



Australian Government

Department of Agriculture, Water and the Environment

VARIATION OF CONDITIONS ATTACHED TO APPROVAL MAULES CREEK (EPBC 2010/5566)

This decision to vary conditions of approval is made under section 143 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Approved action

Person to whom the approval is granted Aston Coal 2 Pty Limited
ACN: 139 472 567

Approved action To construct and operate an open cut coal mine 18 km north-east of the township of Boggabri in New South Wales, including associated infrastructure [See EPBC Act referral **2010/5566**].

Variation

Variation of conditions attached to approval The variation is:

Delete conditions 3, 4, 8, 9, 10, 11, 13, 14, 29, 34, 36, 37 and 40 attached to the approval and substitute with the conditions specified in the table below

Add new conditions 9A, 11A, 12A, 12B, 12C, 12D and 13A

Revoke conditions 12, 17, 18 and 19

Delete definition **State and Transition Model** attached to the approval and substitute with the definition specified in the table below

Add new definition of **additional independent review** specified in the table below

Revoke definition of **offset areas**

Delete **Attachment B** attached to the approval and substitute with the Attachment B specified in the table below

Date of effect This variation has effect on the date the instrument is signed

Person authorised to make decision

Name and position Kim Farrant
Assistant Secretary
Assessment (Vic/Tas) and Post Approvals Branch

Signature

Date of decision 24 March 2021

Date of decision	Conditions attached to approval
Original dated 11/2/2013	<p>Disturbance areas</p> <p>1. The person taking the action must not clear more than 544 hectares (ha) of the EPBC listed White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland critically endangered ecological community within the Maules Creek project area, as identified in <u>Attachment A</u> of these conditions.</p>
Original dated 11/2/2013	<p>2. The person taking the action must not clear more than 1665 ha of habitat for the regent honeyeater (<i>Anthochaera phrygia</i>: formerly <i>Xanthomyza phrygia</i>), swift parrot (<i>Lathamus discolor</i>) or greater long-eared bat (<i>Nyctophilus corbeni</i>), within the Maules Creek project area. The 1665 ha of habitat specified includes the 544 ha of the critically endangered ecological community at condition 1.</p>
As varied on the date this instrument was signed	<p>3. The person taking the action must submit a Biodiversity Corridor plan for the approval of the Minister within three months of the date of this approval. The plan must address the following matters:</p> <ul style="list-style-type: none"> a) protection of native vegetation of a total width of 500 metres (m) where the Maules Creek coal lease boundary is adjacent to the Boggabri coal mine lease boundary; b) maintenance in perpetuity of this area as a biodiversity corridor, and c) evidence that the biodiversity corridor will be protected in perpetuity through a legal mechanism that would provide the equivalent protection of a conservation covenant. <p>The approved Biodiversity Corridor must be implemented.</p>
As varied on the date this instrument was signed	<p>4. The person taking the action is required to submit a Conservation and Biodiversity Bond under condition 55 of the NSW state government project approval dated 23 October 2012 (Application 10_0138). It is noted that this bond may be combined with the rehabilitation security deposit as required under the NSW <i>Mining Act 1992</i>. The person taking the action must submit details of this bond and the rehabilitation security deposit, to the Minister. If the Minister is not satisfied that the bond and the rehabilitation security deposit lodged by the person taking the action is adequate to provide for the implementation of the requirements referred to under conditions 3, 17, 25-28 the Minister may require the person taking the action establish an additional bond or equivalent financial instrument in trust, under conditions approved in writing by the Minister.</p>
Original dated 11/2/2013	<p>5. The person taking the action must provide a map to the Minister showing the area of the biodiversity corridor within the Maules Creek coal mine lease boundary within one month of this approval decision and detail the amount (in hectares) of White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland critically endangered ecological community and habitat or potential habitat for the regent honeyeater, swift parrot and greater long-eared bat within this area.</p>
Original dated 11/2/2013	<p>6. The person taking the action must submit to the Minister for approval, within three months of the commencement of the action, an approach that:</p> <ul style="list-style-type: none"> a) limits the maximum disturbance (in hectares) specified for each of the years 5, 10, 15 and 21 from the date of this approval of the White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community and the habitat or potential habitat for the regent honeyeater, swift parrot and greater long-eared bat; b) incorporates an analysis, undertaken by independent ecological experts approved by the Department, that demonstrates the maximum disturbance limits which will minimise any impacts on relevant matters of national environmental significance; c) demonstrates collaboration with the person taking the action to develop and operate the Boggabri Coal Project (EPBC 2009/5256), in order to minimise progressive project area disturbance limits across both sites. The

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	<p>progressive disturbance limits are to be reflected in the development of the Leard Forest Mining Precinct Biodiversity Strategy.</p>
Original dated 11/2/2013	<p>7. The person taking the action must not clear more than the maximum project area disturbance limits specified for each of the years 5, 10, 15 and 21 as described in condition 6, unless otherwise approved by the Minister.</p>
As varied on the date this instrument was signed	<p>8. The person taking the action must publish the analysis required under condition 6.b) on their website.</p>
As varied on the date this instrument was signed	<p>Direct Offsets</p> <p>9. The person taking the action must register legally binding conservation covenants over offset areas containing, to the satisfaction of the Minister, no less than:</p> <ul style="list-style-type: none"> a. 9,334 ha of an equivalent or better quality of habitat for the regent honeyeater, swift parrot and greater long-eared bat; and b. 5,532 ha of an equivalent or better quality of the White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community. <p>Note: the 5,532 ha of White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community may be included within the 9,334 ha of offset area for the threatened species if it meets the listing criteria for the EPBC-listed critically endangered ecological community as defined in the EPBC listing advice for that community and the requirements of condition 9.</p>
As varied on the date this instrument was signed	<p>9A. The offset areas must be of an overall equivalent or better quality than the areas being cleared. This means:</p> <ul style="list-style-type: none"> a. for White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community, offset areas must meet the definition of the ecological community described in the listing advice, and must be of an overall equivalent or better condition class than the areas being cleared, based on the proportion of each condition class represented and other relevant ecological attributes; b. for the threatened species, the quality of the habitat for the species, taking account of its ecological requirements, must be equivalent to or better than the areas being cleared.
As varied on the date this instrument was signed	<p>10. The person taking the action must verify through independent review the quantity and condition class of White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community and the quantity and quality of habitat for the regent honeyeater, swift parrot and greater long-eared bat within all offset areas proposed in the Environmental Assessment, as specified at <u>Attachment B</u> of these conditions, and any additional offsets as required under condition 11. Details of all independently verified offset areas proposed in the Environmental Assessment must be submitted to the Minister for approval by 30 December 2013. The findings of the independent review must be published on the website of the person taking the action and remain published until the expiry of this approval.</p>
As varied on the date this instrument was signed	<p>11. If the independent review finds that the offset areas proposed in the Environmental Assessment do not meet the requirements of conditions 9 and 9A, then additional areas must be included in the offset areas until the independent review finds that the relevant criteria under these conditions are met.</p>
As varied on the date this instrument was signed	<p>Replacement and new offsets</p> <p>11A. For the purpose of condition 9, the offset areas may include additional offset areas to the offset areas which were the subject of independent review under conditions 10 and 11 if:</p>

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	<p>a) the person taking the action submits a report to the Minister for approval, which has been subject to additional independent review, that identifies and verifies the quantity and condition classes of White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community and the quantity and quality of habitat for the regent honeyeater, swift parrot and greater long-eared bat within the additional offset areas;</p> <p>b) that report is submitted to the Minister for approval by 30 June 2022, unless otherwise agreed by the Minister in writing; and</p> <p>c) the Minister has approved that report.</p> <p>The person taking the action must publish the report on its website within 30 days of the Minister's approval, unless otherwise agreed by the Minister in writing.</p>
As varied on the date this instrument was signed	12. Revoked
As varied on the date this instrument was signed	<p>Offset Management Plans</p> <p>12A. The person taking the action must submit to the Minister for approval an Offset management plan for all of the offset areas proposed in the Environmental Assessment, specified in Attachment B, within 12 months of this approval. The approved Offset management plan must be implemented for all of the offset areas proposed in the Environmental Assessment, specified in Attachment B, and any offset areas agreed as a result of independent verification process as specified in conditions 10 and 11, unless the Minister agrees to the removal of any specific properties as an offset area under this approval.</p> <p>If, after 31 October 2021, the Minister informs the person taking the action that the submitted Offset management plan is not suitable for approval, the Minister may, after 30 December 2021, approve a version of the Offset management plan revised by the Department.</p> <p>Note: for consistency, the person taking the action may develop a Biodiversity Management plan that includes the requirements set for managing offsets and set out in these conditions, to align with the requirements of the NSW state government Project Approval dated 23 October 2012 (application number 10_0138) and this approval.</p>
As varied on the date this instrument was signed	<p>12B. The person taking the action must submit to the Minister for approval an Additional Offset management plan for the additional offset areas within 6 months of their approval under condition 11A. The person taking the action must implement the approved Additional offset management plan.</p> <p>If, after a further 3 months, the Minister informs the person taking the action that the submitted Additional Offset management plan is not suitable for approval, the Minister may, after a further 3 months, approve a version of the Additional Offset management plan revised by the Department.</p> <p>Notes:</p> <p>(1) for consistency, the person taking the action may develop a Biodiversity Management plan that includes the requirements set for managing offsets and set out in these conditions, to align with the requirements of the NSW state government Project Approval dated 23 October 2012 (application number 10_0138) and this approval.</p> <p>(2) with the agreement of the Minister, the person taking the action may combine the Offset management plan and the Additional Offset management plan.</p>

Date of decision	Conditions attached to approval
As varied on the date this instrument was signed	<p>12C. Each <i>offset management plan</i> must include, but not be limited to, the following:</p> <ul style="list-style-type: none"> a) a text description and map which clearly defines the location and boundaries of the offset areas. This must be accompanied by the offset attributes and shapefiles; b) a description of the methodology and results of surveys measuring the baseline ecological conditions in the offset areas. This must be consistent with the State and Transition Model and include but not be limited to: <ul style="list-style-type: none"> i. the extent and condition of all vegetation communities, including a description of the structure, floristics and tree age class representation of each community; ii. the extent and condition class of all areas of the White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community; iii. surveys targeting the regent honeyeater, swift parrot and greater long-eared bat; iv. the extent and quality of all areas of habitat for the regent honeyeater, swift parrot and greater long-eared bat; v. the location of all survey sites (including co-ordinates); vi. photo reference points at survey sites. c) clearly defined ecological management objectives for the offset areas; d) detailed description of all ecological management activities proposed to be undertaken, including maps and/or diagrams showing areas to be managed and the timing of the proposed activities; e) details of ongoing ecological monitoring programs, performance criteria, targets and provisions for adaptive management, including but not limited to: <ul style="list-style-type: none"> i. a set of measurable ecological indicators for detecting changes to the White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community, including those that may be ascribed to ongoing water stress; ii. a monitoring plan to assess the success of the management activities measured against the baseline condition. The monitoring must be statistically robust and able to quantify change in the condition of the White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community and habitat for the regent honeyeater, swift parrot and greater long-eared bat. This should include the use of control sites and periodic ecological surveys to be undertaken by a qualified ecologist; iii. a list of performance criteria based on the ecological management objectives for the White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community and habitat for the regent honeyeater, swift parrot and greater long-eared bat; iv. measures to exclude weeds from all offset areas for the period covered by this approval; v. a description of the potential risks to successful management against the performance criteria, and a description of the contingency measures that would be implemented to mitigate against these risks; vi. a process by which to report to the department the progress of management activities undertaken in the offset areas and the

Date of decision	Conditions attached to approval
	<p>outcome of those activities, including identifying any need for improved management and activities to undertake such improvement.</p> <p>f) details of all parties responsible for management, monitoring and implementing the management activities, including their position or status as a separate contractor;</p> <p>g) details of the funding requirements for the ongoing management activities, including an estimate of the costs of the activities and details of the parties responsible for funding the activities.</p>
As varied on the date this instrument was signed	12D. Unless otherwise agreed to in writing by the department , the baseline surveys for threatened species must be conducted in accordance with the department's <i>Survey Guidelines for Australia's Threatened Birds</i> and the <i>Survey Guidelines for Australia's Threatened Bats</i> . Subsequent monitoring must be carried out annually at the same time of year as the baseline surveys, unless otherwise agreed to in writing by the department .
As varied on the date this instrument was signed	<p>Mechanisms to protect offset areas</p> <p>13. The mechanism/s for registering a legally binding covenant must provide protection for the offset areas proposed in the Environmental Assessment as specified at <u>Attachment B</u> of these conditions, in perpetuity and be registered by 30 June 2021, unless the Minister agrees in writing to removal of any specific properties.</p> <p>Evidence of compliance with condition 13 must be provided to the Department within 30 days of registering a legally binding covenant.</p> <p>The person taking the action must report on progress meeting these requirements in each annual compliance report required under condition 34 and as otherwise requested by the Department.</p>
As varied on the date this instrument was signed	<p>13A. For any approved replacement and new offset area, the person taking the action must:</p> <p>a. implement an approved offset management plan (as per condition 12B);</p> <p>b. by 30 December 2022, submit an application to establish legally binding covenants that provide protection for the offsets areas in perpetuity; and</p> <p>c. by 31 March 2024, register the legally binding covenants that provide protection for the offset areas in perpetuity.</p> <p>The approval holder must report on progress meeting these requirements in each annual compliance report required under condition 34 and as otherwise requested by the Department.</p>
As varied on the date this instrument was signed	<p>Mining activity affecting offsets areas</p> <p>14. If the person taking the action proposes to undertake any mining activity within or beneath areas secured in accordance with conditions 9, 13 and 13A, then approval to undertake that action must be obtained in writing from the Minister before undertaking any mining activity within or beneath such areas. In seeking the Minister's approval, the person undertaking the action must provide a detailed assessment of the area where the mining activity is proposed to take place and an assessment of all associated adverse impacts on matters of national environmental significance. If the Minister agrees to the action within the offset areas, the area identified for the action must be excised from the offset area and alternative offsets secured by the person taking the action at a ratio of at least 20:1 in relation to the impact on matters of national environmental significance.</p> <p>Notes:</p>

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	<p>(1) For the avoidance of any doubt, condition 14 does not apply to an offset area proposed in the Environmental Assessment, as specified at Attachment B of these conditions, if the Minister has agreed in writing to the removal of the property as an offset area pursuant to condition 13 of this approval.</p> <p>(2) In accordance with the EPBC Act, if the proposed mining activity is not part of the approved action, the proposed mining activity cannot be approved as part of this EPBC Act approval.</p>
Original dated 11/2/2013	<p>Indirect Offsets</p> <p>15. To compensate for the loss of the White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community and habitat for the regent honeyeater, swift parrot and greater long-eared bat the person taking the action must submit to the Minister for approval, within 2 years of the date of this approval, a project plan to invest \$1 million for research that will identify effective methodologies for achieving rehabilitation and restoration of functioning White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community on mining sites. The research must be undertaken by a third party and be available to industry and governments generally. The approved project plan must be implemented.</p>
Variation dated 16/3/2017	<p>16. To compensate for the loss of the habitat for the regent honeyeater, swift parrot and greater long-eared bat the person taking the action must provide \$1.5 million over the life of the approval (comprising \$500,000 for each of the regent honeyeater, swift parrot and greater long-eared bat), to deliver activities that implement priority recovery actions for the regent honeyeater, swift parrot and greater long-eared bat. A detailed project plan governing the timing of the \$1.5 million funding for the activities and outcomes must be developed. The project plan must be submitted to the Minister for approval by 30 April 2017, or otherwise agreed in writing by the Minister. The project plan should demonstrate consultation with relevant species experts and be consistent with approved National Recovery Plans where they are available, and as agreed with the relevant Recovery Planning Teams. The approved project plan must be implemented.</p>
As varied on the date this instrument was signed	17. Revoked
As varied on the date this instrument was signed	18. Revoked
As varied on the date this instrument was signed	19. Revoked
Correction dated 16/4/2013	<p>Surface and groundwater management plans</p> <p>20. The person taking the action must provide to the Minister for approval, the <i>surface and groundwater management plans</i> as identified in condition 40 of the NSW state government Project Approval dated 23 October 2012 (application number 10_0138). The <i>surface and groundwater management plans</i> must be approved by the Minister prior to commencement of construction.</p>
Original dated 11/2/2013	21. The <i>surface and groundwater management plans</i> must be consistent with the National Water Quality Management Strategy .
Original dated 11/2/2013	22. The person taking the action must, prior to commencement of construction , in collaboration with the proponent to develop and operate the Boggabri Extension (EPBC 2009/5256) and any other approved mines within 20 kilometres (km) of the project area , provide written advice to the Minister demonstrating how the NSW government approved <i>surface and groundwater management plans</i> (condition 20), addresses the cumulative impact of groundwater drawdown as a result of mining and how this may impact on the consequent health of the remnant native vegetation in the

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	<p>Leard State Forest, the Leard State Conservation Area and surrounding areas. In particular, the advice must address the following matters:</p> <ol style="list-style-type: none"> a. maximum amount of allowable drawdown in the alluvial aquifer b. drawdown in hard rock c. trigger levels pertaining to drawdown in the alluvial aquifer when corrective actions will be required to be undertaken d. identify the depth of root zone of the native vegetation e. monitoring to assess the ongoing quality and quantity of both surface and groundwater to identify impacts on the native vegetation.
Original dated 11/2/2013	<p>23. The person taking the action must within 6 months of the date of this approval, or such other timeframe specified by the Minister, provide to the Minister a report on:</p> <ol style="list-style-type: none"> a. any updated modelling of surface and groundwater impacts that has been undertaken in preparing the <i>surface and groundwater management plans</i> b. how the <i>surface and groundwater management plans</i> addressed groundwater and surface water impacts on matters of national environmental significance.
Original dated 11/2/2013	<p>Leard Forest Mining Precinct Regional Biodiversity Strategy</p> <p>24. The person taking the action must implement the regional biodiversity strategy as required under condition 41 of the NSW state government project approval dated 23 October 2012 (application number 10_0138). The required scoping report for the development of the strategy must be submitted to the Minister for approval on or before 31 July 2013. The approved strategy must be implemented.</p>
Original dated 11/2/2013	<p>Mine site rehabilitation</p> <p>25. To mitigate the impacts to the White Box-Yellow Box –Blakely’s Red Gum Grassy Woodland and Derived Native Grassland and the habitat of the regent honeyeater, swift parrot and greater long-eared bat, the person taking the action must, within 12 months of the commencement of construction, submit to the Minister for approval a <i>mine site rehabilitation plan</i> for the progressive rehabilitation and revegetation of no less than 1665 ha of native forest and woodland (less the portion included in the biodiversity corridor identified in condition 3) in the project area including 544 ha using species consistent with a White Box—Yellow Box—Blakely’s Red Gum Grassy Woodland and Derived Native Grassland Ecological Community. This approved <i>mine site rehabilitation plan</i> must be implemented.</p>
Original dated 11/2/2013	<p>26. The person taking the action must:</p> <ol style="list-style-type: none"> a. rehabilitate the site to be consistent with the proposed rehabilitation strategy as provided in the Environmental Assessment and, as required under the NSW State Government approval dated 23 October 2012 (Application 10_0138); and b. not replace topsoil and sub soil layers at a depth less than the minimum depths determined through pre-stripping soil surveys as described in condition 27(c). <p>Note: the NSW state government Project Approval dated 23 October 2012 (application number 10_0138) conditions require pre-stripping soil surveys and inventories to inform the availability, rehandling, stockpiling and management of soils, and maximising the salvaging of soil to be used, in the rehabilitation of the site.</p>
Original dated 11/2/2013	<p>27. The <i>mine site rehabilitation plan</i> must include, at a minimum, the following information:</p>

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	<p>a. targets and performance indicators to achieve effective restoration of potential habitat for the regent honeyeater, swift parrot and greater long-eared bat and White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community, including weed management;</p> <p>b. details of the vegetation communities to be rehabilitated and the timing of progressive rehabilitation (commencing as soon as practicable following disturbance);</p> <p>c. detailed soil depth surveys and analysis to inform the effective placement and restoration of soils underlying the proposed rehabilitation sites; including mapping of soils across the disturbance sites and soil sampling at no less than one sample point per 20 ha of each soil type identified. Sampling must identify; type, depth, water holding capacity, structure and physio-chemical properties of each of the soil and subsoil layers;</p> <p>d. processes and methodologies for the removal, storage and re-layering of the topsoil and sub soil layers underlying the disturbed sites being prepared for rehabilitation. These processes and methodologies must ensure the replacement of topsoil and sub soil layers:</p> <ul style="list-style-type: none"> • meet the minimum depth requirements determined from sampling outcomes as identified in condition 27(c); and • replicate other existing soil parameters including, but not limited to, soil type, water holding capacity, structure and physio-chemical properties. <p>e. a process to report annually to the department the rehabilitation management actions undertaken and the outcome of those actions, and the mechanisms to be used to identify the need for improved management;</p> <p>f. a description of the potential risks to successful management and rehabilitation on the project site, including weed invasion, and a description of the contingency measures that would be implemented to mitigate these risks;</p> <p>g. details of long-term management and protection of the mine site, including details of the commitment of funds to achieve this.</p>
Original dated 11/2/2013	28. The <i>mine site rehabilitation plan</i> must be subject to an independent review by a qualified ecologist prior to being submitted to the Minister for approval. The findings of the independent review must be published on the proponent's website.
As varied on the date this instrument was signed	<p>Final Landform</p> <p>Note: for consistency, the person taking the action may develop a single <i>mine site rehabilitation plan</i> to align with the requirements, including timing of reporting, of the NSW State Government approval dated 23 October 2012 (Application 10_0138) and this approval. The Offset Management Plan and the Rehabilitation management Plan need to be aligned so as to achieve the biodiversity objectives of condition 29 for the rehabilitated mine-site.</p> <p>29. The person taking the action must undertake rehabilitation to ensure the final landform provides the optimum opportunity for the successful restoration of native forest and woodland including the critically endangered White Box—Yellow Box— Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community.</p>
Original dated 11/2/2013	30. The person taking the action must undertake rehabilitation to ensure the final void and landform minimises the extent of any resulting pit lake, avoids salt scalding

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	<p>and ensures that drained waters do not adversely affect the downstream environment and avoids any impacts on matters of national environmental significance.</p> <p>Note: the State approval conditions for project 10_0138 require the preparation and implementation of an updated Final Void and Mine Closure Plan that considers interactions with the adjoining mines, including interaction between final voids, opportunities for integrated mine planning with adjoining mines to minimise environmental impacts, all reasonable and feasible landform options for the final void (including filling) and predicted hydrochemistry and hydrogeology (including long-term groundwater recovery and void groundwater quality).</p>
Original dated 11/2/2013	<p>Survey data</p> <p>31. All survey data collected for the project must be recorded so as to conform to data standards notified from time to time by the department. When requested by the department, the proponent must provide to the department all species and ecological survey data and related survey information from ecological surveys undertaken for matters of national environmental significance. This survey data must be provided within 30 business days of request, or in a timeframe agreed to by the department in writing. The department may use the survey data for other purposes.</p>
Original dated 11/2/2013	<p>32. In the event that any additional matters of national environmental significance are recorded within the project area and a significant impact on the matter/s is likely, the department must be notified in writing within 14 days of the matter/s being recorded. In accordance with condition 37, the Minister may request that the person taking the action revise any relevant plans to ensure better protection of the relevant matter/s.</p>
Original dated 11/2/2013	<p>Reporting and auditing</p> <p>33. Within 14 days after the commencement of construction, the person taking the action must advise the department in writing of the actual date of commencement of construction.</p>
As varied on the date this instrument was signed	<p>34. By the end of March of each year after the commencement of the action, the person taking the action must publish a report on their website addressing compliance with the conditions of this approval over the previous 12 months, including implementation of any approved management plans as specified in the conditions. Non-compliance with any of the conditions of this approval must be reported to the department at the same time as the compliance report is published.</p>
Original dated 11/2/2013	<p>35. Upon the direction of the Minister, the person taking the action must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to the Minister. The independent auditor must be approved by the Minister prior to the commencement of the audit. Audit criteria must be agreed to by the Minister and the audit report must address the criteria to the satisfaction of the Minister.</p>
As varied on the date this instrument was signed	<p>36. If the person taking the action wishes to carry out any activity otherwise than in accordance with the approved plans, as specified in the conditions, the person taking the action must submit to the department for the Minister's written approval a revised version of that plan. The varied activity shall not commence until the Minister has approved the revised plan in writing. The Minister will not approve a revised plan, unless the revised plan would result in an equivalent or improved environmental outcome. If the Minister approves the revised plan that plan must be implemented in place of the plan originally approved.</p>
As varied on the date this instrument was signed	<p>37. If the Minister believes that it is necessary or convenient for the better protection of listed threatened species and communities or listed migratory species to do so, the Minister may request that the person taking the action make specified revisions to the approved management plan specified in the conditions and submit the revised plan for the Minister's written approval. The person taking the action must comply with any such request.</p>

Date of decision	Conditions attached to approval
	The revised approved plan must be implemented. Unless the Minister has approved the revised plan then the person taking the action must continue to implement the originally approved plan, as specified in the conditions.
Original dated 11/2/2013	38. If, at any time after 5 years from the date of this approval, the person taking the action has not substantially commenced the action , then the person taking the action must not substantially commence the action without the written agreement of the Minister .
Original dated 11/2/2013	<p>Publication of plans</p> <p>39. The person taking the action must maintain accurate records substantiating all activities and outcomes associated with or relevant to the above conditions of approval, including measures taken to implement the management plans required by this approval, and make them available upon request to the department. Such records may be subject to audit by the department or an independent auditor in accordance with section 458 of the <i>Environment Protection and Biodiversity Conservation Act 1999</i> or used to verify compliance with the conditions of approval. Summaries of audits will be posted on the department's website. The results of audits may also be publicised through the general media.</p>
As varied on the date this instrument was signed	40. Unless otherwise agreed to in writing by the Minister , the person taking the action must publish all approved management plans referred to in these conditions of approval on their website. Each management plan must be published on the website within 1 month of being approved and remain published until the expiry of the approval.

