute to the objectives in the:</p> <ul style="list-style-type: none"> <li>• National recovery plan for the Spotted-tail Quoll <i>Dasyurus maculatus</i> – to reduce the rate of decline of the Spotted-tail Quoll</li> <li>• National recovery plan for the Regent Honeyeater (<i>Anthochaera phrygia</i>) - to enhance the condition of habitat across Regent Honeyeater’s range</li> <li>• National recovery plan for the Swift Parrot (<i>Lathamus discolor</i>) - to achieve a demonstrable sustained improvement in the quality and quantity of Swift Parrot habitat.</li> </ul> <p>The Department considers this condition is necessary or convenient for protecting and or mitigating damage to the species and ecological community impacted by the proposed action because it will enable the Department to review the Biodiversity Offset Strategy to ensure that, if the credits relating to the EPBC Act protected matters are calculated in accordance with the NSW Government’s <i>Biodiversity Conservation Act 2016</i> (BC Act), the calculations will provide for equivalent outcomes to those which have been calculated by NSW during the assessment of the proposed action under the bilateral agreement. The requirement for this condition is discussed further in the Legal Considerations <u>Attachment F</u> and with reference to State condition B71 (above).</p>	<p>The Policy states that if the relevant protected matters require a greater level of protection, or specificity in conditioning, other than set out in the proposed state or territory conditions, additional ‘custom’ conditions may be applied.</p> <p>The Department considers this additional EPBC Act condition is consistent with the Policy because it will ensure that, if the credits relating to the EPBC Act protected matters are calculated in accordance with the NSW Government’s <i>Biodiversity Conservation Act 2016</i> (BC Act), the calculations will provide for equivalent outcomes to those which have been calculated by NSW during the assessment of the proposed action.</p>
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4. The approval holder must comply with the State development consent conditions B97, B98, B100, B101, B102, B103, B104 and B105.



<p>State conditions B97 and B98 require the rehabilitation of the site. This includes areas proposed for Ecological Mine Rehabilitation under condition B61 and includes the restoration of self-sustaining native woodland ecosystems that:</p> <ul style="list-style-type: none"> <li>- align with reference sites in the local area; and</li> <li>- use State-recognised plant communities to meet the applicable EPBC Act listing criteria for the Central Hunter Valley Eucalypt Forest and Woodland ecological community.</li> </ul>	<p>The Department considers these conditions are necessary or convenient for protecting and or mitigating damage to the listed threatened species and the ecological community impacted by the proposed action because they require the rehabilitation of the site to meet the listing criterial for the EPBC Act Central Hunter Valley Eucalypt Forest and Woodland ecological community.</p> <p>The Department considers condition B97 is relevant to addressing the IESC comment numbers 2, 5, 7, 8, 9, 16, and 19. The Department considers condition B98 is relevant to addressing the IESC comment number 5. These are discussed further in <a href="#">Attachment K</a>.</p>	<p>The Department considers these State conditions are consistent with the Policy because they will appropriately manage the impacts of the proposed action on EPBC Act protected matters. The Department recommends these conditions be attached to the proposed approval.</p> <p>The Department considers these conditions appropriately address the impacts of the proposed action, and as such, no additional EPBC Act conditions of approval are required.</p>
<p>State condition B100 requires the development of a Rehabilitation Strategy which relates to areas proposed for Ecological Mine Rehabilitation under condition B61.</p> <p>State condition B101 places a timeframe on the preparation and approval of the Rehabilitation Strategy.</p> <p>State condition B102 requires the implementation of the Rehabilitation Strategy.</p>	<p>These conditions ensure that, in the long term, additional foraging and breeding habitat is created for EPBC listed species.</p> <p>This will contribute to the objectives in the:</p> <ul style="list-style-type: none"> <li>• National recovery plan for the Spotted-tail Quoll <i>Dasyurus maculatus</i> – to reduce the rate of decline of the Spotted-tail Quoll</li> <li>• National recovery plan for the Regent Honeyeater (<i>Anthochaera phrygia</i>) - to enhance the condition of habitat across Regent Honeyeater’s range</li> <li>• National recovery plan for the Swift Parrot (<i>Lathamus discolor</i>) - to achieve a demonstrable sustained improvement in the quality and quantity of Swift Parrot habitat.</li> </ul> <p>The Department considers these conditions are necessary or convenient for protecting and or mitigating damage to the species and ecological community impacted by the proposed action because they require that the</p>	<p>The Department considers these State conditions are consistent with the Policy because they will appropriately manage the impacts of the proposed action on EPBC Act protected matters. The Department recommends these conditions be attached to the proposed approval.</p> <p>The Department considers these conditions appropriately address the impacts of the proposed action, and as such, no additional EPBC Act conditions of approval are required.</p>

	Rehabilitation Strategy (which, in part, relates to the Central Hunter Valley Eucalypt Forest and Woodland ecological community) be prepared, approved by the NSW regulator, and implemented.	
<p>State condition B103 requires the development of a Rehabilitation Management Plan which relates to areas proposed for Ecological Mine Rehabilitation under condition B61.</p> <p>State condition B104 places a timeframe on the preparation and approval of the Rehabilitation Management Plan.</p> <p>State condition B105 requires the implementation of the Rehabilitation Management Plan.</p>	<p>These conditions ensure that, in the long term, additional foraging and breeding habitat is created for EPBC listed species.</p> <p>This will contribute to the objectives in the:</p> <ul style="list-style-type: none"> <li>• National recovery plan for the Spotted-tail Quoll <i>Dasyurus maculatus</i> – to reduce the rate of decline of the Spotted-tail Quoll</li> <li>• National recovery plan for the Regent Honeyeater (<i>Anthochaera phrygia</i>) - to enhance the condition of habitat across Regent Honeyeater’s range</li> <li>• National recovery plan for the Swift Parrot (<i>Lathamus discolor</i>) - to achieve a demonstrable sustained improvement in the quality and quantity of Swift Parrot habitat.</li> </ul> <p>The Department considers these conditions are necessary or convenient for protecting and or mitigating damage to the species and ecological community impacted by the proposed action because they require that the Rehabilitation Management Plan (which, in part, relates to the Central Hunter Valley Eucalypt Forest and Woodland ecological community) be prepared, approved by the NSW regulator, and implemented.</p>	<p>The Department considers these State conditions are consistent with the Policy because they will appropriately manage the impacts of the proposed action on EPBC Act protected matters. The Department recommends these conditions be attached to the proposed approval.</p> <p>The Department considers these conditions appropriately address the impacts of the proposed action, and as such, no additional EPBC Act conditions of approval are required.</p>
<b>Administrative conditions</b>		
Notification of date of commencement of the action	The Department considers these conditions are necessary or convenient for protecting and or mitigating damage to	The Department considers these administrative conditions and definitions are consistent with the Policy

<p>5. The approval holder must notify the Department in writing of the date of commencement of the action within 10 business days after the date of commencement of the action.</p> <p>6. If the commencement of the action does not occur within 5 years from the date of this approval, then the approval holder must not commence the action without the prior written agreement of the Minister.</p>	<p>an EPBC Act protected matter because they ensure the Department is aware of when the action commences and enables the Department to establish the sequencing of timing for other conditions attached to the approval.</p> <p>These conditions also require the approval holder to seek agreement to extend the approval time beyond 5 years, thus enabling the Department to assess whether the extension will have impacts on EPBC Act protected matters which are consistent with the impacts which were considered throughout the assessment.</p>	<p>because they provide for a greater level of protection and specificity regarding the EPBC Act protected matters impacted by the proposed action. The Department recommends these conditions be attached to the proposed approval.</p> <p>The Department considers these conditions appropriately address the impacts of the proposed action.</p>
<p>Compliance records</p> <p>7. The approval holder must maintain accurate and complete compliance records.</p> <p>8. If the Department makes a request in writing, the approval holder must provide electronic copies of compliance records to the Department within the timeframe specified in the request.</p>	<p>The Department considers these conditions are necessary or convenient for protecting and or mitigating damage to an EPBC Act protected matter because they ensure auditing of compliance with other conditions attached to the approval.</p>	
<p>Preparation and publication of plans</p> <p>9. The approval holder must:</p> <p>a. Submit the Biodiversity Offset Strategy plan at condition 3a electronically to the Department for approval,</p> <p>b. publish the Biodiversity Offset Strategy plan on the website within 20 business days of the date the Biodiversity Offset Strategy plan is approved by the Department or of the date a revised Biodiversity Offset Strategy plan is submitted to the Department, unless otherwise agreed to in writing by the Department,</p>	<p>The Department considers this condition is necessary or convenient for protecting and or mitigating damage to an EPBC Act protected matter because it specifies how the Biodiversity Offset Strategy plan at condition 3a is to be submitted to the Department for approval and provides for the publication of this plan to enable the public to view the plan and thereby provides for a level of transparency regarding the outcomes and conclusions within this plan. The Department notes transparency and sharing of information is a requirement of a number of international treaties and agreements to which the EPBC Act relates.</p>	

<ul style="list-style-type: none"> <li>c. exclude or redact sensitive ecological data from the Biodiversity Offset Strategy plan published on the website or provided to a member of the public, and</li> <li>d. keep the Biodiversity Offset Strategy plan published on the website until the end date of this approval.</li> </ul>		
<p>Annual compliance reporting</p> <p>10. The approval holder must prepare a compliance report addressing compliance with each of the conditions of this approval, including implementation of any management plans and strategies from the State development consent, for each 12 month period following the date of commencement of the action, or otherwise in accordance with an annual date that has been agreed to in writing by the Minister. The approval holder must:</p> <ul style="list-style-type: none"> <li>a. publish each compliance report on a website within 60 business days following the relevant 12 month period,</li> <li>b. notify the Department by email that a compliance report has been published on the website and provide the website's link for the compliance report within five business days of the date of publication,</li> <li>c. keep all compliance reports publicly available on the website until this approval expires,</li> <li>d. exclude or redact sensitive ecological data from compliance reports published on the website, and</li> <li>e. where any sensitive ecological data has been excluded from the version published, submit</li> </ul>	<p>The Department considers this condition is necessary or convenient for protecting and or mitigating damage to an EPBC Act protected matter because it ensures compliance with other conditions attached to the approval</p>	

<p>the full compliance report to the Department within 5 business days of publication.</p>		
<p>Reporting non-compliance</p> <p>11. The approval holder must notify the Department in writing of any: incident, or non-compliance with the conditions, or non-compliance with the commitments made in plans. The notification must be given as soon as practicable, and no later than two business days after becoming aware of the incident or non-compliance. The notification must specify:</p> <ul style="list-style-type: none"> <li>a. any condition which is or may be in breach,</li> <li>b. a short description of the incident and/or non-compliance, and</li> <li>c. the location (including co-ordinates), date, and time of the incident and/or non-compliance. In the event the exact information cannot be provided, provide the best information available.</li> </ul> <p>12. The approval holder must provide to the Department the details of any incident or non-compliance with the conditions or commitments made in plans as soon as practicable and no later than 10 business days after becoming aware of the incident or non-compliance, specifying:</p> <ul style="list-style-type: none"> <li>a. any corrective action or investigation which the approval holder has already taken or intends to take in the immediate future,</li> <li>b. the potential impacts of the incident or non-compliance, and</li> <li>c. the method and timing of any remedial action that will be undertaken by the approval holder.</li> </ul>	<p>The Department considers these conditions are necessary or convenient for protecting and or mitigating damage to an EPBC Act protected matter because they will ensure the Department is made aware of any potential incidents which may relate to matters protected by the EPBC Act. These conditions also ensure compliance with the conditions attached to the approval and that the onus for non-compliance reporting rests with the approval holder.</p>	

<p>Independent audit</p> <p>13. The approval holder must ensure that independent audits of compliance with the conditions are conducted as requested in writing by the Minister.</p> <p>14. For each independent audit, the approval holder must:</p> <ul style="list-style-type: none"> <li>a. provide the name and qualifications of the independent auditor and the draft audit criteria to the Department,</li> <li>b. only commence the independent audit once the audit criteria have been approved in writing by the Department, and</li> <li>c. submit an audit report to the Department within the timeframe specified in the approved audit criteria.</li> </ul> <p>15. The approval holder must publish the audit report on the website within 10 business days of receiving the Department's approval of the audit report and keep the audit report published on the website until the end date of this approval.</p>	<p>The Department considers these conditions are necessary or convenient for protecting and or mitigating damage to an EPBC Act protected matter because they provide for auditing of compliance with other conditions attached to the approval.</p>	
<p>Completion of the action</p> <p>16. The approval holder must comply with the State development consent condition A9.</p> <p>17. Within 30 days after the completion of the action, the approval holder must notify the Department in writing and provide completion data.</p>	<p>The Department considers these conditions are necessary or convenient for protecting and or mitigating damage to an EPBC Act protected matter because they provide for compliance with State condition A9, which requires that the State approval will continue to apply until the rehabilitation of the site has been undertaken to the standards required by the State approval, including for the rehabilitation of the mine site to re-establish the EPBC Act listed Central Hunter Valley Eucalypt Forest and Woodland ecological community.</p>	

<p>Changes to State development consent</p> <p>18. The approval holder must notify the Department in writing of any proposed change to the State development consent conditions referred to in these conditions within 10 business days of formally proposing a change or becoming aware of any proposed change.</p> <p>19. The approval holder must notify the Department in writing of any change to the conditions of the State development consent referred to in these conditions, within 10 business days of a change to conditions being finalised.</p>	<p>The Department considers these conditions are necessary or convenient for protecting and or mitigating damage to an EPBC Act protected matter because they provide that the approval holder must notify the Department in writing of any change to the State conditions which have been referred to in the EPBC Act conditions.</p> <p>The Department considers these conditions are necessary because, consistent with the <i>EPBC Act Condition Setting Policy</i>, the Department has relied on the State conditions where they provide for the protection and or mitigation of damage to EPBC Act protected matters. These conditions will ensure the Department is informed about any changes, and has the opportunity to respond in the post-approval stage, should the changes to State conditions result in inconsistent outcomes, to those which have been assessed for EPBC Act protected matters.</p>	
<p><b>Definitions</b></p>	<p>The Department considers the definitions are necessary or convenient for protecting and or mitigating damage to an EPBC Act protected matter because they serve to clarify the meaning of the above conditions.</p>	

## Annexure 1



The Department considers this Annexure necessary or convenient for protecting and or mitigating damage to an EPBC Act protected matter because it serves to clarify meaning of Condition 2 and to place a clear limit on the area of impact.



s22

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**From:** Director Compliance  
**Sent:** Friday, 20 September 2019 2:14 PM  
**To:** Compliance  
**Cc:** Director Compliance  
**Subject:** RE: Request for Compliance Check Multiple Companies [SEC=UNOFFICIAL]

Good afternoon s22

In relation to your request:

Based solely on the information available, the Compliance Section of the Office of Compliance have conducted a history check on Glencore Coal Pty , United Collieries Pty Ltd, Wambo Coal Pty Ltd, Peabody and CFMEU, no adverse history has been identified based on the information contained in the compliance history request.

There are no compliance incidents relating to this entity or listed directors recorded in CEMS, J Drive or Spire that relate to contraventions of national environmental law.

Regards,

s22

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**From:** Compliance  
**Sent:** Thursday, 19 September 2019 4:55 PM  
**To:** Director Compliance ; Compliance  
**Subject:** FW: Request for Compliance Check Multiple Companies [SEC=UNOFFICIAL]

For your action please.

**Triage Team**  
**CITES Enforcement Authority of Australia**  
Office of Compliance  
**Department of the Environment and Energy**  
**Email:** [compliance@environment.gov.au](mailto:compliance@environment.gov.au)  
**Phone:** (02) 6274 1372 or free call 1800 110 395  
**Mail:** GPO Box 787 Canberra ACT 2601

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**From:** s22  
**Sent:** Thursday, 19 September 2019 4:41 PM  
**To:** Compliance  
**Cc:** s22  
**Subject:** Request for Compliance Check Multiple Companies [SEC=UNOFFICIAL]

Hi

We are currently drafting the proposed EPBC approval decision for the United and Wambo open cut coal mine project, near Singleton, NSW (EPBC 2015/7600).

The proposed action is a joint venture between United Collieries Pty Ltd and Wambo Coal Pty Ltd to extract a total of 176 million tonnes of run-of-mine coal at a rate of up to 10 million tonnes per annum over 21 years from a single open cut mine that combines existing operations at Wambo with a new mine on leases owned by United Collieries.

The parent companies in the 50:50 Joint Venture are Glencore and Peabody.

United Collieries Pty Limited ownership comprises 95% Glencore Coal Pty. Ltd. and 5% Construction, Forestry, Mining and Energy Union (CFMEU).

Further information about the project is available at  
<http://www.unitedproject.com.au/en/Pages/home.aspx>

I would appreciate it if you could conduct a compliance check on these companies and the CFMEU.

Regards

s22

EPBC Assessment Officer  
Northern NSW Assessment Section  
Environment Approvals and Wildlife Trade Branch  
Ph: s22

**Attachment K – Analysis of how the IESC’s advice has been addressed in the NSW assessment**

Independent Expert Scientific Committee (IESC) Recommendation	Proponent’s response	NSW Department of Planning and Environment/NSW Department of Planning, Industry and Environment (DPE/DPIE)’s consideration and Independent Planning Commission (IPC) conditions	The Department’s conclusions
<p>1. No adequate mapping and delineation of the condition and extent of surface water and groundwater resources has been provided. Further consideration should be made regarding:</p> <p>a) The spatial and temporal presentation and analysis of baseline data for surface water and groundwater quality.</p> <p>b) Including additional water quality analytes in the sampling program (e.g. metals, nutrients and organics).</p> <p>c) Groundwater levels of the regolith groundwater system overlaid with the location of groundwater dependent terrestrial vegetation, especially critically endangered ecological communities (CEECs).</p>	<p>Recommendation 1 is addressed in Part B of the proponent’s response to submissions (RTS) at pages 25-49.</p> <p>1a is addressed in the RTS at pages 25-45. In summary, further consideration of spatial data and temporal presentation and analysis of baseline data for surface water quality was conducted, additional work was undertaken and presented in detail in section 2.1.1 of the RTS. According to the RTS, this additional work did not result in any changes to the assessment outcomes detailed in the Environmental Impact Statement (EIS).</p> <p>1b is addressed in the RTS at pages 46-47. The proponent undertook additional surface water quality monitoring, including an expanded analyte regime at existing monitoring locations to inform the characterisation of baseline water quality.</p> <p>Additional monitoring was undertaken within the water management system (WMS) for an increased range of analytes to further characterise mine water.</p> <p>Additional samples were also taken as part of ongoing surface water monitoring</p>	<p>Condition B52 requires the preparation of a Water Management Plan (WMP) for the development.</p> <p>Condition B52(iv) requires the drafting and implementation of a Surface WMP that includes: detailed baseline data on surface water flows and quality of watercourses and/or water bodies potentially impacted by the development.</p> <p>Condition B52(v) requires the drafting and implementation of a groundwater management plan that must be consistent with the <i>Introduction for prospective mining and petroleum activities (DPI Water, 2014)</i> and the <i>National Water Quality Management Strategy (NWQMS)</i>.</p> <p>To address potential impacts to GDEs, condition B51 requires the proponent to undertake a Groundwater Dependent Ecosystem Study within 12 months of the project commencing. This study must:</p> <p>(a) be prepared by suitably qualified and experienced person/s</p> <p>(b) be developed in consultation with DPIE Water</p>	<p>The Department concludes the additional work undertaken by the proponent, the NSW assessment and the State conditions addressed these issues raised in the IESC advice.</p> <p>The Department has recommended compliance with relevant State conditions of approval. These are discussed in the legal considerations (<a href="#">Attachment F</a>) and in this table (<a href="#">Attachment K</a>).</p> <p>The proposed EPBC condition 1 requires the approval holder to comply with any requirements imposed by the NSW Planning Secretary under State condition B51 to undertake a Groundwater Dependent Ecosystem (GDE) Study.</p> <p>The proposed EPBC condition 1 requires the approval holder to comply with any requirements imposed by the NSW Planning Secretary under State condition B52 to prepare a WMP for the development to the satisfaction of the NSW Planning Secretary.</p> <p>The proposed EPBC condition 1 requires the proponent to comply with State condition B49. This condition requires the proponent to ensure that the proposed action complies with performance measures in Table 4, including aquatic, riparian and GDE performance measures.</p>

**Attachment K – Analysis of how the IESC’s advice has been addressed in the NSW assessment**

	<p>conducted since the EIS surface water assessment was prepared.</p> <p>1c is addressed in the RTS at pages 47-49. The RTS states that Groundwater Dependent Ecosystems (GDEs) have been identified in close proximity to the Project Area primarily associated with riparian vegetation. The EIS assessed potential impacts on GDEs, considering direct mining impacts, surface water impacts and groundwater impacts.</p> <p>There are no GDEs that are critically endangered that are potentially impacted by the Project.</p> <p>Part B of the RTS at pages 87-90 states that the EIS assessment found that no significant impacts on GDEs were predicted due to the proposed action. The RTS also states that this conclusion did not change as a result of additional work done in response to the IESC comments.</p>	<p>(c) assess the hydrological and hydrogeological settings of the site</p> <p>(d) be integrated with the similar studies being undertaken by nearby mines (where practicable)</p> <p>(e) further characterise GDEs (vegetation and communities) potentially impacted by the development, including the <i>Central Hunter Swamp Oak Forest</i> EEC (GDE1), <i>Hunter Valley River Oak Forest</i> (GDE2) and individual River Red Gums (GDE1 and GDE2) identified along the riparian buffers of Redbank Creek and Wollombi Brook</p> <p>(f) detail the reliance of GDEs on surface and groundwater resources</p> <p>(g) identify the potential risks to GDEs from the development and the Wambo Mining Complex, and other nearby mines (where practicable)</p> <p>(h) use the results of this study to develop performance criteria to achieve the performance measures in Table 4 and inform the Groundwater Management Plan in condition B52.</p> <p>Condition B49 requires the proponent to ensure that the proposed action complies with performance measures in Table 4, including aquatic, riparian and GDE performance measures.</p>	
<p>2. The numerical modelling and analysis presented in the assessment documentation do not provide reasonable estimates of the likely impacts of the proposed</p>	<p>2a is addressed in Part B of the RTS at pages 47-79. The RTS provides additional data on the assessment and modelling approaches to address the questions raised by the IESC, however, according to the RTS none of the</p>	<p>Recommendation 2 is addressed at page 80 of the Preliminary Assessment Report (PAR).</p> <p>2bi Tailings: this issue is addressed on p79 of the PAR: “Tailings are, and would be, disposed of on-site within in-pit</p>	<p>The Department concludes the additional work undertaken by the proponent, the NSW assessment and the State conditions addressed these issues raised in the IESC advice.</p> <p>The proposed EPBC condition 1 requires the approval holder to comply with any requirements</p>

**Attachment K – Analysis of how the IESC’s advice has been addressed in the NSW assessment**

<p>project on water resources. Further consideration of the following is needed to better understand the nature and magnitude of impacts to water resources and GDEs:</p> <p>a. Surface water assessment and flood modelling, particularly details of model construction, parameterisation, calibration, validation, and sensitivity and uncertainty analysis.</p> <p>b. Groundwater assessment and modelling:</p> <p>i. The potential for the Wambo void lake and the tailings storage facilities (TSFs) to become a recharge source for the Permian groundwater system and subsequently the alluvial aquifers and surface waters through upwards leakage.</p> <p>ii. Use of the United Collieries underground</p>	<p>assessment outcomes outlined in the EIS have changed and no assessment deficiencies requiring further assessment work were identified.</p> <p>The RTS states further at page 50 that: <i>For the assessment of potential surface water impacts a range of assessment methods were used. The methods included quantitative and qualitative methods to assess the potential impact, as outlined in the Surface Water Assessment. In response to the IESC comments additional detail on the surface water assessment approach taken including details of model construction, parameterisation, calibration, validation, and sensitivity and uncertainty analysis are provided below. It is noted that while additional data on the assessment and modelling approaches have been provided to address the questions raised, none of the assessment outcomes as outlined in the EIS have changed and no assessment deficiencies requiring further assessment work were identified.</i></p> <p>Recommendation 2b is addressed on page 112 of Part B of the RTS. The RTS states in relation to the numerical groundwater model that additional data is not considered essential, as sensitivity and uncertainty analysis was used to determine the influence of parameter variability on the model predictions.</p>	<p>tailings storages. Risk would only occur during extreme events and overtopping. Existing management measures which are proposed to continue include limiting the water volume within the pits, meaning overtopping is unlikely to occur”.</p> <p>Condition C3 states that: “The detailed design of the proposed flood levee and Golden Highway realignment must be based on the latest available flood data for the area”.</p> <p>Condition B52(iv) states that: The surface WMP must detail performance criteria, including trigger levels for identifying and investigating any potentially adverse impacts associated with the development, for:</p> <ul style="list-style-type: none"> <li>• downstream surface water flows and quality</li> <li>• channel stability</li> <li>• downstream flooding impacts.</li> </ul> <p>Condition B52e(iii) states that: “The Erosion and Sediment Control Plan describes measures to minimise soil erosion and the potential for the transport of sediment to downstream waters and manage flood risk”.</p> <p>Condition B52e(iv) requires the drafting of a Surface WMP that includes detailed baseline data on surface water flows and quality of watercourses and/or water bodies potentially impacted by the development.</p>	<p>imposed by the NSW Planning Secretary under the State condition B51 to undertake a GDE Study.</p> <p>The proposed EPBC condition 1 requires the approval holder to comply with any requirements imposed by the NSW Planning Secretary under State condition B52 to prepare a WMP for the development to the satisfaction of the NSW Planning Secretary.</p> <p>The proposed EPBC condition 1 requires the proponent to comply with State condition B49. This condition requires the proponent to ensure that the proposed action complies with performance measures in Table 4, including aquatic, riparian and GDE performance measures.</p> <p>State condition B97 includes a requirement that final voids:</p> <ul style="list-style-type: none"> <li>• be designed as long term groundwater sinks to maximise ground water flows across back filled pits to the final void.</li> <li>• Minimise to the greatest extent practicable: <ul style="list-style-type: none"> <li>• the size and depth of final voids</li> <li>• the drainage catchment of final voids</li> <li>• any high wall instability risk</li> <li>• the risk of flood interaction.</li> </ul> </li> <li>• Maximise potential for beneficial reuse, to the greatest extent practicable.</li> </ul>
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**Attachment K – Analysis of how the IESC’s advice has been addressed in the NSW assessment**

<p>workings as a water storage facility and the potential impact this could have on groundwater quality.</p> <p>iii. The potential influence of faults (i.e. to act as either barriers or conduits) on groundwater flow within the groundwater model domain.</p>	<p>Recommendation 2b is also addressed in the Groundwater Impact Assessment in Appendix 12 of the EIS.</p> <p>2b(i) is addressed in Part B of the RTS at pages 80-84 also at pages 44, 67-69. The groundwater assessment identified that due to extensive depressurisation the final void will act as a dominant sink drawing in groundwater from the Permian coal measures and all saturated spoil at the site. The final void will not act as a recharge source for any aquifers.</p> <p>Additional information provided by the proponent on 10 October 2019 stated: The potential for the voids to become a recharge source was discussed in the RTS Part B, Section 2.1, page 80-84 which reported: In order to understand the potential likelihood and risk of the Wambo void lake and TSF becoming recharge sources groundwater flow modelling and analysis was conducted. The groundwater assessment identified that due to extensive depressurisation of the Permian coal measures from approved and the proposed mining, groundwater is drawn towards and into the active mine areas. The proposed United final void acts as a dominant groundwater sink, drawing in groundwater from the Permian coal measures and all saturated spoil at the site. The final void will not become a recharge source to any aquifers.</p>	<p>To address potential impacts to GDEs, condition B51 requires the proponent to undertake a GDE Study within 12 months of the project commencing.</p> <p>On 15 May 2019, DPE wrote to the IPC in response to an additional information request. DPE cited the proponent’s groundwater modelling showing that groundwater levels in the Wambo void would equilibrate at around 80-83 metres relative to sea level (mRL) if the void was backfilled compared to 55 mRL if left open, resulting in saline groundwater flowing towards the lower lying North Wambo Creek. A peer review agreed with the proponent’s view that leaving both voids open would result in lower environmental impacts. Filling the Wambo void would result in prolonged environmental impacts, significant economic costs and adverse water impacts associated with the loss of a long-term groundwater sink.</p> <p>DPE sought advice from the Water Division of the NSW Department of Industry and the NSW Natural Resources Access Regulator. No concerns were raised regarding the model’s predictions or outputs.</p> <p>DPE therefore accepted the proponent’s arguments that the additional environmental impacts and costs resulting from filling the voids outweighed the benefits of re-instating 24 ha of grazing land and concluded that the proposed final landform including two</p>	
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**Attachment K – Analysis of how the IESC’s advice has been addressed in the NSW assessment**

	<p>Upwards leakage from the Permian strata into alluvial sediments occurs naturally in low lying areas along the alignment of major drainages including the Wollombi Brook and Hunter River. The numerical modelling indicates that the evaporative effect of the final void lakes will intercept some of the Permian groundwater that would have otherwise flowed to the alluvium via upward leakage from the Permian in the absence of the open voids. Therefore, upward leakage is a natural process in the groundwater regime, but the overall effect of the project is to reduce upward leakage of Permian groundwater to the alluvium, not increase it.</p> <p>2b(ii) is addressed in Part B of the RTS at pages 84-85. Both United and Wambo mines have used United Collieries underground workings as a water storage facility for many years. This water source is not separated within the WMS, which according to the WMS is consistent with water management practices at coal mines in the Hunter Valley.</p> <p>Underground workings naturally fill with water from coal seams over time so whether or not water is actively transferred to underground workings they will contain the same amount of water.</p> <p>The alternative of building a surface water storage would have greater</p>	<p>voids is an acceptable and appropriate environmental outcome.</p>	
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**Attachment K – Analysis of how the IESC’s advice has been addressed in the NSW assessment**