Date of decision	Definitions
As varied on the date this instrument was signed	<p>Additional independent review means a review of the report under condition 11A of this approval undertaken by a person(s) that:</p> <ul style="list-style-type: none"> • does not have any individual, or by employment or family affiliation, conflicting or competing interests with the approval holder; the approval holder's staff, representatives or associated persons; or the project, including any personal, financial, business or employment relationship, other than receiving payment for undertaking the role for which the condition requires an independent expert; and • has professional qualifications and at least three (3) years of work experience designing and implementing surveys for or managing or studying and preparing prescriptions for the management of White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community and flora species associated with habitat for the regent honeyeater, swift parrot and greater long-eared bat, and can give an authoritative assessment and advice on the presence and management requirements of White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community and the quantity and quality of habitat for the regent honeyeater, swift parrot and greater long-eared bat using relevant protocols, standards, methods and/or literature.
Original dated 11/2/2013	<p>Biodiversity corridor – an area of native vegetation at least 250 m wide that has not been previously cleared for mining, which links the existing native vegetation to the east and west of the Maules Creek and Boggabri coal mine leases and is located within the Maules Creek coal mine lease where it is adjacent to the Boggabri coal mine lease boundary. The purpose is to ensure that a minimum 500 m wide native vegetation corridor is maintained between the Boggabri and Maules Creek mines and that any alternative corridor <i>provides equivalent or better ecosystem functionality (including habitat for the regent honeyeater, swift parrot and greater long-eared bat)</i>.</p>

Date of decision	Definitions
Original dated 11/2/2013	Commencement of construction – the commencement of any activities within the project area which are included in this approval.
Original dated 11/2/2013	Condition class – One of three states in which the White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community may exist, as defined within the Commonwealth listing advice for the listing of this ecological community as critically endangered under the EPBC Act.
Original dated 11/2/2013	Department - the Australian Government Department responsible for the <i>Environment Protection and Biodiversity Conservation Act 1999</i> .
Original dated 11/2/2013	Environmental Assessment – The Maules Creek Coal Project Environmental Assessment July 2011, prepared by Hansen Bailey for Aston Coal 2 Pty Ltd, and submitted as part of the approval documents for the Maules Creek Coal Project.
Original dated 11/2/2013	Habitat – areas in which a species or community is known to occur or is thought to have the potential to occur based on the biophysical conditions prevailing in the area and the ecological requirements of the species or community
Original dated 11/2/2013	Independent review – an investigation conducted by an independent expert ecologist who has been approved by the department.
Original dated 11/2/2013	Minister - the Minister administering the <i>Environment Protection and Biodiversity Conservation Act 1999</i> and includes a delegate of the Minister
Original dated 11/2/2013	Matters of national environmental significance – all matters listed under Part 3 of the EPBC Act
As varied on the date this instrument was signed	Offset areas – Revoked
Original dated 11/2/2013	Offset attributes -means an '.xls' file capturing relevant attributes of the Offset Area, including the EPBC reference ID number, the physical address of the offset site, coordinates of the boundary points in decimal degrees, the EPBC protected matters that the offset compensates for, any additional EPBC protected matters that are benefiting from the offset, and the size of the offset in hectares.
Original dated 11/2/2013	Project area – the area defined by the Maules Creek Coal Mine Project EPBC Act referral (EPBC Act reference 2010/5566) as lying within the Project Application Boundary.
Original dated 11/2/2013	Shapefiles -means an ESRI Shapefile containing '.shp', '.shx' and '.dbf' files and other files capturing attributes of the Offset Area, including the shape, EPBC reference ID number and EPBC protected matters present at the relevant site. Attributes should also be captured in '.xls' format. A geographically referenced raster 'img' file/s must be provided to provide context for the shapefiles.
As varied on the date this instrument was signed	State and Transition Model – Section 3.2 of <i>A Guide to Managing Box Gum Grassy Woodlands</i> (Caring for our Country Environmental Stewardship, 2010), depicts the different condition states (as reflected by disturbance, inputs and altered land use) in which a given vegetation can exist. This publication can be found at: https://openresearch-repository.anu.edu.au/bitstream/1885/65871/2/01_Rawlings_A_Guide_to_Managing_Box_Gum_2010.pdf
Original dated 11/2/2013	Substantially commence the action – means the extraction of coal from the Maules Creek Coal Mine Project for the purpose of commercial production. Substantial commencement does not include test extraction or extraction of coal samples for quality assurance.

Date of decision	Attachments
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Original dated 11/2/2013	Attachment A – Indicative project layout (6/5/2011)
As varied on the date this instrument was signed	Attachment B - Table B1 - Offset Properties Proposed in the Environmental Assessment

ATTACHMENT B**Table B1 Offset Properties Proposed in the Environmental Assessment**

Property	Size Property (ha)
Blue Range	748
Cattle Plain	284
Teston (nth)	292
Tralee	342
Wallandilly	1890
Warriahdool	1011
Mt Lindesay	2430
Wirradale	4321
Shared Property	884
Kelso	508
Louenville	459
Olivedeem	193
Teston (sht)	1273
Velyama	919

Subject to third party review rights, s 47F(1), and s 22(1)(a)(ii)

Subject to third party review rights, s 22(1)(a)(ii)

Subject to third party review rights, s 47F(1)



23 February 2021

The Hon Minister Sussan Ley MP
Minister for the Environment
Department of Agriculture, Water and the Environment
GPO Box 787
Canberra ACT 2601

By post and email: minister.ley@environment.gov.au
Copy to: sussan.ley.mp@aph.gov.au;
greg.manning@environment.gov.au;
compliance@environment.gov.au

Dear Minister

Maules Creek Coal Mine Project (EPBC 2010/5566): Compliance with biodiversity offsets and further variation to condition 13

1. We confirm that we act for South East Forest Rescue Inc (**SEFR**).
2. We refer to approval EPBC2010/5566 (**Approval**) issued on 11 February 2013 for the Maules Creek Coal Mine (**Project**). The Approval was issued under sections 130(1) and 133 of the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (**EPBC Act**). The approval holder is Aston Coal 2 Pty Ltd (**Aston Coal**). The Project operator is Maules Creek Coal Pty Ltd. Whitehaven Coal is the ultimate holding company of both Aston Coal and Maules Creek Coal Pty Ltd.
3. We also refer to previous correspondence from our office in relation to the Approval, most recently our letter dated 27 February 2020 (copy **enclosed**).

Summary of our client's position

4. The Approval holder is currently required to secure legally binding covenants over the requisite offset areas by 31 March 2021 (except insofar as those requirements apply to the property known as 'Rocklea') (Approval conditions 9, 12, 13).
5. Our client is concerned that the Approval holder may have applied, or intend to apply, for a variation to the conditions of the Approval so as to (further) extend the time within which it is required to secure the legally binding covenants.
6. The purpose of this letter is to put to you our client's position that, should the Approval holder be unable to comply with its offsetting requirements within the time currently stated in the Approval, this should be treated as a matter of non-compliance. The Approval should

not be varied a fourth time so as to accommodate the Approval holder's continued failure to meet the conditions of the Approval.

7. More generally, before making a decision on any variation application, our client's position is that in order to satisfy the requirements of s 143 of the EPBC Act, it is incumbent upon the decision maker to do the following:
- (a) Consider all information set out in and enclosed with this letter.
 - (b) Inquire directly with the NSW Biodiversity Conservation Trust (**NSW BCT**) for a full briefing on the status of all proposed conservation agreements for the Project, including the vegetation mapping verification processes and all current estimates of Box Gum CEEC¹ within the proposed offset areas. Alternatively, require the Approval holder to arrange for the BCT to provide such information directly to the Department.
 - (c) Take into account the Approval holder's environmental history (pursuant to EPBC Act s 143(3)), including the history of related companies, including the following current prosecutions in the NSW Land and Environment Court:
 - (i) proceedings against Maules Creek Coal Pty Ltd in relation to the Maules Creek Coal Mine; and
 - (ii) proceedings against Narrabri Coal Pty Ltd and Narrabri Coal Operations Pty Ltd (both subsidiaries of Whitehaven Coal) in relation to Exploration Licence EL6243 (which forms part of Whitehaven Coal's Narrabri operations).
8. We set out further information in support of our client's position below.

History of variations to condition 13 and the reasons given for the variation decisions

9. Conditions 9, 12 and 13 of the Approval require the Approval holder to secure a specified quantity and quality of 'offset areas', namely:
- (a) 9,334 ha of an equivalent or better quality of habitat for the regent honeyeater, swift parrot and greater long-eared bat; and
 - (b) 5,532ha of an equivalent or better quality of the White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community (**Box Gum CEEC**).

Condition 12 establishes minimum quality requirements for the offset areas, measured relative to the areas being cleared.

10. When the Approval was first given, condition 13 required the approval holder to secure legally binding covenants over the offset areas within 5 years of the date of the approval (i.e. by 11 February 2018).
11. Condition 13 of the Approval has since been varied on three occasions, each giving the approval holder additional time to secure legally binding covenants over the required offset areas. The current deadline is 31 March 2021 (with additional time to secure a conservation agreement over the property known as 'Rocklea', until 15 December 2022).

¹ i.e. White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community, as required by Approval conditions 9(b).

12. Our client has obtained written statements of reasons for each of the condition 13 variation decisions (**2018 Statement of Reasons**,² **2019 Statement of Reasons**,³ and **2020 Statement of Reasons**⁴).
13. According to the statements of reasons issued for each of the variation decisions, the variations were granted on the basis that difficulties securing the offset areas arose in large part from delays on the part of the relevant NSW Government agencies; the 2020 Statement of Reasons also refers to other delaying circumstances that were beyond the Approval holder's control (i.e. severe drought and fire conditions) (but do not relate to the adequacy of the existing offset areas).⁵
14. The 2018 variation decision gave the Approval holder an additional 10 months to secure its offset areas. The 2018 Statement of Reasons stated that:
- ... any additional request beyond 31 December 2018 will need to demonstrate that considerable efforts have been made toward securing and registering the offset site and that further extensions are based on delays wholly attributable to State regulators.⁶ (emphasis added)
15. The 2019 variation decision gave the Approval holder an additional 15 months to secure the offset areas. The statement of reasons for that decision used virtually identical terms as used in the 2018 Statement of Reasons:
- ... any additional request beyond 31 March 2020 will need to demonstrate that considerable efforts have been made toward securing and registering the offset site and that further extensions are based on delays wholly attributable to State regulators.⁷ (emphasis added)
16. We also note that statements of reasons for the variation decisions indicate that when those decisions were made, the decision maker understood that 'the offset areas' had already been identified and acquired.⁸ We note in particular the following references:
- (a) In the 2019 Statement of Reasons: 'Whitehaven own the required offset areas and are managing them in accordance with an approved management plan' (at [13.a.]).
 - (b) In the 2020 Statement of Reasons: 'I noted the Department's advice that it understands that the offset areas are all under the control of Whitehaven and being managed under an approved management plan' (at [10]).

² Statement of reasons issued by Greg Manning for the variation decision made 7 February 2018, dated 12 April 2018 (**2018 Statement of Reasons**).

³ Statement of reasons issued by Declan O'Connor-Cox for the variation decision made 22 February 2019, dated 3 May 2019 (**2019 Statement of Reasons**).

⁴ Statement of reasons issued by Gregory Manning for the variation decision made 19 March 2020, undated (received by SEFR under cover of letter dated 25 June 2020) (**2020 Statement of Reasons**).

⁵ 2018 Statement of Reasons at [5], [12(c)-(d)], [13]; 2019 Statement of Reasons at [5], [13], [14]; 2020 Statement of Reasons at [8].

⁶ 2018 Statement of Reasons at [13].

⁷ 2019 Statement of Reasons at [14].

⁸ 2018 Statement of Reasons, see [5], [12] [13]; 2019 Statement of Reasons, see [5], [13], [14]; 2020 Statement of Reasons, see [8], [9].

Adequacy of the proposed offset areas

17. The Approval holder is required to secure 5,532ha of Box Gum CEEC that is of an overall equivalent or better quality than the areas approved to be cleared within the project area (Approval conditions 9(b) and 12(a)).
18. As you will be aware from our previous correspondence, our client has long been concerned that the properties proposed by the Approval holder as Box Gum CEEC offset areas (as identified in the 2017 Biodiversity Management Plan (**2017 BMP**) for the Project and purportedly verified by two reports prepared by Greenloaning Biostudies (the **First Greenloaning Report** and the **Second Greenloaning Report**)). Our client has voiced concerns that the proposed offset areas do not contain the requisite quantity and quality of Box Gum CEEC. These concerns have been supported by reports prepared by Ms Wendy Hawes of The Envirofactor Pty Ltd and Dr John Hunter of Hewlett Hunter Pty Ltd (as discussed in our letter dated 27 February 2020).
19. In response to correspondence raising the above concerns, the Department has referred to an independent review commissioned by the Department (the **Umwelt Review**) and asserted that the Umwelt Review verified that the proposed offset sites contained the required quantity and quality of Box Gum CEEC.⁹
20. Over the course of the last approximately 2 years, our client has obtained access to various documents prepared by the NSW Biodiversity Conservation Trust (**BCT**) via 'freedom of information' requests submitted under the NSW *Government Information (Public Access) Act 2009* (NSW) (**GIPA Act**) and through release of documents pursuant to a NSW Legislative Council Order for Papers – 'Operation of the Maules Creek coal mine and biodiversity offsets' (the **Order for Papers**).
21. The materials reviewed by our client indicate that the Approval holder has been engaging with the BCT for the purpose of executing conservation agreements (**CAs**) over the proposed offset areas. This process has involved a vegetation mapping verification process. We **enclose** for your reference a document titled 'Offset Conservation Agreement Vegetation Map verification method' badged by the BCT logo and dated March 2018.¹⁰ The document describes the method by which the BCT intends to 'check that the vegetation mapping supplied by the landholder is reasonably accurate and that the types of vegetation present are appropriately classified, in particular that the condition and extent of threatened ecologically communities has been accurately included...'.¹¹
22. Among the papers released pursuant to the Order for Papers are what appear to be unsigned final and/or draft conservation agreements for some of proposed Box Gum CEEC offset areas.¹¹ Those documents suggest that, following vegetation mapping verification by the BCT, the total area of Box Gum CEEC agreed to be present within the proposed offset areas is substantially less than what was stated in the First and Second Greenloaning Reports.¹² We have summarised the key information in the table below, comparing the total area of Box

⁹ Letter from Declan O'Connor-Cox, Acting Assistant Secretary, Assessments and Post Approvals Branch, to Emily Long, EDO NSW, dated 22 February 2019.

¹⁰ Document released to our client pursuant to an application under the GIPA Act.

¹¹ Kelso, Velyama and Louenville unsigned CA; Teston North, Teston South and Tralee unsigned CA; Wollandilly draft CA; Onavale draft CA; Roseglass and Bimbooria unsigned CA (see footnotes 13, 15, 19, 20 & 21 for further details).

¹² Table G.1 in Appendix G to the Second Greenloaning Report provides a summary of the total area of Box Gum CEEC purportedly present in each of the proposed offset areas.

Gum CEEC as stated in the Second Greenloaning Report (at Table G1 in Appendix G) with the total area of Box Gum CEEC identified as present within the draft CAs (noting that the CAs released only relate to the properties Kelso, Louenville, Teston (south), Velyama, Teston (north), Tralee, Wollandilly, Oakleigh/Onavale, Bimbooria and Roseglass):

Property	Area of Box Gum CEEC: per Second Greenloaning Report (see Appendix G, Table G.1)	Area of Box Gum CEEC: per draft conservation agreements (CAs) released pursuant to the Call of Papers	Total difference	Area in CAs as a percentage of area stated in Second Greenloaning Report
Mt Lindesay	1686.89	n/a	n/a	n/a
Wirradale	2222.62	n/a	n/a	n/a
Wongala	282.92	n/a	n/a	n/a
Kelso¹³	16.5	2.2	-14.3	13%
Louenville¹⁴	151	19.99	-131.01	13%
Olivedeen	0	n/a	n/a	n/a
Teston (south)¹⁵	96.6	16.42	-80.18	17%
Velyama¹⁶	109.4	3.98	-105.42	4%
Blue Range	21.7	n/a	n/a	n/a
Cattle Plain	14.4	n/a	n/a	n/a
Teston (north)¹⁷	56.76	13.78	-42.98	24%
Tralee¹⁸	13.95	4.74	-9.21	34%
Wallandilly¹⁹	368.61	117.73	-250.88	32%

¹³ See unsigned document titled 'Conservation Agreement between The Minister Administering the National Parks and Wildlife Act 1974 (NSW) and Aston Coal 2 Pty Ltd ICRA MC Pty Ltd J-Power Australia Pty Ltd for Kelso, Velyama and Louenville Biodiversity Offset Conservation Area Agreement No. VCA0487' (**Kelso, Velyama and Louenville unsigned CA**) (copy **enclosed**) at Table 2, p 26.

¹⁴ See Kelso, Velyama and Louenville unsigned CA at Table 2, p 26.

¹⁵ See unsigned document titled 'Conservation Agreement between The Minister Administering the National Parks and Wildlife Act 1974 (NSW) and Aston Coal 2 Pty Ltd ICRA MC Pty Ltd J-Power Australia Pty Ltd for Teston North, Teston South and Tralee Biodiversity Offset Conservation Area Agreement No. VCA0491' (**Teston North, Teston South and Tralee unsigned CA**) (copy **enclosed**) at Table 2, p 28.

¹⁶ See Kelso, Velyama and Louenville unsigned CA at Table 2, p 26.

¹⁷ See Teston North, Teston South and Tralee unsigned CA at Table 2, p 28.

¹⁸ See Teston North, Teston South and Tralee unsigned CA at Table 2, p 28.

¹⁹ See unsigned document titled 'Conservation Agreement between The Minister Administering the National Parks and Wildlife Act 1974 (NSW) and Aston Coal 2 Pty Ltd ICRA MC Pty Ltd J-Power Australia Pty Ltd for

Warriadhool	64.5	n/a	n/a	n/a
Shared property (Rocklea)	5.6	n/a	n/a	n/a
Oakleigh/Onavale²⁰	146.91	32.92	-113.99	22%
Bimbooria²¹	179.71	12.6	-167.11	7%
Wongala	282.92	n/a	n/a	n/a
Roseglass²²	221.86	45.16	-176.7	20%
Total area	5,942.84			
Revised total area (accounting for the information in the CAs)		4,851.08		

23. Also released pursuant to the Call for Papers is a table that purports to summarise the status of CAs for a range of proposed offset properties, including those listed above (copy **enclosed**). Insofar as it relates to the presence of 'TECs', the information in that table corresponds with the information in the draft CAs referred to above and enclosed with this letter.
24. To summarise, the draft CAs released pursuant to the Call for Papers suggest the following:
- (a) Where the BCT has conducted vegetation verification, the total agreed area of Box Gum CEEC appears to have been substantially revised and reduced to between 34% and as little as 7% of the figures earlier stated in the Second Greenloaning Report.
 - (b) Where these revised Box Gum CEEC figures are used to calculate the total area of Box Gum CEEC identified by the proponent in the proposed offset areas, the total area drops from 5,942.84ha to 4,851.08ha (shy of the 5,532ha required by the Approval).
 - (c) More generally, these materials raise further material concerns that the Box Gum CEEC assessments in the Second Greenloaning Report and the mapping in the 2017 BMP are not reliable.

Wollandilly Biodiversity Offset Conservation Area Agreement No. VC00490' (**Wollandilly Draft CA**) (copy **enclosed**) at Table 2, p 23.

²⁰ See unsigned document titled 'Conservation Agreement between The Minister Administering the National Parks and Wildlife Act 1974 (NSW) and Aston Coal 2 Pty Ltd, ICRA MC Pty Ltd J-Power Australia Pty Ltd for Onavale Biodiversity Offset Conservation Area Agreement No. VC0A0492' (**Onavale Draft CA**) (copy **enclosed**) at Table 2, p 22.

²¹ See unsigned document titled 'Conservation Agreement between The Minister Administering the National Parks and Wildlife Act 1974 (NSW) and Aston Coal 2 Pty Limited ICRA MC Pty Limited J-Power Australia Pty Limited for Roseglass and Bimbooria Biodiversity Offset Conservation Area Agreement No. VCA0489' (**Roseglass Bimbooria Unsigned CA**) (copy **enclosed**) at Table 2, p 21.

²² See Roseglass Bimbooria Final Unsigned CA at Table 2, p 21.

- (d) If the Box Gum CEEC mapping conducted by Greenloaning Biostudies for the remainder of the proposed offset areas listed above is shown to have errors of similar (or even lesser) magnitude to the errors suggested by the CAs released pursuant to the Call for Papers, this is likely to significantly effect whether the Approval holder currently owns properties containing adequate areas for the purpose of satisfying its Box Gum CEEC offsetting requirements. (Noting that the bulk of the Approval holder's proposed Box Gum CEEC offset areas are purportedly located within Mt Lindesay and Wirradale).
25. We note that our client is unaware of whether further CAs have since been prepared and/or finalised for the Project that may provide updated information about Box Gum CEEC vegetation mapping completed for other of the proposed Box Gum CEEC offset areas listed in the table above.
26. We note that other materials obtained by our client pursuant to the Call for Papers and/or GIPA Act requests also more generally suggest that the BCT verification process has revealed that the Greenloaning Biostudies Box Gum CEEC mapping is materially flawed. We **enclose** the following for your reference:
- (a) Minutes of a BCT meeting dated 13 August 2018 which includes the following text (copy **enclosed**):²³
- 9 Whitehaven Mine update**
- Chris and Paul – Whitehaven site visit conducted at Mt Lindsay, noting the following:
- ...
 - There are no grassy woodlands – mapping could be up to 50 per cent wrong. Mapping is very broad scale ...
 - ...
 - It is becoming clear this is a complex job ...
- (b) A document titled 'Background Summary and Status of Whitehaven Coal Conservation Agreement Applications' dated 25 September 2018, which includes the following text (copy **enclosed**):²⁴
- Maules Creek
- 11 of the original 2017 applications and additional 2 submitted in May 2018 (Oakleigh/ Onavale & Roseglass/Bimbora) are for offsets for Project Approval PA10_0138. The 13 applications for Conservation Agreements for Maules Creek Project total an area of 12,275ha.
- ...
- Considerations following initial site visit 22-24th May 2018**
- ...
3. Correlation of vegetation maps with field observations

²³ Released to our client pursuant to GIPA Act request GIPA OEH 19-700.

²⁴ Released to our client pursuant to GIPA Act request GIPA OEH 19-700.

The initial site visits mostly focussed on the Maules Creek Approval Projects. Vegetation maps were provided to the BCT for the sites visited and used on site to inform the visit. While on site, BCT staff made observations that some of the vegetation maps provided did not accurately reflect the vegetation on site.

...

Summary: Initial observations indicate more work would be required to validate vegetation mapping on site

- Veg mapping provided to BCT has poor accuracy on some sites with some areas mapped as Box EEC inconsistent with site observations.
- Some significant vegetation communities present on site were not reflected in the maps.
- If BCT request mapping at a more appropriate scale, time to enable this to occur will need factored in to the overall delivery timeframe.

- (c) A document titled 'Draft Maules Creek Conservation Agreement Vegetation maps accuracy assessment', dated 9 May 2019 and badged with a BCT logo (copy **enclosed**).²⁵ The page headed 'Common Themes and potential sources of error' includes the following text:

% accuracy / assessment of PCT match is less than 80% - indication of errors or inaccuracies in mapping

Unclear from method statement what scale is mapped too and what stratification method was used so there may be sources of error that can be explained

For Certain PCT types – there is a common theme in all 3 field assessments e.g. 435 and 378

Approval holder's compliance history

27. As you will be aware, in deciding whether to vary or add to any conditions attached to an approval under s 143 of the EPBC Act, you may have regard to the approval holder's history in relation to environmental matters (s 143(3)).
28. Previous variation decisions have also considered the approval holder's compliance history and noted that '[t]o date, the Department's compliance team have not taken any compliance action under this approval, or against the approval holder.'²⁶
29. We are instructed to bring to your attention the following compliance history (noting that Whitehaven Coal is the ultimate holding company of the Approval holder, Aston Coal 2 Pty Ltd, and the project operator, Maules Creek Coal Pty Ltd):

- (a) Current prosecutions:

- (i) In early July 2020, the NSW Natural Resources Access Regulator (**NRAR**) announced that it had commenced prosecution in the NSW Land and

²⁵ Released pursuant to the Call for Papers.

²⁶ 2018 Statement of Reasons at [6]; 2019 Statement of Reasons at [6],

Environment Court (**NSW LEC**) against Maules Creek Coal Pty Ltd (the company that operates the Maules Creek Coal Mine and is owned by Whitehaven Coal).²⁷ NRAR has charged Maules Creek Coal Pty Ltd with two alleged breaches of the *Water Management Act 2000* (NSW) for taking water without an access licence over a three year period, between 2016 and 2019. We understand that the proceedings remain on foot.

- (ii) In August 2020, the NSW Department of Regional NSW announced that it had commenced prosecuting proceedings against Narrabri Coal Pty Ltd and Narrabri Coal Operations Pty Ltd in the NSW LEC in relation to Exploration Licence EL6243 (which forms part of Whitehaven Coal's Narrabri operations). We understand that the charges relate to the alleged construction of unauthorised tracks, failing to rehabilitate drill sites and drilling of bore holes contrary to exploration activity approval conditions. This followed a decision in 2019 by the regulator to suspend the exploration licence.²⁸ In December 2020, the regulator determined to reject the respondents' request for an enforceable undertaking.²⁹ We understand that the proceedings remain on foot.³⁰

- (b) Historical matters: Regulatory action against Whitehaven Coal or its subsidiaries includes the following:

- (i) In 2012, the NSW Environment Protection Authority (**NSW EPA**) issued four penalty notices to Whitehaven Coal for polluting waters and breaching its environment protection licences (**EPLs**) at its Narrabri and Tarrawonga coal mines.³¹
- (ii) In 2014, Narrabri Coal Operations Pty Ltd disturbed an Aboriginal heritage site, for which it received a penalty notice (Narrabri coal mine).³²
- (iii) In 2014, the NSW EPA issued a penalty notice and fined Tarrawonga Coal for breaching the conditions of its EPL at the Tarrawonga coal mine.³³
- (iv) In 2015, the (former) NSW Department of Planning and Environment (**DPE**) fined Whitehaven Coal for failure to carry out weed control at Tarrawonga Mine.³⁴

²⁷ See information here: <https://www.industry.nsw.gov.au/natural-resources-access-regulator/nrar-news/water-regulator-commences-prosecution-of-mine-at-maules-creek>.

²⁸ See official media release here:

https://www.resourcesregulator.nsw.gov.au/_data/assets/pdf_file/0006/1248567/Prosecution-proceedings-commenced-against-Narrabri-Coal-Pty-Ltd-and-Narrabri-Coal-Operations.pdf.

²⁹ A copy of the decision to refuse to accept an enforceable undertaking is available here:

https://www.resourcesregulator.nsw.gov.au/_data/assets/pdf_file/0011/1275329/Reasons-for-decision-Narrabri-Coal.pdf.

³⁰ See also, e.g., <https://www.afr.com/companies/energy/whitehaven-pleads-guilty-faces-20-million-in-fines-20201211-p56msx>.

³¹ <https://www.epa.nsw.gov.au/news/media-releases/2012/decmedia12033003>.

³² See *Narrabri Mine Conditions of Approval Independent Environmental Audit Whitehaven Coal Limited* (October 2017) available here:

<https://whitehavencoal.com.au/Documentations/Narrabri%20Mine/Environmental%20Management,%20Monitoring%20&%20Compliance/Independent%20Environmental%20Audits/NAR-Independent%20Environmental%20Audit%20Report%202017.pdf>.

³³ <https://www.epa.nsw.gov.au/news/media-releases/2014/epamedia14120902>.

³⁴ <https://www.planning.nsw.gov.au/-/media/Files/DPE/Media-Releases/2015/August/26082015-Miners-fined-for-environmental-breaches.pdf>.

- (v) In 2015, the (former) NSW DPE fined Whitehaven Coal in relation to failure to carry out feral animal control at Maules Creek Coal Mine.³⁵
- (vi) In 2017, the NSW EPA issued the Maules Creek Coal mine with a fine for failing to minimise or prevent air pollution from truck movements on haul roads.³⁶
- (vii) In 2019, Whitehaven Coal pleaded guilty before the NSW EPA to breaching its EPL for a blast at its Rocglen mine near Gunnedah in August 2016, following successful prosecution by the NSW EPA.³⁷
- (viii) In 2019, the NSW Department of Planning, Industry and the Environment issued a penalty notice to Werris Creek Coal Pty Ltd for a blast at Werris Creek mine that exceeded the airblast overpressure criteria at certain blast monitoring stations.³⁸
- (ix) In 2019, the NSW EPA issued Narrabri Coal Operations Pty Ltd with a Clean-up Notice in relation to the improper disposal of combustible cannisters.³⁹
- (x) In 2019, Narrabri Coal Operations Pty Ltd was fined by the NSW EPA for an alleged breach of the mine's EPL in relation to coal dust emissions.⁴⁰
- (xi) In 2019, the NSW Resources Regulator issued a notice prohibiting the use of all vehicles at the Maules Creek coal mine. The notice was issued during an investigation and inspection during which alleged repeated breaches of mine procedures relating to the safe operation of light vehicles were identified by inspections. The investigation was undertaken following an incident where an unoccupied light vehicle was reversed over by a Dozer.⁴¹
- (xii) In 2020, the NSW Resources Regulator commenced proceedings against Maules Creek Coal Pty Ltd over a collision involving two trucks at the Maules Creek Coal Mine. The regulator accepted an enforceable undertaking which required the company to pay more than \$800,000.⁴²
- (xiii) In 2020, the NSW EPA issued Maules Creek Coal Pty Ltd a Clean-up Notice in relation to the discharge of expandable polystyrene balls into water drainage channels.⁴³
- (xiv) In 2020, the NSW EPA fined Tarrawonga Coal Mine after an alleged breach of its EPL when a sediment dam failed at Tarrawonga coal mine.

³⁵ <https://www.planning.nsw.gov.au/-/media/Files/DPE/Media-Releases/2015/August/26082015-Miners-fined-for-environmental-breaches.pdf>.

³⁶ <https://www.epa.nsw.gov.au/news/media-releases/2017/epamedia17052202>.

³⁷ [https://www.epa.nsw.gov.au/news/media-releases/2019/epamedia190320-whitehaven-coal-mining-ltd-convicted-and-fined-\\$38500-by-court](https://www.epa.nsw.gov.au/news/media-releases/2019/epamedia190320-whitehaven-coal-mining-ltd-convicted-and-fined-$38500-by-court).

³⁸ <https://www.planning.nsw.gov.au/Assess-and-Regulate/About-compliance/Inspections-and-enforcements/March-2019-formal-enforcements/Penalty-Notice-issued-to-Werris-Creek-Coal-Pty-Ltd>.

³⁹ <https://apps.epa.nsw.gov.au/prpoeoapp/ViewPOEONotice.aspx?DOCID=-1&SYSUID=1&LICID=1578807>.

⁴⁰ <https://www.epa.nsw.gov.au/news/media-releases/2019/epamedia190625>.

⁴¹ <https://resourcesandgeoscience.nsw.gov.au/about-us/news/2019/prohibition-notice-issued-to-maules-creek-open-cut-coal-mine>.

⁴² <https://www.resourcesregulator.nsw.gov.au/news/2020/enforceable-undertaking-accepted-in-relation-to-maules-creek-coal-mine-haul-truck-collision>.

⁴³ <https://app.epa.nsw.gov.au/prpoeoapp/ViewPOEONotice.aspx?DOCID=-1&SYSUID=1&LICID=1591771>.

- (c) In addition to the above, the 2018 Independent Audit Report for the Maules Creek Coal Mine records the following regulatory enforcement actions undertaken between 1 July 2015 to 30 June 2018:⁴⁴
- (i) two 'non-compliance recorded' notices issued by NSW DPE;
 - (ii) four 'official cautions' issued (one by the NSW EPA, one by the NSW Department of Primary Industries (Land) and two by the (former) NSW DPE; and
 - (iii) seven 'warning' letters (six from DPE and one from Department of Primary Industries (Water)).

30. We appreciate your attention to this matter and request that you respond by **Tuesday, 9 March 2021**.

Yours sincerely,

Environmental Defenders Office

s. 47F(1)

Emily Long

Senior Solicitor

Reference number: s483

Enclosures:

- Letter from EDO to the Minister dated 27 Feb 2020
- BCT document 'Offset Conservation Agreement Vegetation Map verification method' badged by the BCT logo' (March 2018)
- Kelso, Velyama and Louenville unsigned conservation agreement (see footnote 13 for further details)
- Teston North, Teston South and Tralee unsigned conservation agreement (see footnote 15 for further details)
- Wollandilly Draft conservation agreement (see footnote 19 for further details)
- Onavale Draft conservation agreement (see footnote 20 for further details)
- Roseglass Bimbooria Unsigned conservation agreement (see footnote 21 for further details)
- Table released pursuant to the Call for Papers that purports to summarise the status of CAs for a range of proposed offset properties
- Minutes of a BCT meeting dated 13 August 2018 (released by the BCT under the GIPA Act)
- 'Background Summary and Status of Whitehaven Coal Conservation Agreement Applications' dated 25 September 2018 (released by the BCT under the GIPA Act)
- 'Draft Maules Creek Conservation Agreement Vegetation maps accuracy assessment', dated 9 May 2019 and badged with a BCT logo (released pursuant to the Call for Papers)

⁴⁴ *Maules Creek Coal Mine Conditions of Approval Independent Environmental Audit Report* (Whitehaven Coal Ltd November 2018) available here <https://whitehavencoal.com.au/our-business/our-assets/maules-creek-mine/> (see p 32).

Ground-truthing of Proposed Commonwealth Offset Areas Identified as Box-Gum CEEC

Supplementary expert report provided by Wendy Hawes of The Envirofactor P/L



**South East Forest Rescue Inc v Aston Coal 2 Pty Ltd
(NSD383/2020)**

March 2021

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1. Statement of expertise – Wendy Hawes

I (Wendy Hawes) am a qualified Ecologist with a Bachelor of Science and Master of Science (preliminary) from the University of New England. As a result of my previous and current employment, I have over 25 years' experience in flora and fauna survey and assessment, ground-truthing vegetation mapping products and provision vegetation management advice on public and private land on the northern tablelands and north-west slopes of NSW. This includes the area within which the Maules Creek Coal Mine and the proposed offset areas for the mine are located.

I have prepared this report in response to a supplementary expert brief provided by *Environmental Defenders Office Ltd (EDO)*, on behalf of *South East Forest Rescue Inc (SEFR)*, dated 24th September 2020. In its preparation I have read, understood and complied with, and agree to be bound by, the *Expert Evidence Practice Note (GPN-EXPT) – General Practice Note* including its Annexures, the *Harmonised Expert Witness Code of Conduct* and the *Concurrent Expert Evidence Guidelines* (Federal Court of Australia 2016). The opinions I express in this report are based wholly on my specialised knowledge arising from my training and experience (as required by cl 5.2(a)(ii) of the *Expert Evidence Practice Note*). My complete resume appears in Appendix 1.

As per cl3(i) of the *Harmonised Expert Witness Code of Conduct*; I also declare that I have made all inquiries I believe desirable and appropriate (save for any matters identified explicitly in the report), and that no matters of significance I regard as relevant have, to my knowledge, been withheld from the Court.

2. Background to site inspection

The Environmental Defenders Office Ltd (EDO) engaged The Envirofactor Pty Ltd on behalf of the South East Forest Rescue Inc (SEFR) to inspect areas identified as the Commonwealth listed critically endangered ecological community; *White Box Yellow Box Blakely's Red Gum Grassy Woodland and Derived Native Grassland* (Box-Gum CEEC) as shown in the Maules Creek Coal Mine (2017) *Biodiversity Management Plan* (MCCM BMP).

The focus of the investigation is the properties Mt Lindesay, Wirradale and Wongala, identified within the MCCM BMP (2017) as the Northern Offsets and within which 4,192.43ha of Box-Gum CEEC has been mapped comprising; 1,360.59ha of derived native grassland and 2,831.84ha of woodland.

3. Consultant's brief

The entire supplementary brief provided by the EDO is given in Appendix 2. With respect to the preparation and content of this report the following was requested:

Report preparation

Please prepare a written expert report that conforms with the Code of Conduct and that reports on:

-
- (i) *the presence or otherwise of Box Gum CEEC (being the community listed under the EPBC Act) in the areas inspected by you;*
 - (ii) *the accuracy of the areas mapped as Box Gum CEEC in the 2017 BMP in the areas inspected by you;*
 - (iii) *to the extent possible, any implications that can be drawn on the accuracy of all areas mapped as Box Gum CEEC in the 2017 BMP. Please provide reasoning for your answer;*
 - (iv) *your opinion on the accuracy of the calculated total areas of Box Gum CEEC reported in the First and Second Greenloaning Report (as summarised in the table at [22] above) (refer Appendix 2 pp 4-5).*

4. Location and landscape setting of the Northern Offset areas

The Northern Offset properties comprising part Lot 22 DP1225250 and part Lot 28 DP754860 (Mt Lindesay), part Lot 2 DP1224991, part Lot 28 DP754860, Lot 39 DP754941 and Lot 52 DP704659 (Wirradale and Wongala) are located on the eastern side of Mt Kaputar approximately 35km west of Barraba, NSW (refer locality map in Appendix 3).

The Northern Offset properties straddle the Mt Kaputar and Peel subregions within the Nandewar IBRA (Interim Biogeographic Regionalisation of Australia) bioregion (*BioNet* database accessed 2020) and adjoin Mt Kaputar National Park along their western boundary. Comprising part of the eastern side slope of the Nandewar Range the area is dissected by small hanging valleys, rocky hills, numerous creeks and the Horton River. As a consequence, the topography of the properties is highly undulating to rugged. In elevation the area ranges from 700m above sea level (asl) on Wirradale rising to 1,075m asl on Mt Lindesay.

5. Site inspection

A site inspection of the areas mapped as Box-Gum CEEC on the Northern Offsets properties (Mt Lindesay, Wirradale and Wongala) was undertaken over 4 days from the 10th to 13th November 2020 by myself (Wendy Hawes) and Vanessa Hunter, accompanied by Whitehaven Ecologist, Ben Martin.

Vanessa Hunter's role was to assist me in the collection of field data. Under my direction she collected vegetation data including; tree age class sizes, number of trees with hollows, lengths of fallen logs, presence of dead standing trees and shrub cover. This field assistance with data collection notwithstanding the conclusions and opinions expressed in this report are my own.

In preparation for the site inspection, I studied/viewed the following documents relevant to the properties:

- Maules Creek Coal Mine (2017) *Biodiversity Management Plan*. Whitehaven Coal P/L
- Greenloaning Biostudies (2013) *Independent peer review of offsets for the Maules Creek mine project -EPBC 2010/5566*. Report prepared for Whitehaven Coal P/L

- Greenloaning Biostudies (2014) *Independent peer review of offsets for the Maules Creek mine project -EPBC 2010/5566. Verification Report for Additional Offsets*. Report prepared for Whitehaven Coal P/L

I also viewed the following imagery for the Northern Offset properties:

- Google Earth satellite imagery (2020 CNES/Airbus) dated: 13/08/2018 and 08/12/2019, and
- undated imagery in SIX Maps (NSW Spatial Services, accessed 2020).

Satellite imagery and aerial photography can provide information on the structure of vegetation and the floristic composition of that part of the vegetation that is visible from above. The crowns of the various tree groups and species have different colours, architecture and density, and allows the differentiation of crown patterns that indicate different vegetation types. The use of satellite imagery and aerial photography is a credible and useful means of establishing:

- the vegetation type and structure, and
- the context of the vegetation (e.g. connectivity) at a landscape scale.

5.1. Investigation methods

As previously indicated, the field investigation focussed on ground-truthing¹ areas mapped as Box-Gum CEEC identified within the MCCM BMP (2017) (refer Appendix 4 in this report). Field data collection was consistent with the requirements of the identification for Box-Gum CEEC, outlined in the Threatened Species Scientific Committee (TSSC) listing advice (TSSC 2006), *White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland* EPBC Act Policy Statement (identification guideline) DEH (2006a) and the *White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland National Recovery Plan* (National Recovery Plan) (DECCW 2010).

The identification and nomenclature for flora species in this report is as per the NSW Royal Botanic Gardens *PlantNet* database. (<https://www.rbgsyd.nsw.gov.au/plants/plant-information/online-resources> - accessed 2020).

Prior to undertaking the field survey, sites were selected within areas mapped as Box-Gum CEEC as shown in Appendix 4. This was both to comply with the access requirements stipulated by Whitehaven P/L and to ensure sites selected in the field were within areas mapped as Box-Gum CEEC. Only areas mapped as having a woodland structure were investigated as part of this study. This was because Google Earth imagery (dated 08/12/2019) clearly showed that mapped derived native grassland areas within the Northern

¹ 'Ground truthing' refers to the process of gathering quantitative vegetation data in the field (i.e. on-ground) that can be then used to test the efficacy of modelled and/or remotely sensed mapping products (such as vegetation mapping). Ground truthing of vegetation mapping involves visiting sites within any given mapped polygon of a particular vegetation type and collecting vegetation data (structure and composition) which then enables a determination of whether the vegetation type indicated on the map is in fact present on-ground.

Offsets had been disturbed by ripping and tree planting activities associated with the rehabilitation of these areas. Such disturbance is likely to have impacted on the species composition and or any regeneration of any tree species.

To establish the species composition of the vegetative layers within the woodland sites a 20m x 20m quadrat was used. However, in sites where initial observations clearly indicated likely consistency with the Commonwealth Box-Gum CEEC listing advice (TSSC 2006) including characteristic overstorey species (i.e. white box, yellow box, Blakely's red gum and/or western or coastal grey box) and structure (i.e. grassy not shrubby understorey) the 20m x 20m quadrat was nested at one end of a 20m x 50m quadrat (refer Appendix 5 diagram). At these sites, considered likely to support the Box-Gum CEEC, this larger quadrat was used to establish the species composition of the ground layer and extent of any shrub cover, consistent with the requirements of the Box-Gum CEEC listing advice (TSSC 2006).

Additionally, for each quadrat the dominant 3 species in each vegetation stratum (overstorey, shrub layer and ground layer) and the percentage canopy cover of these species was also recorded.

The location of these quadrats (Q) is shown in Table 1 and depicted in Appendix 6. Within each quadrat all flora species present and their cover/abundance using a modified Braun Blanquet scale² were recorded, as well as fauna habitat features including:

- number and size classes of trees present
- number standing dead trees
- presence of seedling trees
- % shrub cover, and
- length of fallen logs.

Non-vascular groundcover was recorded as an average of 5 x (1m x 1m) quadrats located at 0m, 5m, 10m, 14m, 19m laid along one side of the centreline of the 20m x 20m quadrat (refer Appendix 5 diagram). Within these quadrats the percentage of; litter/dead branches, bare soil/small rocks, cryptogams and large rock/boulders was recorded.

In locating the quadrats, care was taken to select a site representative of the vegetation community sampled and where possible avoid areas of disturbance such as tracks and fencelines. These areas are avoided because they generally have a higher proportion of weeds and voluntary³ native species than areas of less disturbed groundcover, and so are not always representative of the ground layer within the vegetation community.

² A **Braun Blanquet scale** is a commonly used method for recording vegetation data in the field (i.e. species cover-abundance). Invented by J Braun-Blanquet, for each plant species at a site the scale records; the plant species' cover (i.e. how much area the crown/s of a particular plant species occupies) and the abundance of that plant species (i.e. how numerous is it at the site)

³ **Voluntary native species** are native plant species which initially colonise areas following a disturbance (often in great numbers) such as clearing for infrastructure (e.g. tracks and fencelines).

TABLE 1: Location of survey quadrats and rapid assessment points on the Northern Offset properties (Datum: GDA 94)

QUADRAT	ZONE	EASTING	NORTHING	ALTITUDE (m asl)	QUADRAT SIZE
Q1	56	0236966	6632643	851	20m x 50m
Q2	56	0237210	6632537	847	20m x 50m
Q3	56	0233585	6634407	827	20m x 50m
Q4	56	0234658	6635829	840	20m x 50m
Q5	56	0237758	6638957	997	20m x 50m
Q6	56	0237169	6638361	906	20m x 20m
Q7	56	0238773	6634667	780	20m x 50m
Q8	56	0237026	6636183	853	20m x 20m
Q9	56	0236062	6640199	985	20m x 20m
Q10	56	0238510	6639764.	576	20m x 20m
Q11	56	0239471	6639777	967	20m x 20m
Q12	56	0239369	6640453	933	20m x 20m
Q13	56	0239844	6641016	901	20m x 20m
Q14	56	0238686	6642181	923	20m x 20m
Q15	56	0238365	6644388	922	20m x 50m
Q16	56	0238540	6639818	628	20m x 50m
Q17	56	0239036	6640575	619	20m x 50m
Q18	56	0238989	6641273	921	20m x 20m
Q19	56	0236282	6640541	990	20m x 20m
Q20	56	0236483	6640703	992	20m x 20m
Q21	56	0237634	6638828	1002	20m x 20m

6. Limitations of field investigations

The field inspection of the Northern Offsets properties was undertaken in late spring and within the active growing, flowering and seed-set period for the majority of native shrubs and ground layer species on the northern tablelands and north west slopes. The field inspection also occurred after reasonable rain. This notwithstanding, the extended drought that occurred in the 2-3 years prior to the inspection and/or the effects of the 2019 bushfires at some sites will have potentially influenced the germination and growth of many species within the soil seedbank. Additionally, a number of dead/defoliated trees were observed as a result of drought and/or fire, as were trees with epicormic growth and juvenile leaves indicating recovery from these stochastic events.