	<p>environmental impacts and also limit the area from which coal could be extracted.</p> <p>2b(iii) is addressed in Part B of the RTS at pages 85-87.</p> <p>Structural changes due to fault displacement can influence flow direction, however, the faults themselves are not acting as conduits enhancing groundwater flow. The model layers were developed based on detailed site geological models and therefore capture localised displacement of the Permian stratigraphy.</p>		
<p>c. GDEs:</p> <p>i. Potential combined effects on GDEs due to groundwater drawdown and a reduction in surface water flows. For example, the effects of reduced base-flow on low-flow conditions and aquatic biota in Wollombi Brook.</p> <p>ii. Characterisation of GDEs (including stygofauna) in the Hunter River alluvium where the proposed project is predicted to cause up to 10m of</p>	<p>2c(i) is addressed in Part B of the RTS at pages 87-90. The RTS states that the EIS assessment found that the proposed action would have no significant impacts on GDEs. It also states that this conclusion did not change as a result of additional work done in response to the IESC comments.</p> <p>No significant impacts on GDEs or aquatic biota associated with changes to surface waters within Wollombi Brook are predicted.</p> <p>2c(ii) is addressed in Part B of the RTS at page 87. The RTS states: ‘The project is not predicted to cause up to 10m of groundwater drawdown within saturated alluvium as inferred in the IESC comments’.</p> <p>The cumulative drawdown in saturated alluvium along the Hunter River is generally 1m-2m. The cumulative</p>	<p>Condition B49 states that the proponent must ensure that the development complies with the performance measures in Table 4 <i>Water management performance measures</i>. The performance measures for alluvial aquifers (including Wollombi Brook alluvium) require:</p> <ul style="list-style-type: none"> <li>• negligible impacts to the alluvial aquifer beyond those predicted in specific documents listed in the approval, including: <ul style="list-style-type: none"> <li>• negligible change in groundwater levels</li> <li>• negligible impacts to other groundwater users</li> </ul> </li> <li>• appropriate setbacks in accordance with the NSW <i>Aquifer Interference Policy</i>.</li> </ul> <p>The FAR states on pages 48 and 50 that the proponent has committed to</p>	<p>The proposed EPBC condition 1 requires the approval holder to comply with any requirements imposed by the NSW Planning Secretary under State condition B51 to undertake a GDE Study.</p>



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<p>groundwater drawdown.</p>	<p>impacts from existing nearby mining operations have a greater influence on the drawdown within saturated alluvium along the Hunter River.</p> <p>The EIS characterised (identified, mapped and assessed) GDEs in the vicinity of the project area that could be impacted by the proposed action. It also states that this conclusion did not change as a result of additional work done in response to the IESC comments.</p>	<p>undertake periodic sampling of stygofauna.</p> <p>Condition B52e(v) requires the drafting and implementation of a groundwater management plan that must specify groundwater performance criteria, including trigger levels for identifying and investigating any potentially adverse groundwater impacts associated with the development on aquatic habitat and stygofauna.</p>	
<p>d. Impacts arising from leaching from TSFs and materials used in the final landforms.</p>	<p>2d is addressed in Part B of the RTS at pages 91-97. The proponent concluded that the risk of impacts associated with leachate from the TSFs and materials used in the final landform is low.</p> <p>In summary, TSF seepage is a minor fraction of total mine water balance and will be contained in the mine water system.</p> <p>According to the RTS, any water mixed with TSF seepage will only be released under controlled circumstances where NSW water quality discharge criteria are met.</p> <p>Geochemical tests and analysis for waste rock and tailings were conducted by Geoterra. Acid mine drainage potential of overburden and tailings was also assessed.</p> <p>Leachate analysis of waste rock and tailings was conducted to understand</p>	<p>The water management performance measures in table 4 in Condition B49 require the proponent to design and maintain tailings storage areas to encapsulate and prevent the release of tailings seepage and leachate.</p> <p>The water management performance measures in table 4 in Condition B49 also require the proponent to design, install and maintain overburden emplacements to encapsulate and prevent migration of tailings.</p>	<p>The proposed EPBC condition 1 requires the approval holder to comply with any requirements imposed by the NSW Planning Secretary under State condition B52 to prepare a WMP for the development to the satisfaction of the NSW Planning Secretary.</p> <p>Condition B52e(iv) in the State approval requires the drafting of a surface WMP incorporating a program to regularly monitor controlled and uncontrolled discharges and seepage/leachate from the site.</p> <p>Condition B49 requires the proponent to ensure that the proposed action complies with performance measures in Table 4, including designing, installing and maintaining overburden emplacements to encapsulate and prevent migration of tailings seepage and leachate.</p>

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	<p>potential impacts on groundwater quality.</p> <p>These findings are reported in detail in the Geoterra Report at Appendix 3 attached to Part B of the RTS.</p>		
<p>3. For both surface water and groundwater site specific temporal and spatial variability of water quality was not shown for all analytes. Additionally, the range of water quality analytes monitored is limited. This prevents delineation of the current condition and pre-mining variability at specific sites and identification of baseline conditions against which predicted impacts can be assessed. The data should also be compared to site-specific trigger values where available. Data used for modelling (e.g. climate data) should also be presented in a manner that highlights the temporal variability within these datasets. This would allow an assessment of the range of conditions included in modelling.</p>	<p>Recommendation 3 is addressed at page 27 in Part B of the RTS. Additional surface water monitoring was undertaken to address issues raised by the IESC including sampling a broader range of analytes.</p> <p>The full suite of surface water quality data, including all of the data previously reported in the EIS and the newly collected data for both the surrounding surface waters and the water management system, was subject to detailed analysis both temporally and spatially (spatially by comparison between different water systems/surface water types and different parts of the WMS). This analysis was more detailed than that undertaken as part of the EIS providing further analysis on the spatial and temporal distribution of surface water quality as raised in the IESC comments. This analysis did not change any of the findings outlined in the EIS Surface Water Assessment as it did not result in any changes to the outcomes of the previous assessment and did not identify any new issues.</p> <p>Analysis in the RTS provides a guide for the triggers to be applied as part of the</p>	<p>Condition B52e(iv) requires the drafting and implementation of a surface WMP that specifies, amongst other matters, a program to regularly monitor:</p> <ul style="list-style-type: none"> <li>• compliance with the relevant performance measures listed in Table 4 and the performance criteria established above</li> <li>• controlled and uncontrolled discharges and seepage/leachate from the site</li> <li>• impacts on water supply for other water users</li> <li>• surface water inflows, outflows and storage volumes to inform the Site Water Balance</li> <li>• the effectiveness of the surface water management systems and the measures within the Erosion and Sediment Control Plan.</li> </ul> <p>Condition B52e(v) requires the drafting and implementation of a groundwater management plan that, amongst other matters, specifies a program to monitor and evaluate:</p> <ul style="list-style-type: none"> <li>• compliance with the relevant performance measures listed in Table 4 at Condition B49, and</li> </ul>	<p>The proposed EPBC condition 1 requires the proponent to comply with State condition B49. This condition requires the proponent to ensure that the proposed action complies with performance measures in Table 4.</p> <p>The proposed EPBC condition 1 requires the approval holder to comply with any requirements imposed by the NSW Planning Secretary under State condition B52 to prepare a WMP for the development to the satisfaction of the NSW Planning Secretary.</p> <p>State conditions B52e(iv) and B52e(v) require the drafting of a Surface WMP and a Groundwater Management Plan.</p>

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	<p>surface water quality monitoring program for the proposed action.</p> <p>The following sections in the RTS provide detailed discussion and outline the findings of the additional work undertaken:</p> <ul style="list-style-type: none"> <li>• summary of background information contained in the Surface Water Assessment (Appendix 11 of the EIS)</li> <li>• baseline data for the surface waters, including the data collated after the EIS submission, and site specific trigger analysis</li> <li>• expanded monitoring data for the water management system (WMS) and comparison to baseline data for the surrounding surface waters.</li> </ul> <p>Charts of the full data sets are included in Appendix 1 to the RTS.</p> <p>Temporal variability within climate data in relation to the numerical groundwater model is mentioned on page 90 Part B of the RTS.</p> <p>The RTS states that: ‘It should be noted that the numerical model represented natural climatic and streamflow variability through the model input files’.</p> <p>On page 108 of the RTS Part B the proponent states that the WMP will require the drafting and implementation of a Groundwater Management Plan, including:</p>	<p>performance criteria specified at dot point three at Condition B52e(v)</p> <ul style="list-style-type: none"> <li>• water loss/seepage from water storages into the groundwater system</li> <li>• groundwater inflows, outflows and storage volumes to inform the Site Water Balance</li> <li>• any hydraulic connectivity between the alluvial and hardrock aquifers</li> <li>• impacts on groundwater supply for other water users</li> <li>• impacts on GDEs</li> <li>• the effectiveness of the groundwater management systems.</li> </ul>	
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	<ul style="list-style-type: none"> <li>• a groundwater monitoring program (based on the commitments to monitoring made in the EIS and RTS)</li> <li>• trigger levels for water quality and water levels for investigating any potentially adverse impacts.</li> </ul> <p>The WMP will address the management of the open cut operations and will be integrated with the WMP for Wambo which addresses the Wambo Underground, CHPP and train loading facility. There will be erosion and sediment control measures implemented for all works as part of the proposed action including during both the construction and operation phases.</p> <p>On 10 October 2019, (in response to a request from the Department on 4 October 2019) the proponent provided additional information regarding their responses to the IESC advice.</p> <p>In relation to recommendation 3 the proponent stated: Additional analysis of temporal groundwater quality data was undertaken in response to the IESC advice and provided within the RTS Part B (Section 2.1, page 41-45). Appendix 2 with the RTS Part B contains charts of groundwater quality indicators (pH, EC and aluminium) over time. Site specific trigger levels for pH and EC are also included on the charts.</p>		
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	<p>A groundwater monitoring program has been prepared for the project and includes the following analytical suite:</p> <ul style="list-style-type: none"> <li>• physico-chemical indicators – pH, EC, total dissolved solids (TDS)</li> <li>• major ions – calcium, fluoride, magnesium, potassium, sodium, chloride, sulphate</li> <li>• total alkalinity as CaCO<sub>3</sub>, HCO<sub>3</sub>, CO<sub>3</sub></li> <li>• dissolved and total metals – aluminium, arsenic, barium, boron, beryllium, cadmium, chromium, cobalt, copper, iron, lead, manganese, mercury, molybdenum, nickel, selenium, strontium, silver, vanadium, and zinc.</li> </ul> <p>The EIS groundwater model was calibrated using measured groundwater levels and available mine inflows over the period 1970 to 2015. Rainfall data over this time was used to determine rainfall recharge rates and therefore a wide range of climatic conditions were utilised.</p>		
<p>4. Groundwater depths in the regolith need to be shown and compared to the occurrence of potentially groundwater dependent terrestrial vegetation. Mapping should also clearly define where aquifers will</p>	<p>Recommendation 4 is addressed in Part B of the RTS at pages 97, 101 and 121 (additional bores will be established in the regolith).</p> <p>The proposed monitoring network was updated (Part A RTS) to include additional bores within the regolith and spoil around the Project and proposed South Bates TSF. The bores were</p>	<p>This issue is addressed on pp57-58 of the PAR December 2017 and includes a graph depicting predicted groundwater level decline in the alluvium at GDE1.</p> <p>To address potential impacts to GDEs, condition B51 requires the proponent to undertake a GDE Study within 12 months of the project commencing.</p>	<p>The Department concludes the additional work undertaken by the proponent, the NSW assessment and the NSW final conditions addressed this issue.</p> <p>The proposed EPBC condition 1 requires the approval holder to comply with any requirements imposed by the NSW Planning Secretary under State condition B51 to undertake a GDE Study.</p>

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<p>experience complete desaturation.</p>	<p>positioned to enable assessment of groundwater levels, flow directions and water quality, to be monitored on a regular basis for early detection of groundwater quality changes. These mitigation measures will be captured within the Project specific WMP.</p> <p>At GDE1 groundwater levels are predicted to decline more significantly with mining (currently approved mining and the Project). The alluvium near GDE1 is predicted in the groundwater modelling to become largely desaturated due to cumulative impacts from approved mining at HVO South, Wambo and Mount Thorley Warkworth. This desaturation is due to the existing approved mining, without the Project. The Project may result in this effect occurring approximately one year earlier; however, this depends on a range of factors and the timing of any approval for the Project and is highly uncertain. Therefore, according to the RTS the Project is unlikely to result in impacts beyond those currently approved for GDE1.</p>		
<p>5. There is uncertainty in the water balance and flood modelling results due to the lack of information provided on the modelling methodology. There is limited discussion of the parameterisation and calibration process. Assumptions and limitations</p>	<p>Recommendation 5 is addressed in Part B of the RTS.</p> <p>5a. The IESC suggestion that due to the backwater issue identified at the Warkworth gauge consideration should be given to using the upstream Bulga gauge. This was discussed in the RTS Part A and OEH’s advice of April 2017.</p>	<p>In the Assessment Report DPIE stated that the Project can be undertaken:</p> <ul style="list-style-type: none"> <li>• using the existing surface water and groundwater models, which are considered appropriate and fit for purpose, and future revisions and updates of these models</li> <li>• without causing significantly greater impacts than are</li> </ul>	<p>The Department concludes the additional work undertaken by the proponent, the NSW assessment and the State conditions addressed these issues raised in the IESC advice.</p> <p>The proposed EPBC condition 1 requires the approval holder to comply with any requirements imposed by the NSW Planning Secretary under State condition B52 to prepare a WMP for the</p>

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<p>are provided for the water balance modelling only. Sensitivity and uncertainty analyses were not undertaken. This reduces confidence in the modelling results and the suitability of the management and mitigation measures based on these predictions. To increase confidence in the water balance and flood modelling and to show that risks can be adequately addressed, consideration should be given to:</p> <p>a. Providing details on the model construction and values of parameters used. Specifically, flood event peak flow volumes should be compared to other studies undertaken in the vicinity of the proposed project and discrepancies fully explained and justified, including why the flood volumes estimated in this study are considerably lower than those estimated in other studies on Wollombi Brook. Due to the backwater issue identified at the Warkworth gauge</p>	<p>The Department notes that DPI Water developed a new rating curve for the Warkworth gauge and the proponent subsequently committed to updating flood modelling based on this new data as part of preparing final designs for the flood levee and Golden Highway.</p> <p>b. Outlining calibration and validation procedures and reporting of results</p> <p>Sections regarding calibration and validation were included in the RTS Part B (pages 58 to 59, 65, 72 to 77, and the hydrology and hydraulic calibration descriptions in Table 2.21). The approach is summarised below.</p> <p>The hydrology model was calibrated to observed streamflow data within Wollombi Brook at Warkworth using hourly rainfall sourced from the Bulga Coal Mine. The hydrology model was calibrated to the flow response of a flood/flow event during 1998. This flood event was selected for calibration of the hydrology model as there was limited influence by flooding in the Hunter River, good flow records at the Warkworth gauge and hourly rainfall data available. The outputs for the design storm events were also compared to a Flood Frequency Analysis (FFA) (at the Warkworth gauge) based on rating curve data.</p> <p>The results from the two-dimensional (2D) flood model were validated by comparison to historical flood level data,</p>	<p>already approved regarding depressurisation, drawdown, stream leakage, stream flows, GDEs and other vegetation, fauna (including aquatic biota) and flooding</p> <ul style="list-style-type: none"> <li>without causing significant additional impacts to significant water resources (i.e. Wollombi Brook, Hunter River and their associated alluvium).</li> </ul> <p>On 6 November 2018, in an email to the Department, DPE advised that the Warkworth gauge issue was discussed in the RTS Part A and OEH’s advice of April 2017. DPI Water has developed a new rating curve for the Warkworth gauge and the Proponent has committed to updating its flood modelling based on this new data as part of preparing final designs for the flood levee and Golden Highway.</p> <p>Condition B49 states that the proponent must ensure that the development complies with the performance measures in Table 4 <i>Water management performance measures</i>, including:</p> <ul style="list-style-type: none"> <li>Clean water diversions and storage infrastructure must be designed, installed and maintained to capture and convey the 100 year ARI flood event.</li> <li>Flood levees must be designed, installed and maintained to protect mining areas from a 1,000 year ARI</li> </ul>	<p>development to the satisfaction of the NSW Planning Secretary.</p> <p>The proposed EPBC Condition 4 requires the approval holder to comply with State conditions B97 and B98 by rehabilitating the site to the satisfaction of the Resources Regulator. Condition B97 Specifies Rehabilitation Objectives in Table 6.</p>
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<p>consideration should be given to using the upstream Bulga gauge.</p> <p>b. Outlining calibration and validation procedures and reporting of results.</p> <p>c. Undertaking sensitivity and uncertainty analysis.</p> <p>d. Justifying the exclusion of any surface features from the 2D hydraulic model mesh.</p>	<p>as well as comparison to results included in previous studies (WRL, 1996) and Draft WBM BMT Flood Study (2016).</p> <p>In summary, the comparison to historical flood levels indicated that the flood model provided a good basis to determine the relative impacts of the Project on flood behaviour in Wollombi Brook. In addition, the flooding assessment undertaken for the EIS was noted by the NSW Office of Environment and Heritage (OEH) as conservative and appropriate for assessment purposes.</p> <p>c. Undertaking sensitivity and uncertainty analysis</p> <p>Sections regarding the sensitivity analysis were included in the RTS Part B (pages 63 to 65). In summary, the sensitivity analysis considered sensitivity to changes in hydraulic roughness as well as marsh porosity factors. Further to this sensitivity modelling of the 0.2% and 0.5% Annual Exceedance Probability (AEP) flood events was undertaken to act as proxies for climate change as requested by the NSW OEH. The sensitivity analysis also provided information regarding uncertainty data.</p> <p>The outcomes of the sensitivity analysis (as described in the RTS Part B) were:</p> <ul style="list-style-type: none"> <li>• Changing the roughness of the channel +/-10% impacted on</li> </ul>	<p>flood event and to ensure no adverse effect on roads or privately-owned land.</p> <p>Condition 52e(iii) requires the drafting and implementation of an Erosion and Sediment Control Plan. The plan must:</p> <ul style="list-style-type: none"> <li>• describe measures to minimise soil erosion and the potential for the transport of sediment to downstream waters, and manage flood risk</li> <li>• describe the location, function, and capacity of permanent erosion and sediment control structures and flood management structures.</li> </ul> <p>Condition B97 Specifies Rehabilitation Objectives in Table 6 and includes a requirement that in relation to final voids the proponent is required to minimise the risk of flood interaction.</p> <p>Condition C3 states that: ‘The detailed design of the proposed flood levee and Golden Highway realignment must be based on the latest available flood data for the area’.</p>	
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	<p>maximum water surface elevations by up to +/- 240 mm.</p> <ul style="list-style-type: none"> <li>• Flow conveyance in the marsh elements is an insignificant proportion of the total flow and has little effect on the outflows of the model or the shape of the flow hydrographs.</li> <li>• The modelled differences between the 0.5% and 0.2% AEP flood events infer that no major changes occur in the flood behaviour in Wollombi Brook when comparing the modelling results from the two events.</li> </ul> <p>d. Justifying the exclusion of any surface features from the 2D hydraulic model mesh.</p> <p>The development of the digital terrain model (DTM) and subsequent generation of the flood model mesh was described in the RTS Part B (pages 57 and 58). In summary, no specific surface water features were excluded from the 2D hydraulic model mesh due to the techniques used in the development of the DTM and flood model mesh.</p> <p>Checks were undertaken to ensure that the simplified landform to be used for the flood model mesh was representative of the existing topography, with particular attention paid to hydraulically significant features such as creek channels, drains and roads. Cross checks on the volume of flood storage available within each floodplain reach as well as comparison</p>		
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	<p>of elevations to the raw LiDAR mesh were undertaken to check that surface features had not been removed in the development of the mesh. The surface features associated with channels, overflow pathways, roads, bridge approaches, etc. are clearly visible within the mesh structure (Figure 2.4 in RTS Part B).</p> <p>Further to this it was identified that there are two key bridge locations within the flood model area that have the potential to influence flood flows: Wambo Access Road Bridge; and Golden Highway Road Bridge (Cockfighter Bridge). In order to represent the behaviour of the bridges in the 2D model an assessment of the stage-discharge relationships at each of the two crossing points was undertaken to confirm what equivalent roughness should be applied in the model to replicate the bridge performance.</p>		
<p>6. The uncertainty and sensitivity analysis of parameters including recharge and hydraulic conductivity, and the cumulative impact assessment undertaken in the groundwater modelling were completed to a reasonable standard. These analyses have increased the confidence in the groundwater modelling predictions. Improvements to the groundwater model</p>		<p>Condition B52e(v) requires the drafting and implementation of a groundwater management plan that includes:</p> <ul style="list-style-type: none"> <li>• a program to periodically validate the groundwater model for the development, including an independent review of the model every 3 years, and comparison of monitoring results with modelled predictions</li> <li>• a protocol to report on the measures, monitoring results and performance criteria, in the Annual Review required by State condition E11.</li> </ul>	<p>The Department concludes that the State conditions addressed this issue.</p> <p>The proposed EPBC condition 1 requires the approval holder to comply with any requirements imposed by the NSW Planning Secretary under State condition B52 to prepare a WMP for the development to the satisfaction of the NSW Planning Secretary.</p> <p>The department notes that State condition B52e(v) requires the drafting and implementation of a groundwater management plan that includes:</p> <ul style="list-style-type: none"> <li>• a program to periodically validate the groundwater model for the development,</li> </ul>

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<p>which would further increase confidence in the model predictions are outlined below.</p>			<p>including an independent review of the model every 3 years, and comparison of monitoring results with modelled predictions</p> <ul style="list-style-type: none"> <li>• a protocol to report on the measures, monitoring results and performance criteria, in the Annual Review referred to in condition E11.</li> </ul>
<p>7. The assessment documentation is unclear whether both void lakes are expected to act as sinks (EIS, p. 80), or whether leakage may occur from the Wambo void lake (EIS, Appendix 12, p. 88). The Wambo void lake base may be above the recovered groundwater levels meaning it could become a source of groundwater recharge. Given this lake is predicted to become hyper-saline, there is potential for contamination of the Permian groundwater system which could spread to the alluvial aquifers and from there to the surface waters. This is due to the high connectivity between the groundwater systems at the site and the density effects of saline water. There is also potential for the hyper-saline water to enter the surface water system if the voids spill.</p>	<p>Recommendation 7 is addressed in Part A of the RTS at pages 44, 67-69. The RTS states that the final Wambo void will act as a dominant sink drawing in groundwater from the Permian coal measures and all saturated spoil at the site. The final void will not act as a recharge source for any aquifers.</p> <p>Table 2 on page 22 of Part B of the RTS states under <i>groundwater/surface water interactions</i> that the assessment of the final voids indicates that the voids will be self-contained systems which will act as a sink in perpetuity, with no surface spills predicted to downstream watercourses. Therefore, hyper-saline water from the voids won’t enter the surface water system.</p>	<p>DPE addressed this issue on page 37 of the FAR stating that the <i>Concept mine plan and final void assessment</i> state that final voids are planned to be retained and act as a long term water sink, capturing salt and avoiding impacts on surrounding water quality. DPE stated that the retention of two voids is acceptable because it would assist in preventing salt movement downstream and backfilling the voids would be prohibitively expensive.</p> <p>On 15 May 2019, DPE wrote to the NSW IPC in response to an additional information request. DPE cited the proponent’s groundwater modelling showing that groundwater levels in the Wambo void would equilibrate at around 80-83 mRL if the void was backfilled compared to 55 mRL if left open, resulting in saline groundwater flowing towards the lower lying North Wambo Creek. A peer review agreed with the proponent’s view that leaving both voids open would result in lower environmental impacts. The alternative measures of filling the Wambo void would result in prolonged environmental impacts, significant economic costs and adverse</p>	<p>The Department concludes the additional work undertaken by the proponent, the NSW assessment and the state conditions addressed these issues.</p> <p>The Department notes that condition B97 specifies rehabilitation objectives in Table 6 and includes a requirement that final voids must be designed as long term groundwater sinks to maximise ground water flows across back filled pits to the final void.</p>

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		<p>water impacts associated with the loss of a long-term groundwater sink.</p> <p>DPE sought advice from the Water Division of the NSW Department of Industry and the NSW Natural Resources Access Regulator. No concerns were raised regarding the model’s predictions or outputs.</p> <p>DPE therefore accepted the proponent’s arguments that the additional environmental impacts and costs resulting from filling the voids outweighed the benefits of re-instating 24 ha of grazing land and concluded that the proposed final landform including two voids is an acceptable and appropriate environmental outcome.</p> <p>Condition B97 specifies rehabilitation objectives in Table 6 and includes a requirement that final voids must be designed as long term groundwater sinks to maximise ground water flows across back filled pits to the final void.</p>	
<p>8. The approved Homestead and Main TSF (located in existing mined-out voids), and the proposed South Bates TSF (located in underground workings) have the potential to become sources of groundwater recharge. The cumulative potential for discharge from these sources needs to be examined. This should</p>	<p>Recommendation 8 is addressed in Part B of the RTS at page 111.</p> <p>Page 42 of the Geoterra Report states that monitoring of the current Homestead TSF indicates the tailings are not acid forming.</p> <p>Water quality triggers for the Project will be used to implement trigger action response plans (TARPs) aimed at protecting the environment and identifying any unforeseen impacts on</p>	<p>This issue is addressed on p79 of the PAR: “Tailings are and would be disposed of on-site within in-pit tailings storages. Risk would only occur during extreme events and overtopping. Existing management measures which are proposed to continue include limiting the water volume within the pits, meaning overtopping is unlikely to occur”.</p>	<p>The proposed EPBC condition 1 requires the approval holder to comply with any requirements imposed by the NSW Planning Secretary under State condition B52 to prepare a WMP for the development to the satisfaction of the NSW Planning Secretary.</p> <p>Condition B52e(iv) in the State approval requires the drafting of a surface WMP incorporating a program to regularly monitor controlled and uncontrolled discharges and seepage/leachate from the site.</p>

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<p>include an assessment of the risks to the surrounding groundwater systems, design of a monitoring program which is capable of early detection of any groundwater contamination, and a response plan should contamination be confirmed.</p>	<p>downstream water quality should (for example) groundwater contamination be detected.</p> <p>The groundwater assessment concluded that due to extensive depressurisation the final voids will act as a dominant sink drawing in groundwater from the Permian coal measures and all saturated spoil at the site. <u>The final voids will not act as a recharge source for any aquifers.</u></p> <p>Additional information provided by the proponent on 10 October 2019 stated: The EIS numerical model represents the approved open cut and underground mines at Wambo and United. Therefore predictions of groundwater flow represent the cumulative impact of previously approved mining activities on groundwater flow and discharges.</p> <p>The potential for the TSFs to become a recharge source was discussed in the RTS Part B, Section 2.1, page 80-84 which reported:</p> <p>As part of the Project, one new TSF is proposed, which is located within a compartment of the South Bates open cut, part of the current Wambo open cut. The Project will also utilise the currently approved Homestead TSF and Main TSF. The maximum fill level for the proposed South Bates TSF is approximately 50 metres below surface and 40 metres below the base of the alluvium. The TSF will only be utilised during active mine operations, therefore</p>	<p>On 15 May 2019, DPE wrote to the IPC in response to an additional information request. DPE cited the proponent’s groundwater modelling showing that groundwater levels in the Wambo void would equilibrate at around 80-83 mRL if the void was backfilled compared to 55 mRL if left open, resulting in saline groundwater flowing towards the lower lying North Wambo Creek. A peer review agreed with the proponent’s view that leaving both voids open would result in lower environmental impacts. Filling the Wambo void would result in prolonged environmental impacts, significant economic costs and adverse water impacts associated with the loss of a long-term groundwater sink.</p> <p>DPE sought advice from the Water Division of the NSW Department of Industry and the NSW Natural Resources Access Regulator. No concerns were raised regarding the model’s predictions or outputs.</p> <p>DPE therefore accepted the proponent’s arguments that the additional environmental impacts and costs resulting from filling the voids outweighed the benefits of re-instating 24 ha of grazing land and concluded that the proposed final landform including two voids is an acceptable and appropriate environmental outcome.</p> <p>The water management performance measures in table 4 in Condition B49 require the proponent to design and</p>	<p>Condition B52(iv) states that: The surface WMP must detail performance criteria, including trigger levels for identifying and investigating any potentially adverse impacts associated with the development, for:</p> <ul style="list-style-type: none"> <li>• downstream surface water flows and quality</li> <li>• channel stability</li> <li>• downstream flooding impacts.</li> </ul> <p>The Department notes that the trigger levels specified in the surface water and groundwater management plans are the equivalent to the TARPs referred to in the RTS and other State assessment documents.</p> <p>The Department notes that the water management performance measures in table 4 in Condition B49 require the proponent to design and maintain tailings storage areas to encapsulate and prevent the release of tailings seepage and leachate.</p> <p>The water management performance measures in table 4 in Condition B49 also require the proponent to design, install and maintain overburden emplacements to encapsulate and prevent migration of tailings.</p> <p>State condition 52(v) requires the drafting of a Groundwater Management Plan that includes groundwater performance criteria, including trigger levels for identifying and investigating any potentially adverse groundwater impacts associated with the development, on:</p> <ul style="list-style-type: none"> <li>• regional and local aquifers (alluvial and hardrock)</li> <li>• groundwater supply for other water users such as privately-owned licensed groundwater bores</li> </ul>
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	<p>current groundwater conditions of depressurised Permian coal measures are expected to be maintained over the life of the TSF. It is therefore considered unlikely that water associated with the TSF would interact with the alluvium along North Wambo Creek Diversion following capping of the tailings: there will be no rainfall or surface inflows to the TSF and therefore no recharge opportunities.</p> <p>Post closures, water surrounding the proposed TSF and in-pit spoil will flow towards the final voids and remain contained within the mine area. Therefore, there is minimal risk of groundwater within the in-pit spoil and proposed final voids influencing stratigraphy outside of the mine area post closure.</p>	<p>maintain tailings storage areas to encapsulate and prevent the release of tailings seepage and leachate.</p> <p>The water management performance measures in table 4 in Condition B49 also require the proponent to design, install and maintain overburden emplacements to encapsulate and prevent migration of tailings.</p> <p>To address potential impacts to GDEs, condition B51 requires the proponent to undertake a GDE Study within 12 months of the project commencing. This study must:</p> <p>(a) be prepared by suitably qualified and experienced person/s</p> <p>(b) be developed in consultation with DPIE Water</p> <p>(c) assess the hydrological and hydrogeological settings of the site</p> <p>(d) be integrated with the similar studies being undertaken by nearby mines (where practicable).</p> <p>Condition B52e(v) requires the drafting and implementation of a groundwater management plan that specifies a program to monitor and evaluate:</p> <ul style="list-style-type: none"> <li>• compliance with the relevant performance measures listed in Table 4, and performance criteria specified at dot point three at Condition B52e(v)</li> <li>• water loss/seepage from water storages into the groundwater system</li> </ul>	<ul style="list-style-type: none"> <li>• GDEs</li> <li>• aquatic habitat and stygofauna.</li> </ul> <p>State condition B97 includes a requirement that final voids:</p> <ul style="list-style-type: none"> <li>• be designed as long term groundwater sinks to maximise ground water flows across back filled pits to the final void</li> <li>• Minimise to the greatest extent practicable:             <ul style="list-style-type: none"> <li>• the size and depth of final voids</li> <li>• the drainage catchment of final voids</li> <li>• any high wall instability risk</li> <li>• the risk of flood interaction.</li> </ul> </li> <li>• Maximise potential for beneficial reuse, to the greatest extent practicable</li> </ul>
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		<ul style="list-style-type: none"> <li>• groundwater inflows, outflows and storage volumes to inform the Site Water Balance</li> <li>• any hydraulic connectivity between the alluvial and hardrock aquifers</li> <li>• impacts on GDEs</li> <li>• the effectiveness of the groundwater management systems.</li> </ul> <p>State condition B97 includes a requirement that final voids:</p> <ul style="list-style-type: none"> <li>• be designed as long term groundwater sinks to maximise ground water flows across back filled pits to the final void</li> <li>• Minimise to the greatest extent practicable:             <ul style="list-style-type: none"> <li>• the size and depth of final voids</li> <li>• the drainage catchment of final voids</li> <li>• any high wall instability risk</li> <li>• the risk of flood interaction.</li> </ul> </li> <li>• Maximise potential for beneficial reuse, to the greatest extent practicable.</li> </ul>	
<p>9. The project proposes to use the United Collieries underground workings as a potential mine water storage (EIS, Appendix 11, p. 38). The proponent anticipates that storing water in these workings will potentially lessen drawdown in the Permian groundwater</p>	<p>Recommendation 9 is addressed in Part B of the RTS at pages 121 and pages 84-85:</p> <p>Numerical groundwater modelling predicts groundwater within the mine area will be drawn towards active operations and the proposed final voids. Therefore, recharge of groundwater from</p>	<p>Condition B49 includes a water management performance measures table that tailings storage areas are to be designed and maintained to encapsulate and prevent the release of tailings seepage/leachate.</p> <p>Condition B52e(v) requires the drafting and implementation of a groundwater</p>	<p>The Department concludes the additional work undertaken by the proponent, the NSW assessment and the NSW final conditions addressed these issues.</p> <p>The Department notes that numerical groundwater modelling predicts groundwater within the mine area will be drawn towards active operations and the proposed final voids. Therefore, recharge of</p>