7. Investigation results

7.1. Vegetation species identified on the Northern Offset properties

Data collected during the field inspection identified 199 plant species in 54 families on the Northern Offsets properties. Of these, 165 are native species. A comprehensive list of the plant species identified on the Northern Offsets and their relative dominance in each quadrat is given in Appendices 7 and 8.

Quadrat data indicates that wooded vegetation on the Northern Offset properties comprises a mosaic of open forest and woodland native vegetation communities dominated by a range of Eucalypt species including; white box (*Eucalyptus albens*), Blakely's red gum (*E. blakelyi*), yellow box (*E. melliodora*), apple box (*E. bridgesiana*), red stringybark (*E. macrorhyncha*), Bendemeer white gum (*E. elliptica*), ribbon gum (*E. viminalis*) and New England blackbutt (*E. andrewsii*) (refer Appendices 7 and 8). These communities not only vary in the dominant tree species but also in their understorey composition which is variously grassy or shrubby (refer Appendices 7, 8 and 9).

7.2. Presence of the Box-Gum CEEC on survey areas

In determining the presence of the Box-Gum CEEC, field data was assessed against the criteria outlined in the TSSC (2006) listing advice, DEH (2006a) identification guideline and the National Recovery Plan (DECCW 2010) for this ecological community.

As described in the listing advice for this community (TSSC 2006) and shown in the flowchart from the DEH (2006a) identification guideline (refer Appendix 10), to constitute the Box-Gum CEEC an area must have, or have previously had, an overstorey dominated by (i.e. one of the most common species must be); white box (*Eucalyptus albens*), yellow box (*E. melliodora*) and/or Blakely's red gum (*E. blakelyi*). While in the Nandewar bioregion, in which the Northern Offset properties lie, western grey box (*E. microcarpa*) and/or coastal grey box (*E. moluccana*) may also be dominant or co-dominant in this CEEC. Table 2 shows the occurrence of these species in the survey quadrats and their dominance.

Of the 21 quadrats undertaken, the characteristic overstorey species of Box-Gum CEEC were present in 14. However, these species were only dominant or co-dominant (i.e. occurring in equal proportion to another tree species and therefore one of the most common species) in nine of the quadrats (Q1, Q2, Q3, Q4, Q5, Q7, Q8, Q16 and Q17). In the other six quadrats (Q10, Q13, Q15, Q18 and Q19) yellow box and/or Blakely's red gum while present, were neither dominant nor co-dominant within the overstorey but rather comprised relatively minor components within the composition of the tree layer (refer Appendices 7 and 8).

The second criterion for the identification of the CEEC is the presence of a predominantly native understorey, that is where at least 50% of the perennial vegetation cover in the ground layer comprises native species (TSSC 2006, DEH 2006a, DECCW 2010). Of the nine quadrats that supported the characteristic overstorey species only seven (Q1, Q2, Q3, Q7, Q8, Q16 and Q17) had a predominately native ground layer (refer Table 2 and Appendices 7 and 8).

The third criterion in identifying the CEEC is that the patch size be greater than 0.1ha (i.e. 20m x 50m or 1,000m²) (TSSC 2006, DEH 2006a, DECCW 2010). All seven quadrats with the characteristic overstorey species and predominantly native understorey of the CEEC occurred in vegetation patches greater than 0.1ha.

Criterion number four in identifying the presence of Box-Gum CEEC, described in the identification guideline DEH (2006a), listing advice TSSC (2006) and National Recovery Plan (DECCW 2010), is that the vegetation must have a grassy rather than shrubby understorey. This criterion does not appear in the identification flowchart shown in Appendix 10 because vegetation types with a shrubby understorey have already been excluded in the description of the CEEC provided in the text (refer p4 DEH 2006a) As described in the listing advice (TSSC 2006) '*a remnant with a continuous shrub layer, in which the shrub cover is greater than 30%, is considered to be a shrubby woodland and so is not part of the listed ecological community*'. Of the seven quadrats that meet the previous criteria, two (Q7 and Q8) have a continuous shrub cover >30% and consequently are not part of the listed CEEC (refer Table 2 and Appendix 9).

The fifth criterion for Box-Gum CEEC is that a patch in which the perennial vegetation of the ground layer is dominated by native species must contain at least 12 native, non-grass understorey species (such as forbs, shrubs, ferns, grasses and sedges), including at least one important species (e.g. grazing-sensitive, regionally significant or uncommon species) in order to indicate a reasonable condition (TSSC 2006, DEH 2006a, DECCW 2010). Important species are listed in a separate document, *Species list for the EPBC Act policy statement - White Box Yellow Box Blakely's Red Gum Grassy Woodlands and Derived Native Grasslands* (DEH 2006b; <https://www.environment.gov.au/system/files/resources/be2ff840-7e59-48b0-9eb5-4ad003d01481/files/box-gum-species.pdf>). All five quadrats in question contained 12 or more native non-grass ground layer species and one or more important species (refer Appendices 7 and 8).

The exception to the above analysis is Q15, which comprised predominantly open grassy woodland dominated by apple box (*E. bridgesiana*) with only an occasional yellow box present. It is my opinion based on my experience with Box-Gum CEEC and the tree regeneration observed in the 20m x 50m quadrat (i.e. yellow box and Blakely's red gum seedlings and saplings) that this community would have previously been dominated by yellow box and/or Blakely's red gum with its current composition and structure the result of historic clearing events. The previous dominance of these characteristic species of the CEEC, the presence of a predominantly native understory with 12 or more native non-grass species and at least 1 important species and a scarcity of shrub cover, indicate the derived native grassland in this quadrat also constitutes the Box Gum CEEC.

TABLE 2: Comparison of quadrat data to Box-Gum CEEC identification criteria outlined in the listing advice (TSSC 2006), DEH identification flowchart (DEH 2006) and National Recovery Plan (DECCW 2010)

Quadrats which meet the minimum condition criteria for the Box Gum CEEC (refer Appendix 6 for their locations)

QUAD #	CHARACTERISTIC OVERSTOREY SPECIES					PREDOMINANTLY NATIVE GROUND LAYER (Y/N)	SHRUB COVER <30% (Y/N)	BOX-GUM CEEC (Y/N)
	WHITE BOX	YELLOW BOX	BLAKELY'S RED GUM	WESTERN GREY BOX	COASTAL GREY BOX			
1	D	-	-	-	-	Y	Y	Y
2	-	-	CD	-	-	Y	Y	Y
3	D	-	-	-	-	Y	Y	Y
4	D	-	-	-	-	N	N	N
5	-	-	D	-	-	N	Y	N
6	-	-	-	-	-	N	N	N
7	CD	-	-	-	-	Y	N	N
8	D	-	-	-	-	Y	N	N
9	-	-	-	-	-	N	Y	N
10	-	✓	-	-	-	Y	N	N
11	-	-	-	-	-	Y	N	N
12	-	-	-	-	-	Y	N	N
13	-	✓	-	-	-	Y	Y	N
14	-	-	-	-	-	Y	Y	N
15	-	✓	-	-	-	Y	Y	Y
16	-	D	SD	-	-	Y	Y	Y
17	-	D	SD	-	-	Y	Y	Y
18	-	-	✓	-	-	Y	N	N
19	-	✓	✓	-	-	Y	Y	N
20	-	-	-	-	-	Y	Y	N
21	-	-	-	-	-	N	Y	N

D=dominant (the most common tree species on-site); **CD**=co-dominant (equally as common as other tree species on-site); **SD**=sub-dominant (less common than the dominant tree species but still common on-site); **✓** = present on-site but only as a minor component of the tree cover when compared to other tree species present.

8. Conclusion

8.1. Accuracy of areas mapped as Box Gum CEEC in the MCCM BMP 2017

All 21 quadrats undertaken in the current survey were located in areas mapped as Box-Gum CEEC on the Northern Offset properties in the MCCM BMP (2017). Based on this mapping it would be expected the data recorded in the quadrat sampling sites would be relatively consistent in both species' composition and structure. Comprising various combinations of the characteristic Box-Gum CEEC overstorey trees with/without co-dominants and/or occasional occurrences of other tree species, and a grassy understorey with a sparse or patchy shrub cover. Instead, vegetation recorded in the quadrats was found to comprise a range of wooded vegetation types (refer Appendices 7 and 8) dominated by a range of Eucalypt species with/without the characteristic Box-Gum CEEC trees. Similarly, not all vegetation types had a grassy understorey with 8 quadrats having greater than 30% continuous shrub cover (refer Appendices 7, 8 and 9).

As identified above (s7.2), only six of the quadrats surveyed (or 29% of the survey area) actually supported vegetation consistent with the Box-Gum CEEC listing advice (TSSC 2006), identification guideline (DEH 2006a) and the National Recovery Plan (DECCW 2010). Consequently, the accuracy of the areas mapped as Box-Gum CEEC is highly questionable.

8.2. Implications regarding the accuracy of all areas mapped as Box Gum CEEC in the MCCM 2017 BMP

The accuracy of any vegetation map is highly dependent on the survey effort (i.e. the number of reference plots/quadrats), the homogeneity of the geology, soils and landscape as well as the skill and knowledge of the field surveyors and mappers involved. Mapping Box-Gum CEEC is further complicated by the TSSC (2006) minimum condition criteria which requires a detailed assessment of the ground layer at a time when it is actively growing and likely to have the highest number of native species.

While the assessment of the ground layer in Box-Gum CEEC can be problematic depending upon seasonal and temporal constraints, the identification of the characteristic overstorey species and extent of shrub cover is not. So, it is difficult to understand how so many areas of wooded vegetation communities dominated by other Eucalypt species and/or with a continuous shrub layer could be mapped as the Box-Gum CEEC in the Northern Offset properties.

Further, due to time constraints and ease of access, the current investigation focussed on those areas mapped as Box-Gum CEEC woodland adjacent to tracks and therefore readily accessible. Potentially these are also the areas (for similar reasons) targetted by those collecting field data for mapping, which means that you would expect a much higher percentage of accuracy in vegetation types in these areas compared to ground-truthing in more isolated inaccessible areas. This is because distant and less accessible areas are often mapped using remote vegetation sensing techniques with little or no ground truthing.

Remote sensing techniques in this type of vegetation mapping use quadrat data collected in the field, in conjunction with the mapper's knowledge of the vegetation communities in the mapping area. Firstly, to identify vegetation communities present in the quadrat. Then secondly, using aerial photography and/or satellite imagery and the colour, architecture and tree density of vegetation visible from above, to compare the patterns created by the vegetation communities within the quadrats with those in more remote areas. Different patterns indicate different vegetation communities, while matching patterns indicate the presence of the vegetation communities identified at the assessment point. The boundaries of these patterns are then mapped on the aerial photograph/satellite image to create a vegetation map.

As described above the current survey results indicate that only 29% of areas mapped as Box-Gum CEEC woodland on the Northern Offset properties actually comprise the listed CEEC. This indicates that 71% of the area mapped does not comprise the listed CEEC. Consequently, it is my opinion based on the results of the current investigation, that all areas mapped as Box-Gum CEEC woodland within the MCCM 2017 BMP are suspect, and likely to support significant areas of other vegetation communities incorrectly mapped as Box-Gum CEEC.

Additionally, while the current investigation did not focus on the mapped derived native grassland, the inaccuracy of the wooded Box-Gum CEEC mapping places a significant question over the precision of the mapping of this non-wooded vegetation. The need to identify the previous occurrence of the characteristic overstorey species of Box-Gum CEEC in these existing grassland areas (TSSC 2006, DEH 2006 and National Recovery Plan 2010) adds to the complexity of the CEEC identification. Given the apparent inability to identify this CEEC when living tree species are present, it is my opinion the added complication of identifying areas of grassland that once supported the characteristic Box Gum CEEC tree species rather than any other overstorey, indicates that potentially more substantial errors in the derived grassland CEEC mapping are likely than those observed in the wooded CEEC mapping.

8.3. The accuracy of the calculated total areas of Box Gum CEEC reported in the First and Second Greenloaning Reports

A summary of the areas of Box-Gum CEEC reported in the first and second Greenloaning reports (Greenloaning Biostudies 2013 and 2014) and as shown in the consultant's brief (refer Appendix 2) is presented in Table 3. The areas of Box-Gum CEEC presented in the first report (2013) and verified in the second report (2014) were used to identify the offset areas in the MCCM 2017 BMP, as mapped in Appendix 4.

As stated previously, this investigation focussed on woodland areas mapped as Box-Gum CEEC on the Northern Offset properties (Mt Lindesay, Wirradale and Wongala). According to the second Greenloaning (2014) report a total of 4,192.43ha of Box-Gum CEEC with a woodland structure occurs on the Northern Offset properties (refer Table 3). The results of this investigation indicate that only 29% or 1,215.80ha of the area mapped as Box-Gum CEEC woodland within the Northern Offsets would actually meet the minimum condition criteria for the listed community.

While distance, and differences in altitude, aspect, geology and soil type make it difficult to extrapolate accurately the findings of this investigation to the other offset areas (refer Table 3) mapped in the MCCM 2017 BMP, the inaccuracy of the Northern Offsets mapping make it highly probable that similarly significant mapping errors also occur in other offset areas. If an equivalent error factor is presumed, then the mapped area of wooded Box-Gum CEEC across the offset properties drops from 3,798.14ha to 1,101.46ha. Further, if a similar error is assumed for the derived native grassland component then the total area of mapped Box-Gum CEEC (wooded + derived native grassland) within the MCCM 2017 BMP falls from 5,659.92ha to 1,651.82ha.

Based on the above, it is my opinion the Greenloaning reports (2013 and 2014) have grossly over-estimated the areas of the Box Gum CEEC present on all the offset areas.

TABLE 3: Areas of Box-Gum CEEC as presented in Table G1 (Appendix G) of the second (2014) Greenloaning report following verification of the areas of Box-Gum CEEC presented in the first (2013) Greenloaning report

PROPERTY NAME	BOX-GUM CEEC (ha)		
	DERIVED NATIVE GRASSLAND	WOODLAND	TOTAL
NORTHERN OFFSETS			
Mt Lindesay	568.62	1,118.27	1,686.89
Wirradale	728.23	1,494.39	2,222.62
Wongala	63.74	219.18	282.92
WESTERN OFFSETS			
Kelso	0	16.50	16.50
Louenville	0	151.00	151.00
Olivedeem	0	0	0
Teston (south)	18.60	78.0	96.60
Velyama	107.60	1.80	109.40
EASTERN OFFSETS			
Blue Range	0	21.70	21.70
Cattle Plain	6.40	8.00	14.40
Teston (north)	0.84	55.92	56.76
Tralee	0	13.95	13.95
Wallandilly	198.06	170.55	368.61
Warriadhool	0	64.50	64.50
SHARED PROPERTY			
Shared Property	0	5.60	5.60
ADDITIONAL OFFSETS			
Oakleigh/Onavale	54.37	92.54	146.90
Bimbooria	29.48	150.23	179.71
Roseglass	85.84	136.02	221.86
TOTAL	1861.78	3,798.14	5,659.92

9. References

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DEH (2006a) *White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland*. EPBC Act Policy Statements. Australian Government, Department of Environment And Heritage

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Maules Creek Coal Mine (2017) *Biodiversity Management Plan*. Whitehaven Coal P/L

NSW Royal Botanic Gardens *PlantNet Database* <http://plantnet.rbgsyd.nsw.gov.au/>

TSSC (2006) *Commonwealth Listing Advice on White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland*. Commonwealth Threatened Species Scientific Committee <http://www.environment.gov.au/biodiversity/threatened/communities/box-gum.html>

APPENDIX 1:

RESUME – Wendy Hawes BSc MSc (prelim)

R E S U M E

WENDY HAWES

21 Gordon Street
PO Box 626
INVERELL NSW 2360

Mob: 0408 224 997
Email: theenvirofactor@hotmail.com

PERSONAL DETAILS

DRIVERS LICENCE:	Current Class C Gold
NSW OEH SCIENTIFIC LICENCE:	SL 100544
ANIMAL ETHICS APPROVAL	Current
OH&S GENERAL INDUCTION for Construction Work (Green Card)	CG100620760SEQ1
FIRST AID CERTIFICATE	ID 612436

EDUCATIONAL RECORD

1969-1974:	WARILLA HIGH SCHOOL - Higher School Certificate
1975-1977:	UNIVERSITY OF NEW ENGLAND - Bachelor of Science (Major in zoology and ecology)
1978-1979:	UNIVERSITY OF NEW ENGLAND - Master of Science (Prelim)
1988:	INVERELL COLLEGE OF TAFE - Computer Studies 1
1989:	INVERELL COLLEGE OF TAFE - Text Editing
2008:	UNE PARTNERSHIPS – Certificate IV in Training and Assessment

CURRENT MEMBERSHIPS

The Envirofactor Pty Ltd – Director (2004-current)

Accredited Expert: Biodiversity and Threatened Species - *NSW Native Vegetation Regulation 2005*

Northern Tablelands Bushfire Management Committee (Nature Conservation Council rep) - RFS (1999-current)

Office of Environment and Heritage Northern Inland Regional Advisory Committee – OEH (2010-current)

Ecological Society of Australia

Australian Conservation Foundation

Birds Australia

Australian Network for Plant Conservation

Western Woodlands Alliance

GWYMAC Landcare - Friends of Five Corners & North West Koala ARK

Expert Reference Group for CEEC White Box Yellow Box Blakely's Red Gum Grassy Woodland and Derived Native Grassland Mapping – NSW Department of Planning Industry and Environment (2020)

RESUME

WENDY HAWES

TECHNICAL REPORTS

- Hawes W** (1979) Preliminary Study of the Ecology and Behaviour of the Blue Bonnet Parrot (*Psepholus haemalogaster haematormous*) Master of Science (Preliminary) Thesis, University of New England.
- Hawes W** (1982) *Rehabilitation of Degraded North West Croplands with Perennial Grasses*. Department of Conservation and Land Management.
- Hawes W** (1993) Flora and Fauna Survey in *Boobera Lagoon - Environmental Audit*. Department of Land and Water Conservation.
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- Hawes W**, Boschma D and Rose A (1995) *Report on the Current Land Condition of the former "Moree Common"*. Department of Conservation and Land Management.
- Hawes W**, O'Keefe P and J Kewley (2000) *Acacia sp. "Myall Creek" (Miller s.n. 25 May 2000). Site Inspection and Sample Collection*. Department of Land and Water Conservation.
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- Hunter J and **Hawes W** (2020) *Winney Bay Reserve Site Management Report regarding Themeda Grassland and Littoral Rainforest*. Report for the Central Coast Council.

SCIENTIFIC CONTRIBUTIONS

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- Ede AJ and **Hawes W** (1998) *Guidelines for Native Vegetation Assessment and Reporting - Barwon Region*. Dept of Land and Water Conservation. Departmental document.
- Ede AJ and **Hawes W** (2004) *Draft Guidelines for the Environmental Assessment of Existing and New Structures/Developments under Part 6 of Water Act 1912 - Barwon Region*. Dept Infrastructure Planning and Natural Resources. Departmental document.
- Ede A, **Hawes W** and Hunter J (2016) *Koalas on the Northern Tablelands Literature Review*. Report for the Northern Tablelands Local Land Services.
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- Hawes W** and Hunter J (2019) *Feral Deer in NSW - Literature Review*. Report for the North West Local Land Services.

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SCIENTIFIC CONTRIBUTIONS (continued)

- Hawes W**, Hunter J and Hunter B (2020) *Feral Deer Case Study – Willow Tree NSW*. Report for the North West Local Land Services.
- Hawes W**, Hunter J, Lechner A and Ede A (2016) *Northern Tablelands Koala Recovery Strategy 2015-2025*. Northern Tablelands Local Land Services.
- Hunter JT and **Hawes W** (2013) *Review of the Greater Namoi Native Vegetation Map*. Report prepared for the Namoi Catchment Management Authority.
- Ede A, Hutchings P, McGuffick B, G Steenbeeke eds (2013) *Managing and Conserving Native Vegetation. Information for land managers in the Border Rivers-Gwydir catchments*. Border Rivers-Gwydir Catchment Management Authority.
- Hunter JT, **Hawes W** and Souter T (2012) *Biodiversity Strategy for Arding, West Invergowrie, Kentucky & Rocky River*. Report prepared for Uralla Shire Council.
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- Vickers D, Hunter JT and **Hawes W** (2014) Multiple species use of a water-filled tree hollow by vertebrates in dry woodland habitat of northern New South Wales. *Aust. Zoologist* 2104 pp 1-5

FLORA and FAUNA SURVEY EXPERIENCE

- 2020 Fauna survey of shed and trees marked for removal – identification capture and relocation of affected fauna for the Manilla Water Supply Upgrade (Lead PL) - The Envirofactor (TE)
- 2018 Targetted threatened flora survey for EPBC listed communities and species on 'Wyoming', Yetman - TE
- 2017 Fauna survey Tomington State Forest (TopTung Pty Ltd) - TE
- 2016 Fauna survey 'Old Bottom' Tingha- (Anaiwan Local Aboriginal Land Council) - TE
Targetted threatened flora survey for *Dichanthium setosum*, 'The Meadows', Tamworth - TE
- 2015 Ecological tree assessment 'Argyle, Inverell - (Bond Resources) - TE
Oversight of tree removal, identification, capture & relocation of displaced fauna – Fossiker's Way Upgrade- (Gwydir Shire Council) - TE
- 2014 Monitoring of revegetation sites on Northern Tablelands & NW Slopes– (NT Local Land Services) - TE
- 2013 Monitoring of Grassy Box Woodland CEEC at Ross Hill Reserve, Inverell - (GWYMAC) – TE
Rapid Flora Assessment for Central West Native Vegetation Mapping Program - (OEH) – Hewlett Hunter
Rapid Flora Assessment for Review of Great Namoi Vegetation Map - (Namoi CMA) – Hewlett-Hunter
Rapid Flora Assessment of offset areas on 'Wirradale' and 'Mt Lindsay' - TE
Fauna Survey of 'Dunburra', Armidale – Faunagraph
- 2012 Flora Survey Boobera Lagoon – (BRG CMA) – TE
Fauna Survey of Additions to Mehi National Park - (NSW NPWS) - TE
Baseline Flora and Fauna Survey of Ross Hill Reserve, Inverell (GYVMAC) - TE
- 2011 Rapid Flora Assessment for Hunter Valley Native Vegetation Mapping – Australian Museum
Flora and fauna habitat survey, Martin's Gully Armidale (SNELC) - TE
Fauna Survey – '5 Corners' (S Handy) - TE & Faunagraph
Targetted Survey for Threatened Flora Species – Fisher Lane, Inverell (RowerServe Pty Ltd) - TE

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WENDY HAWES

FLORA and FAUNA SURVEY EXPERIENCE (continued)