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<p>system (EIS, Appendix 12, p. 97), however it has the potential to become a source of contaminated recharge to the groundwater system. The exact location of this proposed store is not identified and the potential for contamination of the alluvial aquifers has not been assessed. This water store should be included in the numerical groundwater model to predict its potential effects on groundwater behaviour and allow an assessment of its potential impacts.</p>	<p>the mine area to water resources and GDEs is not predicted.</p> <p>In order to provide greater assurance of early detection of any groundwater quality changes due to waste rock leachate and tailings storage, the proposed monitoring program has been updated to include additional bores within the regolith and spoil (Part A of the RTS). The bores have been positioned to enable assessment of groundwater levels and flow directions. Water quality data will also be collected and tested for a suite of analytes in order to identify any changes in groundwater quality.</p> <p>Additional information provided by the proponent on 10 October 2019 stated: The proposed water storage within the United Collieries underground workings was not included within the groundwater model (refer EIS groundwater report page 97).</p> <p>The potential impact of the United underground water storage on groundwater quality was discussed in the RTS Part B, Section 2.1, page 84-85 which reported: The Woodlands Hill Underground has also been approved, which will intersect the Woodlands Hill Seam immediately above the United Underground. From a groundwater perspective, due to the restriction on the maximum fill elevation, the stored water</p>	<p>management plan that specifies a program to monitor and evaluate:</p> <ul style="list-style-type: none"> <li>• compliance with the relevant performance measures listed in <u>Table 4</u>, and performance criteria specified at dot point three at Condition B52e(v)</li> <li>• water loss/seepage from water storages into the groundwater system</li> <li>• groundwater inflows, outflows and storage volumes to inform the Site Water Balance</li> <li>• any hydraulic connectivity between the alluvial and hardrock aquifers</li> <li>• impacts on GDEs</li> <li>• the effectiveness of the groundwater management systems.</li> </ul>	<p>groundwater from the mine area to water resources and GDEs is not predicted.</p> <p>The Department also notes that the proposed groundwater quality monitoring program has been updated to include additional bores within the regolith and spoil (Part A of the RTS). The bores have been positioned to enable assessment of groundwater levels and flow directions. Water quality data will also be collected and tested for a suite of analytes in order to identify any changes in groundwater quality.</p> <p>Proposed EPBC condition 1 requires the approval holder to comply with any requirements imposed by the NSW Planning Secretary under State condition B52 to prepare a WMP for the development to the satisfaction of the NSW Planning Secretary.</p> <p>Condition B52 includes condition B52e(v) requiring the drafting and implementation of a groundwater management plan that specifies a program to monitor and evaluate various parameters such as water loss/seepage from water storages (including the United Collieries underground workings) into the groundwater system.</p> <p>Proposed EPBC condition 1 requires the approval holder to comply with State condition B49 that requires the approval holder to comply with water management performance measures in table 4 including tailings storage areas that are to be designed and maintained to encapsulate and prevent the release of tailings seepage/leachate.</p>
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	<p>would not form any hydraulic connection with the alluvial aquifer.</p>		
<p>10. A number of faults occur in the vicinity of the proposed project with some intersecting the open cut pits (EIS, Appendix 12, Figure 4-3, p. 35). No discussion or conceptualisation of the style, throw, thrust and penetration of the faults, or how they would influence groundwater flow was presented in the current documentation. Discussion of the groundwater behaviour of faults is needed and their inclusion in the numerical groundwater model should be considered.</p>	<p>Recommendation 10 is addressed in Part B of the RTS at pages 86-87.</p> <p>Structural changes due to fault displacement can influence flow direction, however, the faults themselves are not acting as conduits enhancing groundwater flow. The model layers were developed based on detailed site geological models and therefore capture localised displacement of the Permian stratigraphy.</p> <p>Additional information provided by the proponent on 10 October 2019 stated: The potential influence of faults was discussed in the RTS Part B, Section 2.1, page 85-87, with further discussion below:</p> <p>Numerous hydrogeological and geotechnical assessments have been conducted across the site over its long history. Faults have been intersected in mine workings across Wambo and United. Faults are generally orientated in a north-south or northeast-southwest direction. North-south trending faults are generally high angle faults with displacements of less than 2 metres. Northeast trending faults are generally low angle thrust faults with displacements of up to 7.5 metres.</p> <p>To inform the RTS a hydrogeologist inspected the pits to better understand</p>	<p>In the PAR (pp86-87), DPE noted that the IESC adopted the approach of considering <i>all</i> potential impacts, rather than the increase in impacts over those currently approved. The IESC provided comment on a range of issues, including the influence of geological faults on groundwater modelling. In response to the IESC’s advice, the proponent provided detailed technical clarifications and undertook additional work. The PAR noted that additional information was provided regarding their presentation of water quality data, site-specific trigger values and modelling. DPE considered that the response provided clarification on the IESC issues and a sound basis for a comprehensive assessment of the Project. Importantly, DPE noted that the additional information provided did not change the overall water resource assessment outcomes as presented in the EIS.</p> <p>In addition to the information provided in the RTS, DPE noted that there is a detailed understanding of the existing water resources on the site and surrounds based on the long history of mining and the existing water monitoring programs, which provide a long-term water quality monitoring data set and a sound basis for developing site-specific trigger values. The monitoring program is regularly updated and results analysed and provided to Government. The water</p>	<p>The Department notes that the groundwater model layers were developed based on detailed site geological models and therefore capture localised displacement of the Permian stratigraphy.</p> <p>The Department also notes that in response to the IESC’s advice, the proponent provided detailed technical clarifications and undertook additional work.</p> <p>The PAR noted that the proponent also provided additional water quality data, site-specific trigger values and modelling. DPE considered that the response provided clarification on the IESC issues and a sound basis for a comprehensive assessment of the Project. Importantly, DPE noted that the additional information provided did not change the overall water resource assessment outcomes as presented in the EIS.</p> <p>The Department concludes the additional work undertaken by the proponent, the NSW assessment and the NSW final conditions adequately addressed this issue.</p> <p>The proposed EPBC condition 1 requires the approval holder to comply with any requirements imposed by the NSW Planning Secretary under State condition B52 to prepare a WMP for the development to the satisfaction of the NSW Planning Secretary.</p> <p>Condition B52e(v) requires the drafting and implementation of a groundwater management plan that specifies a program to monitor and evaluate:</p>

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	<p>fault location and behaviour. Photographs were taken of faults and included within the RTS. The site visit helped better understand how the faults influenced groundwater flow and drawdown.</p> <p>The model is a regional scale impact assessment model and it’s not practical to represent all faults in large models like this, particularly the small faults in the project area, hence the model was not updated. The calibration process may have adjusted hydraulic properties to indirectly account for water levels in bore affected by faults but they were not directly represented. Given this the model therefore takes a conservative approach and allows flow across faults, providing a conservative assessment of drawdown and inflow impacts. This is a standard approach to regional impact assessment models.</p> <p>The numerical model developed for the Project uses the ‘effective porous media approach’, whereby the permeability and storage imparted from joints and fractures is represented as a porous media. Consequently, secondary porosity features within the Permian stratigraphy are captured by the hydraulic properties, derived from available field data and calibration against observed groundwater trends.</p> <p>The groundwater model is capable of predicting impacts due to mining, as evidenced by the good measure of fit</p>	<p>models are also updated regularly, with the groundwater model having been peer reviewed several times recently.</p>	<ul style="list-style-type: none"> <li>• compliance with the relevant performance measures listed in Table 4, and performance criteria specified at dot point three at Condition B52e(v)</li> <li>• water loss/seepage from water storages into the groundwater system</li> <li>• groundwater inflows, outflows and storage volumes to inform the Site Water Balance</li> <li>• any hydraulic connectivity between the alluvial and hardrock aquifers</li> <li>• impacts on groundwater supply for other water users</li> <li>• impacts on GDEs</li> <li>• the effectiveness of the groundwater management systems.</li> </ul>
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	<p>between observed and modelled groundwater levels, which includes replicating localised drawdown responses to historic mining at Wambo and United.</p> <p>Previous experience in the area demonstrates that structural changes due to fault displacement can influence flow directions; however, the faults themselves are not acting as conduits enhancing groundwater flow. The structural influence of the faults on groundwater flow is reflected within the model layers. The model layers were developed based on detailed site geological models and therefore capture localised displacement of the Permian stratigraphy.</p> <p>In summary, the groundwater model appropriately considered the influence of faults and calibration of the model has shown that it is capable of accurately predicting the impacts of the Project.</p> <p>If the project is approved further assessment of faults exposed in the mining areas will be undertaken and observations incorporated into regular updates to the numerical model to gradually refine the predicted impacts.</p>		
<p>11. The proponent has provided a limited assessment of the proposed project’s potential impacts on GDEs, particularly groundwater dependent terrestrial</p>	<p>Recommendation 11 is addressed in Part B of the RTS at pages 87-90. The RTS states that the EIS assessment found that no significant impacts on GDEs were predicted due to the proposed action. It also states that this</p>	<p>The FAR stated that, as set out in the PAR, there would be “<i>some localised effects on potential GDEs due to cumulative drawdown in the alluvium and shallow overburden.</i>”</p>	<p>The proposed EPBC condition 1 requires the approval holder to comply with any requirements imposed by the NSW Planning Secretary under State condition B51 to undertake a GDE Study.</p>

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<p>vegetation located to the north of the project area adjacent to the Hunter River. It is also unclear if the potential impacts on GDEs due to the combined effects of both groundwater drawdown and loss of surface water flows, have been fully considered. This is particularly the case along Wollombi Brook, and for its aquatic biota that rely on base-flow during low-flow periods. Stygofauna were sampled only once; a study of temporal variation in Hunter Valley stygofauna reported new taxa were being collected after four sampling periods in over half the bores sampled (Hancock and Boulton, 2009). Further sampling of representative bores within the zone of drawdown should be considered.</p>	<p>conclusion did not change as a result of additional work done in response to the IESC comments.</p> <p>The proponent has undertaken to install additional groundwater monitoring bores in the Hunter River alluvium and shallow overburden to the north of the site (page 122 Part B of the RTS).</p> <p>The proponent also committed to undertake periodic sampling of stygofauna.</p> <p>In response to the IESC advice the proponent undertook additional stygofauna surveys in the Hunter River alluvium and Wollombi Brook alluvium. Stygofauna was found in very low diversity in the former and was absent in the latter.</p> <p>The drawdown in the Hunter River alluvium is predicted to have a minor, local impact on stygofauna. This is explained in detail from page 88 onwards in Part B of the RTS.</p>	<p>The FAR noted that both GDE1 and GDE2 are located outside the Project site <i>“along the riparian corridors of Redbank Creek and Wollombi Brook respectively”</i> and that impacts to these GDE are likely to <i>“result in sustained groundwater depressurisation and reduced alluvial recharge rates in the locality for a significant period of time.”</i></p> <p>The <i>Central Hunter Swamp Oak Forest</i> EEC is GDE1 and <i>Hunter Valley River Oak Forest</i> is GDE2.</p> <p>The FAR acknowledged that there is some uncertainty <i>“around the characterisation of these GDEs and how they may be impacted by the Project.”</i></p> <p>State condition B51 requires the proponent to undertake a GDE Study within 12 months of commencement of the Project. The study is to include:</p> <ul style="list-style-type: none"> <li>• <i>“assessment of the hydrological and hydrogeological settings of the site</i></li> <li>• <i>characterisation of the GDE’s and their reliance on surface and groundwater resources</i></li> <li>• <i>identification of potential risks to these GDEs from mining</i></li> <li>• <i>development of appropriate performance criteria and management measures to ensure negligible environmental consequences.”</i></li> </ul> <p>The FAR noted that as part of the groundwater monitoring program, required under the Groundwater Management Plan, there is a requirement to develop detailed baseline</p>	<p>The proposed EPBC condition 1 requires the approval holder to comply with any requirements imposed by the NSW Planning Secretary under State condition B52 to prepare a Water Management Plan. Condition B52e(v) requires the drafting and implementation of a groundwater management plan that must include groundwater performance criteria, including trigger levels for identifying and investigating any potentially adverse groundwater impacts associated with the development on aquatic habitat and stygofauna.</p> <p>The proposed EPBC condition 1 requires the proponent to comply with State condition B49. Condition B49 includes a water management performance measures table stating that tailings storage areas are to be designed and maintained to encapsulate and prevent the release of tailings seepage/ leachate.</p>
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		<p>data of GDEs and to develop groundwater performance criteria including trigger levels for identifying and investigating any potentially adverse groundwater impacts on associated GDEs.</p> <p>These measures accord with the IESC recommendations to develop trigger action response plans to manage potential impacts on GDEs. The Department’s FAR concluded that it considered that <i>“predicted impacts on GDEs could be appropriately managed through a comprehensive monitoring regime and adaptive management measures, including specific trigger levels for remedial action and/or offsetting.”</i></p> <p>Assessment Report p64: The Proponent has committed to undertake periodic sampling of stygofauna.</p> <p>Condition B52e(v) requires the drafting and implementation of a groundwater management plan that must include groundwater performance criteria, including trigger levels for identifying and investigating any potentially adverse groundwater impacts associated with the development on aquatic habitat and stygofauna.</p> <p>Condition B49 includes a water management performance measures table stating that tailings storage areas are to be designed and maintained to</p>	
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		encapsulate and prevent the release of tailings seepage/ leachate.	
12. It is not possible to assess the potential impacts due to leaching from TSFs, waste rock and the final landforms because the geochemical analysis report was not provided in the assessment documentation. This report should be provided to allow an assessment of whether the risks posed by this material have been adequately addressed.	<p>Recommendation 12 is addressed in Part B of the RTS at pages 91-97. The proponent concluded that the risk of impacts associated with leachate from the TSFs and materials used in the final landform is low.</p> <p>In summary, TSF seepage is a minor fraction of total mine water balance and will be contained in the mine water system.</p> <p>According to the RTS, any water mixed with TSF seepage will only be released under controlled circumstances where NSW water quality discharge criteria are met.</p> <p>Geochemical tests and analysis for waste rock and tailings were conducted by Geoterra. Acid mine drainage potential of overburden and tailings was also assessed.</p> <p>Leachate analysis of waste rock and tailings was conducted to understand potential impacts on groundwater quality.</p> <p>These findings are reported in detail in the Geoterra Report at Appendix 3 attached to Part B of the RTS.</p>	<p>DPE noted that to provide greater assurance of early detection of any groundwater quality changes due to waste rock leachate and tailings storage, the proposed monitoring program was updated by the proponent to include additional bores within the regolith and spoil.</p> <p>In the PAR (page 109), DPE noted that the geology of the Hunter coalfields has historically presented a low risk of acid and metalliferous drainage. Nonetheless, DPE recommended monitoring of leachate quality and that groundwater monitoring bores be required.</p> <p>State condition B49 includes a water management performance measures table stating that tailings storage areas are to be designed and maintained to encapsulate and prevent the release of tailings seepage/ leachate.</p> <p>State condition B52e(iv) requires the drafting of a surface WMP incorporating a program to regularly monitor controlled and uncontrolled discharges and seepage/leachate from the site.</p>	<p>The proposed EPBC condition 1 requires the proponent to comply with State condition B49. State condition B49 includes a water management performance measures table stating that tailings storage areas are to be designed and maintained to encapsulate and prevent the release of tailings seepage/ leachate.</p> <p>The proposed EPBC condition 1 requires the approval holder to comply with State condition B52 to prepare a WMP for the development.</p> <p>State condition B52e(iv) requires the drafting of a surface WMP incorporating a program to regularly monitor controlled and uncontrolled discharges and seepage/leachate from the site.</p>
13. In addition to the responses provided in Question 1, the following would enable	13a is addressed in Part B of the RTS at pages 98-99.	To address potential impacts to GDEs, condition B51 requires the proponent to	The Department concludes the additional work undertaken by the proponent, the NSW

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<p>assessment of the impacts of the proposed project:</p> <p>a. The surface water modelling could be improved by:</p> <p>i. Estimating flood hydrographs using a runoff routing model as recommended by Australian Rainfall and Runoff (Ball <i>et al.</i> 2016).</p> <p>ii. Discussing the limitations and assumptions of the selected modelling approach and the data used in the models.</p> <p>iii. Presenting model results against the 2D hydraulic mesh model boundary and aerial photography to facilitate interpretation.</p> <p>b. A systematic approach to identifying GDEs and application of techniques outlined in the GDE Toolbox (Richardson <i>et al.</i> 2011) would improve the</p>	<p>The RTS states (Part B page 98) that the flood assessment in the EIS was accepted by NSW OEH and was identified as being conservative.</p> <p>According to the RTS (Part B page 98) the 2D modelling approach is consistent with methods outlined in the Australian Rainfall and Runoff Project 15 - 2D Modelling in Urban and Rural Floodplains (November 2012).</p> <p>The RTS states (Part B page 98) that the results of the modelling were presented in a series of figures for the 10 per cent, 5 per cent and 1 per cent annual exceedance probability flood and the probable maximum flood event in the Flood Assessment Report. As requested by the IESC, additional figures were produced presenting the model results against the 2D hydraulic mesh and aerial photograph at a larger scale.</p> <p>The RTS (Part B page 98) cites a scientific paper by Ball <i>et al.</i> 2016 that states that: ‘In situations where the interest is only in the combined hydrograph at the catchment outlet and where good flood records for current conditions are available at that point, modelling of the catchment as a single “lumped” response unit may be sufficient’. The RTS states that this was considered to be the case for the Wollombi Brook Flood Assessment for this proposed action.</p>	<p>undertake GDE Study within 12 months of the project commencing.</p> <p>Condition B52e(v) requires the drafting and implementation of a groundwater management plan that must include groundwater performance criteria, including trigger levels for identifying and investigating any potentially adverse groundwater impacts associated with the development on aquatic habitat and stygofauna.</p> <p>The FAR (page 56) found that the Project will have some localised effects on GDEs due to drawdown in the alluvium and shallow overburden and will contribute to the cumulative drawdown impacts of mining in the area.</p> <p>In the FAR (pages 57-58), DPE acknowledged that the proposed development would contribute a limited degree of additional drawdown pressure in this area and would accelerate the desaturation of this alluvium by about one year. However, this additional pressure would only change the timing of impacts and would not result in any substantial changes to the overall magnitude of impacts already approved to occur. DPE considered this slight change in timing to be acceptable.</p> <p>The FAR (page 58) notes that the EIS considers that the Project will not result in any significant additional impacts to GDEs due to changing surface water flows, especially considering the mine</p>	<p>assessment and the NSW final conditions adequately addressed these issues.</p> <p>The proposed EPBC condition 1 requires the approval holder to comply with any requirements imposed by the NSW Planning Secretary under State condition B51 to undertake a GDE Study.</p> <p>The proposed EPBC condition 1 requires the approval holder to comply with any requirements imposed by the NSW Planning Secretary under State condition B52 to prepare a WMP for the development to the satisfaction of the NSW Planning Secretary.</p> <p>Condition B52e(v) requires the drafting and implementation of a groundwater management plan that must include groundwater performance criteria, including trigger levels for identifying and investigating any potentially adverse groundwater impacts associated with the development on aquatic habitat and stygofauna.</p> <p>The proposed EPBC condition 1 requires the proponent to comply with State condition B49. Condition B49 states that the proponent must ensure that the development complies with the performance measures in Table 4 <i>Water management performance measures</i>, including:</p> <ul style="list-style-type: none"> <li>• The clean water diversions and storage infrastructure must be designed, installed and maintained to capture and convey the 100 year ARI flood event.</li> <li>• Flood levees must be designed, installed and maintained to protect mining areas from a 1,000 year ARI flood event and to ensure no adverse effect on roads or privately-owned land.</li> </ul>
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<p>assessment of potential impacts on GDEs. Additional suggestions include:</p> <p>i. Further surveys of GDEs which may include remote sensing to identify spatial and temporal variations in groundwater dependent vegetation (Barron <i>et al.</i> 2014), especially along the Hunter River to the north of the project. Additional stygofauna sampling should also be considered in this area.</p> <p>ii. Discussion of how the predicted drawdown will affect the ability of GDEs to continue to access and utilise groundwater.</p>	<p>The RTS provided further information on the modelling approach.</p> <p>Additional figures were provided presenting the model results against the 2D hydraulic mesh model boundary results and aerial photographs at a larger scale.</p> <p>13b is addressed in Part B of the RTS at pages 88 and 100-102.</p> <p>The RTS states that the EIS assessment found that no significant impacts on GDEs were predicted due to the proposed action. It also states that this conclusion did not change as a result of additional work done in response to the IESC comments.</p> <p>According to the RTS (Part B page 100), in response to the IESC advice the proponent undertook additional stygofauna surveys in the Hunter River alluvium and Wollombi Brook alluvium. Stygofauna was found in very low diversity in the former and was absent in the latter.</p> <p>The proponent has committed to undertake periodic sampling of stygofauna (FAR page 64).</p> <p>According to the RTS (Part B page 100), the area of Hunter River alluvium where some degradation is predicted due to the proposed action consists of modified vegetation and no GDEs have been identified.</p>	<p>plans incorporate setback distances from Wollombi Brook, the Hunter River and associated riparian GDEs.</p> <p>DPE considered that predicted impacts on GDEs could be appropriately managed through a comprehensive monitoring regime and adaptive management measures, including specific trigger levels for remedial action (page 58 FAR).</p> <p>The proponent committed to undertake periodic sampling of stygofauna (FAR page 64).</p> <p>These issues were addressed through conditioning in the NSW approval for the project, as outlined above.</p>	<p>Condition B49 also includes aquatic, riparian and GDE performance measures.</p>
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<p>14. Has the applicant provided reasonable strategies to avoid, mitigate or reduce the likelihood, extent and significance of impacts? And if not, why are the strategies unsatisfactory?</p> <p>IESC Response: The proposed strategies were not able to be assessed due to the lack of information provided on these strategies in the assessment documentation. The WMP is the central element of the proposed mitigation and management measures. This document has not been finalised and was not provided with the assessment documentation. Therefore the IESC is unable to determine if the proposed strategies are reasonable.</p>	<p>Recommendation 14 is addressed in Part B of the RTS at pages 102-110:</p> <p>According to Part B of the RTS (page 102), a WMP is required as an approval condition not as part of the assessment process.</p> <p>The EIS outlined in detail the water management strategies and commitments that have been made for the Project. The EIS also committed to the development of, and provided detail on the proposed content of, the WMP for the Project. The water management system for the Project (Project WMS) has been designed in accordance with relevant government standards to limit potential impacts on downstream water resources by: containing mine water; managing runoff from disturbed areas; and undertaking all discharges in accordance with environmental protection licences and legislation.</p> <p>The Project WMS has been designed to convey clean water around mining operations and segregate, store and reuse mine-impacted water to minimise adverse effects on water quality from mining operations to downstream waterways.</p> <p>According to the RTS, the Project exists within a well-regulated system that has been designed to provide for the sustainable management of the State’s water resources. The design and management of the WMS has and will</p>	<p>The State conditions require:</p> <ul style="list-style-type: none"> <li>• the preparation and implementation of a Water Management Plan, including a program to monitor groundwater levels and surface and groundwater quality</li> <li>• the provision of compensatory water supplies for any affected groundwater user</li> <li>• compliance with water management performance measures, and</li> <li>• the implementation of suitable mitigation, management, monitoring and response measures to manage impacts on water resources.</li> </ul> <p>State Condition B49 states that the proponent must ensure that the development complies with the performance measures in Table 4 <i>Water management performance measures</i>.</p> <p>State Condition B52 requires the proponent to prepare a WMP for the development to the satisfaction of the NSW Planning Secretary.</p>	<p>The Department concludes the additional work undertaken by the proponent, the NSW assessment and the NSW final condition requiring the drafting and implementation of a WMP addressed these issues raised in the IESC advice.</p> <p>The Department has recommended compliance with relevant State conditions. These are discussed in the legal considerations (<a href="#">Attachment F</a>) and in this table which details the IESC’s advice, the proponent’s response, DPE’s response and the corresponding EPBC Act conditions of approval which have been recommended by the Department.</p> <p>The objective of the recommended EPBC conditions 1 is to minimise the impacts of the action on a Water Resource. These conditions require compliance with relevant State conditions.</p>
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	<p>be undertaken in a manner that meets these legislative requirements, resulting in the WMS contributing to the achievement of this sustainable management of water.</p>		
<p>15. Are there further strategies the IESC would recommend to avoid, mitigate or reduce the likelihood, extent and significance of impacts on water resources? And if so, why?</p> <p>Noting the response to Question 3, strategies that could be considered include:</p> <p>a. Use of water treatment technologies to improve the quality of discharge waters given exceedances of ANZECC guidelines have been observed in the water management system.</p> <p>b. Regular validation and review of the water balance, groundwater and surface water models including independent peer review. Uncertainty analysis of the groundwater model has highlighted that the predicted impacts could</p>	<p>Recommendation 15 is addressed in Part B of the RTS at pages 110-114.</p> <p>According to the RTS, treatment methods used within the WMS include management of different water qualities (i.e. clean, dirty and mine water) and use of settling technologies for removal of sediment loads. There are no other treatment technologies currently proposed to be implemented as part of the Project as they are not considered necessary to meet the objective of sustainably managing water in accordance with NSW Government requirements.</p> <p>The water treatment on the site, i.e. containment and settling, meets the water quality discharge requirements for the HRSTS (Hunter River Salinity Trading Scheme) and EPL and no water which does not meet these requirements will be discharged from the site.</p> <p>A WMP will be prepared for the Project, in consultation with DPE and DPI Water, and will account for reporting and assessment requirements for active approved operations. This includes annual review of monitoring data against</p>	<p>Condition B52e(1) requires the preparation of a site water balance</p> <p>Condition B52e(v) also requires the drafting and implementation of a groundwater management plan that includes:</p> <ul style="list-style-type: none"> <li>• a program to periodically validate the groundwater model for the development, including an independent review of the model every 3 years, and comparison of monitoring results with modelled predictions</li> <li>• a protocol to report on the measures, monitoring results and performance criteria, in the Annual Review referred to in condition E11.</li> </ul> <p>Condition B52e(iv) requires the drafting of a surface WMP incorporating a program to regularly monitor:</p> <ul style="list-style-type: none"> <li>• compliance with the relevant performance measures listed in Table 4 and performance criteria listed in this condition,</li> <li>• controlled and uncontrolled discharges and seepage/leachate from the site</li> </ul>	<p>The Department concludes the additional work undertaken by the proponent, the NSW assessment and the NSW final conditions addressed these issues raised in the IESC advice.</p> <p>The Department has recommended compliance with State conditions to address any residual impacts on water resources, in accordance with the IESC’s advice. These are discussed in the legal considerations (<a href="#">Attachment F</a>) and in this table which details the IESC’s advice, the proponent’s response, DPE’s response and the corresponding EPBC Act conditions of approval which have been recommended by the Department.</p> <p>The proposed EPBC condition 1 requires the approval holder to comply with any requirements imposed by the NSW Planning Secretary under State condition B52 to prepare a WMP for the development to the satisfaction of the NSW Planning Secretary.</p> <p>Condition B52e(v) also requires the drafting and implementation of a groundwater management plan that includes:</p> <ul style="list-style-type: none"> <li>• a program to periodically validate the groundwater model for the development, including an independent review of the model every 3 years, and comparison of monitoring results with modelled predictions</li> </ul>