- 2010 Oversight of tree removal; identification, capture & relocation of displaced fauna - Copeton Dam (Thomas & Coffey Pty Ltd) - TE
Targetted Survey for Threatened Flora Species – Tuttle's Lane, Glen Innes (PowerServe Pty Ltd) - TE
- 2009 Split Rock Dam Stage 1 Upgrade Flora and Fauna Survey (NSW State Water Corporation) - TE
- 2008 TSR Flora and Bird Surveys for Identification of HCV sites (Lachlan CMA and Forbes/Young RLPBs) - North West Ecological Services (NWES) & TE
Copeton Dam Upgrade Flora and Fauna Survey (NSW State Water Corporation) - TE
- 2007 Border Rivers-Gwydir High Conservation Vegetation Mapping – Vegetation typing (DECCW) - TE
- 2006 '5 Corners' Fauna Survey - Dept Environment and Climate Change (S Handy) – NWES & TE
Trapping and translocation of endangered saddleback birds (*Philesturnus carunculatus*) from Mokoia Island (Rotorua) to Bushy Park (Whangamui) - Dept of Conservation, New Zealand
- 2005 Biodiversity Conservation in the NSW Sheep-Wheat Belt Project - Flora and Bird Surveys (Dept. of Environment and Conservation) – TE
Bat Survey - Hillgrove Derelict Mine Project (NSW Dept of Lands) – TE
- 2003 & 2004 Habitat Manipulation in Grassy Woodlands Project - Reptile Survey- Centre for Natural Resources (CNR)
- 2002 & 2003 Nandewar Regional Biodiversity Fauna Assessment Survey (NSW National Parks & Wildlife Service)
- 2002 Threatened Flora Survey "Balaclava" Glen Innes – Dept of Land & Water Conservation (DLWC)
"Minbalup" Community Biodiversity Survey (Fauna Survey) – NWES and Greening Australia
- 2001 Vegetation Condition Rating Project and Reptile Survey – (CNR)
Flora and Fauna Survey, Peery National Park – Australian Museum, Australian Herpetological Society, Birds Australia
Bat Survey – Ironbark Nature Reserve – NWES
- 2000 King Conrad Mine Fauna Survey – NWES and DLWC
Fauna Survey, Sturt National Park – Australian Museum, Australian Herpetological Society, NWES
- 1998 Threatened Flora Survey "Fairview" Walgett– DLWC
Threatened Flora Survey "Fairlands" Boggabilla - DLWC
- 1996 Pilliga Fauna Survey – DLWC Ecologists in conjunction with Harry Parnaby (Australian Museum)
Gwydir Wetlands Fauna Survey – NWES & DLWC
- 1992 Environmental Audit Boobera Lagoon (Flora and Fauna Survey) – DLWC

RELEVANT TRAINING

Department of Natural Resources	Aboriginal Sites Identification Aerial Photo Interpretation Four Wheel Drive Training Introduction to Arcview Laboratory Techniques and Safety Risk Management Assessment Soil Data System Sponsorship Workshop Train the Trainer Vegetation Management Legal Enforcement Workshop Wetland Plant Identification
WorkCover	OHS General Induction for Construction Work in NSW
Farming For The Future	Facilitation Training
State Forests	Frog and Bat Identification and Survey Skills
University of New England	Identification of Western Grasses Tree and Shrub Identification

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WENDY HAWES

EXPERIENCE in TRAINING and EDUCATION**The Envirofactor (2004-present)**

- Development and delivery of workshops regarding identification of EPBC Act listed Threatened Ecological Communities and threatened species habitat for LLS Sustainable Land Management staff @ Moree, Gunnedah, Glen Innes & Dubbo.
- Development and delivery of plant and vegetation community identification workshops for LLS staff @ Inverell, Glen Innes & Armidale – NT LLS
- Development and delivery of a workshop regarding the identification of native vegetation communities and use of the Collector App on Travelling Stock Reserves in the Western Division of NSW for LLS TSR management staff @ Cobai
- Delivery of the native vegetation identification and management component of Box-Gum Woodland Commonwealth Stewardship Program field days @ Cunnock, Warialda and Gunnedah – Central West CMA
- Development of a Biodiversity Education Package for secondary teachers for 9 school excursion sites across the Border Rivers-Gwydir Catchment – Border Rivers Gwydir (BRG) CMA
- Delivery of the biodiversity component of school education days @ Lake Inverell (2010, 2011 & 2012) - BRG CMA
- Delivery of native vegetation identification and monitoring workshop for Central West, Namoi and BRG CMA staff – Multiple Ecological Communities Commonwealth Stewardship Program - Central West CMA
- Development and delivery of High Conservation Value Roadside Vegetation Workshops and an Education Package for local government staff and LHPA rangers - BRG CMA
- Deliver presentations, workshops and walks on biodiversity, habitat and nocturnal fauna to landholders, community groups and schools for 5 Corners VCA (2009, 2010, 2011, 2012, 2013, 2014, 2015, 2017); GwydirMAC Landcare (2012, 2013, 2014) and Uralla Shire Council (2013, 2014)
- Deliver presentation and provide in-field technical advice regarding weeds in north-west NSW for the Grassy Box Woodland CMN Weeds Tour
- Development and delivery of Threatened Species and Biodiversity Workshops and an Education Package for staff and landholders – Border Rivers-Gwydir CMA

NSW Dept Natural Resources – Ecologist (1995-2006)

- Involved in delivering of training courses to external agency staff eg "Ecology Workshop for Fire Control Officers" (Rural Fire Service, NPWS, TAFE, DLWC) and "Grass Identification for Rural Lands Protection Officers" (DLWC and Rural Lands Protection Board).
- Conservation conference, Armidale.
- Deliver presentations at regional conferences including: "Box-Gum Woodland – Ecological Significance" at Grassy Box Woodland Conference – Grassy Box Woodland Conservation Management Network @ Lake Keepit and "Legislation – what you need to know when designing a rehab project" – Australian Network for Plant
- Deliver presentations on "NSW Native Vegetation Policy" to UNE students as part of their course work (2005 and 2007)
- Development and delivery of "Grass Identification" Workshops to landholders in Gunnedah, Pilliga, Moree, Gwydir Wetlands and Warialda areas.
- Development and delivery of environmental assessment training courses to departmental staff with no botanical or ecological background (eg Water Licensing Officers, 3A Licensing Officers, Catchment Managers and River Planners).
- Educative presentations to Catchment Management Boards and Regional Vegetation Management Committees; eg "Biodiversity in the Gwydir Catchment" to the Gwydir CMB, "Ecology and Planning Considerations" to the Tenetfield RVMC and "The NVC Act Assessment Process" to the Inverell/Yallaroi RVMC.
- Development and delivery of training courses for departmental Vegetation Management Officers involved in assessing native vegetation clearing and native forestry proposals under SEPP46 and NVC Act, ie "Native Vegetation Conservation Act Assessment & Reporting".

NSW Dept Land & Water Conservation (DLWC) Education Officer (1990–1995)

- Responsible for the development and delivery of environmental education packages to meet the needs of a wide range of client groups (primary, secondary and tertiary students as well as teachers, landholders, landcare and community groups).
- Co-ordinator (3 years) of the North West Schools Landcare Competition

NSW DLWC - Acting Property Management Planner 1995 (6 Months)

- Responsible for the maintenance of the Farming for the Future program including delivery of property planning workshops to landholders.

9

RESUME

WENDY HAWES

EMPLOYMENT HISTORY

APR 2004 - PRESENT

THE ENVIROFACTOR PTY LTD

DIRECTOR/TERRESTRIAL ECOLOGIST

Design & undertake floral fauna surveys & threatened species assessments for research, urban and rural infrastructure development to meet legislative requirements under state & federal planning legislation. Examples include:

- *Flora and Fauna Impact Assessment of Torrington State Forest - proposed mining operation - (TopTung P/L)*
- *Bushfire and Fauna Habitat Assessment - Biodiversity Strategy for four areas: Arding, Kentucky, West Invergowrie and Rocky River (Uralla Shire Council)*
- *Ecological assessment of trees - Argyle Sapphire Mine, Inverell (Bond Resources)*
- *Flora and Fauna Impact Assessments - Keepit Dam Upgrade Offsets - Installation of fishways at Mollee & Gunkidgera Weirs & Removal of Weeta Weir on the Namoi R (NSW Dept Primary Industries (Fisheries))*
- *Fauna Habitat Assessment - Proposed Mining Exploration, Inverell (Elsmore Resources Ltd & Bond Resources)*
- *Flora and Fauna Impact Assessment - Bunnings @ Narrabri NSW*
- *Flora and Fauna Impact Assessment - Cattle Feedlot @ Gunyerwanldi, NSW*
- *Flora and Fauna Impact Assessment for mobile tower installation, @ Rocky Creek (Service Stream)*
- *Review of Environmental Factors for Copeton Dam Security Upgrade (including installation of an Auxiliary Spillway, Infrastructure Relocation & Powerline Installation) and Split Rock Dam Security Upgrade - (NSW State Water Corporation)*
- *Review of Environmental Factors - Boomi, Boranga, Welbondanga, Eurabis & Daigelly Artesian Water Supply Projects, Kensington Artesian Water Supply Project, Cryan Water Management Project, Thooloo Joint Water Supply Scheme, Three B Water Supply Scheme, Dumble Water Supply Scheme, Bangate Private Scheme, Langboid & Old Gnomery Water Supply Schemes - (Office of Water)*
- *Identification of High Conservation Value vegetation within the Border Rivers Gwydir CMA and Lachlan CMA areas - Grassy Box woodland Conservation Management Network*
- *Flora and Fauna Impact Assessment - Proposed Concrete Batching Plant @ Tamworth (Boral)*
- *Flora and Fauna Impact Assessments - Gwydir Highway Rehabilitation (Inverness), Spencer's Gully Bridge and Sawpit Gully Bridge Construction & Road Realignment, Guyra Road Realignment, Mackie Lane Widening (Inverell Shire Council)*
- *Flora and Fauna Impact Assessments for various Residential and Rural Residential Subdivisions @ Sandy Hollow, Scone, Merriwa, Muswellbrook & Tamworth (private clients)*
- *Flora and Fauna Impact Assessment - Ecotourism development, at Murrurundi - (private client)*
- *Statement of Environmental Effects for Rural Subdivisions @ Inverell and Armidale (private clients)*
- *Flora and Fauna Impact Assessment for Telstra Cable Installation @ Cropps Creek, Lowana & Copeton - (Telstra)*

Provide expert advice for legislative compliance:

- *Assessment of the presence of EPBC listed Brigalow (Acacia harpophylla dominant and codominant) ecological community and threatened species on a property subject to compliance actions @ Belyando, Qld (DoEE)*
- *Determination of vegetation communities including the presence of endangered EPBC listed ecological communities (Box-Gum Woodland and Semi-evergreen Vine Thicket and Wesping Myall Woodlands) and threatened species habitat on 2 properties subject to compliance actions near Warialda & Uralla and 1 property near Blackville NSW (DoEE)*

RESUME

WENDY HAWES

EMPLOYMENT HISTORY (continued)

- Determination of vegetation communities including the presence of endangered ecological communities (Coolibah Black Box and Weeping Myall Woodland) the ecological impact of clearing on 3 properties subject to compliance actions under NV Act near Boggabilla and Garah NSW (DEH)

- Assessment of the presence of the endangered ecological community, Weeping Myall Woodlands at Warren NSW (DEWHA)

- Assessment of the presence of the endangered ecological community, Weeping Myall Woodlands at Quambone NSW (DSEWPaC)

- Review of Flora and Fauna Assessment reports for residential and industrial development regarding the likely occurrence and compliance with departmental guidelines for endangered ecological communities (Tamworth Regional Council)

Develop the Draft National Recovery Plan for the Critically Endangered Ecological Community – White Box Yellow Box Blakely's Red Gum Grassy Woodland and Derived Native Grassland (DECCW)

Develop the Northern Tablelands Koala Recovery Strategy, 2015-2025 (Northern Tablelands Local Land Services)

Develop the Background and Issues Paper for the EPBC listed Endangered Ecological Community – Grey Box (Eucalyptus microcarpa) grassy woodlands and derived native grasslands (DSEWPaC)

Provide specialist ecological advice for the preparation and development of:

- Central Coast Council - Site management protocols for threatened ecological communities: Themedra Grassland and Littoral Rainforest @ Terrigal Haven and Winney Bay Reserves

- DPIE's CEEC White Box Yellow Box Blakely's Red Gum Grassy Woodland and Derived Native Grassland mapping program

- DEH Saving our Species program - the identification of priority areas for threatened ecological communities: Box Gum Woodland, Weeping Myall Woodland and Bungalow in northern NSW

- A Threatened ecological community nomination under Commonwealth EPBC Act for Maules Creek Catchment Groundwater Dependent Ecosystem (Maules Creek Community Council)

- Commonwealth and State Scientific Committees' – Threatened Ecological Community listings including: Box Gum Woodland, Myall Woodland Coolibah/Black Box Woodland, Inland Grey Box Woodland and Native Grasslands on basalt and fine textured soils

- Commonwealth Stewardship Program – Multiple Ecological Community Identification and Monitoring Package

Provide critical independent expert review of:

- Re-vegetation sites on northern tablelands and northwest slopes (NTLLS)

- Flora Survey and Analysis Report of Box Gum Woodland regarding a mining development @ Muswellbrook (DEWHA)

- Environmental Impact Assessment - proposed expansion of a Boggabri Coal mine, the proposed Aston Coal mine and Tarrawonga mine development (Maules Creek Community Council)

- Maules Creek Coal Mine Biodiversity Management Plan & Offset Areas @ Boggabri as regards Box Gum Woodland EEC/CEEC (NSW EDG)

- Environmental Impact Assessment - Dumaresq to Lismore Transmission Line (Upper Dumaresq Action Group)

Assess, provide landholder liaison, establish monitoring sites, prepare management plans and contract agreements for Voluntary Conservation and Wildlife Refuge Agreements (NSW Office of Environment & Heritage) for properties @ Inverell (2 properties), Coonabarabran (2 properties), Paliamallawa, Wauchope, Missabotti, Copeland, Black Head, Arding, Wauchope and North Star

Assess, provide landholder liaison, prepare management plans for Conservation Agreements (NSW Biodiversity Conservation Trust) for properties @ Inverell (3 properties), Croppa Creek (2 properties) and Boggabilla (NSW Office of Environment & Heritage)

T

RESUME

WENDY HAWES

EMPLOYMENT HISTORY (continued)**Develop and/or deliver environmental education packages/workshops:**

- Series of short videos on FAQ regarding nest boxes (2020) – Granite Borders Landcare
- EBPC Act threatened ecological community identification workshops for LLS Sustainable Land Management staff @ Moree, Glen Innes, Gunnedah and Dubbo
- Plant and plant community identification for beginners on Northern Tablelands and Northwest Slopes @ Inverell, Glen Innes & Walcha (2017)– NT LLS
- Kids on Country field days @ 'Bassendean' Tingha – Border Rivers Gwydir (BRG) CMA
- Development of DVD series on History of Box Gum Grassy Woodland – Grassy Box Woodland Conservation Management Network
- Native vegetation identification and management component of Box-Gum Woodland Commonwealth Stewardship Program field days @ Cumnock, Warialda and Gunnedah – Central West CMA
- Biodiversity Education Package for 10 school excursion sites across the Border Rivers-Gwydir Catchment – BRG CMA
- School education days @ Lake Inverell (2010, 2011 & 2012) - BRG CMA
- School education day @ Ross Hill Reserve (2013) – GWYMAC Landcare
- Native vegetation identification and monitoring for Central West, Namoi and BRG CMA staff – Multiple Ecological Communities Commonwealth Stewardship Program - Central West CMA
- High Conservation Value Roadside Vegetation Workshops and an Education Package for local government staff and LHPA rangers - BRG CMA
- Presentations on biodiversity, habitat and nocturnal fauna to community groups for 5 Corners VCA
- Presentation and in-field technical advice for the North West Grassy Box Woodland CMN Weeds Tour
- Threatened Species and Biodiversity Workshops and an Education Package for staff and landholders– Border Rivers-Gwydir CMA

Project management, costing, account maintenance, OH&S risk assessments/safe work practices, equipment maintenance, data collection, analysis, interpretation and reporting. Client and government agency liaison.

DEPARTMENT OF NATURAL RESOURCES**Inverell Resource Centre (IRC)**

OCT 1992 – JUNE 2006

TERRESTRIAL ECOLOGIST

Provide specialist ecological advice on vegetation management, biodiversity, habitat assessment and threatened species to:

- Departmental staff including Vegetation Management, Compliance and Water Licensing Officers administering State Environmental Planning Policy No 46 (SEPP 46), Native Vegetation Conservation Act 1997 (NVC Act), Water Act 1912 and Water Management Act 2000
- Local Government, Private Consultants, Community Groups and Landholders.

Expert witness in departmental compliance actions in respect to environmental harm and biodiversity issues, as well as, prepare remediation plans for areas illegally cleared.

RESUME

WENDY HAWES

EMPLOYMENT HISTORY (continued)

Provide specialist ecological advice for the preparation and development of:

- Commonwealth and State Scientific Committees' - Endangered Ecological Community listings
- Natural Resources Commission statewide biodiversity & vegetation targets
- DNR Director General's requirements for EIS, SEEs and REFs
- Catchment Management Authority (CMA) targets/plans- Vegetation Benchmarks for Property Vegetation Plan Developer (PVP Developer)
- Consultant Briefs for Flora and Fauna surveys
- Plans of Management for public and private land eg Boobers Lagoon Management Plan, Moree Common, Gooloowigall Bushland, Inverell Bushfire Management Plan
- Property Agreements.

Critical review of flora, fauna and threatened species components of EIS', SEEs and REFs for departmental comment.

Assist in the development of:

- Decision support systems - Biodiversity Benefits Index, Terrestrial & Aquatic Threatened Species database, PVP Developer
- Staff assessment guidelines - see Scientific Contributions
- Flora and fauna survey guidelines.

Develop & deliver workshops, education material & presentations on native vegetation management and biodiversity for:

- Departmental staff - Vegetation Management Officers, Water Licensing Staff, Compliance Staff
- NGOs - Grassy Box Woodland Conservation Management Network, Australian Network for Plant Conservation, UNE, "5 Corners" Voluntary Conservation Area
- Landholders
- Other agency staff - CMA Community Support Officers, Rural Fire Control Officers, Rural Lands Protection Board Rangers

Design and conduct flora and fauna surveys, OH&S risk assessments, implementation of safe working practices, staff recruitment & management. Data collection, analysis and reporting.

MAR 1995 (6 Months)

ACTING PROPERTY MANAGEMENT PLANNER - MOREE

Responsible for the maintenance of the Farming for the Future program. Liaison with landcare groups. Organising & delivery of property planning workshops

AUG 1990 - AUG 1995

EDUCATION OFFICER - BARWON

Liaison with educators and community groups regarding their environmental education needs. Develop and deliver specific education programs for schools, tertiary institutions and community groups. Organise functions focusing on the environment & education for specific events (eg Landcare Month, World Environment Day, Water Week). Responsible for the resources, operation & financial allocations associated with the (RC Environmental Education Centre. Team leader of the Northwest Schools Landcare Competition coordination committee. Organise outside sponsorship to fund specific events.

AUG 1989 - SEPT 1992

TECHNICAL ASSISTANT - BARWON

Assist with the implementation, maintenance, sampling and recording data of field trails. Collection and preparation of samples and undertaking laboratory (physical and chemical) soil tests for conservation earthworks and research programs. Assist in the operation and maintenance of equipment and stores for use in the laboratory and field. Assist in soil survey. Undertake data entry, analysis and interpretation. Report and submission writing.

RESUME

WENDY HAWES

EMPLOYMENT HISTORY (continued)

1988 - 1989	INVERELL COLLEGE OF TAFE TEACHER: (Casual) Design and deliver an outreach course, "Meeting Procedures", for indigenous community groups
1984-1987	J.C. HAWKINS (BVSc) Inverell VETERINARY ASSISTANT: Office administration, accounts, client liaison, surgical assistant, records maintenance and hospital/office cleaning.
1978-1983	COMMUNITY YOUTH SUPPORT SCHEME Coonamble and Inverell PROJECT OFFICER: Co-ordinating activities for young unemployed people (16-25 years). Liaison with employers and community organisations. Counselling and conflict resolution. Submission writing for government funding.

APPENDIX 2:**Consultant's Brief**

Environmental
Defenders Office

24 September 2020

Ms Wendy Hawes
The Envirofactor
PO Box 626
INVERELL NSW 2360

By email: info@theenvirofactor.com.au

CONFIDENTIAL AND PRIVILEGED

Dear Ms Hawes,

Supplementary Expert Brief: South East Forest Rescue Inc v Aston Coal 2 Pty Ltd (NSD383/2020) – Ground truthing the Proposed Commonwealth Offset Areas

1. We act for South East Forest Rescue Inc (**SEFR**) in the above proceedings (the **Proceedings**). SEFR is a public interest organisation based in NSW which focuses on the conservation and protection of native forests.
2. We confirm that you have prepared a report in response our earlier expert briefs (dated 1 May 2019 (**May 2019 Expert Brief**) and 19 December 2019). Your report is dated 9 July 2020 and marked as annexure 'WH3' to your affidavit affirmed 10 July 2020.
3. The respondent (Aston Coal 2 Pty Ltd) has agreed to allow you (in your capacity as SEFR's expert witness), accompanied by an assistant, to attend and assess certain properties that are under its control.
4. The properties to which access has been permitted are such properties as the respondent:
 - (a) asserts contain areas of White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland critically endangered ecological community (**Box Gum CEEC**) (as listed under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (**EPBC Act**)); and
 - (b) proposes to secure as 'offset areas' for the purpose of complying with its offsetting obligations under the Commonwealth Approval (a copy of the Approval in its current form appears at **Tab 14**).
5. The purpose of such access is to enable you to:
 - (a) inspect areas that have been identified by the respondent, or by persons acting for or on behalf of the respondent, as Box Gum CEEC; and
 - (b) form your own opinion as to whether such areas are in fact Box Gum CEEC (again, as per the listing of Box Gum CEEC under the EPBC Act).
6. Our client wishes to brief you to conduct this work. The work required is set out in more detail at [26], below.
7. In providing this expert brief, we confirm that we are instructed to engage you as follows:

+61 2 9262 6989 +61 2 9264 2414
info@edo.org.au edo.org.au
Level 5, 263 Clarence St, Sydney NSW 2000

- (a) to prepare an expert report that sets out your opinion in response to the questions asked at [26] below; and
 - (b) to act as an expert witness in the Proceedings. This may include appearing in Court to assist the Court impartially on matters relevant to your area of expertise.
8. We note that your duty as an expert witness to the Court continues to apply to any expert opinion provided in response to the questions set out in this supplementary expert brief.
9. In this respect, we confirm that we are engaging you in accordance with Part 23 (rules 23.01-23.15) of the *Federal Court Rules 2011* (Cth) (**FC Rules**) (**Tab 1**)¹ and the *Expert Evidence Practice Note (GPN-EXPT)* (**Expert Evidence Practice Note**) (**Tab 2**) (including the annexures to it, noting in particular Annexure A, the *Harmonised Expert Witness Code of Conduct (Code of Conduct)* (also at **Tab 2**)).
10. We confirm that your duty in providing this advice is to provide your objective and impartial assessment of the matters put to you insofar as they fall within your area of expertise. We refer you to [27]-[30] of the May 2019 Expert Brief for further information about the role and duty of an expert witness.

Background and legal context

11. We refer to [6]-[25] of our expert brief dated 1 May 2019 for an overview of the legal and factual context in which your brief arises. In addition, we note the following:

Variation to the Approval – extension of time to secure offsets

12. On 18 March 2020, a delegate of the Commonwealth Minister for the Environment varied condition 13 of the Approval to give the respondent additional time within which to register its required offset areas. As a result, the respondent must register its offset areas (as are required by conditions 9-13 of the Approval, including 5,532ha of Box Gum CEEC) by 31 March 2021 – except in respect of the Rocklea property, which must be registered by 15 December 2022.
13. A copy of the Approval as varied appears at **Tab 14**.