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<p>vary considerably (e.g. higher hydraulic conductivity rates would reduce surface water flows (EIS, Appendix B of Appendix 12, pp. 40-41)). Therefore improving confidence in the modelling outputs is important. It is noted that some layers of the groundwater model may not contain calibration targets. As part of the validation process, data should be obtained for these layers. Validation should occur promptly once data is available. The proponent has committed to reviewing the groundwater model every 5 years (EIS, Appendix 12, p. 116), however this could be done more frequently and should be done if validation indicates that observed drawdowns are inconsistent with predicted drawdown.</p> <p>c. Management actions based on trigger systems need to be clearly articulated and presented for all potential impacts.</p>	<p>water balance, surface water and groundwater modelling predictions.</p> <p>The WMP will include a prescriptive Trigger Action Response Plan (TARP). Surface water and groundwater monitoring data will be compared against the prescribed trigger thresholds relevant for each monitoring location and parameter. When surface water and groundwater monitoring results are compared to the water quality trigger thresholds:</p> <ul style="list-style-type: none"> <li>• if results do not exceed the trigger thresholds for the relevant monitoring location, then no further action is required;</li> <li>• if results exceed the water quality thresholds, an investigation and response will be initiated. The WMP will include a prescriptive TARP if groundwater quality impacts around TSF’s and the final voids are detected. In addition, a TARP process will be established for alluvial aquifers, private users and watercourses if impacted as a result of the Project.</li> </ul>	<ul style="list-style-type: none"> <li>• surface water inflows, outflows and storage volumes to inform the Site Water Balance</li> <li>• the effectiveness of the surface water management systems and the measures within the Erosion and Sediment Control Plan.</li> </ul> <p>Existing water management triggers already exist for mining operations at Wambo and United. The proponent proposes to review and update site-specific water triggers during development of a Water Management Plan, should the Project be approved.</p> <p>Regarding groundwater, specific trigger levels for each bore are proposed by the proponent as this would provide good indications of groundwater change on a localised level.</p> <p>The Department notes that development of a WMP for the Project would occur in consultation with DPIE Water and EPA.</p>	<ul style="list-style-type: none"> <li>• a protocol to report on the measures, monitoring results and performance criteria, in the Annual Review referred to in condition E11.</li> </ul> <p>Condition B52e(iv) requires the drafting of a surface WMP incorporating a program to regularly monitor:</p> <ul style="list-style-type: none"> <li>• compliance with the relevant performance measures listed in Table 4 and performance criteria listed in this condition,</li> <li>• controlled and uncontrolled discharges and seepage/leachate from the site,</li> <li>• surface water inflows, outflows and storage volumes to inform the Site Water Balance,</li> <li>• the effectiveness of the surface water management systems and the measures within the Erosion and Sediment Control Plan.</li> </ul> <p>The Department notes that the trigger levels specified in the surface water and groundwater management plans are the equivalent to the TARPs referred to in the RTS and other State assessment documents.</p> <p>The proposed EPBC condition 1 requires the proponent to comply with State condition B49. This condition requires the proponent to ensure that the proposed action complies with performance measures in Table 4, including aquatic, riparian and GDE performance measures.</p>
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<p>16. Does the EIS provide a reasonable assessment of the potential for discharges (including salt) to nearby watercourses and alluvial groundwater systems and the significance of any resulting impacts on water quality and the downstream environment? If not, what additional information would be required to provide a reasonable assessment of these matters?</p> <p>Some potential discharge sources and pathways have not been fully examined in the assessment documentation. Further consideration is required for:</p> <p>a. Wambo void lake which could become a recharge source for the groundwater systems, as discussed in response to Question 1. Possible spillages from the water management system.</p> <p>b. The potential for water from tailings dewatering to be a contaminant source when it is reused.</p>	<p>Recommendation 16a is addressed in Part B of the RTS at page 114 and in Part A of the RTS at pages 69-70 and 202.</p> <p>The final void will act as a dominant sink drawing in groundwater from the Permian coal measures and all saturated spoil at the site. The final void will not act as a recharge source for any aquifers.</p> <p>16b is addressed in Part B of the RTS at pages 115-119: The reuse of tailings decant water is ongoing at the Wambo mine. The vast majority of the material to be mined will be acid consuming, the risk associated with any small areas of potential acid forming (PAF) materials will be low.</p> <p>16c is addressed in Part B of the RTS at pages 119-120: The WMS is designed to contain mine water and all discharges must be in accordance with existing State licences. All monitoring of discharges will occur in accordance with existing licences. The proponent believes that no further discussion is required because the discharge is approved and operational and no changes to this arrangement are required to undertake the proposed action.</p>	<p>On 15 May 2019, DPE wrote to the IPC NSW in response to an additional information request. DPE cited the proponent’s groundwater modelling showing that groundwater levels in the Wambo void would equilibrate at around 80-83 mRL if the void was backfilled compared to 55 mRL if left open, resulting in saline groundwater flowing towards the lower lying North Wambo Creek. A peer review agreed with the proponent’s view that leaving both voids open would result in lower environmental impacts. Filling the Wambo void would result in prolonged environmental impacts, significant economic costs and adverse water impacts associated with the loss of a long-term groundwater sink.</p> <p>DPE sought advice from the Water Division of the NSW Department of Industry and the NSW Natural Resources Access Regulator. No concerns were raised regarding the model’s predictions or outputs.</p> <p>DPE therefore accepted the proponent’s arguments that the additional environmental impacts and costs resulting from filling the voids outweighed the benefits of re-instating 24 ha of grazing land and concluded that the proposed final landform including two voids is an acceptable and appropriate environmental outcome.</p> <p>Condition B46 states that all surface discharges from the site must comply with:</p>	<p>Recommended EPBC condition 1 requires the approval holder to comply with State development consent condition B52 to prepare a WMP for the development.</p> <p>The proposed EPBC condition 1 requires the proponent to comply with State condition B49. Condition B49 includes a water management performance measures table that in relation to alluvial aquifers (including Wollombi Brook Aquifer) requires appropriate setbacks according to the <i>NSW Aquifer Interference Policy</i> and results in negligible impacts to the alluvial aquifer beyond those predicted in specific documents listed in the approval, including:</p> <ul style="list-style-type: none"> <li>• negligible change in groundwater levels</li> <li>• negligible impacts to other groundwater users.</li> </ul> <p>The water management performance measures in table 4 in Condition B49 require the proponent to design and maintain tailings storage areas to encapsulate and prevent the release of tailings seepage and leachate.</p> <p>Recommended EPBC condition 1 requires the approval holder to comply with State development consent condition B46 to ensure that surface discharges from the site comply with:</p> <p>(a) discharge limits (both volume and quality) set for the development in any EPL, or</p> <p>(b) relevant provisions of the NSW POEO Act or Protection of the Environment Operations (Hunter River Salinity Trading Scheme) Regulation 2002.</p> <p>Recommended EPBC condition 4 requires the proponent to comply with State condition B97 that specifies Rehabilitation Objectives in Table 6 and</p>
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<p>c. Characterisation of metals, nutrients and organics in water discharged at the licenced discharge point on Wollombi Brook.</p>		<p>(a) discharge limits (both volume and quality) set for the development in any EPL, or</p> <p>(b) relevant provisions of the <i>Protection of the Environment Operations Act 1997</i> (POEO Act) or Protection of the Environment Operations (Hunter River Salinity Trading Scheme) Regulation 2002.</p> <p>The water management performance measures in table 4 in Condition B49 require the proponent to design and maintain tailings storage areas to encapsulate and prevent the release of tailings seepage and leachate.</p> <p>Condition B52e(iv) requires the drafting of a surface WMP incorporating a program to regularly monitor controlled and uncontrolled discharges and seepage/leachate from the site.</p>	<p>includes a requirement that in relation to final voids:</p> <ul style="list-style-type: none"> <li>• be designed as long term groundwater sinks to maximise ground water flows across back filled pits to the final void</li> <li>• Minimise to the greatest extent practicable: <ul style="list-style-type: none"> <li>• the size and depth of final voids</li> <li>• the drainage catchment of final voids</li> <li>• any high wall instability risk</li> <li>• the risk of flood interaction.</li> </ul> </li> <li>• Maximise potential for beneficial reuse, to the greatest extent practicable.</li> </ul>
<p>17. There is potential for water storages to spill into Wollombi Brook and North Wambo Creek, including some that contain mine water. Due to the issues with the surface water modelling discussed in point 5 of this advice, and the recent dam failure at Wambo Coal, uncertainty exists as to whether the proposed measures to prevent discharges to surface water features will be sufficient. If any of these proposed measures was to fail,</p>	<p>The RTS concluded that there will be no spills from voids into downstream watercourses.</p> <p>According to Part B of the RTS (p46), surface water and groundwater monitoring programs are currently being implemented at United and Wambo with the content of these monitoring programs approved by the NSW Government.</p> <p>The surface water quality monitoring programs have developed over the period of historical mining to provide indicators of any increased risk or environmental harm. As such, these</p>	<p>Condition B46 requires the proponent to ensure that all surface discharges from the site comply with:</p> <p>(a) discharge limits (both volume and quality) set for the development in any EPL, or</p> <p>(b) relevant provisions of the NSW POEO Act or Protection of the Environment Operations (Hunter River Salinity Trading Scheme) Regulation 2002.</p> <p>The performance measures for above-ground mine water storages specified in Table 4 <i>Water Management Performance Measures</i> in State condition B49 are:</p>	<p>Recommended EPBC condition 1 requires the approval holder to comply with State development consent condition B46 to ensure that surface discharges from the site comply with:</p> <p>(a) discharge limits (both volume and quality) set for the development in any EPL, or</p> <p>(b) relevant provisions of the NSW POEO Act or Protection of the Environment Operations (Hunter River Salinity Trading Scheme) Regulation 2002.</p> <p>The proposed EPBC condition 1 requires the proponent to comply with State condition B49. State condition B49 specifies the performance measures for above-ground mine water storages in Table 4 Water Management Performance Measures in the NSW Approval (p20) are:</p>

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<p>uncontrolled discharges of potentially contaminated water may occur. Further assessment of this potential discharge and contamination pathway should be made, with mitigation measures identified should spilling occur. Given the high connectivity between surface water and groundwater in parts of the proposed project area, the potential for contamination of groundwater should be considered and management options developed if needed.</p>	<p>monitoring programs focus on the key risks associated with the water management system to downstream receiving waters being spills from sediment dams in the dirty water system to the downstream environment. These parameters, being pH, EC, TDS and total suspended solids, have been determined to be the key water quality risk indicators for the mining operation considering the nature of the operation and the geological context within which it sits, and there are significant data sets for these key parameters. Monitoring of licensed discharges is also undertaken to confirm that discharge criteria are met (volume and quality).</p> <p>Additional information provided by the proponent on 10 October 2019 stated: The Project exists within a well-regulated water resource management system that has been designed by the NSW government to provide for the sustainable management of the State’s water resources and the Project complies with all of these NSW requirements reducing the risk of the Project resulting in significant impacts to water resources.</p> <p>As described in the RTS Part B (page 13) the NSW government requires developments (including mining) to control water pollution, including management of sustainable salt loads associated with all water sources, including mine water discharges – that is, making sure that poor quality water is</p>	<ul style="list-style-type: none"> <li>• Design, install and maintain mine water storage infrastructure to avoid unlicensed or uncontrolled discharge of mine water</li> <li>• Design to contain the 100 year ARI storm event and minimise permeability.</li> </ul> <p>Water management performance measures in Condition B49 for alluvial aquifers (including Wollombi Brook Aquifer) require appropriate setbacks according to the NSW <i>Aquifer Interference Policy</i> and result in negligible impacts to the alluvial aquifer beyond those predicted in specific documents listed in the approval, including:</p> <ul style="list-style-type: none"> <li>• negligible change in groundwater levels</li> <li>• negligible impacts to other groundwater users.</li> </ul>	<ul style="list-style-type: none"> <li>• Design, install and maintain mine water storage infrastructure to avoid unlicensed or uncontrolled discharge of mine water</li> <li>• Designed to contain the 100 year ARI storm event and minimise permeability.</li> </ul> <p>Condition B49 includes a water management performance measures table that in relation to alluvial aquifers (including Wollombi Brook Aquifer) requires appropriate setbacks according to the NSW <i>Aquifer Interference Policy</i> and results in negligible impacts to the alluvial aquifer beyond those predicted in specific documents listed in the approval, including:</p> <ul style="list-style-type: none"> <li>• negligible change in groundwater levels</li> <li>• negligible impacts to other groundwater users.</li> </ul>
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	<p>not discharged from the Project and that any water released meets relevant quality requirements such that it does not result in significant impacts on downstream water quality.</p> <p>The NSW government also provides guidelines that govern the appropriate design of water management systems for mines to provide for appropriate water quality in accordance with pollution control requirements.</p> <p>As discussed in the RTS Part B (page 14) both United and Wambo mines have extensive existing WMSs in place which include mine dewatering systems, water storages, sedimentation and retention basins, and water diversions and catch drains.</p> <p>The proposed measures for the Project to prevent discharges to surface water features include capture and management of both dirty water i.e. runoff from disturbed areas outside the mining pit and infrastructure areas, such as overburden emplacement areas (both active and under rehabilitation) and mine water i.e. runoff from areas exposed to coal, groundwater inflows and water used in coal processing or from coal stockpile areas.</p> <p>Dirty water controls will be designed, managed and maintained in accordance with the NSW guidelines: Managing Urban Stormwater: Soils and Construction Volume 1, and Volume 2E</p>		
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	<p>Mines and Quarries (Table 2.1 of the RTS Part B).</p> <p>Mine water controls will be designed to convey and capture the 1% 24 hour AEP event, with sufficient freeboard in mine water storages to contain this runoff (Table 2.1 of the RTS Part B).</p> <p>Surplus water will be discharged from the WMS in accordance with the relevant NSW regulations (as described on page 17 of the RTS Part B). In summary, pollution in NSW is regulated by the Protection of the Environment Operations Act 1990 (POEO Act) with discharges from the mine water management system required to be licensed by an Environment Protection Licence (EPL) if the discharge would otherwise constitute a pollution of waters (section 120 of the POEO Act). The quantity and quality of water discharges from mining operations in the Hunter Region are managed in accordance with relevant EPLs and consistent with the provisions of the Hunter River Salinity Trading Scheme (HRSTS). As part of the development of the HRSTS, the NSW Government has determined the sustainable salt load for the Hunter River, considering the impacts on the environment. Surplus water within the mine water management system will be managed under the EPL and HRSTS and discharged in accordance with these controls.</p>		
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	<p>The potential for surface water potentially contaminated with mine water to impact upon groundwater depends on the connectivity between surface water and groundwater. The EIS groundwater report (Figure 3-6) provided an assessment of potential ‘losing’ and ‘gaining’ zones along the Wollombi Brook and Hunter River. This assessment concluded that both the Hunter River and Wollombi Brook are predominantly gaining water from the alluvium, however, there are also areas where the river recharges the underlying alluvium and losing conditions occur. This suggests that any contamination of surface water would largely remain within surface water.</p>		
<p>18. The proponent proposes to reuse water from tailings dewatering (EIS, p. 235). This water has the potential to be contaminated. Reuse of this water should therefore be confined to areas where runoff can be captured and retained by the water management system to prevent possible discharges to adjacent waterways. Additionally, application rates should be carefully managed to limit the amount of contaminated water that could potentially become groundwater recharge. A water quality assessment of this water should also be</p>	<p>Recommendation 18 is addressed in Part B of the RTS at pages 119-120.</p> <p>The RTS states that the reuse of tailings decant water is ongoing at the Wambo mine. This water source is not separated within the WMS, which according to the RTS is consistent with water management practices at coal mines in the Hunter Valley.</p> <p>Additional information provided by the proponent on 10 October 2019 stated: As discussed in the RTS Part B (page 119) reuse of tailings decant water within the water management systems (WMS) for both United and Wambo mines has been undertaken throughout the operation of these mines. This water ‘source’ is not separated within the</p>	<p>Condition B49 requires the proponent to ensure that the proposed action complies with performance measures in Table 4, including:</p> <ul style="list-style-type: none"> <li>• designing, installing and maintaining overburden emplacements to encapsulate and prevent migration of tailings.</li> <li>• designing and maintain tailings storage areas to encapsulate and prevent the release of tailings seepage/leachate.</li> </ul>	<p>Recommended EPBC condition 1 requires the approval holder to comply with State development consent condition B46 to ensure that surface discharges from the site comply with:</p> <p>(a) discharge limits (both volume and quality) set for the development in any EPL, or</p> <p>(b) relevant provisions of the NSW POEO Act or Protection of the Environment Operations (Hunter River Salinity Trading Scheme) Regulation 2002.</p> <p>The proposed EPBC condition 1 requires the proponent to comply with State condition B49. Condition B49 requires the proponent to ensure that the proposed action complies with performance measures in Table 4, including:</p> <ul style="list-style-type: none"> <li>• designing, installing and maintaining overburden emplacements to encapsulate and prevent migration of tailings</li> </ul>

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<p>undertaken to enable adequate management of these risks.</p>	<p>WMS, which is consistent with water management practices for coal mines in the Hunter Valley. The general water quality monitoring within the WMS (mine water) is considered representative of the water quality to be expected with reuse of tailings decant water.</p> <p>A comprehensive discussion on the water quality within the WMS was included in the RTS Part B (page 37). In summary, mine water is typically neutral to alkaline with pH, electrical conductivity (EC) and total suspended solids (TSS) typically being above the ANZECC default triggers for lowland rivers in NSW. EC in the mine water system ranges typically up to 10,000 µS/cm and shows a decreasing overall trend in EC in recent years. High EC is to be expected in mine water systems due to the influence of coal seam groundwater within the system.</p> <p>Table 2.9 of the RTS Part B also included a summary of the statistical analysis for metals and nutrients for mine water for a range of metals and nutrients. The following summary was provided in the RTS Part B (page 41).</p> <p>The analysis shows that mine water quality typically exceeds the default ANZECC guidelines for 95% freshwater ecosystem protection for the same analytes as the Hunter River (Al, Cu, Zn and TP) as well as for As, Cd, Fe, Pb, Se, pH, EC and Nitrate. However, only</p>		<ul style="list-style-type: none"> <li>designing and maintain tailings storage areas to encapsulate and prevent the release of tailings seepage/leachate.</li> </ul>
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	<p>Fe is higher than the ANZECC irrigation guidelines.</p> <p>It should be noted that one elevated reading for TP for the Homestead Open Cut Pit influences the analysis for TP for mine water. Similarly, water quality samples for the C11 weir are elevated in nitrates and influence the analysis for nitrates for mine water.</p> <p>The above results for mine water quality are as expected given that the mine water is not representative of the natural surface water quality within the surrounding environment. Mine water has a strong influence from groundwater from the coal seam aquifers intercepted during mining with this water being of poorer quality than that of surface waters. It is for this reason that the WMS for the Project separately manages this water and contains it on the site for reuse. The WMS has been designed to avoid overflows of mine water and the only potential release path for mine water is via the Wambo licenced discharge point to Wollombi Brook. As discussed in the EIS, there are existing NSW government-imposed water quality discharge limits on this existing Wambo licenced discharge point and no changes are proposed to these quality limits for the Project. Water must meet these quality limits prior to being discharged, with these limits determined by the NSW Government to acceptably</p>		
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	<p>manage downstream water quality impacts.”</p>		
<p>19. Exceedances of ANZECC guideline values for metals including cadmium, chromium, copper, lead, nickel and zinc have been reported in the surface water management system (EIS, Appendix 11, p. 25). As this water has been regularly discharged to Wollombi Brook it is important that its quality is understood and managed to prevent potential downstream impacts.</p>	<p>According to the RTS Part B (pages 18-19) analysis of the concentrations of various metals and metalloids reveals a generally wider spread in the concentrations detected in the samples from the existing operations compared with the samples from the Hunter River. There are several parameters monitored within the existing WMSs for which the mean and median values exceed the ANZECC 95th percentile guideline value for the protection of freshwater ecosystems including cadmium, chromium, copper, lead, nickel and zinc. This is to be expected as the mine water includes poor quality groundwater which inflows from the coal seam aquifers and due to the contact of the mine water with coal and other strata excavated from below the surface, the properties of this water will of course be different to that in surrounding natural surface water systems.</p> <p>However, the WMSs have been designed to contain and reuse this water within the mining area and these exceedances are not reflected in downstream receiving waters, supporting the contention that metals and metalloids are not a significant environmental risk due to the effective operation of the existing WMSs.</p>	<p>In relation to aquatic, riparian and GDEs the water management performance measures table at condition B49 require the proponent to develop site-specific in-stream water quality objectives in accordance with the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC &amp; ARMCANZ, 2000) and Using the ANZECC Guidelines and Water Quality Objectives in NSW (DEC, 2006).</p> <p>Condition B49 requires the proponent to ensure that the proposed action complies with performance measures in Table 4 in relation to water management in general the proponent is required to:</p> <ul style="list-style-type: none"> <li>• Maintain separation between clean, dirty and mine water</li> <li>• Minimise the use of clean and potable water</li> <li>• Maximise water recycling, reuse and sharing opportunities</li> <li>• Minimise the use of make-up water from external sources</li> <li>• Design, install, operate and maintain water management infrastructure in a proper and efficient manner.</li> </ul> <p>State condition B97, in relation to final voids, includes a requirement that final voids be designed as long term groundwater sinks to maximise ground water flows across back filled pits to the final void and maximises the potential for</p>	<p>Recommended EPBC condition 1 requires the proponent to comply with State condition B49 that requires the proponent to ensure that the proposed action complies with performance measures in Table 4. In relation to water management in general the proponent is required to:</p> <ul style="list-style-type: none"> <li>• Maintain separation between clean, dirty and mine water</li> <li>• Minimise the use of clean and potable water</li> <li>• Maximise water recycling, reuse and sharing opportunities</li> <li>• Minimise the use of make-up water from external sources</li> <li>• Design, install, operate and maintain water management infrastructure in a proper and efficient manner.</li> </ul> <p>Recommended EPBC condition 4 requires the proponent to comply with State condition B97 that in relation to final voids, includes a requirement that final voids be designed as long term groundwater sinks to maximise ground water flows across back filled pits to the final void and maximises the potential for beneficial reuse, to the greatest extent practicable.</p>

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		beneficial reuse, to the greatest extent practicable.	
<p><b>20. Groundwater</b></p> <p>The IESC suggests the following further monitoring and management actions be considered, in addition to those highlighted in the response to previous questions:</p>			
<p>20a Design and implementation of monitoring programs (including installation of additional monitoring bores) capable of early detection of groundwater and surface water contamination from the Wambo void lake, the TSFs and the final landforms.</p>	<p>Recommendation 20a is addressed in Part B of the RTS at pages 121-122.</p> <p>In order to provide greater assurance of early detection of any groundwater quality changes due to waste rock leachate and tailings storage, the proposed monitoring program for the Project has been updated to include additional bores within the regolith and spoil. The positions of the proposed additional bores have been selected to enable assessment of groundwater levels and flow directions. Water quality data will also be collected and tested for a suite of analytes in order to identify any changes in groundwater quality.</p> <p>As discussed in the EIS, a specific WMP will be prepared for the Project, in consultation with DPE, DPI Water and DoEE. The WMP will include triggers that initiate remedial actions if groundwater quality impacts around TSF’s and the final voids are detected or if surface water impacts are predicted in the surrounding environment.</p>	<p>To provide greater assurance of early detection of any groundwater quality changes due to waste rock leachate and tailings storage, the proposed monitoring program was updated by the proponent to include additional bores within the regolith and spoil.</p> <p>The Groundwater Monitoring Program addresses this issue and allows for collection of baseline data prior to commencing mining in the area.</p> <p>In the FAR, DPE noted that in order to provide greater assurance of early detection of any impacts within the Hunter River alluvium and shallow overburden north of the Wambo open cut, a series of additional monitoring points has been proposed by the proponent.</p> <p>DPE also noted that this would expand the existing and proposed network to the southwest of the development site to detect changes in groundwater level and quality at the southern extent of the project plan.</p>	<p>Recommended EPBC condition 1 requires the approval holder to comply with State development consent condition B52 to prepare a WMP for the development. Condition B52e(v) requires the drafting and implementation of a groundwater management plan that must specify groundwater performance criteria, including trigger levels for identifying and investigating any potentially adverse groundwater impacts associated with the development on:</p> <ul style="list-style-type: none"> <li>• regional and local aquifers (alluvial and hardrock)</li> <li>• groundwater supply for other water users such as privately-owned licensed groundwater bores</li> <li>• GDEs</li> <li>• aquatic habitat and stygofauna.</li> </ul> <p>This should allow early detection of groundwater contamination.</p> <p>Recommended EPBC condition 1 requires the approval holder to comply with State development consent condition B52 to prepare a WMP for the development. Condition B52e(iv) requires the drafting and implementation of a surface water management plan. Condition B52(iv) states that: The surface WMP must detail performance criteria,</p>

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	<p>On 21 October 2019, the proponent provided a table to the Department clarifying their responses to issues raised by the IESC. The table stated: As discussed in the Response to the IPC Review Report Recommendation R41 (Pg88) and shown in Figure 3.6 additional monitoring bores and vibrating wire piezometers are proposed to be installed. In addition to these bores monitoring is warranted around the TSFs, however this cannot occur until post closure when the water table rebounds and saturates the in-pit spoils, which will allow construction of piezometers. The WMP will provide for monitoring bores to be located and constructed as part of detailed closure planning.</p>		<p>including trigger levels for identifying and investigating any potentially adverse impacts associated with the development, for downstream surface water flows and quality, water supply for other water users and post-mining water pollution from rehabilitated areas of the site.</p> <p>The surface WMP must detail a program to regularly monitor compliance with the relevant performance measures listed in Table 4 and the performance criteria.</p> <p>This should allow early detection of surface water contamination.</p>
<p>20b Additional groundwater monitoring bores to the north and north-west of the proposed project site both in the Hunter River alluvium and between the mine and the alluvium, and to the south-west of the proposed project, near Wollemi National Park. These bores would allow potential impacts to be better monitored near these sensitive locations and would provide further data for model calibration.</p>	<p>20b is addressed in Part B of the RTS at page 122.</p> <p>The Project occurs within an existing mining area therefore an extensive groundwater monitoring regime is in place. This includes monitoring by both United and Wambo, and monitoring by other nearby mining operations.</p> <p>Although an extensive monitoring program is already in place, as an outcome of the groundwater assessment process some further monitoring locations were proposed in the RTS.</p> <p>In order to provide greater assurance of early detection of any impacts within the Hunter River alluvium and shallow</p>	<p>In the FAR, DPE noted that in order to provide greater assurance of early detection of any impacts within the Hunter River alluvium and shallow overburden north of the Wambo open cut, a series of additional monitoring points has been proposed by the proponent.</p> <p>DPE also noted that this would expand the existing and proposed network to the southwest of the development site to detect changes in groundwater level and quality at the southern extent of the project plan.</p> <p>According to the FAR (page 64) the Project is not predicted to impact any privately-owned bores located within</p>	<p>The Department is satisfied with the proponent’s response to recommendation 20b. On 21 October 2019, the proponent provided a table to the Department clarifying their responses to issues raised by the IESC. The table stated: “United Wambo has commenced installing the monitoring network proposed during the EIS. An updated figure is provided that shows the monitoring bores already constructed to the north and north-west of the project site in the Hunter River alluvium (P408, P409, P410) and between the mine and the alluvium (P320, P321).</p> <p>These sites are multi-level sites monitoring the alluvium and Permian strata and therefore will be able to detect changes throughout the full stratigraphic profile influenced by the mining. These monitoring sites are equipped with data loggers that will record groundwater levels on a</p>

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	<p>overburden north of the Wambo Open Cut, a series of additional monitoring points were proposed. The network has also been expanded to the south-west of the Project area in order to detect changes in groundwater level and quality at the southern extent of the Project plan. This includes utilisation of existing bores around the proposed South Bates TSF.</p> <p>On 21 October 2019, the proponent provided a table to the Department clarifying their responses to issues raised by the IESC. The table stated: As discussed in the Response to the IPC Review Report Recommendation R41 (Pg88) and shown in Figure 3.6 additional monitoring bores and vibrating wire piezometers are proposed to be installed.</p> <p>United Wambo has commenced installing the monitoring network proposed during the EIS. An updated figure is provided that shows the monitoring bores already constructed to the north and north-west of the project site in the Hunter River alluvium (P408, P409, P410) and between the mine and the alluvium (P320, P321). These sites are multi-level sites monitoring the alluvium and Permian strata and therefore will be able to detect changes throughout the full stratigraphic profile influenced by the mining. These monitoring sites are equipped with data loggers that will record groundwater levels on a daily basis providing time</p>	<p>alluvial aquifers. Groundwater levels within three mine-owned bores within the alluvial aquifers are predicted to decrease by a maximum of 1.6 m during mining and 0.74 m post mining. The proponent has committed to continue groundwater monitoring at the site and would install additional monitoring bores to provide a long-term groundwater monitoring network in all key groundwater bearing units.</p>	<p>daily basis providing time series data for future updates to the groundwater model calibration.</p> <p>Further monitoring bores to the south-west of the proposed Project, near Wollemi National Park have not been prioritised as this is an elevated up-gradient area where the water table is relatively deep and there is a lack of environmental receptors. The existing monitoring bores in this area were considered adequate”.</p>
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	<p>series data for future updates to the groundwater model calibration.</p> <p>Further monitoring bores to the south-west of the proposed Project, near Wollemi National Park have not been prioritised as this is an elevated up-gradient area where the water table is relatively deep and there is a lack of environmental receptors. The existing monitoring bores in this area were considered adequate.</p>		
<b>GDEs</b>			
<p>20c Further monitoring of surface water and groundwater levels, and ecosystem health at the location identified as GDE1. These measures would improve the understanding of this ecosystem, and allow a management plan to be formulated to monitor and manage drawdown and prevent complete dewatering of the alluvial aquifer at this location. These actions could be done in cooperation with Hunter Valley Operations South.</p>	<p>Recommendation 20c is addressed in Part B of the RTS at page 123.</p>	<p>To address potential impacts to GDEs, condition B51 requires the proponent to undertake a GDE Study within 12 months of the project commencing.</p> <p>Condition B51 requires the proponent to further characterise GDEs (vegetation and communities) potentially impacted by the development, including the Central Hunter Swamp Oak Forest EEC (GDE1), Hunter Valley River Oak Forest (GDE2) and individual River Red Gums (GDE1 and GDE2) identified along the riparian buffers of Redbank Creek and Wollombi Brook.</p> <p>Condition 51(d) requires the GDE Study to be integrated with the similar studies being undertaken by nearby mines (where practicable).</p>	<p>The proposed EPBC condition 1 requires the approval holder to comply with any requirements imposed by the NSW Planning Secretary under State condition B51 to undertake a GDE Study.</p>
<b>Surface water</b>			
<p>20 d Monitoring of metals in the surface water management system (currently only undertaken</p>	<p>Recommendation 20d is addressed in Part B of the RTS at page 124: In addition to existing monitoring,</p>	<p>DPE noted that in response to the IESC recommendation, the proponent noted that monitoring of rejects, overburden</p>	<p>Recommended EPBC condition 1 requires the approval holder to comply with State development consent condition B52 to prepare a WMP for the</p>



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<p>by United Collieries annually) should be increased in frequency (eg monthly). The proposal to only sample for metals when a pH trigger is initiated would require in-depth knowledge of potentially leachable metals and their solubility characteristics under a range of conditions, which has not been demonstrated in the assessment documentation. Additionally, exceedances of the ANZECC guidelines for metals have been observed in the water storages, highlighting the need to monitor for metals as this water may be discharged to adjacent waterways, potentially impacting water quality and possibly GDEs. Metals and organics (as toxicants and stressors) monitoring should also be undertaken in receiving waterways as proposed in the EIS.</p>	<p>monitoring of rejects, overburden and water quality will be undertaken to enable assessment and management of any potential downstream water quality impacts.</p> <p>Monitoring will occur within, upstream and downstream of the Project.</p> <p>The stream reaches between monitoring stations will not be influenced by coal mining operations other than existing Wambo operations and the United Wambo proposal.</p> <p>The analytes that will be sampled are specified in the RTS.</p> <p>Additional information provided by the proponent on 10 October 2019 stated: The United Wambo Joint Venture proposes to undertake monthly surface water monitoring at a range of locations within the surface water management system and the surrounding watercourses.</p> <p>The following parameters, consistent with the current monitoring program, are proposed monitored and recorded:</p> <ul style="list-style-type: none"> <li>• pH</li> <li>• electrical conductivity (µs/cm)</li> <li>• TSS (mg/L)</li> <li>• TDS (mg/L)</li> <li>• flow conditions by observation (i.e. high, medium or low flow; or no flow).</li> </ul> <p>In addition to the monthly monitoring program, the United Wambo Joint</p>	<p>and water quality would be undertaken to enable assessment and management of any potential downstream water quality impacts. Monitoring of water quality would include pH, EC, TSS, TSD, oil and grease, and a suite of metals, metalloids and ions, within downstream and (where possible) upstream, on a regular basis.</p> <p>On page 88 of the FAR DPE noted that the IESC had raised concerns regarding the lack of a geochemical assessment in the Project’s EIS. In its RTS, the proponent provided a geochemical assessment undertaken by GeoTerra: <i>United Wambo Open Cut Coal Mine Project Waste Rock/Tailings Geochemical Characterisation and Acid &amp; Metalliferous Drainage Assessment 2017</i>.</p> <p>Based on the available data, and this report, during operation the waste rock and tailings are unlikely to cause adverse changes in groundwater quality, due to low acid and metalliferous drainage (AMD) potential.</p>	<p>development. Condition B52e(iv) requires the drafting and implementation of a surface water management plan. Condition B52(iv) states that: The surface WMP must detail performance criteria, including trigger levels for identifying and investigating any potentially adverse impacts associated with the development, for downstream surface water flows and quality.</p> <p>The surface WMP must detail a program to regularly monitor compliance with the relevant performance measures listed in Table 4 and the performance criteria.</p>
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	<p>Venture proposes to undertake further speciation analysis at each of the monitoring locations in the both the surface water management system and the surrounding watercourses.</p> <p>This speciation analysis includes (on an annual basis):</p> <ul style="list-style-type: none"> <li>• Total Metals / Metalloids: Aluminium (Al), Arsenic (As), Cobalt (Co), Copper (Cu), Iron (Fe), Manganese (Mn), Nickel (Ni), Selenium (Se), Zinc (Zn), Mercury (Hg), Lead (Pb), Potassium (K), Silver (Ag), Flouride (Fl), Boron (B), Calcium (Ca), Barium (Ba), Magnesium (Mg), Cadmium (Cd), Sodium (Na)</li> <li>• Nutrients - Total phosphorous (P), Nitrite, Nitrate, Total Kjeldahl Nitrogen (TKN), Total nitrogen (Total N)</li> <li>• Ions - Chloride (Cl), Bicarbonate (CaCO3), Sulphate (SO4)</li> </ul>		
<p>20e Refinement of the proposed trigger schemes for surface water and groundwater quality and groundwater levels to improve the ability of these schemes to promptly detect change. This includes:</p> <p>i. discussion of the derivation of the surface water quality triggers and confirmation that these are consistent with the ANZECC methodology;</p>	<p>Recommendation 20e is addressed in Part B of the RTS at pages 125-127</p> <p>Existing surface water quality triggers are in place at United and Wambo. The site-specific water quality triggers will be updated and reviewed as part of the development of the WMP. This will include review of additional water quality data to inform the development of site specific triggers for other analytes.</p> <p>Water quality triggers for the Project will be used to implement actions aimed at</p>	<p>Condition B52e(v) requires the drafting and implementation of a groundwater management plan that must specify groundwater performance criteria, including trigger levels for identifying and investigating any potentially adverse groundwater impacts associated with the development on aquatic habitat and stygofauna.</p> <p>The FAR noted that existing water management triggers already exist for mining operations at Wambo and United.</p>	<p>Recommended EPBC condition 1 requires the approval holder to comply with State development consent condition B52 to prepare a WMP for the development. Condition B52e(v) requires the drafting and implementation of a groundwater management plan that must specify groundwater performance criteria, including trigger levels for identifying and investigating any potentially adverse groundwater impacts associated with the development on aquatic habitat and stygofauna.</p> <p>Condition B52(iv) states that: The surface WMP must detail performance criteria, including trigger</p>

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<p>ii. groundwater quality data should be compared with trigger values when data becomes available rather than annually as currently proposed and the temporal scale of sampling increased to three-monthly. The proposed use of a control chart approach to developing triggers would require considerable baseline data and a high sampling frequency. It may also lead to issues with gradual changes not being detected if a moving baseline is used. Derivation of triggers based on the ANZECC methodology (ie 80th percentile from reference conditions for physiochemical parameters) could be more appropriate. Proposed control charting may be a useful tool during the investigative phase following trigger initiation.</p> <p>iii. The trigger for groundwater drawdown outside the predicted zone of impact needs to consider that using a moving 24-month average as currently proposed may allow a gradual decline in water levels to go undetected. Management measures would then not be implemented.</p>	<p>protecting the environment and identifying any unforeseen impacts on downstream water quality.</p> <p>Regarding groundwater, the proponent has proposed specific triggers for each bore as this will give a more representative indication of groundwater changes on a localised scale as opposed to the use of reference conditions.</p> <p>A percentile or standard deviation approach will be adopted in the establishment of the trigger levels and the proposed control chart approach will enable immediate (i.e. quarterly) detection of any adverse changes.</p> <p>In order to identify potential gradual declines in water levels that may not be detected by the trigger, the long-term trends in groundwater levels will be reviewed as part of the Annual Review to identify any potential impacts due to the Project.</p>	<p>The proponent proposes to review and update site-specific water triggers during development of the Water Management Plan.</p> <p>It also notes regarding groundwater, that specific trigger levels for each bore are proposed by the proponent as this would provide good indications of groundwater change on a localised level.</p> <p>DPE noted that development of a WMP for the Project would occur in consultation with CLWD and EPA.</p>	<p>levels for identifying and investigating any potentially adverse impacts associated with the development, for:</p> <ul style="list-style-type: none"> <li>• downstream surface water flows and quality</li> <li>• channel stability</li> <li>• downstream flooding impacts.</li> </ul> <p>The Department notes that the trigger levels specified in the surface water and groundwater management plans are the equivalent to the TARPs referred to in the RTS and other State assessment documents.</p>
<p>20f Measurable triggers, based on robust statistical analyses, should be developed in advance for identifying significant deviations in groundwater levels from baseline or model</p>	<p>Recommendation 20f is addressed in Part B of the RTS at page 128: historic data and trigger levels are currently in place for existing approved operations. The RTS proposed updating and reviewing the site specific water quality</p>	<p>In the FAR, DPE noted that the proponent proposes reviewing and updating site specific water quality trigger levels if development consent is granted.</p>	<p>Recommended EPBC condition 1 requires the approval holder to comply with State development consent condition B52 to prepare a WMP for the development. Condition B52e(v) requires the drafting and implementation of a groundwater management plan that must specify groundwater</p>

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<p>predictions. These should be used in addition to the judgement of an expert independent hydrogeologist.</p>	<p>triggers as part of the development of the WMP. The establishment of triggers will be conducted as part of the WMP process, which will involve consultation and approval from relevant State regulatory bodies.</p>	<p>Condition B52e(v) requires the drafting and implementation of a groundwater management plan that must specify groundwater performance criteria, including trigger levels for identifying and investigating any potentially adverse groundwater impacts associated with the development on aquatic habitat and stygofauna.</p> <p>The FAR noted that existing water management triggers already exist for mining operations at Wambo and United. The proponent proposes to review and update site-specific water triggers during development of the Water Management Plan.</p> <p>The FAR also notes, regarding groundwater, that specific trigger levels for each bore are proposed by the proponent as this would provide good indications of groundwater change on a localised level.</p>	<p>performance criteria, including trigger levels for identifying and investigating any potentially adverse groundwater impacts associated with the development on aquatic habitat and stygofauna.</p> <p>Condition B52(iv) states that: The surface WMP must detail performance criteria, including trigger levels for identifying and investigating any potentially adverse impacts associated with the development, for:</p> <ul style="list-style-type: none"> <li>• downstream surface water flows and quality</li> <li>• channel stability</li> <li>• downstream flooding impacts.</li> </ul> <p>The Department notes that the trigger levels specified in the surface water and groundwater management plans are the equivalent to the TARPs referred to in the RTS and other State assessment documents.</p>
<p>20g Automated loggers should be downloaded more frequently, currently proposed to be six-monthly, to reduce the potential for data loss and to improve the capability of the proposed trigger system. Three-monthly sampling of groundwater quality would improve the ability to detect and address changes in water quality.</p>	<p>Recommendation 20g is addressed in Part B of the RTS at page 128-129: according to the RTS, the proposed monitoring program will include download of automated loggers on a more frequent, three monthly basis.</p>	<p>In the Final Assessment Report, DPE noted that the proponent has committed to three-monthly data downloads.</p>	<p>The Department is satisfied with the proponent’s and DPE’s response that the proposed monitoring program will include download of automated loggers on a more frequent, three monthly basis.</p>
<p>20h Selection of appropriate groups of upstream and downstream sampling locations to be used for identifying the</p>	<p>Recommendation 20h is addressed in Part B of the RTS at pages 123-130. The existing monitoring locations have been designed in consultation with</p>	<p>Condition B46 requires the proponent to ensure that all surface discharges from the site comply with:</p>	<p>Recommended EPBC condition 1 requires the approval holder to comply with State development consent condition B46 to ensure that all surface discharges from the site comply with any</p>

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<p>potential impacts of discharge on downstream environments. These should be located within the same reach where possible and the downstream location should not be affected by discharge from other mining operations. Contextual information about the proposed monitoring sites and justification of the selection should be provided.</p>	<p>relevant agencies. Monitoring will occur within, upstream and downstream of the Project on a regular basis.</p> <p>The stream reaches between monitoring stations will not be influenced by coal mining operations other than existing Wambo operations and the United Wambo proposal.</p>	<p>(a) discharge limits (both volume and quality) set for the development in any EPL, or (b) relevant provisions of the NSW POEO Act or Protection of the Environment Operations (Hunter River Salinity Trading Scheme) Regulation 2002.</p>	<p>discharge limits (both volume and quality) set for the development in any Environment Protection Licence or provisions of the <i>Protection of the Environment Operations Act 1997</i> or <i>Protection of the Environment Operations (Hunter River Salinity Trading Scheme) Regulation 2002</i>.</p>
<p>21 Commitments for surface and groundwater monitoring should be presented as part of a water monitoring plan and should be consistent with the <i>National Water Quality Management Strategy</i> (NWQMS).</p>	<p>Recommendation 21 is addressed in Part B of the RTS at page 130, the proponent stated that: ‘A specific water monitoring plan will be prepared in consultation with DPE, DPI Water and with reference to relevant industry standards which are consistent with the NWQMS’.</p>	<p>Condition B52e(iv) requires the drafting and implementation of a surface water management plan. The NSW approval does not require the plan to be consistent with the National Water Quality Management Strategy (DoEE, 2015). However, Condition B49 requires the proponent to ensure that the proposed action complies with performance measures in Table 4 in relation to aquatic, riparian and GDEs, including development of site-specific in-stream water quality objectives in accordance with the <i>Australian and New Zealand Guidelines for Fresh and Marine Water Quality</i> (ANZECC &amp; ARMCANZ, 2000) and <i>Using the ANZECC Guidelines and Water Quality Objectives in NSW</i> (DEC, 2006)</p> <p>Condition B52e(v) requires the drafting and implementation of a groundwater management plan. The Groundwater Management Plan must be consistent with Groundwater Monitoring and Modelling Plans – Introduction for prospective mining and petroleum</p>	<p>The proposed EPBC condition 1 requires the approval holder to comply with any requirements imposed by the NSW Planning Secretary under State condition B52 to prepare a WMP for the development to the satisfaction of the NSW Planning Secretary.</p> <p>Condition B52e(iv) requires the drafting and implementation of a surface water management plan. The NSW approval does not require the plan to be consistent with the National Water Quality Management Strategy (DoEE, 2015). However, Condition B49 requires the proponent to ensure that the proposed action complies with performance measures in Table 4 in relation to aquatic, riparian and GDEs, including development of site-specific in-stream water quality objectives in accordance with the <i>Australian and New Zealand Guidelines for Fresh and Marine Water Quality</i> (ANZECC &amp; ARMCANZ, 2000) and <i>Using the ANZECC Guidelines and Water Quality Objectives in NSW</i> (DEC, 2006)</p> <p>Condition B52e(v) requires the drafting and implementation of a groundwater management plan. The Groundwater Management Plan must be consistent with Groundwater Monitoring and</p>

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		<p>activities (DPI Water, 2014) and the National Water Quality Management Strategy (DoEE, 2015).</p> <p>Both plans include water monitoring provisions.</p>	<p>Modelling Plans – Introduction for prospective mining and petroleum activities (DPI Water, 2014) and the National Water Quality Management Strategy (DoEE, 2015).</p> <p>Both plans include water monitoring provisions.</p>
<p>22 The Northern Sydney Basin, which includes the Hunter Subregion, has been identified as a Bioregional Assessment (BA) priority region. Data and relevant information from the proposed project should be made accessible to this BA and related research projects.</p>	<p>Recommendation 22 is addressed in Part B of the RTS at page 131. Glencore has already provided data to the BA and is willing to provide relevant data and information on request.</p>	<p>The final assessment report states under <i>factors to have regard to</i> that the Commonwealth Government released its bioregional assessment package for the Northern Sydney Basin -Hunter Subregion in May 2018. NSW notes that the bioregional assessment includes predictions of drawdown covering the United Wambo Project area but also notes that bioregional assessments are undertaken at a regional scale and the results are used to inform more detailed local scale assessment, using finer scale modelling and local data. This local scale assessment has already been undertaken for the project and should therefore continue to be relied on over the larger-scale bioregional assessment.</p>	<p>The Department notes that Glencore has already provided data to the BA and is willing to provide relevant data and information on request.</p>
<p><b>NSW Assessment Conclusion</b></p> <p>On pages 76-77 in the Assessment Report DPIE concluded that there would be no significant impacts on water resources resulting from the Project, above and beyond those already approved for the existing United Colliery and Wambo Coal Mine.</p> <p>The proposed action is unlikely to have significant impacts on groundwater and surface water near the Project and any impacts are able to be appropriately licensed, monitored and managed. To ensure this is the case, DPIE recommended conditions requiring:</p> <ul style="list-style-type: none"> <li>• the preparation and implementation of a Water Management Plan, including a program to monitor groundwater levels and surface and groundwater quality,</li> <li>• the provision of compensatory water supplies for any affected groundwater user,</li> <li>• compliance with water management performance measures, and</li> <li>• the implementation of suitable mitigation, management, monitoring and response measures to manage impacts on water resources.</li> </ul> <p><b>Department’s Overall Conclusion</b></p>			

**Attachment K – Analysis of how the IESC’s advice has been addressed in the NSW assessment**

The Department considers the NSW assessment and State conditions of approval have addressed the issues raised in the IESC’s advice. The Department is satisfied that the proposed action will not have an unacceptable impact on water resources, provided it is taken in accordance with the relevant State conditions, which have been referenced in the proposed EPBC Act conditions of approval.

# EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

## United Wambo Proposed Decision Check

Report created: 16/09/19 15:22:59

[Summary](#)

[Details](#)

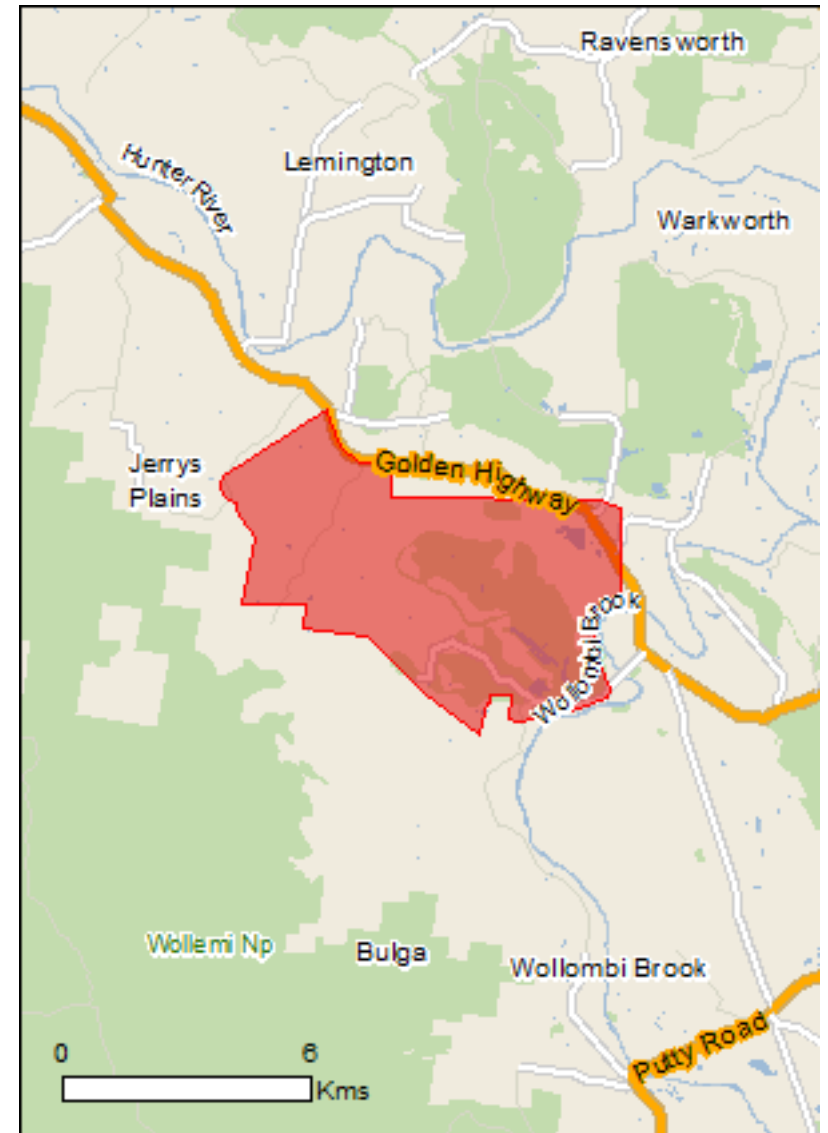
[Matters of NES](#)

[Other Matters Protected by the EPBC Act](#)

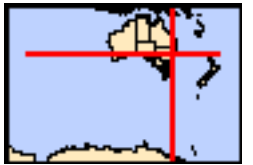
[Extra Information](#)

[Caveat](#)

[Acknowledgements](#)



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# Summary

## Matters of National Environment Significance

<a href="#">World Heritage Properties:</a>	None
<a href="#">National Heritage Places:</a>	None
<a href="#">Ramsar Wetlands:</a>	1
<a href="#">Great Barrier Reef Marine Park:</a>	None
<a href="#">Commonwealth Marine Area:</a>	None
<a href="#">Threatened Ecological Communities:</a>	4
<a href="#">Threatened Species:</a>	30
<a href="#">Migratory Species:</a>	14

## Other Matters Protected by the EPBC Act

<a href="#">Commonwealth Lands:</a>	None
<a href="#">Commonwealth Heritage Places:</a>	None
<a href="#">Listed Marine Species:</a>	21
<a href="#">Whales and Other Cetaceans:</a>	None
<a href="#">Critical Habitats:</a>	None
<a href="#">Commonwealth Reserves Terrestrial:</a>	None
<a href="#">Australian Marine Parks</a>	None

## Extra Information

This part of the report provides information that may also be relevant to the area you have

<a href="#">State and Territory Reserves:</a>	None
<a href="#">Regional Forest Agreements:</a>	1
<a href="#">Invasive Species:</a>	36
<a href="#">Nationally Important Wetlands:</a>	None
<a href="#">EPBC Act Referrals:</a>	8
<a href="#">Key Ecological Features (Marine)</a>	None

# Details

## Matters of National Environmental Significance

### Wetlands of International Importance (Ramsar Wetlands) [\[ Resource Information \]](#)

Name	Proximity
<a href="#">Hunter estuary wetlands</a>	50 - 100km upstream

### Threatened Ecological Communities [\[ Resource Information \]](#)

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Name	Status	Type of Presence
<a href="#">Central Hunter Valley eucalypt forest and woodland</a>	Critically Endangered	Community likely to occur within area
<a href="#">Hunter Valley Weeping Myall (<i>Acacia pendula</i>) Woodland</a>	Critically Endangered	Community may occur within area
<a href="#">Warkworth Sands Woodland of the Hunter Valley</a>	Critically Endangered	Community may occur within area
<a href="#">White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland</a>	Critically Endangered	Community may occur within area

### Threatened Species [\[ Resource Information \]](#)

Name	Status	Type of Presence
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#### BIRDS

<a href="#">Anthochaera phrygia</a> Regent Honeyeater [82338]	Critically Endangered	Species or species habitat known to occur within area
<a href="#">Botaurus poiciloptilus</a> Australasian Bittern [1001]	Endangered	Species or species habitat may occur within area
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
<a href="#">Grantiella picta</a> Painted Honeyeater [470]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Hirundapus caudacutus</a> White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Lathamus discolor</a> Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area
<a href="#">Numenius madagascariensis</a> Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
<a href="#">Rostratula australis</a> Australian Painted-snipe, Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area

#### FROGS

<a href="#">Heleioporus australiacus</a> Giant Burrowing Frog [1973]	Vulnerable	Species or species habitat may occur within area
<a href="#">Litoria aurea</a> Green and Golden Bell Frog [1870]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Litoria booroolongensis</a> Booroolong Frog [1844]	Endangered	Species or species habitat may occur within area

#### MAMMALS

Name	Status	Type of Presence
<a href="#">Chalinolobus dwyeri</a> Large-eared Pied Bat, Large Pied Bat [183]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Dasyurus maculatus maculatus (SE mainland population)</a> Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]	Endangered	Species or species habitat known to occur within area
<a href="#">Nyctophilus corbeni</a> Corben's Long-eared Bat, South-eastern Long-eared Bat [83395]	Vulnerable	Species or species habitat may occur within area
<a href="#">Petauroides volans</a> Greater Glider [254]	Vulnerable	Species or species habitat may occur within area
<a href="#">Petrogale penicillata</a> Brush-tailed Rock-wallaby [225]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)</a> Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Pseudomys novaehollandiae</a> New Holland Mouse, Pookila [96]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Pteropus poliocephalus</a> Grey-headed Flying-fox [186]	Vulnerable	Foraging, feeding or related behaviour known to occur within area

## PLANTS

<a href="#">Androcalva procumbens</a> [87153]	Vulnerable	Species or species habitat may occur within area
<a href="#">Cryptostylis hunteriana</a> Leafless Tongue-orchid [19533]	Vulnerable	Species or species habitat may occur within area
<a href="#">Cynanchum elegans</a> White-flowered Wax Plant [12533]	Endangered	Species or species habitat likely to occur within area
<a href="#">Eucalyptus glaucina</a> Slaty Red Gum [5670]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Euphrasia arguta</a> [4325]	Critically Endangered	Species or species habitat may occur within area
<a href="#">Olearia cordata</a> [6710]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Pomaderris brunnea</a> Rufous Pomaderris [16845]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Prasophyllum sp. Wybong (C.Phelps ORG 5269)</a> a leek-orchid [81964]	Critically Endangered	Species or species habitat may occur within area
<a href="#">Prostanthera cineolifera</a> [11233]	Vulnerable	Species or species habitat may occur within area
<a href="#">Pterostylis gibbosa</a> Illawarra Greenhood, Rufa Greenhood, Pouched Greenhood [4562]	Endangered	Species or species habitat may occur within area
<a href="#">Thesium australe</a> Austral Toadflax, Toadflax [15202]	Vulnerable	Species or species habitat may occur within area

## Migratory Species

[ [Resource Information](#) ]

\* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

Name	Threatened	Type of Presence
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## Migratory Marine Birds

Name	Threatened	Type of Presence
<a href="#">Apus pacificus</a> Fork-tailed Swift [678]		Species or species habitat likely to occur within area
<b>Migratory Terrestrial Species</b>		
<a href="#">Hirundapus caudacutus</a> White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Monarcha melanopsis</a> Black-faced Monarch [609]		Species or species habitat known to occur within area
<a href="#">Motacilla flava</a> Yellow Wagtail [644]		Species or species habitat may occur within area
<a href="#">Myiagra cyanoleuca</a> Satin Flycatcher [612]		Species or species habitat known to occur within area
<a href="#">Rhipidura rufifrons</a> Rufous Fantail [592]		Species or species habitat known to occur within area
<b>Migratory Wetlands Species</b>		
<a href="#">Actitis hypoleucos</a> Common Sandpiper [59309]		Species or species habitat may occur within area
<a href="#">Calidris acuminata</a> Sharp-tailed Sandpiper [874]		Species or species habitat likely to occur within area
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
<a href="#">Calidris melanotos</a> Pectoral Sandpiper [858]		Species or species habitat may occur within area
<a href="#">Gallinago hardwickii</a> Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area
<a href="#">Numenius madagascariensis</a> Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
<a href="#">Pandion haliaetus</a> Osprey [952]		Species or species habitat may occur within area
<a href="#">Tringa nebularia</a> Common Greenshank, Greenshank [832]		Species or species habitat may occur within area

## Other Matters Protected by the EPBC Act

Listed Marine Species		<a href="#">[ Resource Information ]</a>
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
Name	Threatened	Type of Presence
<b>Birds</b>		
<a href="#">Actitis hypoleucos</a> Common Sandpiper [59309]		Species or species habitat may occur within area
<a href="#">Apus pacificus</a> Fork-tailed Swift [678]		Species or species habitat likely to occur within area
<a href="#">Ardea alba</a> Great Egret, White Egret [59541]		Species or species habitat likely to occur within area

Name	Threatened	Type of Presence
<a href="#">Ardea ibis</a> Cattle Egret [59542]		Species or species habitat may occur within area
<a href="#">Calidris acuminata</a> Sharp-tailed Sandpiper [874]		Species or species habitat likely to occur within area
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
<a href="#">Calidris melanotos</a> Pectoral Sandpiper [858]		Species or species habitat may occur within area
<a href="#">Chrysococcyx osculans</a> Black-eared Cuckoo [705]		Species or species habitat known to occur within area
<a href="#">Gallinago hardwickii</a> Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area
<a href="#">Haliaeetus leucogaster</a> White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area
<a href="#">Hirundapus caudacutus</a> White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Lathamus discolor</a> Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area
<a href="#">Merops ornatus</a> Rainbow Bee-eater [670]		Species or species habitat may occur within area
<a href="#">Monarcha melanopsis</a> Black-faced Monarch [609]		Species or species habitat known to occur within area
<a href="#">Motacilla flava</a> Yellow Wagtail [644]		Species or species habitat may occur within area
<a href="#">Myiagra cyanoleuca</a> Satin Flycatcher [612]		Species or species habitat known to occur within area
<a href="#">Numenius madagascariensis</a> Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
<a href="#">Pandion haliaetus</a> Osprey [952]		Species or species habitat may occur within area
<a href="#">Rhipidura rufifrons</a> Rufous Fantail [592]		Species or species habitat known to occur within area
<a href="#">Rostratula benghalensis (sensu lato)</a> Painted Snipe [889]	Endangered*	Species or species habitat likely to occur within area
<a href="#">Tringa nebularia</a> Common Greenshank, Greenshank [832]		Species or species habitat may occur within area

## Extra Information

### Regional Forest Agreements

[ [Resource Information](#) ]

Note that all areas with completed RFAs have been included.

Name	State
<a href="#">North East NSW RFA</a>	New South Wales

### Invasive Species

[ [Resource Information](#) ]

Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps from Landscape Health Project, National Land and Water Resources Audit,

Name	Status	Type of Presence
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#### Birds

<a href="#">Acridotheres tristis</a> Common Myna, Indian Myna [387]		Species or species habitat likely to occur within area
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<a href="#">Alauda arvensis</a> Skylark [656]		Species or species habitat likely to occur within area
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<a href="#">Anas platyrhynchos</a> Mallard [974]		Species or species habitat likely to occur within area
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<a href="#">Carduelis carduelis</a> European Goldfinch [403]		Species or species habitat likely to occur within area
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<a href="#">Columba livia</a> Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitat likely to occur within area
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<a href="#">Lonchura punctulata</a> Nutmeg Mannikin [399]		Species or species habitat likely to occur within area
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<a href="#">Passer domesticus</a> House Sparrow [405]		Species or species habitat likely to occur within area
--	--	--

<a href="#">Pycnonotus jocosus</a> Red-whiskered Bulbul [631]		Species or species habitat likely to occur within area
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<a href="#">Streptopelia chinensis</a> Spotted Turtle-Dove [780]		Species or species habitat likely to occur within area
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<a href="#">Sturnus vulgaris</a> Common Starling [389]		Species or species habitat likely to occur within area
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<a href="#">Turdus merula</a> Common Blackbird, Eurasian Blackbird [596]		Species or species habitat likely to occur within area
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#### Frogs

<a href="#">Rhinella marina</a> Cane Toad [83218]		Species or species habitat likely to occur within area
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#### Mammals

<a href="#">Bos taurus</a> Domestic Cattle [16]		Species or species habitat likely to occur within area
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<a href="#">Canis lupus familiaris</a> Domestic Dog [82654]		Species or species habitat likely to occur within area
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<a href="#">Felis catus</a> Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
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<a href="#">Lepus capensis</a> Brown Hare [127]		Species or species habitat likely to occur within area
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Name	Status	Type of Presence
<a href="#">Mus musculus</a> House Mouse [120]		Species or species habitat likely to occur within area
<a href="#">Oryctolagus cuniculus</a> Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
<a href="#">Rattus norvegicus</a> Brown Rat, Norway Rat [83]		Species or species habitat likely to occur within area
<a href="#">Rattus rattus</a> Black Rat, Ship Rat [84]		Species or species habitat likely to occur within area
<a href="#">Sus scrofa</a> Pig [6]		Species or species habitat likely to occur within area
<a href="#">Vulpes vulpes</a> Red Fox, Fox [18]		Species or species habitat likely to occur within area
<b>Plants</b>		
<a href="#">Alternanthera philoxeroides</a> Alligator Weed [11620]		Species or species habitat likely to occur within area
<a href="#">Chrysanthemoides monilifera</a> Bitou Bush, Boneseed [18983]		Species or species habitat may occur within area
<a href="#">Chrysanthemoides monilifera subsp. monilifera</a> Boneseed [16905]		Species or species habitat likely to occur within area
<a href="#">Dolichandra unguis-cati</a> Cat's Claw Vine, Yellow Trumpet Vine, Cat's Claw Creeper, Funnel Creeper [85119]		Species or species habitat likely to occur within area
<a href="#">Eichhornia crassipes</a> Water Hyacinth, Water Orchid, Nile Lily [13466]		Species or species habitat likely to occur within area
<a href="#">Genista sp. X Genista monspessulana</a> Broom [67538]		Species or species habitat may occur within area
<a href="#">Lantana camara</a> Lantana, Common Lantana, Kamara Lantana, Large-leaf Lantana, Pink Flowered Lantana, Red Flowered Lantana, Red-Flowered Sage, White Sage, Wild Sage [10892]		Species or species habitat likely to occur within area
<a href="#">Lycium ferocissimum</a> African Boxthorn, Boxthorn [19235]		Species or species habitat likely to occur within area
<a href="#">Opuntia spp.</a> Prickly Pears [82753]		Species or species habitat likely to occur within area
<a href="#">Pinus radiata</a> Radiata Pine Monterey Pine, Insignis Pine, Wilding Pine [20780]		Species or species habitat may occur within area
<a href="#">Rubus fruticosus aggregate</a> Blackberry, European Blackberry [68406]		Species or species habitat likely to occur within area
<a href="#">Salix spp. except S.babylonica, S.x calodendron &amp; S.x reichardtii</a> Willows except Weeping Willow, Pussy Willow and Sterile Pussy Willow [68497]		Species or species habitat likely to occur within area
<a href="#">Salvinia molesta</a> Salvinia, Giant Salvinia, Aquarium Watermoss, Kariba Weed [13665]		Species or species habitat likely to occur within area
<a href="#">Senecio madagascariensis</a> Fireweed, Madagascar Ragwort, Madagascar Groundsel [2624]		Species or species habitat likely to occur within area

Further details about the referral or advice - including its current status if still active - are available in its PINK report; click on the title.