The Proceedings

14. On 2 April 2020, SEFR commenced the Proceedings.
15. On 10 July 2020, we filed and served a copy of your affidavit (affirmed 10 July 2020) on the respondent's solicitors.
16. On 14 August 2020, at the hearing of an application by the respondent to have the Proceedings summarily dismissed (in whole or in part), the Federal Court made orders staying the Proceedings until 21 April 2020.
17. During the hearing it was agreed that the applicant's expert(s) would be permitted access to the respondent's proposed Box Gum CEEC offset areas in the coming months for the purpose of inspecting and assessing those areas.

The Proposed Commonwealth Offset Areas and some additional proposed areas

18. In 2017, the respondent submitted to the Commonwealth Department of the Environment (**Department**) a 'biodiversity management plan' (**2017 BMP** (**Tab 5**)) in which it identified the

¹ In this expert brief we refer to materials previously provided to you and listed at [34] of the May 2019 Expert Brief.

following properties as comprising the areas that it proposes to rely on for the purpose of complying with its offsetting obligations under the Approval (the **Proposed Commonwealth Offset Areas**):

- (a) the Northern Offset, comprising:
 - (i) Mt Lindesay;
 - (ii) Wirradale; and
 - (iii) Wongala;
 - (b) the Western Offset, comprising:
 - (i) Kelso;
 - (ii) Louenville;
 - (iii) Olivedeen;
 - (iv) Teston (south); and
 - (v) Velyama;
 - (c) the Eastern Offset, comprising:
 - (i) Cattle Plain;
 - (ii) Teston (north);
 - (iii) Tralee;
 - (iv) Wallandilly;
 - (v) Warriahdool; and
 - (vi) Oakleigh/Onavale;
 - (d) the 'shared property', which we understand to be the property known as Rockdale; and
 - (e) the Southern Offset, comprising:
 - (i) Roseglass; and
 - (ii) Bimbooria.
19. The Proposed Commonwealth Offset Areas were the subject of a 'review' by Greenloaning Biostudies Pty Ltd, as reported in the First and Second Greenloaning Reports (**Tabs 11 & 13** respectively), during which Greenloaning reported on the total area of Box Gum CEEC (derived native grassland (DNG) and woodland) it considered to be present in each of the Proposed Commonwealth Offset Areas.
20. The table below sets out the following information:
- (a) Each of the Proposed Commonwealth Offset Areas.
 - (b) The total area of Box Gum CEEC in each of the Proposed Commonwealth Offset Areas that was purportedly verified by Greenloaning Biostudies Pty Ltd, as extracted from Table G.1. in Appendix G to the Second Greenloaning Report.
 - (c) Property details (Lot & DP numbers) for the properties that comprise the Proposed Commonwealth Offset Areas. As you will see, for many of the properties, only a portion of the property is proposed to be secured as part of an offset area. As will also be clear, not all of the properties listed below purportedly contain areas of Box Gum CEEC.

21. **Please note however** that the work requested in this brief is confined to consideration and assessment of the following three properties:
- Mt Lindesay;
 - Wirradale; and
 - Wongala.
22. In relation to the property details, we note that we have requested that the respondent provide Lot & DP numbers for all properties comprising the Proposed Commonwealth Offset Areas. We have not yet received this information and thus have derived the details below from such information as is available to us. We will let you know if, upon receipt of the property details from the respondent, any information in this brief needs to be amended.

Property	Box Gum CEEC Areas purportedly verified in the Second Greenloaning Report: Second Greenloaning Report Table G.1 ²			Lot & DP numbers
	DNG	Woodland	Total	
Northern				
Mt Lindesay	568.62	1118.27	1686.89	Lot 28 DP754860 Lot 22 DP1225250
Wirradale	728.23	1494.39	2222.62	Lot 39 DP754941 Lot 52 DP704659 Lot 1 DP1224991 Lot 2 DP1224991
Wongala	63.74	219.18	282.92	Lot 2 DP122491 (i.e. same details as Wirradale)
Western				
Kelso	0	16.50	16.5	Lot 54 DP754948
Louenville	0	151	151	Lot 76 DP754948
Olivedeen	0	0	0	Lot 822 DP1074515
Teston (south)	18.6	78	96.6	Lot 42 DP754940 Lot 43 DP754940 Lot 57 DP754940 Lot 58 DP754940 Lot 59 DP754940 Lot 60 DP754940 Lot 61 DP754940
Velyama	107.6	1.8	109.4	Lot 102 DP1204994
Eastern				
Blue Range	0	21.7	21.7	n/a
Cattle Plain	6.4	8	14.4	n/a
Teston (north)	0.84	55.92	56.76	Lot 45 DP754948 Lot 70 DP754948 Lot 71 DP754948 Lot 72 DP754948

² At pdf page 223 of the Second Greenloaning Report when viewed electronically.

				Lot 73 DP754948 Lot 74 DP754948 Lot 75 DP754948
Tralee	0	13.95	13.95	Lot 1 DP1157540
Wallandilly	198.06	170.55	368.61	Lot 11 DP611290 Lot 12 DP611290 Lot 33 DP754940 Lot 34 DP754940 Lot 5 DP223209 Lot 55 DP754940 Lot 55 DP754924 Lot 64 DP754924 Lot 1 DP114795 Lot 2 DP114795 Lot 3 DP114795 Lot 5 DP114795 Lot 4 DP114795 Lot 54 DP754924 Lot 17 DP754924
Warriadhool	0	64.5	64.5	n/a
Shared Property				
Shared Property	0	5.6	5.6	Lot 159 DP755475 Lot 248 DP755475 Lot 93 DP755475
Additional Offsets				
Oakleigh /Onavale	54.37	92.54	146.9	Lot 1 DP120611 Lot 1 DP1192663 Lot 3 DP1068048 Lot 13 DP1192663 Lot 14 DP1192663 Lot 15 DP1192663 Lot 16 DP1192663 Lot 27 DP 754927 Lot 37 DP754924 Lot 38 DP754924 Lot 51 DP754924 Lot 67 DP754924 Lot 74 DP754924 Lot 81 DP754924 Lot 83 DP754924 Lot 50 DP754924 Lot 82 DP754924 Lot 97 DP754924 Lot 10 DP754927 Lot 11 DP754927 Lot 16 DP754927
Bimbooria	29.48	150.23	179.71	Lot 3 DP754955 Lot 91 DP754955
Roseglass	85.84	136.02	221.86	Lot 32 DP754955 Lot 67 DP754955

23. The respondent has recently advised our client that it has acquired three additional properties as potential offsets: 'Thornfield', 'Ellerslie' and 'Ferndale'. We understand that

these properties are reasonably small (Thornfield ~171ha; Ellerslie ~60ha; Ferndale ~45ha) although are awaiting receipt of property details from the respondent. At this stage you are **not** briefed to visit or assess any of these additional properties.

Terms on which the applicant has been granted access to the Proposed Commonwealth Offset Areas

24. We are still finalising the terms on which the respondent has granted you, as our client's expert, access to the Proposed Commonwealth Offset Areas. We will provide you with these terms once they have been settled. At this stage we note the following
- (a) Access is to occur between **1 October 2020 and 27 November 2020**.
 - (b) The respondent will require a copy of your proposed access proposal, including proposed access dates, at least **10 days prior to access**.

Your quote

25. We refer to your quote dated 23 April 2020. This brief is confined to the scope of work – including total hours/days of work – referred to in that quote.

The work required

26. The work we require involves the following:
- (a) *Pre-inspection of aerial or satellite imagery to identify areas mapped as Box Gum Woodland to select field sites from the three identified properties*
 As you are aware, our client's funds are limited to the work outlined in your quote dated 23 April 2020.
 Accordingly, you are briefed to conduct a pre-inspection analysis of three of the Proposed Commonwealth Offset Areas, being **Mt Lindesay, Wirradale and Wongala**. The purpose of this pre-inspection analysis is to use aerial or satellite imagery to identify priority areas for inspection that will help to ensure that you obtain the best possible information to address the questions below in the time available.
 Based on the above analysis, please prepare a proposed access schedule that we may provide to the respondent in which you list the areas that you require access to.
 We request that you complete this work as soon as possible bearing in mind the need to provide the respondent with **at least 10 days' notice** of any proposed access.
 As noted earlier, you are not asked to consider any of the other Proposed Commonwealth Offset Areas, nor the recently identified additional properties known as Thornfield, Ellerslie or Ferndale.
 - (b) *Notification of proposed access dates*
 Please let us know when, in your opinion, the ecological conditions are suitable for you to conduct the site inspections. As noted above at [24], we are required to provide the respondent with a proposed schedule **at least 10 days' prior to** any proposed access.
 - (c) *Field inspection of areas mapped as Box Gum woodland within offset areas*
 Conduct field inspections as per any proposed access schedule that has been agreed to by the respondent.

(d) Report preparation

Please prepare a written expert report that conforms with the Code of Conduct and that reports on:

- (i) the presence or otherwise of Box Gum CEEC (being the community listed under the EPBC Act) in the areas inspected by you;
- (ii) the accuracy of the areas mapped as Box Gum CEEC in the 2017 BMP in the areas inspected by you;
- (iii) to the extent possible, any implications that can be drawn on the accuracy of all areas mapped as Box Gum CEEC in the 2017 BMP. Please provide reasoning for your answer;
- (iv) your opinion on the accuracy of the calculated total areas of Box Gum CEEC reported in the First and Second Greenloaming Report (as summarised in the table at [22] above).

(e) Review and respond to any expert reports filed by the respondent (if required)**(f) Participate in joint conferencing with the respondent's experts, including preparation of a joint report with the respondent's experts (if required)****(g) Appear in court as an expert witness (if required)**

27. We request that you provide us with a draft of all reports for review before finalising them. We emphasise that the purpose of this is not to influence the conclusions or recommendations you make but to ensure that the language and expression of the report is clear and complies with the formal legal requirements of an expert report.

Relevant documents

28. Please consider the following documents in conducting the work requested.
29. We refer you to the list of relevant documents at [34] of the May 2019 Expert Brief that have previously been provided for your review. For the purpose of this expert brief, we also refer you to the following documents:
- (a) Approval (as amended on 18 March 2020 (**Tab 14**)).
30. Please let us know if you need us to re-send you the documents referred to in the May 2019 Expert Brief.
31. Please also let us know as soon as possible if you require further information for the purpose of giving your expert opinion.

Expert report requirements: content

32. Your expert report will be used as evidence in chief of your professional opinion. Information which you believe the Court should be aware of must be contained in your expert report. Whilst you may be able to clarify matters contained in your report at a later date, this is unlikely to extend to the provision of new information.
33. In providing your opinion to the Court you must set out all the assumptions upon which the opinion is based. This may include, for example, facts observed as a result of field or lab work or 'assumed' facts based on a body of scientific opinion. If the latter, you should provide references which demonstrate the existence of that body of opinion.
34. Your expert report must also set out the process of reasoning which you have undertaken in order to arrive at your conclusions. It is insufficient for an expert report to simply state your opinion or conclusion reached without an explanation as to how this was arrived at. The

purpose of providing such assumptions and reasoning is to enable the Court and experts engaged by other parties to the proceedings to make an assessment as to the soundness of your opinion.

35. For further details about the specific requirements for expert reports, please refer to [39]-[46] of the May 2019 Expert Brief.

Expert report requirements: format

36. Once you have prepared your report, we will assist you to format it (as an affidavit) in accordance with the *Federal Court Rules 2011* (Cth).
37. If you wish to use diagrams or other visual forms of representation in your report, please present these as annexures to the report.

Timing

38. Bearing in mind limits to your availability, we propose the following schedule for preparation and finalisation of your report:

Date	Work due
To be agreed	Wendy Hawes to provide proposed access schedule to EDO
At least 10 days' before any proposed site access	Wendy Hawes to notify EDO the dates on which she seeks access. EDO to liaise with respondent and Wendy Hawes to arrange access.
At an ecologically suitable time to be determined by Wendy Hawes with agreement from the respondent and between 1 October 2020 – 27 November 2020 (and with at least 10 days' notice)	Wendy Hawes and assistant to conduct site access
To be agreed following site access	Wendy Hawes to provide draft expert report to EDO
To be agreed	All/any further work

39. We will provide further information on any joint expert reporting requirements and hearing dates as they become available.

Fees and terms

40. Thank you for agreeing to provide your advice in accordance with your quote dated 23 April 2020. EDO relies on experts such as you to assist in matters with very little financial compensation and we thank you for agreeing to provide this advice at a reduced rate.
41. Please note the following terms:
- (a) your work will only be used by EDO to assist our client;

- (b) EDO will take all reasonable steps to prevent your work being used for purposes other than that mentioned above, but we accept no responsibility for the actions of third parties;
- (c) regardless of the above points, EDO may choose not to use your work; and
- (d) you will not be covered by the EDO's insurance while undertaking the above tasks.

Duty of confidentiality

- 42. Please treat your work as strictly confidential until your expert report is provided to other parties and the Court, unless authorised by us.
- 43. If you would like to discuss this brief further, please contact Emily Long by phone or email (emily.long@edo.org.au).
- 44. We are grateful for your assistance in this matter.

Yours sincerely

Environmental Defenders Office

s. 47F(1)

Emily Long

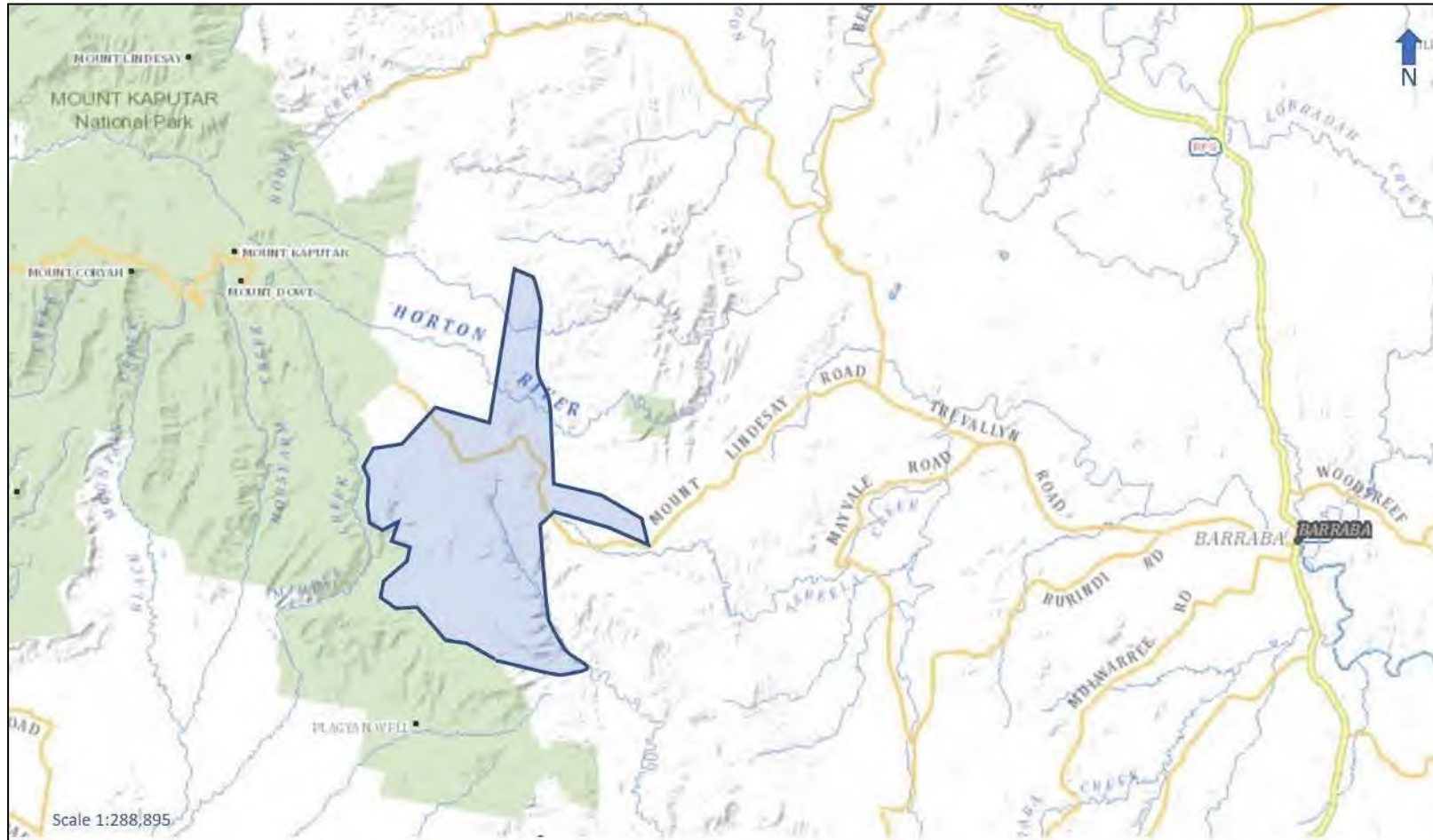
Senior Solicitor

Our Ref: 2027736

APPENDIX 3:

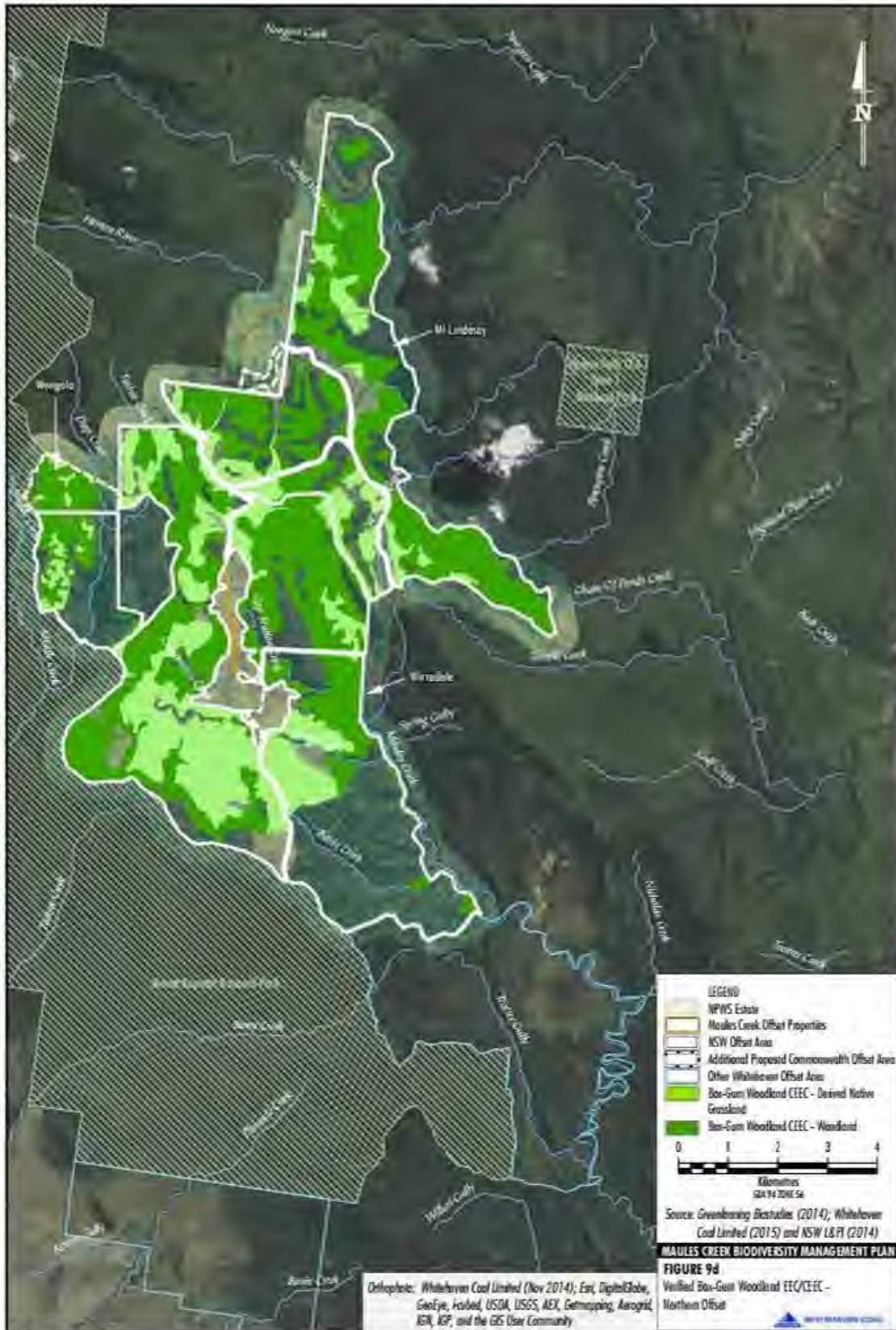
Location of Northern Offset properties; Mt Lindesay, Wirradale and Wongala (indicative boundary marked in blue)

(Base Map: NSW Department of Finance and Services - SIX maps)



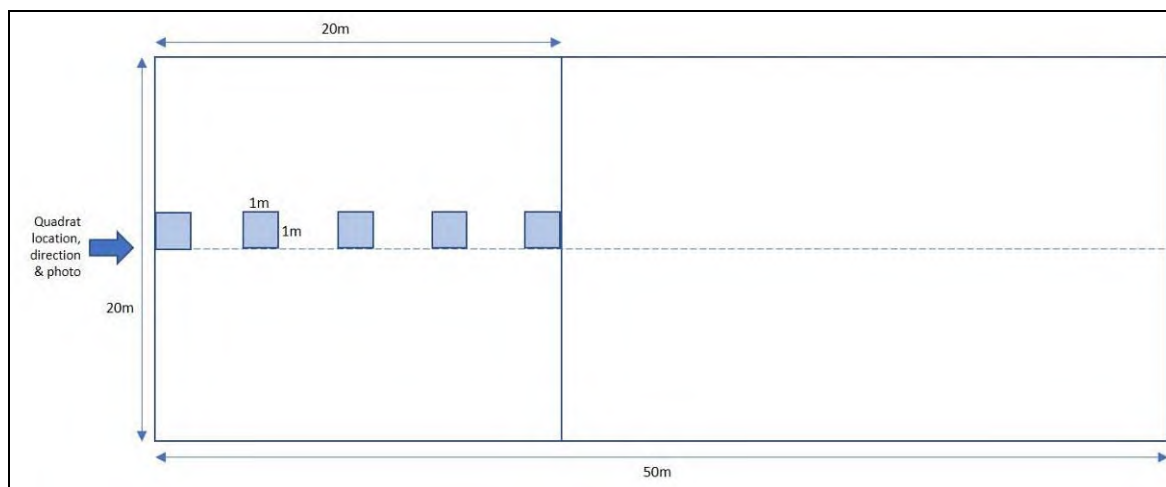
APPENDIX 4:

Box-Gum CEEC map of the Northern Offset properties [from the Maules Creek Coal Mine Biodiversity Management Plan (2017)]



APPENDIX 5:

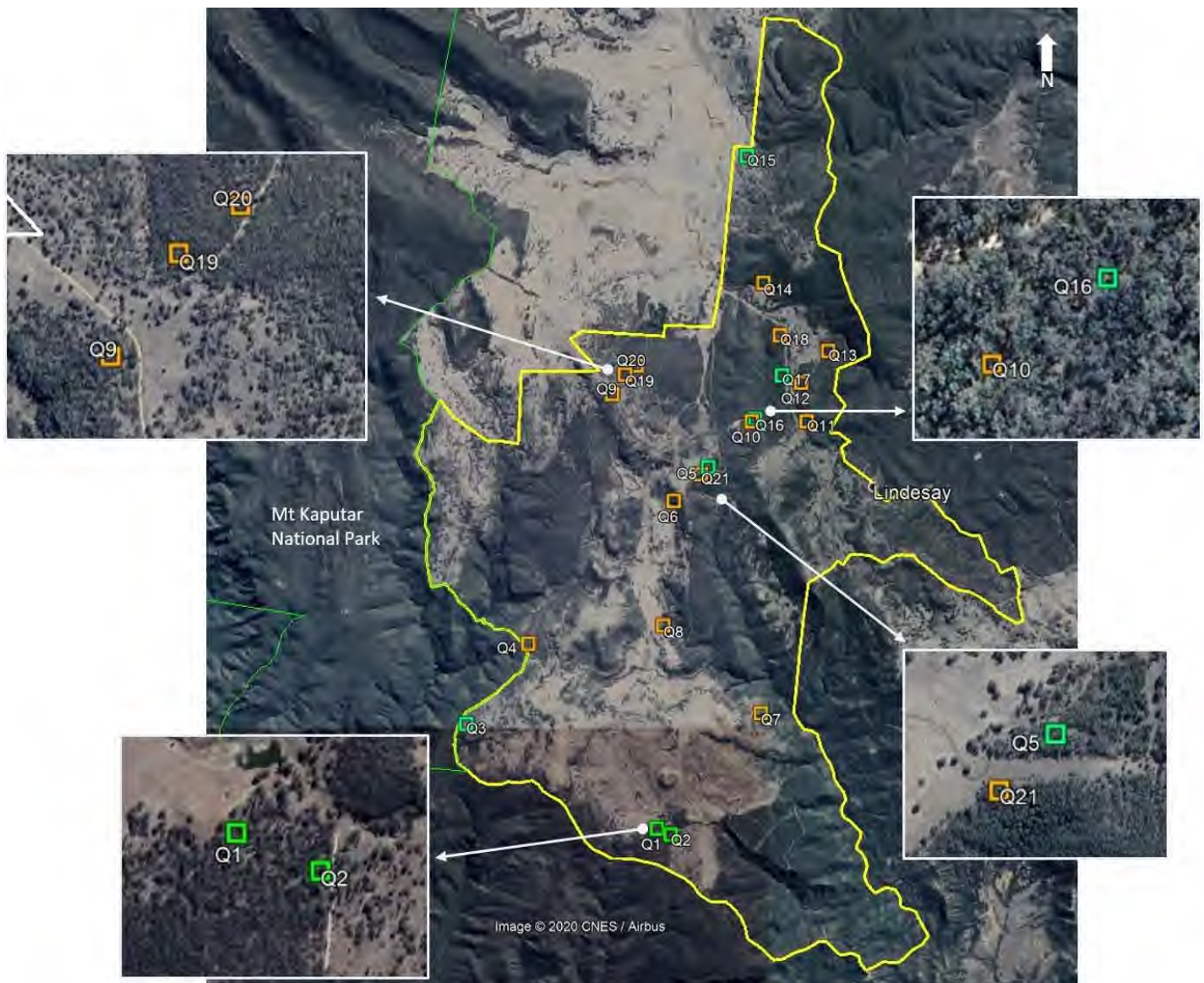
Quadrat layout diagram (not to scale) showing nested 20m x 20m quadrat within the larger 20m x 50m quadrat, used in vegetation with constituent overstorey species and structure of Box-Gum CEEC. Also shows the 1m x 1m quadrats used to determine non-vegetative ground cover



APPENDIX 6:

Location of quadrat sampling sites on the Northern Offset properties, Mt Lindesay, Wirradale and Wongala (boundary in yellow). Quadrats supporting Box-Gum CEEC shown in green, quadrats supporting other vegetation communities not constituting Box-Gum CEEC shown in orange. Insets show magnified quadrat locations.

(Background image Google Earth 08/12/2019)



APPENDIX 7:

Flora Species Identified on the Whitehaven Northern Offset properties; Mt Lindesay, Wirradale and Wongala, Barraba NSW

10th - 13th November 2020

Sites 1-10

¹ Cover/abundance recorded using modified Braun-Blanquet categories:

1= <5% (rare number of individuals at site); 2= <5% (species common at the site); 3= 5-20%; 4= 21-30%; 5= 31-40%; 6= 41-50%;
 7= 51-60%; 8= 61-70%; 9= 71-80%; 10= 81-90%; 11= 91-100%

#(#) = Braun Blanquet category (% foliage cover)

* Introduced species

Important species for the purposes of determining Box-Gum CEEC <https://www.environment.gov.au/system/files/resources/be2ff840-7e59-48b0-9eb5-4ad003d01481/files/box-gum-species.pdf>

FAMILY	SCIENTIFIC NAME	COMMON NAME	SITE NUMBER ¹									
			Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
Acanthaceae	<i>Rostellularia adscendens</i>	Pink Tongues	1		1	1		2	1			
Adiantaceae	<i>Cheilanthes sieberi</i> ssp <i>sieberi</i>	Rock Fern		1			1				1	1
Anthericaceae	<i>Dichopogon fimbriatus</i>	Nodding Chocolate Lily			2	1	2		2		2	
	<i>Dichopogon strictus</i>	Chocolate Lily	2	2					2			
Apiaceae	<i>Cyclospermum leptophyllum</i> *	Slender Celery				3	3			1	1	1
	<i>Daucus glochidiatus</i>	Native Carrot	1	1	2	2		2	2	2	2	2
	<i>Hydrocotyle laxiflora</i>	Stinking Pennywort	1	3		2	2	3	2		2	2
	<i>Hydrocotyle tripartita</i>	Pennywort										1
Asteraceae	<i>Calotis cuneifolia</i>	Purple Burr Daisy								1		
	<i>Calotis lappulacea</i>	Yellow Burr-Daisy	1						1			
	<i>Carduus tenuiflorus</i> *	Winged Slender Thistle			1		1					
	<i>Cassinia laevis</i>	Cough Bush						2				
	<i>Cassinia quinquefaria</i>	Rosemary Cassinia						2	3	1		

Expert advice re: Box-Gum CEEC

Whitehaven Northern Offset Properties

FAMILY	SCIENTIFIC NAME	COMMON NAME	SITE NUMBER ¹									
			Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
	<i>Chrysocephalum apiculatum</i>	Common Everlasting	1		1					1		
	<i>Cirsium vulgare</i> *	Black Thistle	1	1				1		1	1	1
	<i>Conyza bonariensis</i> *	Flax-leaf Fleabane	1	1	1	1	1	1		1	1	
	<i>Craspedia variabilis</i>	Billy Buttons			2						1	
	<i>Cymbonotus lawsonianus</i>	Bear's Ear			1	1						
	<i>Cyanthillium cinereum</i> *	Iron Weed				1						
	<i>Euchiton sphaericus</i>	Japanese Cudweed	2	2	1	2	2	1		2		2
	<i>Glossocardia bidens</i>	Cobbler's Tack				1	1	1	1			
	<i>Hypochaeris radicata</i> *	Flatweed	2	1	1	1	2	1		1	1	
	<i>Lactuca serriola</i> *	Prickly Lettuce	1	1	1		1		1			
	<i>Olearia elliptica</i>	Sticky Daisy Bush	1	2								3
	<i>Olearia viscidula</i>	Wallaby Weed						7				
	<i>Senecio bathurstianus</i>							1				
	<i>Senecio hispidulus</i>	Hill Fireweed		1								1
	<i>Senecio quadridentatus</i>	Cotton Fireweed	1		1	2	1				1	
	<i>Senecio</i> sp	Groundsel										1
	<i>Sonchus oleraceus</i> *	Common Sowthistle	1			1		1		1		
	<i>Taraxacum officinale</i> *	Dandelion									1	
	<i>Triptilodiscus pygmaeus</i>	Common Sunray		1	1	1						
	<i>Vittadinia muelleri</i>	Fuzzweed	1	1	1	1						
Brassicaceae	<i>Lepidium bonariense</i> *	Cut-leaf Peppergrass	1									
Cactaceae	<i>Opuntia stricta</i> *	Prickly Pear	1									
Campanulaceae	<i>Wahlenbergia</i> sp (1)	Bluebell	1	2	1	1	2	1	2	1	1	1
	<i>Wahlenbergia</i> sp (2)	Bluebell		1								
Caryophyllaceae	<i>Petrohragia nanteuilii</i> *	Proliferous Pink	1	1	2	2	2		1		1	
	<i>Spergularia rubra</i> *	Sandspurry								1		

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FAMILY	SCIENTIFIC NAME	COMMON NAME	SITE NUMBER ¹									
			Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
	<i>Stellaria leptoclada</i>	Chickweed			1	1	1		1		2	
Chenopodiaceae	<i>Einadia nutans</i>	Climbing Saltbush	1									
Clusiaceae	<i>Hypericum gramineum</i>	Small St John's Wort			1	2					1	
Convolvulaceae	<i>Convolvulus erubescens</i>	Australian Bindweed			1							
	<i>Cuscuta campestris*</i>	Golden Dodder										
	<i>Dichondra</i> sp A	Kidneyweed	2	2		2	1	2	2	1	2	2
Cupressaceae	<i>Callitris glaucophylla</i>	White Cypress Pine								3		
Cyperaceae	<i>Carex appressa</i>	Tall Sedge			1							2
	<i>Fimbristylis dichotoma</i>	Common Fringe-sedge		1			1					
Dilleniaceae	<i>Hibbertia obtusifolia</i>	Hoary Guinea Flower										1
	<i>Hibbertia riparia</i>	Common Guinea Flower										
Ericaceae	<i>Melichrus urceolatus</i>	Urn Heath								1		2
Fabaceae	<i>Desmodium brachypodum</i>	Large Tick-trefoil	1		1		1		1	2		1
	<i>Desmodium varians</i>	Slender Tick-trefoil	1	1				1		2	1	
	<i>Dillwynia sieberi</i>		1	2								
	<i>Glycine clandestina</i>	Twining Glycine		1	1	1		1	2	2	2	2
	<i>Glycine tabacina</i>	Variable Glycine			1	1	1					
	<i>Hardenbergia violacea</i>	Native Sarsaparilla							1			1
	<i>Hovea lanceolata</i>	Hovea	1							5		
	<i>Lespedeza juncea</i>	Bush Clover							2		2	
	<i>Lotus australis</i>	Australian Trefoil				1						1
	<i>Swainsona galegifolia</i>	Smooth Darling Pea	2			2	1	2	2	2		2
	<i>Swainsona monticola</i>	Notched Swainson-pea										1
	<i>Trifolium angustifolium*</i>	Narrow-leaved Clover			1				1		2	
	<i>Trifolium arvense*</i>	Haresfoot Clover	2	2	3	3	3	3	3	2	3	
	<i>Trifolium campestre*</i>	Hop Clover	1	3		3	5	3	2		8	

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FAMILY	SCIENTIFIC NAME	COMMON NAME	SITE NUMBER ¹									
			Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
	<i>Trifolium dubium*</i>	Yellow Suckling Clover						1				
	<i>Trifolium glomeratum*</i>	Clustered Clover	2			1		3	2	2		
	<i>Trifolium repens*</i>	White Clover		1	1	1	2				1	
Gentianaceae	<i>Centaurium erythraea *</i>	Common Centaury					3				2	
Geraniaceae	<i>Geranium solanderi</i>	Australian Cranesbill	1	2	3	3	3	2	2		2	
Goodeniaceae	<i>Goodenia hederacea</i>	Ivy Goodenia								2		2
Juncaceae	<i>Juncus</i> sp 1	Pin Rush			1	1	1				2	1
Lamiaceae	<i>Ajuga australis</i>	Australian Bugle							2			
	<i>Mentha satureioides</i>	Native Pennyroyal										
	<i>Scutellaria humilis</i>	Dwarf Skullcap		1		1	1		1	1	1	
Linaceae	<i>Linum marginale</i>	Native Flax			2							
Lobeliaceae	<i>Lobelia purpurascens</i>	Whiteroot				1						1
Lomandraceae	<i>Lomandra filiformis</i>	Wattle Matrush		1								
	<i>Lomandra longifolia</i>	Spiny-headed Matrush							2			
	<i>Lomandra multiflora</i>	Many-flowered Matrush	1	1					1			1
Luzuriagaceae	<i>Eustrephus latifolius</i>	Wombat Berry						2	2		1	
Mimosaceae	<i>Acacia implexa</i>	Hickory Wattle		1								
Myrtaceae	<i>Angophora floribunda</i>	Rough-barked Apple							2(3)			3(20)
	<i>Angophora subvelutina</i>	Broad-leaf Apple									1	
	<i>Eucalyptus albens</i>	White Box	5(40)		3(5)	5(35)			1(2)	3(20)		
	<i>Eucalyptus blakelyi</i>	Blakely's Red Gum		3(15)			3(15)					
	<i>Eucalyptus bridgesiana</i>	Apple Box					3(5)	3(8)			4(20)	4(25)
	<i>Eucalyptus elliptica</i>	Bendemeer White Gum										
	<i>Eucalyptus macrorhyncha</i>	Red Stringybark						3(10)				3(15)
	<i>Eucalyptus melliodora</i>	Yellow Box										3(10)
	<i>Eucalyptus prava</i>	Orange Gum								3(10)		

FAMILY	SCIENTIFIC NAME	COMMON NAME	SITE NUMBER ¹										
			Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	
	<i>Eucalyptus youmanii</i>	Youman's Stringybark		3(15)									
Oleaceae	<i>Jasminum lineare</i>	Desert Jasmine						2					
	<i>Notelaea microcarpa</i>	Native Olive	1	2	1	2			3				
Orchidaceae	<i>Microtis unifolia</i>	Common Onion Orchid		1			1		1				
Oxalidaceae	<i>Oxalis perennans</i>	Yellow Wood-sorrel	2	1	1	1			2				
Phormiaceae	<i>Dianella caerulea</i>	Blue Flax Lily								1	1	1	
Phyllanthaceae	<i>Phyllanthus virgatus</i>	Petty Spurge	1							1			
	<i>Poranthera microphylla</i>	Small Poranthera											1
Plantaginaceae	<i>Plantago lanceolata</i> *	Ribwort		2	2								
	<i>Plantago varia</i>	Variable Plantain	1	1	2	3	2	1			2	1	
	<i>Veronica calycina</i>	Hairy Speedwell	1					2		2		1	
Poaceae	<i>Aira cupaniana</i> *	Silvery Hairgrass								1			
	<i>Aristida caput-medusae</i>	Many-headed Wiregrass											2
	<i>Aristida ramosa</i>	Purple Wiregrass	2			1				2	2	2	
	<i>Aristida sp</i>	Wiregrass		3									
	<i>Aristida vagans</i>	Three-awn Wiregrass		1	2				2		2	3	
	<i>Austrostipa scabra</i>	Rough Speargrass	3		2					3			
	<i>Bothriochloa macra</i>	Redleg Grass			1	2	2						
	<i>Briza minor</i> *	Shivery Grass		1			1						
	<i>Bromus diandrus</i> *	Great Brome		1	1	2	2	1		2	2	2	
	<i>Cymbopogon refractus</i>	Barbed Wiregrass	1	3		1	2	1	3	2	2	2	
	<i>Dichanthium sericeum</i>	Queensland Bluegrass			1				1				
	<i>Dichelachne micrantha</i>	Short-haired Plume Grass		1	2	2	2			1	2		
	<i>Digitaria brownii</i>	Cotton Panic Grass			1								
	<i>Echinopogon caespitosus</i>	Tufted Hedgehog Grass						2			1	2	
	<i>Echinopogon intermedius</i>	Erect Hedgehog Grass					2						

FAMILY	SCIENTIFIC NAME	COMMON NAME	SITE NUMBER ¹									
			Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
	<i>Echinopogon ovatus</i>	Forest Hedgehog Grass	1	1	1		1	2			2	2
	<i>Enteropogon acicularis</i>	Curly Windmill Grass	1		2							
	<i>Lachnagrostis filiformis</i>	Blown Grass				1						
	<i>Lolium perenne*</i>	Ryegrass	3	2								
	<i>Microlaena stipoides</i>	Weeping Rice Grass	1	1				1		1		
	<i>Panicum effusum</i>	Hairy Panic Grass			1	1			2			
	<i>Poa annua *</i>	Annual Poa										
	<i>Poa labillardieri</i>	Tussock Grass		1								2
	<i>Poa sieberiana</i>	Snow Grass		1	2	2	2	1	3		2	3
	<i>Rytidosperma indutum</i>	Wallaby Grass								1		
	<i>Rytidosperma racemosum</i>	Wallaby Grass	1		1			2		1		
	<i>Rytidosperma sp</i>	Wallaby Grass		1								
	<i>Setaria parviflora *</i>	Slender Pigeon Grass			1							
	<i>Sorghum leiocladum</i>	Native Sorghum							3			
	<i>Sporobolus caroli</i>	Fairy Grass					1					
	<i>Sporobolus creber</i>	Rat's Tail Grass		1								
	<i>Themeda triandra</i>	Kangaroo Grass									1	
	<i>Vulpia bromoides *</i>	Squirrel-tail Fescue		1	1						1	
Polygonaceae	<i>Rumex brownii</i>	Slender Dock	1	1		1	1	1	1		1	
Primulaceae	<i>Lysimachia arvensis *</i>	Pimpernel		1	3		2	1	2		2	1
Ranunculaceae	<i>Clematis aristata</i>	Old Man's Beard								1		
	<i>Clematis glycinoides</i>	Headache Vine						3				
Rhamnaceae	<i>Discaria pubescens</i>	Australian Anchor Plant	1									
Rosaceae	<i>Acaena ovina</i>				2	1	1				1	1
	<i>Rosa rubiginosa *</i>	Sweet Briar	1		1	1	1	2	1			
Rubiaceae	<i>Asperula conferta</i>	Common Woodruff			1	2			1			1

FAMILY	SCIENTIFIC NAME	COMMON NAME	SITE NUMBER ¹									
			Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
	<i>Galium gaudichaudii</i>	Rough Bedstraw	1	1								
	<i>Galium leptogonium</i>	Bedstraw						2		1		1
	<i>Opercularia aspera</i>	Coarse Stinkweed				1				1		
Santalaceae	<i>Exocarpos cupressiformis</i>	Native Cherry									1	
Sapindaceae	<i>Dodonaea viscosa</i>	Sticky Hopbush		3		4	2	6	4	6		6
Solanaceae	<i>Solanum esuriale</i>	Quena	1	1						2		
	<i>Solanum nigrum</i> *	Blackberry Nightshade						3				1
Sterculiaceae	<i>Brachychiton populneus</i> ssp <i>populneus</i>	Kurrajong	1		1			1				
Thymelaeaceae	<i>Pimelea curviflora</i>	Riceflower	1									
	<i>Pimelea neo-anglica</i>	New England Riceflower	1	1	1	1		2	1	1		
	<i>Pimelea strigosa</i>	Riceflower				1			1		1	
Urticaceae	<i>Urtica urens</i> *	Small Nettle						1				
Verbenaceae	<i>Verbena bonariensis</i> *	Purple-top						1			1	
Violaceae	<i>Hybanthus monopetalus</i>	Slender Violet Bush							2		1	1

APPENDIX 8:**Flora Species Identified on the Whitehaven Northern Offset properties; Mt Lindesay, Wirradale and Wongala, Barraba NSW****10th - 13th November 2020****Sites 11-21**¹ Cover/abundance recorded using modified Braun-Blanquet categories:

1= <5% (rare number of individuals at site); 2= <5% (species common at the site); 3= 5-20%; 4= 21-30%; 5= 31-40%; 6= 41-50%;
 7= 51-60%; 8= 61-70%; 9= 71-80%; 10= 81-90%; 11= 91-100%

#(#) = Braun Blanquet category (% foliage cover)

* Introduced species

Important species for the purposes of determining Box-Gum CEEC <https://www.environment.gov.au/system/files/resources/be2ff840-7e59-48b0-9eb5-4ad003d01481/files/box-gum-species.pdf>

FAMILY	SCIENTIFIC NAME	COMMON NAME	SITE NUMBER										
			Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21
Adiantaceae	<i>Cheilanthes sieberi ssp sieberi</i>	Rock Fern			2	1			2	2			1
Anthericaceae	<i>Dichopogon fimbriatus</i>	Nodding Chocolate Lily			1		1	2					
	<i>Dichopogon strictus</i>	Chocolate Lily											1
	<i>Thysanotus tuberosus</i>	Common Fringed Lily										1	
Apiaceae	<i>Cyclospermum leptophyllum</i> *	Slender Celery			3	2		1	2	2			3
	<i>Daucus glochidiatus</i>	Native Carrot	1	1	2	2	2	2	1		1		2
	<i>Hydrocotyle laxiflora</i>	Stinking Pennywort	3	1		3	3	2	2		4		2
	<i>Hydrocotyle sibthorpioides</i>	Pennywort			3			1					
	<i>Hydrocotyle tripartita</i>	Pennywort	3			2			3	1			
Asphodelaceae	<i>Bulbine bulbosa</i>	Native Leek											1
Asteraceae	<i>Brachyscome multifida</i>	Cut-leaved Daisy								1			
	<i>Brachyscome sp</i>	Daisy										1	

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FAMILY	SCIENTIFIC NAME	COMMON NAME	SITE NUMBER										
			Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21
	<i>Calotis cuneifolia</i>	Purple Burr Daisy			1						1		
	<i>Carduus tenuiflorus*</i>	Winged Slender Thistle			1		1						1
	<i>Cassinia laevis</i>	Cough Bush							1		1		
	<i>Chrysocephalum apiculatum</i>	Common Everlasting		1	1		1			2	1		
	<i>Cirsium vulgare*</i>	Black Thistle	1	1	1	1			1		1	1	1
	<i>Conyza bonariensis*</i>	Flax-leaf Fleabane	1	1		1					1	1	1
	<i>Craspedia canens</i>	Grey Billy Buttons						1		1			
	<i>Craspedia variabilis</i>	Billy Buttons			1								
	<i>Cymbonotus lawsonianus</i>	Bear's Ear				1			1			1	
	<i>Euchiton sphaericus</i>	Japanese Cudweed	1	1	1			1	1	1		1	
	<i>Gamochaeta americana*</i>	Cudweed		1									
	<i>Glossocardia bidens</i>	Cobbler's Tack											1
	<i>Hypochaeris albiflora*</i>	White Flatweed				1							
	<i>Hypochaeris radicata*</i>	Flatweed	1	1	2	2			1	1		1	1
	<i>Lactuca serriola*</i>	Prickly Lettuce											1
	<i>Olearia elliptica</i>	Sticky Daisy Bush	6	4	4	4			3		3	3	1
	<i>Rhodanthe anthemoides</i>	Chamomile Sunray									1		
	<i>Senecio hispidulus</i>	Hill Fireweed	1	1	1	1			1			1	2
	<i>Senecio quadridentatus</i>	Cotton Fireweed				1							
	<i>Senecio microbasis</i>									1	1		1
	<i>Senecio sp</i>	Groundsel	1										
	<i>Solenogyne bellioides</i>										2	1	
	<i>Sonchus oleraceus*</i>	Common Sowthistle	1	1		2				1		1	
	<i>Taraxacum officinale*</i>	Dandelion		1									
	<i>Vittadinia cuneata</i>	Fuzzweed			1					1			
	<i>Xerochrysum bracteatum</i>	Golden Everlasting Daisy									1		