## Referral

Title	Reference	Referral Outcome	Assessment Status
<a href="#">Wambo Coal Mine Development Project</a>	2003/1138	CA	Approval Decision Made-Post-Approval
<a href="#">Aerial baiting for wild dog control</a>	2006/2713	NCA-PM	Referral Decision Made-Post-Approval
<a href="#">Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia</a>	2015/7522	NCA	Referral Decision Made-Completed
<a href="#">United and Wambo open cut coal mine project, Hunter Valley, NSW</a>	2015/7600	CA	Comments on Proposed Decision Sought-Proposed Decision
<a href="#">South Wambo underground coal mine extension, NSW</a>	2016/7636	CA	Approval Decision Made-Post-Approval
<a href="#">Hunter Valley Coal Mining Operations North - State approved mining, NSW</a>	2016/7640	CA	Approval Decision Made-Post-Approval
<a href="#">Hunter Valley Coal Mining Operations South - Modification 5</a>	2016/7641	NCA	Referral Decision Made-Completed
<a href="#">South Bates Extension Underground Mine, Warkworth, NSW</a>	2016/7816	CA	Approval Decision Made-Post-Approval



# Caveat

The information presented in this report has been provided by a range of data sources as acknowledged at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the Environment Protection and Biodiversity Conservation Act 1999. It holds mapped locations of World and National Heritage properties, Wetlands of International and National Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to consider the qualifications below and may need to seek and consider other information sources.

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

For species where the distributions are well known, maps are digitised from sources such as recovery plans and detailed habitat studies. Where appropriate, core breeding, foraging and roosting areas are indicated under 'type of presence'. For species whose distributions are less well known, point locations are collated from government wildlife authorities, museums, and non-government organisations; bioclimatic distribution models are generated and these validated by experts. In some cases, the distribution maps are based solely on expert knowledge.

Threatened, migratory and marine species distributions have been derived through a variety of methods. Where distributions are well known and if time permits, maps are derived using either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc) together with point locations and described habitat; or environmental modelling (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where very little information is available for species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc). In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More reliable distribution mapping methods are used to update these distributions as time permits.

Only selected species covered by the following provisions of the EPBC Act have been mapped:

- migratory and
- marine

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as extinct or considered as vagrants
- some species and ecological communities that have only recently been listed
- some terrestrial species that overfly the Commonwealth marine area
- migratory species that are very widespread, vagrant, or only occur in small numbers

The following groups have been mapped, but may not cover the complete distribution of the species:

- non-threatened seabirds which have only been mapped for recorded breeding sites
- seals which have only been mapped for breeding sites near the Australian continent

Such breeding sites may be important for the protection of the Commonwealth Marine environment.

# Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

- [-Office of Environment and Heritage, New South Wales](#)
- [-Department of Environment and Primary Industries, Victoria](#)
- [-Department of Primary Industries, Parks, Water and Environment, Tasmania](#)
- [-Department of Environment, Water and Natural Resources, South Australia](#)
- [-Department of Land and Resource Management, Northern Territory](#)
- [-Department of Environment and Heritage Protection, Queensland](#)
- [-Department of Parks and Wildlife, Western Australia](#)
- [-Environment and Planning Directorate, ACT](#)
- [-Birdlife Australia](#)
- [-Australian Bird and Bat Banding Scheme](#)
- [-Australian National Wildlife Collection](#)
- Natural history museums of Australia
- [-Museum Victoria](#)
- [-Australian Museum](#)
- [-South Australian Museum](#)
- [-Queensland Museum](#)
- [-Online Zoological Collections of Australian Museums](#)
- [-Queensland Herbarium](#)
- [-National Herbarium of NSW](#)
- [-Royal Botanic Gardens and National Herbarium of Victoria](#)
- [-Tasmanian Herbarium](#)
- [-State Herbarium of South Australia](#)
- [-Northern Territory Herbarium](#)
- [-Western Australian Herbarium](#)
- [-Australian National Herbarium, Canberra](#)
- [-University of New England](#)
- [-Ocean Biogeographic Information System](#)
- [-Australian Government, Department of Defence](#)
- [-Forestry Corporation of NSW](#)
- [-Australian Tropical Herbarium, Cairns](#)
- [-eBird Australia](#)
- [-Australian Government – Australian Antarctic Data Centre](#)
- [-Museum and Art Gallery of the Northern Territory](#)
- [-Australian Government National Environmental Science Program](#)
- [-Australian Institute of Marine Science](#)
- [-Reef Life Survey Australia](#)
- [-American Museum of Natural History](#)
- [-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania](#)
- [-Tasmanian Museum and Art Gallery, Hobart, Tasmania](#)
- Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

**Attachment P – ERT Review – United and Wambo Open Cut Coal Mine Project, Singleton, NSW  
(EPBC: 2015/7600)****Proposed Approval Decision ERT Review**

The Department's Environmental Reporting Tool (ERT) dated 16 September 2019 identified additional listed threatened species and ecological communities that may occur within 5 km of the proposed action site that were not considered at the time of the controlled action decision on 7 December 2015.

Ecological communities

Two additional ecological communities, the Warkworth Sands Woodland of the Hunter Valley – critically endangered (this ecological community was listed under the EPBC Act on the 5 May 2016) and the Coastal Swamp Oak (*Casuarina glauca*) Forest of New South Wales and South East Queensland – endangered (this ecological community was listed under the EPBC Act on the 20 March 2018). Both ecological communities were listed after the controlled action decision was made on 7 December 2015.

In accordance with section 158A of the EPBC Act, this approval decision is not affected by the listing of these ecological communities as the listing occurred after the section 75 controlled action decision.

Listed threatened species

The following listed threatened species was listed under the EPBC Act since the controlled action decision was made and in accordance with section 158A of the EPBC Act, is not relevant to this proposed decision:

- Greater Glider (*Petauroides volans*) – vulnerable. Listed 5 May 2016.

Listed threatened species with updated distributions

Since the controlled action decision was made on 7 December 2015, new information on the distribution of listed threatened species (that were listed at the time that the controlled action decision was made) has been included in our databases. The ERT, dated 16 September 2019, identified that the following listed threatened species may be present within proximity to the proposed action. As such, an analysis of the likelihood of the proposed action resulting in a significant impact to these species was undertaken.

- Curlew Sandpiper (*Calidris ferruginea*) - critically endangered
- Eastern Curlew (*Numenius madagascariensis*) - critically endangered
- Giant Burrowing Frog (*Heleioporus australiacus*) - vulnerable
- New Holland Mouse (*Pseudomys novaehollandiae*) - vulnerable
- (*Androcalva procumbens*) – vulnerable
- Leafless Tongue-orchid (*Cryptostylis hunteriana*) - vulnerable
- A leek-orchid (*Prasophyllum* sp. Wybong) (C.Phelps ORG 5269) - critically endangered
- *Prostanthera cineolifera* – vulnerable.

Despite detailed surveys, these species have not been recorded on, or in the vicinity of the proposed action site. The Department therefore concludes that it is unlikely that individuals will be cleared or impacted by the proposed action and as such, it is unlikely that there will be significant impacts on these species.

### Listed threatened species with updated EPBC listing statuses

The following listed threatened species was identified in both the original ERT and the ERT dated 16 September 2019. This species has been listed in another category representing a higher degree of endangerment under the EPBC Act since the controlled action decision was made:

- Swift Parrot (*Lathamus discolor*) – up-listed from endangered to critically endangered on 5 May 2016.

The Department considered the above species in the controlled action decision, and concluded that the proposed action was likely to have a significant impact on this species. In accordance with section 158A of the EPBC Act, this approval decision is not affected by the up-listing of this species, as it was up-listed after the section 75 controlled action decision was made.

s22

**From:** s47F [redacted]@glencore.com.au  
**Sent:** Wednesday, 20 November 2019 1:03 PM  
**To:** s22 [redacted]  
**Cc:** s47F [redacted]@glencore.com.au  
**Subject:** RE: Invitation to comment - proposed approval - United and Wambo Coal Project - EPBC 2015/7600 [SEC=OFFICIAL]

Hi s22 [redacted]

We have reviewed the additions to the proposed approval decision for EPBC 2015/7600 and have no further comment.

We look forward to your review of the Biodiversity Offset Strategy, I will have Umwelt available for a meeting Monday afternoon or Tuesday morning.

Kind regards,

s47F [redacted]

Approvals Manager  
United Wambo JV Project  
134 Jerrys Plains Road, Warkworth, NSW

s47F [redacted]

[redacted]@glencore.com.au

W: [www.glencore.com](http://www.glencore.com)

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**From:** s22 [redacted]  
**Sent:** Tuesday, 19 November 2019 12:18 PM  
**To:** s47F [redacted] (United - AU) ; s22 [redacted]  
**Cc:** s47F [redacted] (United - AU)  
**Subject:** RE: Invitation to comment - proposed approval - United and Wambo Coal Project - EPBC 2015/7600 [SEC=OFFICIAL]  
**Importance:** High

#### External sender

Hi s47F [redacted] thank you for your comments on the Minister's proposed conditions of approval and also submitting a copy of the Biodiversity Management Plan (which includes the Biodiversity Offset Strategy (the Strategy) referred to in condition 3.a of the Minister's proposed conditions).

A preliminary review of the Strategy indicates that Glencore may in future need to make use of the provisions at section 143A of the EPBC Act which provides for the variation of an "Action Management Plan which is a condition of approval". The Strategy would meet this definition.

The Department has a suite of standard administrative conditions specific to section 143A - I have added these to the draft conditions (numbers 20-25, attached and highlighted in yellow). Conditions 21-23 basically provide that Glencore can revise the Strategy, without having to submit it for approval under section 143A of the EPBC Act, if the revisions would not be likely to have a new or increased impact to that which has been agreed to in an earlier approved version of the Strategy. These conditions remove the administrative burden for approval holders having to submit Action Management Plans, and have them approved by the Minister, every time a minor variation is made.

Including these conditions has required a slight update to conditions 3.a and 9 (I have made the approver of the Strategy the Minister – you will see this is consistent with the wording of section 143A of the EPBC Act – see yellow highlights). I have also included our standard definition of "**New or increased impact**" (yellow highlight). You will note that we have included all of your recommended changes from last week.

As you can see from other recent approvals – these conditions are a standard requirement where an Action Management Plan has been included in conditions of approval. For example, see conditions 26-31 in the recent approval notice for the Six Mile Creek Dam Upgrade, Qld.

<http://epbcnotices.environment.gov.au/entity/annotation/2874b7fb-1301-ea11-b26f-005056842ad1/a71d58ad-4cba-48b6-8dab-f3091fc31cd5?t=1574121400916>

I note the formal end of the 10 business day comment period is close of business tomorrow. If you could get back to me by then it would be much appreciated, if you need to discuss these conditions further, please do not hesitate to call me.

Regards

s22

Assistant Director  
Northern NSW Assessments Section  
Department of the Environment and Energy  
GPO Box 787  
Canberra ACT 2601

s22

[@environment.gov.au](mailto:s22@environment.gov.au)

---

**From:** s47F [@glencore.com.au](mailto:s47F@glencore.com.au)

**Sent:** Wednesday, 13 November 2019 4:26 PM

**To:** s22 [@environment.gov.au](mailto:s22@environment.gov.au); s22 [@environment.gov.au](mailto:s22@environment.gov.au)

**Cc:** s47F [@glencore.com.au](mailto:s47F@glencore.com.au)

**Subject:** RE: Invitation to comment - proposed approval - United and Wambo Coal Project - EPBC 2015/7600 [SEC=OFFICIAL]

Hi s22

Apologies, there were two more corrections we would like to propose:

Water Resources – there is only one condition

The objective of **Condition** 1 is to minimise the impacts of the **action** on a **Water Resource**.

**Listed threatened species and ecological community**

1. The objective of conditions 2 to 4 is to minimise the impacts of the **action** on **listed threatened species and an ecological community**.
3. The **approval holder** must comply with the **State development consent** conditions B55, B56, B57, B58, B59, B60, B61, B62, B69, B71, B72 and B73.
  - a. To compensate for the loss of the **listed threatened species and ecological community** habitat identified at condition 2, the **approval holder** must submit the Biodiversity Offset Strategy **plan** (specified at condition B71(e) of the **State development consent**) to the **Department** for approval.

**Definitions**

**Protected matters** means a **water resource** (sections 24D and 24E), and, the **EPBC Act** **listed threatened species and community**: Regent Honeyeater (*Anthochaera phrygia*), Swift Parrot (*Lathamus discolor*), Spotted-tail quoll (*Dasyurus maculatus maculatus*), Central Hunter Valley eucalypt forest and woodland ecological community.

The wording in the EPBC Act Part 13 Division 1 - **Listed threatened species and ecological communities**

We propose that the definition needs to be consistent with the conditions.

If you require clarification please don't hesitate to call me.

Kind regards,

s47F  
Approvals Manager  
United Wambo JV Project  
134 Jerrys Plains Road, Warkworth, NSW  
s47F  
@glencore.com.au  
W: [www.glencore.com](http://www.glencore.com)

---

**From:** s47F (United - AU)  
**Sent:** Wednesday, 13 November 2019 10:01 AM  
**To:** s22 @environment.gov.au>; s22 @environment.gov.au>  
**Cc:** s47F @glencore.com.au>  
**Subject:** RE: Invitation to comment - proposed approval - United and Wambo Coal Project - EPBC 2015/7600 [SEC=OFFICIAL]

Hi s22

No, these are our final comments on the proposed decision conditions unless the Department disagrees with our proposed changes, then we would like the opportunity to discuss the matter further.

Kind regards,

s47F  
Approvals Manager  
United Wambo JV Project  
134 Jerrys Plains Road, Warkworth, NSW  
s47F  
@glencore.com.au  
W: [www.glencore.com](http://www.glencore.com)

---

**From:** s22 @environment.gov.au>  
**Sent:** Wednesday, 13 November 2019 9:28 AM  
**To:** s47F @glencore.com.au>; s22  
s22 @environment.gov.au>  
**Cc:** s47F @glencore.com.au>  
**Subject:** RE: Invitation to comment - proposed approval - United and Wambo Coal Project - EPBC 2015/7600 [SEC=OFFICIAL]

**External sender**

Hi s47F thank you for sending this through.

Can I check, do you intend to provide any more comments on the conditions before the 20 November deadline?

Regards

s22

---

**From:** s47F @glencore.com.au]  
**Sent:** Tuesday, 12 November 2019 4:31 PM  
**To:** s22 @environment.gov.au>; s22 @environment.gov.au>

Cc: s47F [redacted] [@glencore.com.au](mailto:[redacted]@glencore.com.au)

**Subject:** RE: Invitation to comment - proposed approval - United and Wambo Coal Project - EPBC 2015/7600 [SEC=OFFICIAL]

Hi s22 [redacted]

Please find attached our proposed changes and comments on the proposed approval for EPBC 2015/7600.

Please do not hesitate to contact us if you require clarification.

Kind regards,

s47F [redacted]  
Approvals Manager  
United Wambo JV Project  
134 Jerrys Plains Road, Warkworth, NSW

s47F [redacted]  
[redacted]  
[redacted] [@glencore.com.au](mailto:[redacted]@glencore.com.au)  
W: [www.glencore.com](http://www.glencore.com)

---

**From:** s22 [redacted] [@environment.gov.au](mailto:[redacted]@environment.gov.au)>  
**Sent:** Thursday, 7 November 2019 12:07 PM  
**To:** s47F [redacted] [@glencore.com.au](mailto:[redacted]@glencore.com.au)>  
**Cc:** s47F [redacted] [@glencore.com.au](mailto:[redacted]@glencore.com.au)>; s22 [redacted]  
s22 [redacted]  
**Subject:** Invitation to comment - proposed approval - United and Wambo Coal Project - EPBC 2015/7600 [SEC=OFFICIAL]  
**Importance:** High

**External sender**

Dear s47F [redacted]

Please find attached a letter from the Minister for the Environment inviting comment on the proposed EPBC Act approval for the United and Wambo Coal Project, NSW (EPBC 2015/7600).

Comments on the proposed approval decision are due by **5pm, 20 November 2019**. Please send your comments to me **by return email**.

If you have any questions about this decision, please contact myself or s22 [redacted] can be contacted on s22 [redacted]

Regards  
s22 [redacted]  
Assistant Director  
Northern NSW Assessments Section  
Department of the Environment and Energy  
GPO Box 787  
Canberra ACT 2601  
s22 [redacted]  
[redacted] [@environment.gov.au](mailto:[redacted]@environment.gov.au)

\*\*\*\*\*  
LEGAL DISCLAIMER. The contents of this electronic communication and any attached documents are strictly confidential and they may not be used or disclosed by someone who is not a named recipient.  
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\*\*\*\*\*





**PROPOSED APPROVAL**

**United and Wambo Open Cut Coal Mine Project, Singleton, NSW (EPBC 2015/7600)**

Commented §47F : This wording was used in the Referral, cannot be changed

This decision is made under sections 130(1) and 133(1) of the *Environment Protection and Biodiversity Conservation Act 1999 (Cth)*. Note that section 134(1A) of the **EPBC Act** applies to this approval, which provides in general terms that if the **approval holder** authorises another person to undertake any part of the **action**, the **approval holder** must take all reasonable steps to ensure that the other person is informed of any conditions attached to this approval, and that the other person complies with any such condition.

**Details**

<b>Person to whom the approval is granted (approval holder)</b>	United Collieries Pty Ltd
<b>ACN or ABN of approval holder</b>	ACN: 001 990 209
<b>Action</b>	A joint venture between United Collieries Pty Ltd and Wambo Coal Pty Ltd to extract a total of 176 million tonnes of run-of-mine coal at a rate of up to 10 million tonnes per annum over 21 years from a single open cut mine that combines existing operations at Wambo with a new mine on leases owned by United Collieries, located 16 kilometres west of Singleton, NSW [See <b>EPBC Act</b> referral 2015/7600].

Commented §47F : Understand that no change can be made to this section as the wording has been copied from the EPBC Controlled Action Referral Decision.

**Proposed Approval decision**

My decisions on whether or not to approve the taking of the **action** for the purposes of each controlling provision for the **action** are as follows.

**Controlling Provisions**

<b>Listed Threatened Species and Communities</b>	
Section 18	Approve
Section 18A	Approve
<b>Coal seam gas or large coal mining development impact on water resources</b>	
Section 24D	Approve
Section 24E	Approve

The wording that we used in the Referral was different: The Joint Venture proposes to develop the United and Wambo Open Cut Project (the Proposed Action) as a single open cut **operation** that combines the existing open cut operations at Wambo with a proposed new open cut coal mine at United.'

**Period for which the approval has effect**

This approval has effect until 31 December 2052.

## Decision-maker

---

**Name and position**

The Hon Sussan Ley MP  
Minister for the Environment

---

**Signature**

**PROPOSED DECISION DO NOT SIGN**

---

**Date of decision**

**PROPOSED DECISION DO NOT DATE**

---

## Conditions of approval

This approval is subject to the conditions under the EPBC Act as set out in ANNEXURE A.

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### ANNEXURE A – CONDITIONS OF APPROVAL

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#### Part A – Conditions specific to the action

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##### Water Resources

The objective of Condition 1 is to minimise the impacts of the **action** on a **Water Resource**.

1. The **approval holder** must comply with **State development consent** conditions B39, B40, B46, B49, B51, B52, B53 and B54.

##### Listed threatened species and ecological community

The objective of conditions 2 to 4 is to minimise the impacts of the **action** on **listed threatened species and an ecological community**.

2. Within the area shown at Annexure 1, the **approval holder** must not clear more than:
  - a. 203.7 hectares of Regent Honeyeater (*Anthochaera phrygia*) habitat,
  - b. 203.7 hectares<sup>1</sup> of Swift Parrot (*Lathamus discolor*) habitat,
  - c. 352.9 hectares of Spotted-tail quoll (*Dasyurus maculatus maculatus*) habitat,
  - d. 246.8 hectares of the Central Hunter Valley Eucalypt Forest and Woodland ecological community.
3. The **approval holder** must comply with the **State development consent** conditions B55, B56, B57, B58, B59, B60, B61, B62, B69, B71, B72 and B73.
  - a. To compensate for the loss of the **listed threatened species and ecological community** habitat identified at condition 2, the **approval holder** must submit the Biodiversity Offset Strategy **plan** (specified at condition B71(e) of the **State development consent**) to the **Department** for approval.
    - i. The **approval holder** must not commence **Phase 1A** until the Biodiversity Offset Strategy **plan** has been approved by the **Department**.

---

<sup>1</sup> For the purposes of the EPBC Act, the clearance area of habitat for the Swift Parrot (*Lathamus discolor*) is the same as the clearance area of habitat for the Regent Honeyeater (*Anthochaera phrygia*) because the main eucalypt species that will be impacted in the Regent Honeyeater's habitat on the site also provide important foraging habitat for the Swift Parrot.

- ii. The approval holder must implement the Biodiversity Offset Strategy **plan** as approved by the **Department**.
4. The **approval holder** must comply with the **State development consent** conditions B97, B98, B100, B101, B102, B103, B104 and B105.

---

#### **Part B –Administrative conditions**

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##### **Notification of date of commencement of the action**

5. The **approval holder** must notify the **Department** in writing of the date of **commencement of the action** within 10 **business days** after the date of **commencement of the action**.
6. If the **commencement of the action** does not occur within 5 years from the date of this approval, then the **approval holder** must not commence the **action** without the prior written agreement of the **Minister**.

##### **Compliance records**

7. The **approval holder** must maintain accurate and complete **compliance records**.
8. If the **Department** makes a request in writing, the **approval holder** must provide electronic copies of **compliance records** to the **Department** within the timeframe specified in the request.

**Note:** **Compliance records** may be subject to audit by the **Department** or an independent auditor in accordance with section 458 of the **EPBC Act**, and or used to verify compliance with the conditions. Summaries of the result of an audit may be published on the **Department's website** or through the general media.

##### **Preparation and publication of plans**

9. The **approval holder** must:
  - a. Submit the Biodiversity Offset Strategy **plan** at condition 3.a electronically to the **Department** for approval,
  - b. publish the Biodiversity Offset Strategy **plan** on the **website** within 20 **business days** of the date the Biodiversity Offset Strategy **plan** is approved by the **Department** or of the date a revised Biodiversity Offset Strategy **plan** is submitted to the **Department**, unless otherwise agreed to in writing by the **Department**,
  - c. exclude or redact **sensitive ecological data** from the Biodiversity Offset Strategy **plan** published on the **website** or provided to a member of the public, and
  - d. keep the Biodiversity Offset Strategy **plan** published on the **website** until the end date of this approval.

##### **Annual compliance reporting**

10. The **approval holder** must prepare a **compliance report** addressing compliance with each of the conditions of this approval, including implementation of any management **plans** and strategies from the **State development consent** [that are referred to in this approval](#), for each 12 month period following the date of **commencement of the action**, or otherwise in accordance with an annual date that has been agreed to in writing by the **Minister**. The **approval holder** must:
  - a. publish each **compliance report** on a **website** within 60 **business days** following the relevant 12 month period,

- b. notify the **Department** by email that a **compliance report** has been published on the **website** and provide the **website's** link for the **compliance report** within five **business days** of the date of publication,
- c. keep all **compliance reports** publicly available on the **website** until this approval expires,
- d. exclude or redact **sensitive ecological data** from **compliance reports** published on the **website**, and
- e. where any **sensitive ecological data** has been excluded from the version published, submit the **full compliance report** to the **Department** within 5 **business days** of publication.

Note: Compliance reports may be published on the Department's website.

#### Reporting non-compliance

11. The **approval holder** must notify the **Department** in writing of any: **incident**, or non-compliance with the conditions, or non-compliance with the commitments made in **plans**. The notification must be given as soon as practicable, and no later than two **business days** after becoming aware of the **incident** or non-compliance. The notification must specify:
  - a. any condition which is ~~or may be~~ in breach,
  - b. a short description of the **incident** and/or non-compliance, and
  - c. the location (including co-ordinates), date, and time of the **incident** and/or non-compliance. In the event the exact information cannot be provided, provide the best information available.
12. The **approval holder** must provide to the **Department** the details of any **incident** or non-compliance with the conditions or commitments made in **plans** as soon as practicable and no later than 10 **business days** after becoming aware of the **incident** or non-compliance, specifying:
  - a. any corrective action or investigation which the **approval holder** has already taken or intends to take in the immediate future,
  - b. the potential impacts of the **incident** or non-compliance, and
  - c. the method and timing of any remedial action that will be undertaken by the **approval holder**.

Commented s47F : The condition requires notification of actual non-compuances, not potential non-compliances

#### Independent audit

13. The **approval holder** must ensure that **independent audits** of compliance with the conditions are conducted as requested in writing by the **Minister**.
14. For each **independent audit**, the **approval holder** must:
  - a. provide the name and qualifications of the independent auditor and the draft audit criteria to the **Department**,
  - b. only commence the **independent audit** once the audit criteria have been approved in writing by the **Department**, and
  - c. submit an audit report to the **Department** within the timeframe specified in the approved audit criteria.
15. The **approval holder** must publish the audit report on the **website** within 10 **business days** of receiving the **Department's** approval of the audit report and keep the audit report published on the **website** until the end date of this approval.

#### Completion of the action

16. The **approval holder** must comply with the **State development consent** condition A9<sup>2</sup>.

<sup>2</sup> Condition A9 states that the **State development consent** continues to apply (beyond 31 August 2042) until the rehabilitation of the site has been carried out.

17. Within 30 days after the **completion of the action**, the **approval holder** must notify the **Department** in writing and provide **completion data**.

#### **Changes to State development consent**

18. The **approval holder** must notify the **Department** in writing of any proposed change to the **State development consent** conditions referred to in these conditions within 10 **business days** of formally proposing a change or becoming aware of any proposed change.

19. The **approval holder** must notify the **Department** in writing of any change to the conditions of the **State development consent** referred to in these conditions, within 10 **business days** of a change to conditions being finalised.

---

#### **Part C - Definitions**

---

**Action** means the United and Wambo Open Cut Coal Mine Project, Singleton, NSW (EPBC 2015/7600).

**Approval holder** means the person to whom the approval is granted as identified on the approval notice for EPBC 2015/7600, or to whom the approval is transferred under S145B of the **EPBC Act**, or a person who may take the **action** in accordance with section 133(2A) of the **EPBC Act**.

**Business day** means a day that is not a Saturday, a Sunday or a public holiday in the state or territory of the **action**.

**Commencement of the action** means the commencement of construction as defined in the **State development consent**.

**Completion data** means an environmental report and spatial data clearly detailing how the conditions of this approval have been met. The **Department's** preferred spatial data format is **shapefile**.

**Completion of the action** means the time at which all approval conditions (except condition 16) have been fully met.

**Compliance records** means all documentation or other material in whatever form required to demonstrate compliance with the conditions of approval in the **approval holder's** possession or that are within the **approval holder's** power to obtain lawfully.

**Compliance report(s)** means written reports:

- i. providing accurate and complete details of compliance, **incidents**, and non-compliance with the conditions and the **plans**,
- ii. consistent with the **Department's Annual Compliance Report Guidelines (2014)**,
- iii. including a **shapefile** of any clearance of any **protected matters**, or their habitat, undertaken within the relevant 12 month period, and
- iv. annexing a schedule of all **plans** prepared and in existence in relation to the conditions during the relevant 12 month period.

**Department** means the Australian Government agency responsible for administering the **EPBC Act**.

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

**Incident** means any event which has the potential to, or does, impact on one or more **protected matter(s)** other than as authorised by this approval.

**Independent audit:** means an audit conducted by an independent and **suitably qualified person** as detailed in the *Environment Protection and Biodiversity Conservation Act 1999 Independent Audit and Audit Report Guidelines* (2019).

**Listed threatened species and community:** Regent Honeyeater (*Anthochaera phrygia*), Swift Parrot (*Lathamus discolor*), Spotted-tail quoll (*Dasyurus maculatus maculatus*), Central Hunter Valley eucalypt forest and woodland ecological community.

**Minister** means the Minister administering the *Environment Protection and Biodiversity Conservation Act 1999* (Cth), and includes a delegate of the Minister.

**Phase 1A** is defined in the **State development consent**.

**Plan(s)** means any of the documents required to be prepared, and/or implemented by the **approval holder** and published on the **website** in accordance with these conditions.

**Protected matters** means a **water resource** (sections 24D and 24E), and, the **EPBC Act listed threatened species and ecological community:** Regent Honeyeater (*Anthochaera phrygia*), Swift Parrot (*Lathamus discolor*), Spotted-tail quoll (*Dasyurus maculatus maculatus*), Central Hunter Valley eucalypt forest and woodland ecological community.

**Sensitive ecological data** means data as defined in the Australian Government Department of the Environment (2016) *Sensitive Ecological Data – Access and Management Policy V1.0*.

**Shapefile** means location and attribute information of the **action** provided in an Esri shapefile format. Shapefiles must contain '.shp', '.shx', '.dbf' files and a '.prj' file that specifies the projection/geographic coordinate system used. Shapefiles must also include an '.xml' metadata file that describes the shapefile for discovery and identification purposes.

**Site** is defined in the **State development consent**.

**State development consent** means the State development consent for application number SSD-7142 dated 29 August 2019.

**Suitably qualified person** means a person who has professional qualifications, training, skills and/or experience related to the nominated subject matter and can give authoritative independent assessment, advice and analysis on performance relative to the subject matter using the relevant protocols, standards, methods and/or literature.

**Website** means a set of related web pages located under a single domain name attributed to the **approval holder** and available to the public.

**Water Resource** has the same meaning as in the Commonwealth *Water Act 2007*.



Image Source: AAM (2012), United (2013)  
 Data Source: Glencora (2014)

- Legend**
- Project Area
  - Approved Wambo Surface Development Area
  - Existing 330kV Powerline
  - Proposed extent of Open Cut Mining
  - Proposed Golden Highway Realignment
  - Proposed Relocated 330kV Powerline

File Name (AA): R02/3509\_025.dgn  
 20150630 15:56

FIGURE 1.3  
 The Project

**From:** EPBC <EPBC@industry.gov.au>  
**Sent:** Wednesday, 20 November 2019 4:14 PM  
**To:** s22 ; EPBC; 'epbc@ga.gov.au'  
**Cc:** s22  
**Subject:** RE: Invitation to comment - proposed approval - United and Wambo Coal Project - EPBC 2015/7600 [DLM=For-Official-Use-Only]  
**Attachments:** GA Comments - Proposed approval and conditions Wambo Open Cut Coal Mine....pdf  
**Categories:** File

Good afternoon s22,

Thank you for the opportunity to comment on the Proposed Approval of EPBC 2015/7600, the United and Wambo Coal Project.

The Department of Industry, Innovation and Science has no objections to the proposed action from the joint venture between United Collieries Pty Ltd and Wambo Coal Pty to develop a new single open cut coal mining operation and combine the existing open cut operations at Wambo, 16 kilometres West of Single NSW. We support the sustainable development of coal mining projects, subject to the proponent obtaining the relevant environmental approvals required by State and Commonwealth agencies.

Geoscience Australia has reviewed the proposed approval and provided comments. Please find them attached for your consideration.

Warm regards,

s22  
**Policy Officer, Environment and Resources Stewardship**  
Resources Strategy | Resources Division  
s22 @industry.gov.au

---

**Department of Industry, Innovation and Science**

For Official Use Only

**From:** s22 @environment.gov.au  
**Sent:** Thursday, 7 November 2019 1:56 PM  
**To:** EPBC ; 'epbc@ga.gov.au'  
**Cc:** s22  
**Subject:** Invitation to comment - proposed approval - United and Wambo Coal Project - EPBC 2015/7600 [SEC=OFFICIAL]

Good Afternoon,

I am writing to you as the delegated *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) contact for the Minister for Resources and Northern Australia.

Please find attached a letter from the Minister for the Environment inviting comment on the proposed EPBC Act approval decision for the United and Wambo Coal Project, NSW (EPBC 2015/7600).

Comments on the proposed decision are due by **5pm, 20 November 2019**. Please send any comments to me **by email**, or by letter, to:

Northern NSW Assessments  
Environment Approvals and Wildlife Trade Branch



Department of the Environment and Energy  
GPO Box 787  
CANBERRA ACT 2601

If you have any questions about this decision, please do not hesitate to contact me. If you provide a response, could you please confirm whether or not you intend to provide further comments.

Regards

s22

Assistant Director

Northern NSW Assessments Section

Department of the Environment and Energy

GPO Box 787

Canberra ACT 2601

s22

[environment.gov.au](http://environment.gov.au)



**Environmental and Resources Stewardship  
Resources Strategy  
Resources Division  
Department of Industry, Innovation and Science**

20 November 2019

Attn: s22

Cnr Jerrabomberra Avenue  
and Hindmarsh Drive,  
Symonston ACT 2609  
GPO Box 378,  
Canberra, ACT 2601 Australia  
Phone: +61 2 6249 9111  
Facsimile: +61 2 6249 9999  
Web: [www.ga.gov.au](http://www.ga.gov.au)  
ABN 80 091 799 039

**Re: Proposed approval decision and conditions – United and Wambo Open Cut Coal Mine Project, Singleton, NSW (EPBC 2015/7600)**

I refer to the request dated 7 November 2019 for comment on the proposed approval conditions of the United and Wambo Open Cut Coal Mine Project (the Project), Singleton, NSW (EPBC 2015/7600) by United Collieries Pty Limited. Geoscience Australia has reviewed the proposed approval decision, particularly as it relates to sections 24D and 24E (the water trigger) of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Geoscience Australia has focussed on the potential for impacts to groundwater resources.

The Project has been identified as a controlled action under the EPBC Act, with the water trigger being a controlling provision. The Project was assessed under the bilateral assessment agreement between the Commonwealth and New South Wales. Geoscience Australia notes the conditions of approval relating to groundwater refer to a subset of the New South Wales Development Consent (NSW Conditions) to safeguard matters of national environmental significance (MNES).

In the context of the Commonwealth and NSW approval conditions, Geoscience Australia has briefly reviewed and considered the following documents:

- Conditions listed in NSW Development Consent- United Wambo Open Cut Coal Mine Project (SSD 7142).
- Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development (IESC) Advice, 14 October 2016, reference: IESC 2016-079

Whilst Geoscience Australia does not provide specific technical commentary on State Conditions, the following general comments are provided.

Geoscience Australia has not identified any significant concerns beyond those noted by the IESC. If the proposed conditions are rigorously applied, the issues raised by the IESC should be addressed.

It is noted, however, that the potential for cumulative impacts to groundwater is not specifically addressed in the State Conditions. GA suggests requiring the proponent to make groundwater data available to the Department and NSW authorities (if requested) for inclusion in any cumulative impact assessment.

If you have any queries on this, please contact s22 on s22 or s22

Kind regards,

s22

A/g Director – Advice, Data and Modelling Section  
Groundwater Branch, Environmental Geoscience Division  
Geoscience Australia

s22

**From:** s22  
**Sent:** Thursday, 21 November 2019 11:02 AM  
**To:** Louise Vickery; s22  
**Cc:** s22 DLO Ley; DLOTaylor; s22  
**Subject:** RE: MC19-015360 invitation Minister Taylor to comment on proposed approval decision [SEC=OFFICIAL]

Hi all

Minister Taylor's office has advised the Minister has no comment on this proposal.

I will close the item in PDMS.

Regards

s22  
**Strategic Policy and Governance**  
Energy Division

---

**Department of the Environment and Energy**  
PO Box 787, CANBERRA, ACT 2601  
T: s22 | [Environment.gov.au](http://Environment.gov.au)  
I work part time hours – Mon – Thur

---

**From:** Louise Vickery  
**Sent:** Wednesday, 20 November 2019 2:22 PM  
**To:** s22  
**Cc:** s22 ; DLO Ley ; s22  
**Subject:** RE: MC19-015360 invitation Minister Taylor to comment on proposed approval decision [SEC=OFFICIAL]

Hi s22

This is an invitation from Ley to Taylor inviting him to comment on her proposed decision regarding the United Wambo Mine EPBC Approval

So this needs to go to Energy Division to handle.

I was going to call s22 (to talk her through what it is about) but s22 is enroute to Perth along with other key SES.

s22 used to handle and has now been replaced by s22.

I have explained this to s22. All other SES are enroute to Perth for Energy Ministers meeting tomorrow.

Note consultation comments are due back cob today – so we are likely to have nil response.

Louise

---

**From:** s22  
**Sent:** Wednesday, 20 November 2019 1:48 PM  
**To:** Louise Vickery <[Louise.Vickery@environment.gov.au](mailto:Louise.Vickery@environment.gov.au)>  
**Subject:** MC19-015360 invitation Minister Taylor to comment on proposed approval decision

Hi Louise

I have just assigned the above Ministerial correspondence to you, your advice/action would be much appreciated (see processing instructions on PDMS).

I spoke with s22 (DLO Ley at the MO), who suggested I contact you.

Regards

s22  
Parliamentary Services.



**THE HON SUSSAN LEY MP  
MINISTER FOR THE ENVIRONMENT  
MEMBER FOR FARRER**

MS19-001012

s47F  
Project Manager United Complex  
United Collieries Pty Ltd  
Private Mailbag 13  
SINGLETON NSW 2300

05 DEC 2019

Dear s22

**Decision on Approval - United and Wambo Open Cut Coal Mine Project, Singleton, NSW  
(EPBC 2015/7600)**

I am writing to you in relation to a proposal to develop a single open cut coal mining operation that combines the existing open cut operations at Wambo with a proposed new open cut coal mine on leases owned by United Collieries. I have considered the proposal in accordance with Part 9 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and have decided to grant an approval to United Collieries Pty Ltd. The details of my decision are attached. The proposal must be undertaken in accordance with the conditions specified in the approval.

I would appreciate your assistance by informing me, via the project manager specified below, when you start the action and who will be the contact person responsible for the administration of the approval decision. Please note, any plans required as conditions of approval will be regarded as public documents unless you provide sufficient justification to warrant commercial-in-confidence status.

You should also note that this EPBC Act approval does not affect obligations to comply with any other laws of the Commonwealth, state or territory that are applicable to the action. Neither does this approval confer any right, title or interest that may be required to access land or waters to take the action.

The Department has an active audit program for proposals that have been referred or approved under the EPBC Act. The audit program aims to ensure that proposals are implemented as planned and that there is a high degree of compliance with any associated conditions. Please note that your project may be selected for audit by the Department at any time and all related records and documents may be subject to scrutiny. Information about the Department's compliance monitoring and auditing program is enclosed.

I have also written to the following parties to advise them of this decision:

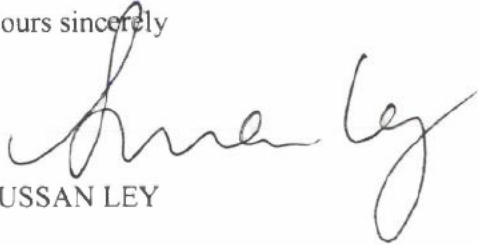
- The Minister for Resources and Northern Australia, Senator the Hon Matthew Canavan.
- The Minister for Energy and Emissions Reduction, the Hon Angus Taylor MP.
- The Minister for Indigenous Australians, the Hon Ken Wyatt AM MP.
- The Minister for Agriculture, Senator the Hon Bridget McKenzie.

- The Minister for Water Resources, Drought, Rural Finance, Natural Disaster and Emergency Management, the Hon David Littleproud MP.
- The New South Wales Minister for Planning and Public Spaces, the Hon Robert Stokes MP.

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If you have any questions about this decision, please contact the project manager, s22 [REDACTED], by email to s22 [REDACTED].au, or telephone s22 [REDACTED] 7 and quote the EPBC reference number (EPBC 2015/7600).

Yours sincerely



SUSSAN LEY

Enc



# COMPLIANCE MONITORING AND AUDITING

This fact sheet provides an overview of the compliance monitoring and auditing program in place for projects referred under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and permits granted under the *Environment Protection (Sea Dumping) Act 1981* (the Sea Dumping Act).

## What is the EPBC Act?

The EPBC Act is Australia's key national environment law. Under the EPBC Act, proposals which are likely to have a significant impact on matters of national environmental significance must be referred, assessed, and a decision made by the Minister or his delegate on whether to approve the proposal.

## What is the Sea Dumping Act?

The Sea Dumping Act regulates the loading and dumping of waste at sea. The Sea Dumping Act fulfils Australia's international obligations under the London Protocol to prevent marine pollution by dumping of wastes and other matter. Permits are required from the Department for all ocean disposal activities.

## What is compliance monitoring and auditing for?

The Department has implemented a program to monitor and audit projects that have been referred under the EPBC Act and the Sea Dumping Act to ensure they are complying with their approval/permit conditions or particular manner requirements and the legislation.

Compliance monitoring activities, including inspections and audits, aim to ensure projects with the potential to impact on nationally protected matters are implemented as planned. Monitoring and audits help the Australian Government to understand how well conditions or requirements are being understood and applied, and contribute to improving the effectiveness of the Department's operations.

All compliance monitoring activities, and any subsequent enforcement activities, are conducted in accordance with the Department's Compliance and Enforcement Policy.

## What is a monitoring inspection?

Approved projects are subject to monitoring inspections to ensure and verify compliance with the conditions or requirements of the approval or permit. Projects are selected for a monitoring inspection based on a risk-based process informed through a number of factors, including sector, location, compliance history and the potential impact on listed matters (such as threatened species and ecological communities).

## What is a compliance audit?

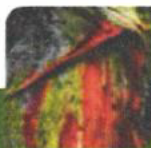
A compliance audit is an objective assessment of a project's compliance against selected criteria. Projects are audited against conditions or requirements. A compliance audit usually takes the form of a desktop document review and may include a site inspection, if necessary. In some cases, the document review provides the Department with enough information to verify that a project is compliant.

Projects can be chosen for audit based on a random selection process or a risk-focused selection process. If your project is selected for an audit, you will be contacted by a Departmental officer who will explain the process. All audit report summaries are posted on the Department's website. The results of audits may also be publicised through the general media.

## Further information

For further information on the compliance monitoring and auditing program, please visit the Department's website at [www.environment.gov.au](http://www.environment.gov.au) or contact:

The Director, Monitoring and Assurance Section  
Department of the Environment and Energy  
GPO Box 787 CANBERRA ACT 2601  
Telephone: (02) 6274 1111  
Email: [EPBCmonitoring@environment.gov.au](mailto:EPBCmonitoring@environment.gov.au)









**THE HON SUSSAN LEY MP  
MINISTER FOR THE ENVIRONMENT  
MEMBER FOR FARRER**

MS19-001012

Senator the Hon Matthew Canavan  
Minister for Resources and Northern Australia  
Parliament House  
CANBERRA ACT 2600

05 DEC 2010

Dear Minister *Matt*

**Decision on Approval - United and Wambo Open Cut Coal Mine Project, Singleton, NSW  
(EPBC 2015/7600)**

I am writing to you in relation to the proposal by United Collieries Pty Ltd to develop a single open cut coal mining operation that combines the existing open cut operations at Wambo with a proposed new open cut coal mine on leases owned by United Collieries.

I have considered the proposal in accordance with Part 9 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and have decided to grant an approval to United Collieries Pty Ltd. A notice of my decision is attached for your information.

If you have any questions about this decision, please contact the project manager s22, by email to s22, or telephone s22 and quote the EPBC reference number (EPBC 2015/7600).

Yours sincerely

*Susan Ley*  
SUSSAN LEY

Enc



**THE HON SUSSAN LEY MP  
MINISTER FOR THE ENVIRONMENT  
MEMBER FOR FARRER**

MS19-001012

The Hon Angus Taylor MP  
Minister for Energy and Emissions Reduction  
Parliament House  
CANBERRA ACT 2600

05 DEC 2019

Dear Minister

A handwritten signature in cursive script, appearing to read 'Angus', written over the printed name 'Dear Minister'.

**Decision on Approval - United and Wambo Open Cut Coal Mine Project, Singleton, NSW  
(EPBC 2015/7600)**

I am writing to you in relation to the proposal by United Collieries Pty Ltd to develop a single open cut coal mining operation that combines the existing open cut operations at Wambo with a proposed new open cut coal mine on leases owned by United Collieries.

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If you have any questions about this decision, please contact the project manager, s22 [redacted] by email to s22 [redacted] au, or telephone s22 [redacted] and quote the EPBC reference number (EPBC 2015/7600).

Yours sincerely

A large, stylized handwritten signature in cursive script, appearing to read 'Sussan Ley', written in black ink.

SUSSAN LEY

Enc



**THE HON SUSSAN LEY MP  
MINISTER FOR THE ENVIRONMENT  
MEMBER FOR FARRER**

MS19-001012

The Hon Ken Wyatt AM MP  
Minister for Indigenous Australians  
Parliament House  
CANBERRA ACT 2600

05 DEC 2019

Dear Minister 

**Decision on Approval - United and Wambo Open Cut Coal Mine Project, Singleton, NSW  
(EPBC 2015/7600)**

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Yours sincerely



SUSSAN LEY

Enc



**THE HON SUSSAN LEY MP  
MINISTER FOR THE ENVIRONMENT  
MEMBER FOR FARRER**

MS19-001012

Senator the Hon Bridget McKenzie  
Minister for Agriculture  
Parliament House  
CANBERRA ACT 2600

05 DEC 2010

Dear Minister *Bridget*

**Decision on Approval - United and Wambo Open Cut Coal Mine Project, Singleton, NSW  
(EPBC 2015/7600)**

I am writing to you in relation to the proposal by United Collieries Pty Ltd to develop a single open cut coal mining operation that combines the existing open cut operations at Wambo with a proposed new open cut coal mine on leases owned by United Collieries.

I have considered the proposal in accordance with Part 9 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and have decided to grant an approval to United Collieries Pty Ltd. A notice of my decision is attached for your information.

If you have any questions about this decision, please contact the project manager, s22, by email to s22, or telephone s22 and quote the EPBC reference number (EPBC 2015/7600).

Yours sincerely

A handwritten signature in black ink, appearing to read 'Sussan Ley', with a flourish at the end.

SUSSAN LEY

Enc



**THE HON SUSSAN LEY MP  
MINISTER FOR THE ENVIRONMENT  
MEMBER FOR FARRER**

MS19-001012

The Hon David Littleproud MP  
Minister for Water Resources, Drought, Rural Finance,  
Natural Disaster and Emergency Management  
Parliament House  
CANBERRA ACT 2600

05 DEC 2019

Dear Minister *David*

**Decision on Approval - United and Wambo Open Cut Coal Mine Project, Singleton, NSW  
(EPBC 2015/7600)**

I am writing to you in relation to the proposal by United Collieries Pty Ltd to develop a single open cut coal mining operation that combines the existing open cut operations at Wambo with a proposed new open cut coal mine on leases owned by United Collieries.

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Yours sincerely

A handwritten signature in black ink, appearing to read 'Sussan Ley', written over the typed name 'SUSSAN LEY'.

SUSSAN LEY

Enc



**THE HON SUSSAN LEY MP  
MINISTER FOR THE ENVIRONMENT  
MEMBER FOR FARRER**

MS19-001012

The Hon Robert Stokes MP  
Minister for Planning and Public Spaces  
Parliament House  
6 Macquarie Street  
SYDNEY NSW 2000

05 DEC 2010

Dear Minister *Rob*

**Decision on Approval - United and Wambo Open Cut Coal Mine Project, Singleton, NSW  
(EPBC 2015/7600)**

I am writing to you in relation to the proposal by United Collieries Pty Ltd to develop a single open cut coal mining operation that combines the existing open cut operations at Wambo with a proposed new open cut coal mine on leases owned by United Collieries.

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Yours sincerely

*Sussan Ley*  
SUSSAN LEY

Enc

# EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

ERT Wambo united 5 km buffer 14 November 2019

Report created: 14/11/19 14:27:48

[Summary](#)

[Details](#)

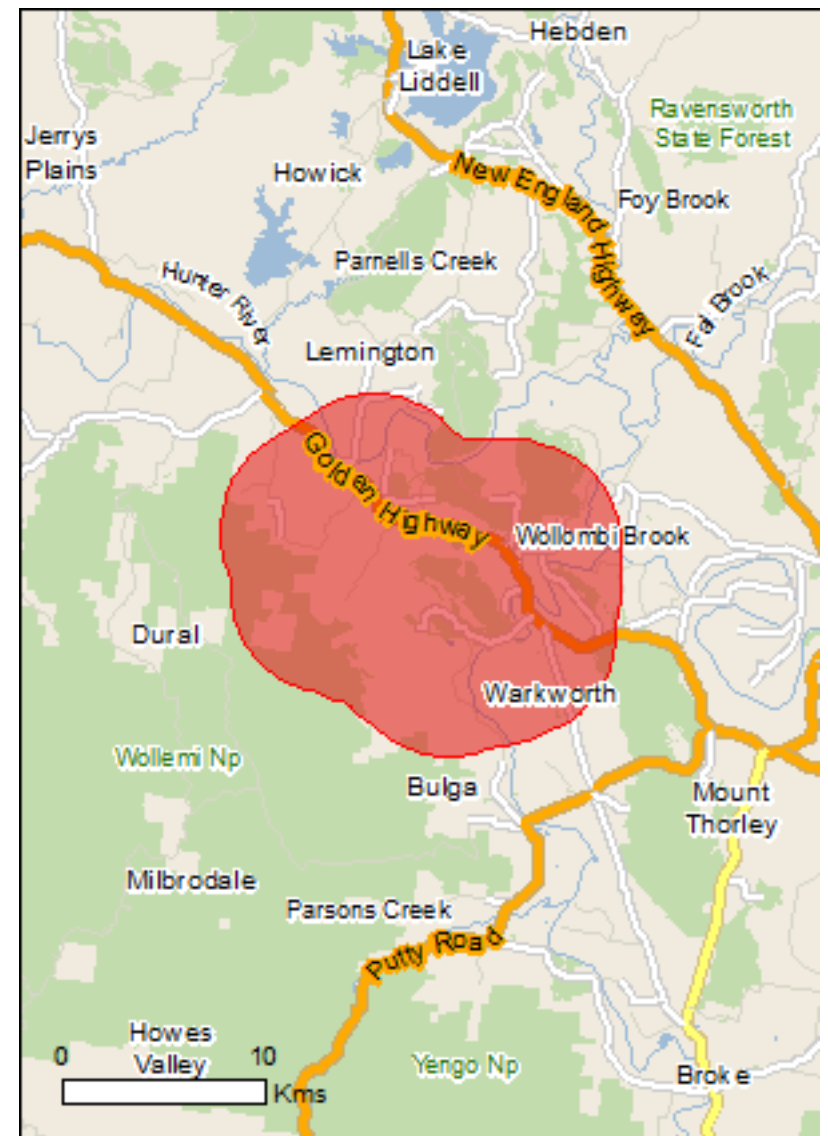
[Matters of NES](#)

[Other Matters Protected by the EPBC Act](#)

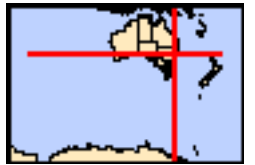
[Extra Information](#)

[Caveat](#)

[Acknowledgements](#)



This map may contain data which are ©Commonwealth of Australia (Geoscience Australia), ©PSMA Australia Limited



# Summary

## Matters of National Environment Significance

<a href="#">World Heritage Properties:</a>	1
<a href="#">National Heritage Places:</a>	1
<a href="#">Ramsar Wetlands:</a>	1
<a href="#">Great Barrier Reef Marine Park:</a>	None
<a href="#">Commonwealth Marine Area:</a>	None
<a href="#">Threatened Ecological Communities:</a>	5
<a href="#">Threatened Species:</a>	36
<a href="#">Migratory Species:</a>	14

## Other Matters Protected by the EPBC Act

<a href="#">Commonwealth Lands:</a>	2
<a href="#">Commonwealth Heritage Places:</a>	None
<a href="#">Listed Marine Species:</a>	21
<a href="#">Whales and Other Cetaceans:</a>	None
<a href="#">Critical Habitats:</a>	None
<a href="#">Commonwealth Reserves Terrestrial:</a>	None
<a href="#">Australian Marine Parks</a>	None

## Extra Information

This part of the report provides information that may also be relevant to the area you have

<a href="#">State and Territory Reserves:</a>	1
<a href="#">Regional Forest Agreements:</a>	1
<a href="#">Invasive Species:</a>	38
<a href="#">Nationally Important Wetlands:</a>	None
<a href="#">EPBC Act Referrals:</a>	12
<a href="#">Key Ecological Features (Marine)</a>	None



# Details

## Matters of National Environmental Significance

### World Heritage Properties [\[ Resource Information \]](#)

Name	State	Status
<a href="#">The Greater Blue Mountains Area</a>	NSW	Declared property

### National Heritage Places [\[ Resource Information \]](#)

Name	State	Status
<b>Natural</b>		
<a href="#">The Greater Blue Mountains Area</a>	NSW	Listed place

### Wetlands of International Importance (Ramsar Wetlands) [\[ Resource Information \]](#)

Name	Proximity
<a href="#">Hunter estuary wetlands</a>	50 - 100km upstream

### Threatened Ecological Communities [\[ Resource Information \]](#)

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Name	Status	Type of Presence
<a href="#">Central Hunter Valley eucalypt forest and woodland</a>	Critically Endangered	Community likely to occur within area
<a href="#">Coastal Swamp Oak (Casuarina glauca) Forest of New South Wales and South East Queensland ecological community</a>	Endangered	Community may occur within area
<a href="#">Hunter Valley Weeping Myall (Acacia pendula) Woodland</a>	Critically Endangered	Community likely to occur within area
<a href="#">Warkworth Sands Woodland of the Hunter Valley</a>	Critically Endangered	Community may occur within area
<a href="#">White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland</a>	Critically Endangered	Community may occur within area

### Threatened Species [\[ Resource Information \]](#)

Name	Status	Type of Presence
<b>BIRDS</b>		
<a href="#">Anthochaera phrygia</a> Regent Honeyeater [82338]	Critically Endangered	Species or species habitat known to occur within area
<a href="#">Botaurus poiciloptilus</a> Australasian Bittern [1001]	Endangered	Species or species habitat may occur within area
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
<a href="#">Grantiella picta</a> Painted Honeyeater [470]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Hirundapus caudacutus</a> White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Lathamus discolor</a> Swift Parrot [744]	Critically Endangered	Species or species habitat known to occur within area
<a href="#">Numenius madagascariensis</a> Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
<a href="#">Rostratula australis</a> Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area
<b>FROGS</b>		
<a href="#">Heleioporus australiacus</a> Giant Burrowing Frog [1973]	Vulnerable	Species or species habitat likely to occur within area

Name	Status	Type of Presence
<a href="#">Litoria aurea</a> Green and Golden Bell Frog [1870]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Litoria booroolongensis</a> Booroolong Frog [1844]	Endangered	Species or species habitat may occur within area
<a href="#">Litoria littlejohni</a> Littlejohn's Tree Frog, Heath Frog [64733]	Vulnerable	Species or species habitat may occur within area
<b>MAMMALS</b>		
<a href="#">Chalinolobus dwyeri</a> Large-eared Pied Bat, Large Pied Bat [183]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Dasyurus maculatus maculatus (SE mainland population)</a> Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]	Endangered	Species or species habitat known to occur within area
<a href="#">Nyctophilus corbeni</a> Corben's Long-eared Bat, South-eastern Long-eared Bat [83395]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Petauroides volans</a> Greater Glider [254]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Petrogale penicillata</a> Brush-tailed Rock-wallaby [225]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)</a> Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Potorous tridactylus tridactylus</a> Long-nosed Potoroo (SE Mainland) [66645]	Vulnerable	Species or species habitat may occur within area
<a href="#">Pseudomys novaehollandiae</a> New Holland Mouse, Pookila [96]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Pteropus poliocephalus</a> Grey-headed Flying-fox [186]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
<b>PLANTS</b>		
<a href="#">Allocasuarina glareicola</a> [21932]	Endangered	Species or species habitat may occur within area
<a href="#">Androcalva procumbens</a> [87153]	Vulnerable	Species or species habitat may occur within area
<a href="#">Cryptostylis hunteriana</a> Leafless Tongue-orchid [19533]	Vulnerable	Species or species habitat may occur within area
<a href="#">Cynanchum elegans</a> White-flowered Wax Plant [12533]	Endangered	Species or species habitat likely to occur within area
<a href="#">Eucalyptus glaucina</a> Slaty Red Gum [5670]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Euphrasia arguta</a> [4325]	Critically Endangered	Species or species habitat may occur within area
<a href="#">Homoranthus darwinioides</a> [12974]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Olearia cordata</a> [6710]	Vulnerable	Species or species habitat likely to occur within area

Name	Status	Type of Presence
<a href="#">Pomaderris brunnea</a> Rufous Pomaderris [16845]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Prasophyllum sp. Wybong (C.Phelps ORG 5269)</a> a leek-orchid [81964]	Critically Endangered	Species or species habitat may occur within area
<a href="#">Prostanthera cineolifera</a> [11233]	Vulnerable	Species or species habitat may occur within area
<a href="#">Pterostylis gibbosa</a> Illawarra Greenhood, Rufa Greenhood, Pouched Greenhood [4562]	Endangered	Species or species habitat may occur within area
<a href="#">Rutidosia heterogama</a> Heath Wrinklewort [13132]	Vulnerable	Species or species habitat may occur within area
<a href="#">Thesium australe</a> Austral Toadflax, Toadflax [15202]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Wollemia nobilis</a> Wollemi Pine [64545]	Critically Endangered	Species or species habitat likely to occur within area

### Migratory Species [\[ Resource Information \]](#)

\* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

Name	Threatened	Type of Presence
<b>Migratory Marine Birds</b>		
<a href="#">Apus pacificus</a> Fork-tailed Swift [678]		Species or species habitat likely to occur within area
<b>Migratory Terrestrial Species</b>		
<a href="#">Hirundapus caudacutus</a> White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Monarcha melanopsis</a> Black-faced Monarch [609]		Species or species habitat known to occur within area
<a href="#">Motacilla flava</a> Yellow Wagtail [644]		Species or species habitat may occur within area
<a href="#">Myiagra cyanoleuca</a> Satin Flycatcher [612]		Species or species habitat known to occur within area
<a href="#">Rhipidura rufifrons</a> Rufous Fantail [592]		Species or species habitat known to occur within area
<b>Migratory Wetlands Species</b>		
<a href="#">Actitis hypoleucos</a> Common Sandpiper [59309]		Species or species habitat may occur within area
<a href="#">Calidris acuminata</a> Sharp-tailed Sandpiper [874]		Species or species habitat likely to occur within area
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
<a href="#">Calidris melanotos</a> Pectoral Sandpiper [858]		Species or species habitat may occur within area
<a href="#">Gallinago hardwickii</a> Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area
<a href="#">Numenius madagascariensis</a> Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area

Name	Threatened	Type of Presence
<a href="#">Pandion haliaetus</a> Osprey [952]		Species or species habitat may occur within area
<a href="#">Tringa nebularia</a> Common Greenshank, Greenshank [832]		Species or species habitat may occur within area

## Other Matters Protected by the EPBC Act

### Commonwealth Lands [\[ Resource Information \]](#)

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Name
Commonwealth Land - Australian Telecommunications Commission
Commonwealth Land - Telstra Corporation Limited

### Listed Marine Species [\[ Resource Information \]](#)

\* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

Name	Threatened	Type of Presence
<b>Birds</b>		
<a href="#">Actitis hypoleucos</a> Common Sandpiper [59309]		Species or species habitat may occur within area
<a href="#">Apus pacificus</a> Fork-tailed Swift [678]		Species or species habitat likely to occur within area
<a href="#">Ardea alba</a> Great Egret, White Egret [59541]		Species or species habitat known to occur within area
<a href="#">Ardea ibis</a> Cattle Egret [59542]		Species or species habitat may occur within area
<a href="#">Calidris acuminata</a> Sharp-tailed Sandpiper [874]		Species or species habitat likely to occur within area
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
<a href="#">Calidris melanotos</a> Pectoral Sandpiper [858]		Species or species habitat may occur within area
<a href="#">Chrysococcyx osculans</a> Black-eared Cuckoo [705]		Species or species habitat known to occur within area
<a href="#">Gallinago hardwickii</a> Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area
<a href="#">Haliaeetus leucogaster</a> White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area
<a href="#">Hirundapus caudacutus</a> White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Lathamus discolor</a> Swift Parrot [744]	Critically Endangered	Species or species

Name	Threatened	Type of Presence
<a href="#">Merops ornatus</a> Rainbow Bee-eater [670]		habitat known to occur within area  Species or species habitat may occur within area
<a href="#">Monarcha melanopsis</a> Black-faced Monarch [609]		Species or species habitat known to occur within area
<a href="#">Motacilla flava</a> Yellow Wagtail [644]		Species or species habitat may occur within area
<a href="#">Myiagra cyanoleuca</a> Satin Flycatcher [612]		Species or species habitat known to occur within area
<a href="#">Numenius madagascariensis</a> Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
<a href="#">Pandion haliaetus</a> Osprey [952]		Species or species habitat may occur within area
<a href="#">Rhipidura rufifrons</a> Rufous Fantail [592]		Species or species habitat known to occur within area
<a href="#">Rostratula benghalensis (sensu lato)</a> Painted Snipe [889]	Endangered*	Species or species habitat likely to occur within area
<a href="#">Tringa nebularia</a> Common Greenshank, Greenshank [832]		Species or species habitat may occur within area

## Extra Information

State and Territory Reserves	[ Resource Information ]
Name	State
Wollemi	NSW

Regional Forest Agreements	[ Resource Information ]
Note that all areas with completed RFAs have been included.	
Name	State
<a href="#">North East NSW RFA</a>	New South Wales

Invasive Species	[ Resource Information ]
Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps from Landscape Health Project, National Land and Water Resources Audit,	

Name	Status	Type of Presence
<b>Birds</b>		
<a href="#">Acridotheres tristis</a> Common Myna, Indian Myna [387]		Species or species habitat likely to occur within area
<a href="#">Alauda arvensis</a> Skylark [656]		Species or species habitat likely to occur within area
<a href="#">Anas platyrhynchos</a> Mallard [974]		Species or species habitat likely to occur within area
<a href="#">Carduelis carduelis</a> European Goldfinch [403]		Species or species habitat likely to occur within area
<a href="#">Columba livia</a> Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitat likely to occur within area
<a href="#">Lonchura punctulata</a> Nutmeg Mannikin [399]		Species or species habitat likely to occur within area

Name	Status	Type of Presence
<a href="#">Passer domesticus</a> House Sparrow [405]		Species or species habitat likely to occur within area
<a href="#">Pycnonotus jocosus</a> Red-whiskered Bulbul [631]		Species or species habitat likely to occur within area
<a href="#">Streptopelia chinensis</a> Spotted Turtle-Dove [780]		Species or species habitat likely to occur within area
<a href="#">Sturnus vulgaris</a> Common Starling [389]		Species or species habitat likely to occur within area
<a href="#">Turdus merula</a> Common Blackbird, Eurasian Blackbird [596]		Species or species habitat likely to occur within area
<b>Frogs</b>		
<a href="#">Rhinella marina</a> Cane Toad [83218]		Species or species habitat likely to occur within area
<b>Mammals</b>		
<a href="#">Bos taurus</a> Domestic Cattle [16]		Species or species habitat likely to occur within area
<a href="#">Canis lupus familiaris</a> Domestic Dog [82654]		Species or species habitat likely to occur within area
<a href="#">Felis catus</a> Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
<a href="#">Feral deer</a> Feral deer species in Australia [85733]		Species or species habitat likely to occur within area
<a href="#">Lepus capensis</a> Brown Hare [127]		Species or species habitat likely to occur within area
<a href="#">Mus musculus</a> House Mouse [120]		Species or species habitat likely to occur within area
<a href="#">Oryctolagus cuniculus</a> Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
<a href="#">Rattus norvegicus</a> Brown Rat, Norway Rat [83]		Species or species habitat likely to occur within area
<a href="#">Rattus rattus</a> Black Rat, Ship Rat [84]		Species or species habitat likely to occur within area
<a href="#">Sus scrofa</a> Pig [6]		Species or species habitat likely to occur within area
<a href="#">Vulpes vulpes</a> Red Fox, Fox [18]		Species or species habitat likely to occur within area
<b>Plants</b>		
<a href="#">Alternanthera philoxeroides</a> Alligator Weed [11620]		Species or species habitat likely to occur within area
<a href="#">Chrysanthemoides monilifera</a> Bitou Bush, Boneseed [18983]		Species or species habitat may occur within area
<a href="#">Chrysanthemoides monilifera subsp. monilifera</a> Boneseed [16905]		Species or species habitat likely to occur within area

Name	Status	Type of Presence
<a href="#">Dolichandra unguis-cati</a> Cat's Claw Vine, Yellow Trumpet Vine, Cat's Claw Creeper, Funnel Creeper [85119]		Species or species habitat likely to occur within area
<a href="#">Eichhornia crassipes</a> Water Hyacinth, Water Orchid, Nile Lily [13466]		Species or species habitat likely to occur within area
<a href="#">Genista sp. X Genista monspessulana</a> Broom [67538]		Species or species habitat may occur within area
<a href="#">Lantana camara</a> Lantana, Common Lantana, Kamara Lantana, Large-leaf Lantana, Pink Flowered Lantana, Red Flowered Lantana, Red-Flowered Sage, White Sage, Wild Sage [10892]		Species or species habitat likely to occur within area
<a href="#">Lycium ferocissimum</a> African Boxthorn, Boxthorn [19235]		Species or species habitat likely to occur within area
<a href="#">Opuntia spp.</a> Prickly Pears [82753]		Species or species habitat likely to occur within area
<a href="#">Pinus radiata</a> Radiata Pine Monterey Pine, Insignis Pine, Wilding Pine [20780]		Species or species habitat may occur within area
<a href="#">Rubus fruticosus aggregate</a> Blackberry, European Blackberry [68406]		Species or species habitat likely to occur within area
<a href="#">Salix spp. except S.babylonica, S.x calodendron &amp; S.x reichardtii</a> Willows except Weeping Willow, Pussy Willow and Sterile Pussy Willow [68497]		Species or species habitat likely to occur within area
<a href="#">Salvinia molesta</a> Salvinia, Giant Salvinia, Aquarium Watermoss, Kariba Weed [13665]		Species or species habitat likely to occur within area
<a href="#">Senecio madagascariensis</a> Fireweed, Madagascar Ragwort, Madagascar Groundsel [2624]		Species or species habitat likely to occur within area
<a href="#">Tamarix aphylla</a> Athel Pine, Athel Tree, Tamarisk, Athel Tamarisk, Athel Tamarix, Desert Tamarisk, Flowering Cypress, Salt Cedar [16018]		Species or species habitat likely to occur within area

## EPBC Act Referrals [\[ Resource Information \]](#)

Further details about the referral or advice - including its current status if still active - are available in its PINK report; click on the title.

Referral	Reference	Referral Outcome	Assessment Status
<a href="#">Extending Existing operations at Warkworth Coal Mine</a>	2002/629	CA	Condition variation being considered
<a href="#">Redbank 2 Power Station &amp; Infrastructure</a>	2003/1088	NCA-PM	Referral Decision Made
<a href="#">Wambo Coal Mine Development Project</a>	2003/1138	CA	Approval Decision Made
<a href="#">Clearance of 35 ha in Ravensworth State Forest for extension of Mt Owen coal mining operations</a>	2004/1369	NCA	Referral Decision Made
<a href="#">Aerial baiting for wild dog control</a>	2006/2713	NCA-PM	Referral Decision Made
<a href="#">Warkworth Mine Extension</a>	2009/5081	CA	Approval Decision Made
<a href="#">Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia</a>	2015/7522	NCA	Referral Decision Made
<a href="#">United and Wambo open cut coal mine project, Hunter Valley, NSW</a>	2015/7600	CA	Comments on Proposed Decision Sought
<a href="#">South Wambo underground coal mine extension, NSW</a>	2016/7636	CA	Approval Decision Made
<a href="#">Hunter Valley Coal Mining Operations North - State approved mining, NSW</a>	2016/7640	CA	Approval Decision Made
<a href="#">Hunter Valley Coal Mining Operations South - Modification 5</a>	2016/7641	NCA	Referral Decision Made





# Caveat

The information presented in this report has been provided by a range of data sources as acknowledged at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the Environment Protection and Biodiversity Conservation Act 1999. It holds mapped locations of World and National Heritage properties, Wetlands of International and National Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to consider the qualifications below and may need to seek and consider other information sources.

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

For species where the distributions are well known, maps are digitised from sources such as recovery plans and detailed habitat studies. Where appropriate, core breeding, foraging and roosting areas are indicated under 'type of presence'. For species whose distributions are less well known, point locations are collated from government wildlife authorities, museums, and non-government organisations; bioclimatic distribution models are generated and these validated by experts. In some cases, the distribution maps are based solely on expert knowledge.

Threatened, migratory and marine species distributions have been derived through a variety of methods. Where distributions are well known and if time permits, maps are derived using either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc) together with point locations and described habitat; or environmental modelling (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where very little information is available for species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc). In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More reliable distribution mapping methods are used to update these distributions as time permits.

Only selected species covered by the following provisions of the EPBC Act have been mapped:

- migratory and
- marine

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as extinct or considered as vagrants
- some species and ecological communities that have only recently been listed
- some terrestrial species that overfly the Commonwealth marine area
- migratory species that are very widespread, vagrant, or only occur in small numbers

The following groups have been mapped, but may not cover the complete distribution of the species:

- non-threatened seabirds which have only been mapped for recorded breeding sites
- seals which have only been mapped for breeding sites near the Australian continent

Such breeding sites may be important for the protection of the Commonwealth Marine environment.

# Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

- [-Office of Environment and Heritage, New South Wales](#)
- [-Department of Environment and Primary Industries, Victoria](#)
- [-Department of Primary Industries, Parks, Water and Environment, Tasmania](#)
- [-Department of Environment, Water and Natural Resources, South Australia](#)
- [-Department of Land and Resource Management, Northern Territory](#)
- [-Department of Environment and Heritage Protection, Queensland](#)
- [-Department of Parks and Wildlife, Western Australia](#)
- [-Environment and Planning Directorate, ACT](#)
- [-Birdlife Australia](#)
- [-Australian Bird and Bat Banding Scheme](#)
- [-Australian National Wildlife Collection](#)
- Natural history museums of Australia
- [-Museum Victoria](#)
- [-Australian Museum](#)
- [-South Australian Museum](#)
- [-Queensland Museum](#)
- [-Online Zoological Collections of Australian Museums](#)
- [-Queensland Herbarium](#)
- [-National Herbarium of NSW](#)
- [-Royal Botanic Gardens and National Herbarium of Victoria](#)
- [-Tasmanian Herbarium](#)
- [-State Herbarium of South Australia](#)
- [-Northern Territory Herbarium](#)
- [-Western Australian Herbarium](#)
- [-Australian National Herbarium, Canberra](#)
- [-University of New England](#)
- [-Ocean Biogeographic Information System](#)
- [-Australian Government, Department of Defence](#)
- [-Forestry Corporation of NSW](#)
- [-Australian Tropical Herbarium, Cairns](#)
- [-eBird Australia](#)
- [-Australian Government – Australian Antarctic Data Centre](#)
- [-Museum and Art Gallery of the Northern Territory](#)
- [-Australian Government National Environmental Science Program](#)
- [-Australian Institute of Marine Science](#)
- [-Reef Life Survey Australia](#)
- [-American Museum of Natural History](#)
- [-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania](#)
- [-Tasmanian Museum and Art Gallery, Hobart, Tasmania](#)
- Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

## Attachment E2 – Environmental Reporting Tool Review – United and Wambo Open Cut Coal Mine Project, Singleton, NSW (EPBC: 2015/7600)

### New listings

The Department's Environmental Reporting Tool (ERT) dated 14 November 2019 identified additional listed threatened species and ecological communities that may occur within 5 km of the proposed action site that were not considered at the time of the controlled action decision on 7 December 2015.

### Ecological communities

Two additional ecological communities were identified:

1. The Warkworth Sands Woodland of the Hunter Valley – critically endangered (this ecological community was listed under the EPBC Act on 5 May 2016).
2. The Coastal Swamp Oak (*Casuarina glauca*) Forest of New South Wales and South East Queensland – endangered (this ecological community was listed under the EPBC Act on 20 March 2018).

Both ecological communities were listed after the controlled action decision was made on 7 December 2015.

In accordance with section 158A of the EPBC Act, this approval decision is not affected by the listing of these ecological communities as the listing occurred after the section 75 controlled action decision.

### Listed threatened species

Two additional listed threatened species were identified:

1. Greater Glider (*Petauroides volans*) – vulnerable. Listed 5 May 2016.
2. White-throated Needletail (*Hirundapus caudacutus*) - vulnerable. Listed 4 July 2019.

Both threatened species were listed after the controlled action decision was made on 7 December 2015.

In accordance with section 158A of the EPBC Act, this approval decision is not affected by the listing of these species as the listing occurred after the section 75 controlled action decision.

### Listed threatened species with updated distributions

Following the controlled action decision on 7 December 2015, new information on the distribution of listed threatened species (that were listed at the time that the controlled action decision was made) has been included in the Department's databases. The ERT, dated 14 November 2019, identified that the following listed threatened species may be present within the proximity of the proposed action. As such, an analysis of the likelihood of the proposed action resulting in a significant impact to these species has been undertaken:

1. Curlew Sandpiper (*Calidris ferruginea*) - critically endangered
2. Eastern Curlew (*Numenius madagascariensis*) - critically endangered
3. Giant Burrowing Frog (*Heleioporus australiacus*) - vulnerable
4. (*Androcalva procumbens*) – vulnerable

5. A leek-orchid (*Prasophyllum* sp. Wybong) (C.Phelps ORG 5269) - critically endangered
6. *Prostanthera cineolifera* – vulnerable
7. Long-nosed Potoroo (SE Mainland) (*Potorous tridactylus tridactylus*) – vulnerable
8. Heath Wrinklewort (*Rutidosia heterogama*) - vulnerable.

Despite detailed surveys, the proponent's Environmental Impact Assessment and the State assessment did not identify that significant impacts to these species are likely. The Department agrees with this analysis and concludes that it is unlikely there will be significant impacts on these species.

#### **Listed threatened species with updated EPBC listing statuses**

The following listed threatened species were identified in both the original ERT and the ERT dated 14 November 2019. These species have been listed in another category representing a higher degree of endangerment under the EPBC Act since the controlled action decision was made:

1. Swift Parrot (*Lathamus discolor*) – up-listed from endangered to critically endangered on 5 May 2016.
2. Wollemi Pine (*Wollemia nobilis*) – up-listed from endangered to critically endangered on 11 May 2018.

In accordance with section 158A of the EPBC Act, this approval decision is not affected by the up-listing of these species, as they were up-listed after the section 75 controlled action decision was made on 7 December 2015. The Department notes, at the time of the referral decision, the Department considered that the proposed action was likely to have a significant impact on the Swift Parrot (*Lathamus discolor*) and this species was assessed as part of the State assessment. The Department did not consider that the proposed action was likely to have a significant impact on the Wollemi Pine (*Wollemia nobilis*) at the time of the referral decision.



**~~PROPOSED~~-APPROVAL**

**United and Wambo Open Cut Coal Mine Project, Singleton, NSW (EPBC 2015/7600)**

This decision is made under sections 130(1) and 133(1) of the *Environment Protection and Biodiversity Conservation Act 1999 (Cth)*. Note that section 134(1A) of the EPBC Act applies to this approval, which provides in general terms that if the approval holder authorises another person to undertake any part of the action, the approval holder must take all reasonable steps to ensure that the other person is informed of any conditions attached to this approval, and that the other person complies with any such condition.

**Details**

<b>Person to whom the approval is granted (approval holder)</b>	United Collieries Pty Ltd
<b>ACN or ABN of approval holder</b>	ACN: 001 990 209
<b>Action</b>	A joint venture between United Collieries Pty Ltd and Wambo Coal Pty Ltd to extract a total of 176 million tonnes of run-of-mine coal at a rate of up to 10 million tonnes per annum over 21 years from a single open cut mine that combines existing operations at Wambo with a new mine on leases owned by United Collieries, located 16 kilometres west of Singleton, NSW [See EPBC Act referral 2015/7600].

**~~Proposed~~ Approval decision**

My decisions on whether or not to approve the taking of the action for the purposes of each controlling provision for the action are as follows.

**Controlling Provisions**

Listed Threatened Species and Communities	
Section 18	Approve
Section 18A	Approve
Coal seam gas or large coal mining development impact on water resources	
Section 24D	Approve
Section 24E	Approve

***Period for which the approval has effect***

This approval has effect until 31 December 2052.

## Decision-maker

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**Name and position**

The Hon Sussan Ley MP  
Minister for the Environment

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**Signature**

~~PROPOSED DECISION DO NOT SIGN~~

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**Date of decision**

~~PROPOSED DECISION DO NOT DATE~~

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## Conditions of approval

This approval is subject to the conditions under the EPBC Act as set out in ANNEXURE A.

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## ANNEXURE A – CONDITIONS OF APPROVAL

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### Part A – Conditions specific to the action

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#### Water Resources

The objective of ~~Conditions~~Condition 1 is to minimise the impacts of the **action** on a **Water Resource**.

1. The **approval holder** must comply with **State development consent** conditions B39, B40, B46, B49, B51, B52, B53 and B54.

#### Listed threatened species and ecological community

The objective of conditions 2 to 4 is to minimise the impacts of the **action** on **listed threatened species and an ecological community**.

2. Within the area shown at Annexure 1, the **approval holder** must not clear more than:
  - a. 203.7 hectares of Regent Honeyeater (*Anthochaera phrygia*) habitat,
  - b. 203.7 hectares<sup>1</sup> of Swift Parrot (*Lathamus discolor*) habitat,
  - c. 352.9 hectares of Spotted-tail quoll (*Dasyurus maculatus maculatus*) habitat,
  - d. 246.8 hectares of the Central Hunter Valley Eucalypt Forest and Woodland ecological community.
3. The **approval holder** must comply with the **State development consent** conditions B55, B56, B57, B58, B59, B60, B61, B62, B69, B71, B72 and B73.
  - a. To compensate for the loss of the **listed threatened species and ecological community** habitat identified at condition 2, the **approval holder** must submit the Biodiversity Offset Strategy **plan** (specified at condition B71(e) of the **State development consent**) to the ~~Department~~Minister for approval.

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<sup>1</sup> For the purposes of the EPBC Act, the clearance area of habitat for the Swift Parrot (*Lathamus discolor*) is the same as the clearance area of habitat for the Regent Honeyeater (*Anthochaera phrygia*) because the main eucalypt species that will be impacted in the Regent Honeyeater's habitat on the site also provide important foraging habitat for the Swift Parrot.

- i. The **approval holder** must not commence **Phase 1A** until the Biodiversity Offset Strategy **plan** has been approved by the **DepartmentMinister**.
  - ii. The approval holder must implement the Biodiversity Offset Strategy **plan** as approved by the **DepartmentMinister**.
4. The **approval holder** must comply with the **State development consent** conditions B97, B98, B100, B101, B102, B103, B104 and B105.

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## Part B –Administrative conditions

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### Notification of date of commencement of the action

5. The **approval holder** must notify the **Department** in writing of the date of **commencement of the action** within 10 **business days** after the date of **commencement of the action**.
6. If the **commencement of the action** does not occur within 5 years from the date of this approval, then the **approval holder** must not commence the **action** without the prior written agreement of the **Minister**.

### Compliance records

7. The **approval holder** must maintain accurate and complete **compliance records**.
8. If the **Department** makes a request in writing, the **approval holder** must provide electronic copies of **compliance records** to the **Department** within the timeframe specified in the request.

**Note:** **Compliance records** may be subject to audit by the **Department** or an independent auditor in accordance with section 458 of the **EPBC Act**, and or used to verify compliance with the conditions. Summaries of the result of an audit may be published on the **Department's website** or through the general media.

### Preparation and publication of plans

9. The **approval holder** must:
  - a. Submit the Biodiversity Offset Strategy **plan** at condition 3.a electronically to the **Department** for approval **by the Minister**,
  - b. publish the Biodiversity Offset Strategy **plan** on the **website** within 20 **business days** of the date the Biodiversity Offset Strategy **plan** is approved by the **DepartmentMinister** or of the date a revised Biodiversity Offset Strategy **plan** is submitted to the **Minister or the Department**, unless otherwise agreed to in writing by the **DepartmentMinister**,
  - c. exclude or redact **sensitive ecological data** from the Biodiversity Offset Strategy **plan** published on the **website** or provided to a member of the public, and
  - d. keep the Biodiversity Offset Strategy **plan** published on the **website** until the end date of this approval.

### Annual compliance reporting

10. The **approval holder** must prepare a **compliance report** addressing compliance with each of the conditions of this approval, including implementation of any management **plans** and strategies from the **State development consent** **that are referred to in this approval**, for each 12 month period following the date of **commencement of the action**, or otherwise in accordance with an annual date that has been agreed to in writing by the **Minister**. The **approval holder** must:

- a. publish each **compliance report** on a **website** within 60 **business days** following the relevant 12 month period,
- b. notify the **Department** by email that a **compliance report** has been published on the **website** and provide the **website's** link for the **compliance report** within five **business days** of the date of publication,
- c. keep all **compliance reports** publicly available on the **website** until this approval expires,
- d. exclude or redact **sensitive ecological data** from **compliance reports** published on the **website**, and
- e. where any **sensitive ecological data** has been excluded from the version published, submit the full **compliance report** to the **Department** within 5 **business days** of publication.

**Note:** **Compliance reports** may be published on the **Department's website**.

### **Reporting non-compliance**

11. The **approval holder** must notify the **Department** in writing of any: **incident**, or non-compliance with the conditions, or non-compliance with the commitments made in **plans**. The notification must be given as soon as practicable, and no later than two **business days** after becoming aware of the **incident** or non-compliance. The notification must specify:
  - a. any condition which is ~~or may be~~ in breach,
  - b. a short description of the **incident** and/or non-compliance, and
  - c. the location (including co-ordinates), date, and time of the **incident** and/or non-compliance. In the event the exact information cannot be provided, provide the best information available.
12. The **approval holder** must provide to the **Department** the details of any **incident** or non-compliance with the conditions or commitments made in **plans** as soon as practicable and no later than 10 **business days** after becoming aware of the **incident** or non-compliance, specifying:
  - a. any corrective action or investigation which the **approval holder** has already taken or intends to take in the immediate future,
  - b. the potential impacts of the **incident** or non-compliance, and
  - c. the method and timing of any remedial action that will be undertaken by the **approval holder**.

### **Independent audit**

13. The **approval holder** must ensure that **independent audits** of compliance with the conditions are conducted as requested in writing by the **Minister**.
14. For each **independent audit**, the **approval holder** must:
  - a. provide the name and qualifications of the independent auditor and the draft audit criteria to the **Department**,
  - b. only commence the **independent audit** once the audit criteria have been approved in writing by the **Department**, and
  - c. submit an audit report to the **Department** within the timeframe specified in the approved audit criteria.
15. The **approval holder** must publish the audit report on the **website** within 10 **business days** of receiving the **Department's** approval of the audit report and keep the audit report published on the **website** until the end date of this approval.



## Completion of the action

16. The **approval holder** must comply with the **State development consent** condition A9<sup>2</sup>.
17. Within 30 days after the **completion of the action**, the **approval holder** must notify the **Department** in writing and provide **completion data**.

## Changes to State development consent

18. The **approval holder** must notify the **Department** in writing of any proposed change to the **State development consent** conditions referred to in these conditions within 10 **business days** of formally proposing a change or becoming aware of any proposed change.
19. The **approval holder** must notify the **Department** in writing of any change to the conditions of the **State development consent** referred to in these conditions, within 10 **business days** of a change to conditions being finalised.

## Revision of action management plans

20. The **approval holder** may, at any time, apply to the **Minister** for a variation to an action management plan approved by the **Minister** under condition 3.a, or as subsequently revised in accordance with these conditions, by submitting an application in accordance with the requirements of section 143A of the **EPBC Act**. If the **Minister** approves a revised action management plan (RAMP) then, from the date specified, the **approval holder** must implement the RAMP in place of the previous action management plan.
21. The **approval holder** may choose to revise an action management plan approved by the **Minister** under condition 3.a, or as subsequently revised in accordance with these conditions, without submitting it for approval under section 143A of the **EPBC Act**, if the taking of the action in accordance with the RAMP would not be likely to have a **new or increased impact**.
22. If the **approval holder** makes the choice under condition 21 to revise an action management plan without submitting it for approval, the **approval holder** must:
  - a. notify the **Department** in writing that the approved action management plan has been revised and provide the **Department** with:
    - i. an electronic copy of the RAMP;
    - ii. an electronic copy of the RAMP marked up with track changes to show the differences between the approved action management plan and the RAMP;
    - iii. an explanation of the differences between the approved action management plan and the RAMP;
    - iv. the reasons the **approval holder** considers that taking the action in accordance with the RAMP would not be likely to have a **new or increased impact**; and
    - v. written notice of the date on which the **approval holder** will implement the RAMP (RAMP implementation date), being at least 20 **business days** after the date of providing notice of the revision of the action management plan, or a date agreed to in writing with the **Department**.
  - b. subject to condition 24, implement the RAMP from the RAMP implementation date.
23. The **approval holder** may revoke their choice to implement a RAMP under condition 21 at any time by giving written notice to the **Department**. If the **approval holder** revokes the choice under

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<sup>2</sup> Condition A9 states that the **State development consent** continues to apply (beyond 31 August 2042) until the rehabilitation of the site has been carried out.

condition 21, the **approval holder** must implement the action management plan in force immediately prior to the revision undertaken under condition 21.

24. If the **Minister** gives a notice to the **approval holder** that the **Minister** is satisfied that the taking of the action in accordance with the RAMP would be likely to have a **new or increased impact**, then:

a. **condition 21** does not apply, or ceases to apply, in relation to the RAMP; and

b. the **approval holder** must implement the action management plan specified by the **Minister** in the notice.

25. At the time of giving the notice under condition 24, the **Minister** may also notify that for a specified period of time, **condition 21** does not apply for one or more specified action management plans.

**Note:** conditions 21, 22, 23 and 24 are not intended to limit the operation of section 143A of the **EPBC Act** which allows the **approval holder** to submit a revised action management plan, at any time, to the **Minister** for approval.

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## Part C - Definitions

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**Action** means the United and Wambo Open Cut Coal Mine Project, Singleton, NSW (EPBC 2015/7600).

**Approval holder** means the person to whom the approval is granted as identified on the approval notice for EPBC 2015/7600, or to whom the approval is transferred under S145B of the **EPBC Act**, or a person who may take the **action** in accordance with section 133(2A) of the **EPBC Act**.

**Business day** means a day that is not a Saturday, a Sunday or a public holiday in the state or territory of the **action**.

**Commencement of the action** means the commencement of construction as defined in the **State development consent**.

**Completion data** means an environmental report and spatial data clearly detailing how the conditions of this approval have been met. The **Department's** preferred spatial data format is **shapefile**.

**Completion of the action** means the time at which all approval conditions (except condition 16) have been fully met.

**Compliance records** means all documentation or other material in whatever form required to demonstrate compliance with the conditions of approval in the **approval holder's** possession or that are within the **approval holder's** power to obtain lawfully.

**Compliance report(s)** means written reports:

- i. providing accurate and complete details of compliance, **incidents**, and non-compliance with the conditions and the **plans**,
- ii. consistent with the **Department's Annual Compliance Report Guidelines** (2014),
- iii. ~~include~~**including** a **shapefile** of any clearance of any **protected matters**, or their habitat, undertaken within the relevant 12 month period, and
- iv. annexing a schedule of all **plans** prepared and in existence in relation to the conditions during the relevant 12 month period.

**Department** means the Australian Government agency responsible for administering the **EPBC Act**.

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

**Incident** means any event which has the potential to, or does, impact on one or more **protected matter(s)** other than as authorised by this approval.

**Independent audit:** means an audit conducted by an independent and **suitably qualified person** as detailed in the *Environment Protection and Biodiversity Conservation Act 1999 Independent Audit and Audit Report Guidelines* (2019).

**Listed threatened species and community:** Regent Honeyeater (*Anthochaera phrygia*), Swift Parrot (*Lathamus discolor*), Spotted-tail quoll (*Dasyurus maculatus maculatus*), Central Hunter Valley eucalypt forest and woodland ecological community.

**Minister** means the Minister administering the *Environment Protection and Biodiversity Conservation Act 1999* (Cth), and includes a delegate of the Minister.

**New or increased impact** means a new or increased environmental impact or risk relating to any protected matters, when compared to the likely impact of implementing the action management plan that has been approved by the Minister under condition 3.a, including any subsequent revisions approved by the Minister, as outlined in the *Guidance on 'New or Increased Impact' relating to changes to approved management plans under EPBC Act environmental approvals* (2017).

**Phase 1A** is defined in the **State development consent**.

**Plan(s)** means any of the documents required to be prepared, and/or implemented by the **approval holder** and published on the **website** in accordance with these conditions.

**Protected matters** means a **water resource** (sections 24D and 24E), and, the **EPBC Act listed threatened species and ecological community:** Regent Honeyeater (*Anthochaera phrygia*), Swift Parrot (*Lathamus discolor*), Spotted-tail quoll (*Dasyurus maculatus maculatus*), Central Hunter Valley eucalypt forest and woodland ecological community.

**Sensitive ecological data** means data as defined in the Australian Government Department of the Environment (2016) *Sensitive Ecological Data – Access and Management Policy V1.0*.

**Shapefile** means location and attribute information of the **action** provided in an Esri shapefile format. Shapefiles must contain '.shp', '.shx', '.dbf' files and a '.prj' file that specifies the projection/geographic coordinate system used. Shapefiles must also include an '.xml' metadata file that describes the shapefile for discovery and identification purposes.

**Site** is defined in the **State development consent**.

**State development consent** means the State development consent for application number SSD-7142 dated 29 August 2019.

**Suitably qualified person** means a person who has professional qualifications, training, skills and/or experience related to the nominated subject matter and can give authoritative independent assessment, advice and analysis on performance relative to the subject matter using the relevant protocols, standards, methods and/or literature.

**Website** means a set of related web pages located under a single domain name attributed to the **approval holder** and available to the public.

**Water Resource** has the same meaning as in the Commonwealth *Water Act 2007*.



Image Source: AAM (2012), United (2015)  
 Data Source: Glencore (2014)

- Legend**
- Project Area
  - Approved Wambo Surface Development Area
  - Existing 330kV Powerline
  - Proposed Extent of Open Cut Mining
  - Proposed Golden Highway Realignment
  - Proposed Relocated 330kV Powerline

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FIGURE 1.3  
 The Project