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FAMILY	SCIENTIFIC NAME	COMMON NAME	SITE NUMBER										
			Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21
Campanulaceae	<i>Wahlenbergia</i> sp (1)	Bluebell	2	2	2	2	1	2	2	2	2		2
	<i>Wahlenbergia</i> sp (2)	Bluebell	2										
Caryophyllaceae	<i>Petrorhagia nanteuillii</i> *	Proliferous Pink				1	1		2				1
	<i>Stellaria leptoclada</i>	Chickweed				1	1						2
Clusiaceae	<i>Hypericum gramineum</i>	Small St John's Wort					1					1	
Convolvulaceae	<i>Cuscuta campestris</i> *	Golden Dodder											2
	<i>Dichondra</i> sp A	Kidneyweed	3	3					2	1	1	1	
Cupressaceae	<i>Callitris glaucophylla</i>	White Cypress Pine		1									
Cyperaceae	<i>Carex inversa</i>	Knob Sedge				1							
	<i>Fimbristylis dichotoma</i>	Common Fringe-sedge									1		
	<i>Lipocarpa microcephala</i>	Button Rush						1					
	<i>Schoenus apogon</i>	Common Bogrush					1	1	1			2	
Dennstaedtiaceae	<i>Pteridium esculentum</i>	Common Bracken	1										
Dilleniaceae	<i>Hibbertia kaputarensis</i>	Guinea Flower								2			
	<i>Hibbertia obtusifolia</i>	Hoary Guinea Flower		1	2		1					2	
	<i>Hibbertia riparia</i>	Common Guinea Flower			1								
Ericaceae	<i>Brachyloma daphnoides</i> ssp <i>glabrum</i>	Daphne Heath		1	2					1	2		
	<i>Lissanthe strigosa</i>	Peach Heath			2				1	1		1	1
	<i>Melichrus urceolatus</i>	Urn Heath	1	2					2	1	2		1
Fabaceae	<i>Desmodium brachypodum</i>	Large Tick-trefoil	1	1					1		1		2
	<i>Desmodium varians</i>	Slender Tick-trefoil	1						1	1		1	
	<i>Dillwynia sieberi</i>		1										
	<i>Glycine clandestina</i>	Twining Glycine	1	2					1	2	2		1
	<i>Glycine tabacina</i>	Variable Glycine	2			2							
	<i>Gompholobium</i> sp	Wedge-pea			3							1	
	<i>Hardenbergia violacea</i>	Native Sarsaparilla		1									1

FAMILY	SCIENTIFIC NAME	COMMON NAME	SITE NUMBER										
			Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21
	<i>Hovea heterophylla</i>		1									1	
	<i>Hovea lanceolata</i>	Hovea		1									
	<i>Indigofera adesmiifolia</i>	Tick Indigo			1	2							
	<i>Indigofera australis</i>	Austral Indigo		3				1		1		1	
	<i>Lespedeza juncea</i>	Bush Clover					2		1				
	<i>Lotus australis</i>	Australian Trefoil			2			1	1	2		2	
	<i>Pultenaea foliolosa</i>	Small-leaf Bush Pea			3					2		2	
	<i>Pultenaea</i> sp	Egg & Bacon Pea										2	
	<i>Pultenaea villosa</i>	Hairy Bush-pea			3								
	<i>Rhynchosia minima</i>	Rhyncho	1			1							
	<i>Swainsona galegifolia</i>	Smooth Darling Pea	2			2		2					2
	<i>Trifolium arvense</i> *	Haresfoot Clover					3		2		2		2
	<i>Trifolium campestre</i> *	Hop Clover				2	3		2		1		3
	<i>Trifolium dubium</i> *	Yellow Suckling Clover							3				
	<i>Trifolium glomeratum</i> *	Clustered Clover					1						
	<i>Trifolium repens</i> *	White Clover	1			2	2		1		1		1
Gentianaceae	<i>Centaurium erythraea</i> *	Common Centaury		1		1	1	1	1				
Geraniaceae	<i>Geranium solanderi</i>	Australian Cranesbill	2	2	3	1	2	2	2		2		
Goodeniaceae	<i>Goodenia hederacea</i>	Ivy Goodenia		1	2			1		3		2	2
Juncaceae	<i>Juncus</i> sp 1	Pin Rush				1	1	1	1				1
	<i>Juncus</i> sp 2	Pin Rush				1							
Lamiaceae	<i>Ajuga australis</i>	Australian Bugle									1		1
	<i>Mentha satuireioides</i>	Native Pennyroyal			1	3					1		
	<i>Scutellaria humilis</i>	Dwarf Skullcap		1	1	2		2					2
Lomandraceae	<i>Lomandra filiformis</i>	Wattle Mattrush				2						2	
	<i>Lomandra longifolia</i>	Spiny-headed Mattrush		1					1	1		1	

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FAMILY	SCIENTIFIC NAME	COMMON NAME	SITE NUMBER										
			Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21
	<i>Lomandra multiflora</i>	Many-flowered Matrush		2					1	1		1	
Loranthaceae	<i>Amyema</i> sp	Mistletoe	1										
Luzuriagaceae	<i>Eustrephus latifolius</i>	Wombat Berry		1									1
Myrsinaceae	<i>Lysimachia arvensis</i> *	Pimpernel					1	1	1				2
Myrtaceae	<i>Angophora floribunda</i>	Rough-barked Apple		1				3(3)		3	3(20)		
	<i>Eucalyptus andrewsii</i>	New England Blackbutt										5(40)	
	<i>Eucalyptus blakelyi</i>	Blakely's Red Gum			3(5)				3(10)	3(10)	3(10)	3(5)	
	<i>Eucalyptus bridgesiana</i>	Apple Box		1	4(15)			3(5)	3(10)				4(30)
	<i>Eucalyptus elliptica</i>	Bendemeer White Gum		3(10)			4(15)					4(25)	
	<i>Eucalyptus macrorhyncha</i>	Red Stringybark		4(30)	5(25)	3(10)	1		3	3(10)	5(35)		
	<i>Eucalyptus melliodora</i>	Yellow Box				1		2(2)	4(20)	3(15)		3(10)	
	<i>Eucalyptus viminalis</i>	Manna Gum					3(20)					3	
	<i>Eucalyptus youmanii</i>	Youman's Stringybark										3	
	<i>Kunzea parvifolia</i>	Violet Kunzea									1		
Orchidaceae	<i>Diuris punctata</i>	Purple Donkey Orchid						1					
	<i>Microtis unifolia</i>	Common Onion Orchid						1		2			
Oxalidaceae	<i>Oxalis perennans</i>	Yellow Wood-sorrel	2	2		1			1	1	1	1	1
Phormiaceae	<i>Dianella caerulea</i>	Blue Flax Lily			2					1	1		
Phyllanthaceae	<i>Poranthera microphylla</i>	Small Poranthera			1				1				
Pittosporaceae	<i>Pittosporum undulatum</i>	Sweet Pittosporum	1										
Plantaginaceae	<i>Plantago varia</i>	Variable Plantain	1			1			1	1			
	<i>Veronica calycina</i>	Hairy Speedwell									1		
Poaceae	<i>Anthoxanthum odoratum</i> *	Sweet Vernal Grass			1	2				2	2		
	<i>Aristida caput-medusae</i>	Many-headed Wiregrass	2	3	2				2	3	3	2	
	<i>Aristida ramosa</i>	Purple Wiregrass							1				
	<i>Aristida vagans</i>	Three-awn Wiregrass			1			1		3			

Expert advice re: Box-Gum CEEC

Whitehaven Northern Offset Properties

FAMILY	SCIENTIFIC NAME	COMMON NAME	SITE NUMBER										
			Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21
	<i>Austrostipa scabra</i>	Rough Speargrass						1					
	<i>Bothriochloa decipiens</i>	Pitted Bluegrass						1					
	<i>Bothriochloa macra</i>	Redleg Grass		1		1			1	2	2		
	<i>Bromus diandrus*</i>	Great Brome	2	2		2		2	2	2			3
	<i>Cymbopogon refractus</i>	Barbed Wiregrass		2	1			1	3	2			2
	<i>Dichelachne micrantha</i>	Short-haired Plume Grass	1	1					1	2	1		2
	<i>Echinopogon caespitosus</i>	Tufted Hedgehog Grass	2	2									1
	<i>Echinopogon intermedius</i>	Erect Hedgehog Grass			3	1	2	2	2				
	<i>Echinopogon ovatus</i>	Forest Hedgehog Grass	1	1	1	2		1		2	2		2
	<i>Eragrostis sp</i>	Lovegrass								1			
	<i>Lolium perenne*</i>	Ryegrass					1						
	<i>Microlaena stipoides</i>	Weeping Rice Grass		3						1			1
	<i>Poa annua *</i>	Annual Poa								1			
	<i>Poa labillardieri</i>	Tussock Grass	2			3	6		2		2		3
	<i>Poa sieberiana</i>	Snow Grass	2	2	2		3	2	2	3		3	3
	<i>Rytidosperma bipartitum</i>	Wallaby Grass			1								
	<i>Rytidosperma pallidum</i>	Red-anther Wallaby Grass										3	
	<i>Rytidosperma sp</i>	Wallaby Grass		1		1		1	1		1		1
	<i>Sorghum leiocladum</i>	Native Sorghum					3						
	<i>Sporobolus creber</i>	Rat's Tail Grass					1		1				
	<i>Themeda triandra</i>	Kangaroo Grass								3			
	<i>Vulpia bromoides</i>	Squirrel-tail Fescue		1			1						
Polygonaceae	<i>Rumex brownii</i>	Slender Dock				1			1		1		1
Primulaceae	<i>Lysimachia arvensis *</i>	Pimpernel	1										
Ranunculaceae	<i>Clematis glycinoides</i>	Headache Vine	2										1
	<i>Ranunculus lappaceus</i>	Common Buttercup	1			1	1						

FAMILY	SCIENTIFIC NAME	COMMON NAME	SITE NUMBER										
			Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20	Q21
Rosaceae	<i>Acaena ovina</i>					1	2		1		1		
	<i>Rosa rubiginosa</i> *	Sweet Briar					1	1			1		
	<i>Rubus parvifolius</i>	Wild Raspberry				1	2						
Rubiaceae	<i>Asperula conferta</i>	Common Woodruff				2	1						
	<i>Galium gaudichaudii</i>	Rough Bedstraw	2		1								
	<i>Galium leptogonium</i>	Bedstraw		1		1							1
	<i>Opercularia aspera</i>	Coarse Stinkweed		1	1						1	1	1
	<i>Opercularia hispida</i>	Hairy Stinkweed			2						1		
Sapindaceae	<i>Dodonaea viscosa</i>	Sticky Hopbush				1		3		3			7
Solanaceae	<i>Solanum nigrum</i> *	Blackberry Nightshade	1	1							1		1
Thymelaeaceae	<i>Pimelea curviflora</i>	Riceflower											
	<i>Pimelea linifolia</i>	Slender Riceflower					1						
	<i>Pimelea neo-anglica</i>	New England Riceflower		1	1			1			1		1
	<i>Pimelea strigosa</i>	Riceflower					2			1			
Verbenaceae	<i>Verbena bonariensis</i> *	Purple-top	1										
Violaceae	<i>Hybanthus monopetalus</i>	Slender Violet Bush	1	1				1			1		
Zamiaceae	<i>Macrozamia stenomera</i>	Burrawang	1										

APPENDIX 9:

Vegetation structure identified on the Whitehaven Northern Offset properties; Mt Lindesay, Wirradale and Wongala, Barraba NSW

¹A=absent; O=occasional; C=common

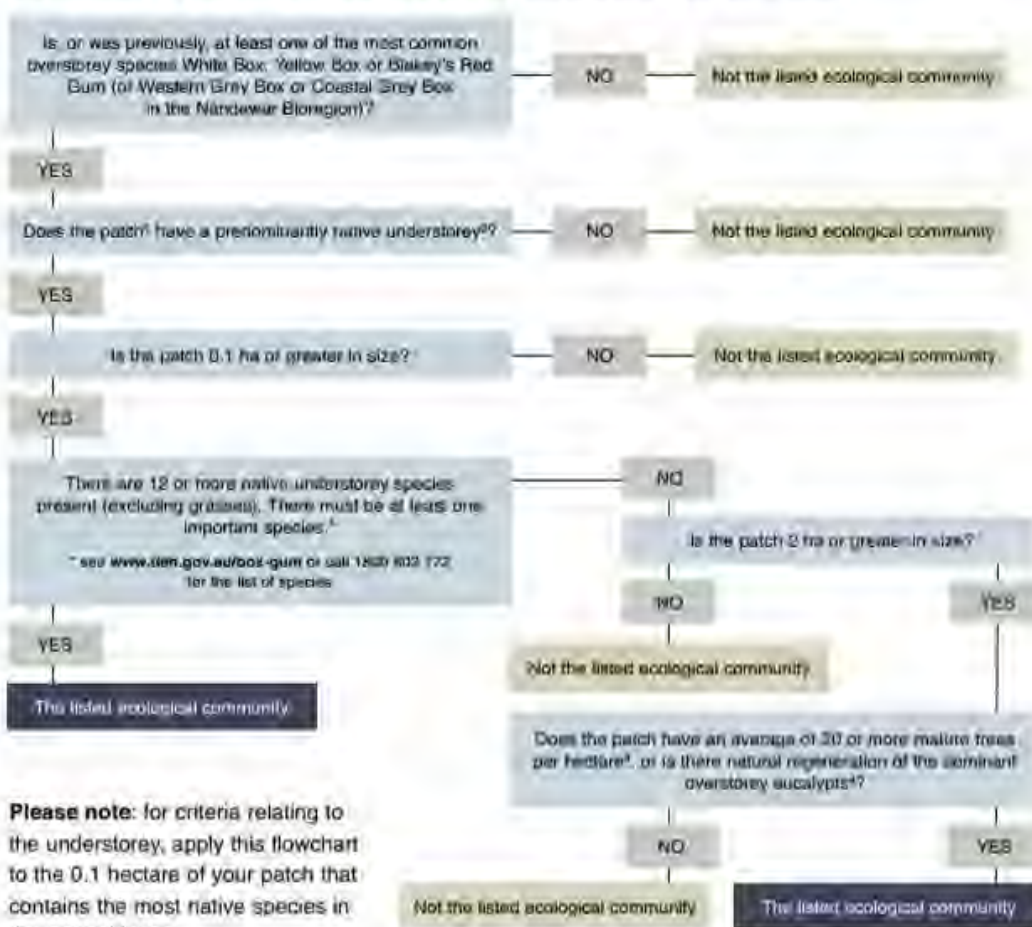
Quadrat	Tree size classes (diameter at breast height)							Trees w hollows	Dead standing trees	Seedling trees ¹ (<1.5m tall)	% Shrub cover	Length of fallen logs (m)	% Non-vegetative ground cover			
	<10cm	11-20cm	21-30cm	31-50cm	51-60cm	61-80cm	+81cm						litter/ dead branches	% bare soil / small rocks	cryptogam	large rock/ boulder
1	0	0	0	2	1	2	1	0	0	O	<30	149	81	0	0	0
2	2	0	4	1	1	2	0	7	3	O	<30	324	24	0	0	0
3	0	2	0	2	0	0	0	1	2	C	<30	84	7	7	0	0
4	0	2	7	4	0	1	0	0	0	O	>30	73	26	0	1	0
5	10	10	8	6	0	0	0	0	3	C	<30	129	3	1	0	0
6	0	3	2	1	0	0	0	0	0	A	>51	54	54	1	0	1
7	3	0	0	0	0	0	0	0	1	O	>30	143	32	20	0	0
8	0	1	3	2	0	0	0	1	3	O	>51	54	80	2	0	0
9	2	7	2	1	0	0	0	0	0	O	<30	8	10	1	0	8
10	7	0	1	1	1	2	0	0	0	C	>30	51	17	1	0	0
11	10	5	4	2	0	1	0	3	5	O	>30	87	50	0	0	0
12	2	5	5	6	1	0	0	4	7	A	>30	112	66	0	0	0
13	14	9	4	3	1	0	0	3	8	O	<30	42	40	0	0	0
14	6	11	2	2	1	0	0	0	9	O	<30	-	58	5	0	0
15	4	3	0	1	0	0	0	0	0	O	0	17	5	<1	0	0
16	3	3	4	7	2	1	1	1	3	O	<30	83	91	0	0	0
17	33	29	10	2	0	0	1	0	7	O	0	123	20	0	0	0
18	3	5	10	7	0	0	0	0	5	O	>30	90	72	1	0	0
19	0	0	3	2	1	2	0	2	2	O	<30	124	76	0	0	0
20	3	3	0	5	2	1	0	0	2	A	0	81	81	6	0	0
21	2	11	8	4	0	0	0	0	7	O	<30	37	23	1	0	0

APPENDIX 10:

Flowchart for the Identification of the critically endangered *White Box Yellow Box Blakely's Red Gum Grassy Woodland and derived native grassland* ecological community, listed under the EPBC Act (from DEH 2006)

The flowchart below represents the lowest condition at which patches are included in the listed ecological community. This is not the ideal state of the ecological community. Large patches, those that link remnants in the landscape, those that occur in highly cleared areas, those that contain rare, declining or threatened species, and those that represent the entire range of the ecological community, are important for the long-term future of the ecological community.

Determining if your land has an area of the listed ecological community



¹ Patch – a patch is a continuous area containing the ecological community (areas of other ecological communities such as woodlands dominated by other species are not included in a patch). In determining patch size it is important to know what is included within any individual patch. The patch is the larger of:
 - an area that contains five or more trees in which no tree is greater than 75 m from another tree, or
 - the area over which the understorey is predominantly native.
 Patches must be assessed at a scale of 0.1 ha (1000m²) or greater.

² A predominantly native ground layer is one where at least 50 per cent of the perennial vegetation cover in the ground layer is made up of native species. The best time of the year to determine this is late autumn when the annual species have died back and have not yet started to regrow. (At other times of the year, you can determine whether something is perennial or not is if it is difficult to pull out of the soil. Annual species pull out very easily.)

³ Mature trees are trees with a circumference of at least 125 cm at 130 cm above the ground.

⁴ Natural regeneration of the dominant overstorey eucalypts when there are mature trees plus regenerating trees of at least 15 cm circumference at 130 cm above the ground.

APPENDIX 11:**Photographs of quadrats on Northern Offset properties (10th – 13th Dec 2020)**

(Note: No photo exists of Q16)

**PLATE 1:** Q1 - White Box grassy woodland**PLATE 2:** Q2 - Blakely's red gum / Youman's stringybark grassy woodland**PLATE 3:** Q3 – White Box grassy woodland



PLATE 4: Q4 - White Box shrub/grass woodland



PLATE 5: Q5 – Blakely's red gum grassy woodland



PLATE 6: Q6 – Red stringybark / Apple Box shrubby woodland



PLATE 7: Q7 – Rough-barked Apple / White Box shrubby woodland



PLATE 8: Q8 – White box – Orange Gum shrubby woodland



PLATE 9: Q9 - Apple Box grassy woodland



PLATE 10: Q10 – Apple Box Rough-barked Apple shrubby woodland



PLATE 11: Q11 – Red stringybark / Bendemeer White Gum shrubby open forest



PLATE 12: Q12 - Red stringybark shrubby open forest



PLATE 11: Q13 - Apple Box shrub/grass woodland



PLATE 14: Q14 - Ribbon Gum /Apple Box grassy open forest



PLATE 15: Q15 - Apple Box open grassy woodland



PLATE 16: Q17 – Yellow Box / Blakely's Red Gum grassy woodland



PLATE 17: Q18 – Red Stringybark open forest



PLATE 18: Q19 – Bendemeer White Gum grassy woodland



PLATE 19: Q20 – New England Blackbutt grassy woodland



PLATE 20: Q21 – Apple Box shrubby open forest



Australian Government

Department of Agriculture, Water and the Environment

VARIATION OF CONDITIONS ATTACHED TO APPROVAL MAULES CREEK (EPBC 2010/5566)

This decision to vary conditions of approval is made under section 143 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Approved action

Person to whom the approval is granted Aston Coal 2 Pty Limited
ACN: 139 472 567

Approved action To construct and operate an open cut coal mine 18 km north-east of the township of Boggabri in New South Wales, including associated infrastructure [See EPBC Act referral **2010/5566**].

Variation

Variation of conditions attached to approval The variation is to delete condition 13 attached to the approval and substitute with the conditions specified in the table below.

Date of effect This variation has effect on the date the instrument is signed

Person authorised to make decision

Name and position Greg Manning
Assistant Secretary
Assessment (WA, SA, NT), Post Approvals and Policy Branch

Signature

Date of decision

19/3/20

Date of decision	Conditions attached to approval
Original dated 11/2/2013	<p>Disturbance areas</p> <p>1. The person taking the action must not clear more than 544 hectares (ha) of the EPBC listed White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland critically endangered ecological community within the Maules Creek project area, as identified in <u>Attachment A</u> of these conditions.</p>
Original dated 11/2/2013	<p>2. The person taking the action must not clear more than 1665 ha of habitat for the regent honeyeater (<i>Anthochaera phrygia</i>: formerly <i>Xanthomyza phrygia</i>), swift parrot (<i>Lathamus discolor</i>) or greater long-eared bat (<i>Nyctophilus corbeni</i>), within the Maules Creek project area. The 1665 ha of habitat specified includes the 544 ha of the critically endangered ecological community at condition 1.</p>
Original dated 11/2/2013	<p>3. The person taking the action must submit a Biodiversity Corridor plan for the approval of the Minister within three months of the date of this approval. The plan must address the following matters:</p> <ul style="list-style-type: none"> a) protection of native vegetation of a total width of 500 metres (m) where the Maules Creek coal lease boundary is adjacent to the Boggabri coal mine lease boundary; b) maintenance in perpetuity of this area as a biodiversity corridor, and c) evidence that the biodiversity corridor will be protected in perpetuity through a legal mechanism that would provide the equivalent protection of a conservation covenant. <p>The approved Biodiversity Corridor must be implemented.</p>
Original dated 11/2/2013	<p>4. The person taking the action is required to submit a Conservation and Biodiversity Bond under condition 55 of the NSW state government project approval dated 23 October 2012 (Application 10_0138). It is noted that this bond may be combined with the rehabilitation security deposit as required by the NSW Trade & Investment - Division of Resources and Energy under the NSW <i>Mining Act 1992</i>. The person taking the action must submit details of this bond and the rehabilitation security deposit, to the Minister. If the Minister is not satisfied that the bond and the rehabilitation security deposit lodged by the person taking the action is adequate to provide for the implementation of the requirements referred to under conditions 3, 17, 25- 28 the Minister may require the person taking the action establish an additional bond or equivalent financial instrument in trust, under conditions approved in writing by the Minister.</p>
Original dated 11/2/2013	<p>5. The person taking the action must provide a map to the Minister showing the area of the biodiversity corridor within the Maules Creek coal mine lease boundary within one month of this approval decision and detail the amount (in hectares) of White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland critically endangered ecological community and habitat or potential habitat for the regent honeyeater, swift parrot and greater long-eared bat within this area.</p>
Original dated 11/2/2013	<p>6. The person taking the action must submit to the Minister for approval, within three months of the commencement of the action, an approach that:</p> <ul style="list-style-type: none"> a) limits the maximum disturbance (in hectares) specified for each of the years 5, 10, 15 and 21 from the date of this approval of the White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community and the habitat or potential habitat for the regent honeyeater, swift parrot and greater long-eared bat; b) incorporates an analysis, undertaken by independent ecological experts approved by the Department, that demonstrates the maximum disturbance limits which will minimise any impacts on relevant matters of national environmental significance; c) demonstrates collaboration with the person taking the action to develop and operate the Boggabri Coal Project (EPBC 2009/5256), in order to minimise progressive project area disturbance limits across both sites. The progressive

Date of decision	Conditions attached to approval
	disturbance limits are to be reflected in the development of the Leard Forest Mining Precinct Biodiversity Strategy.
Original dated 11/2/2013	7. The person taking the action must not clear more than the maximum project area disturbance limits specified for each of the years 5, 10, 15 and 21 as described in condition 6, unless otherwise approved by the Minister .
Original dated 11/2/2013	8. The person taking the action must publish the analysis under condition 6 on their website.
Original dated 11/2/2013	<p>Direct Offsets</p> <p>9. The person taking the action must register a legally binding conservation covenant over offset areas of no less than:</p> <ul style="list-style-type: none"> a. 9,334 ha of an equivalent or better quality of habitat for the regent honeyeater, swift parrot and greater long-eared bat; and b. 5,532 ha of an equivalent or better quality of the White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community. <p>Note: the 5,532 ha of White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community may be included within the 9,334 ha of offset area for the threatened species if it meets the listing criteria for the EPBC-listed critically endangered ecological community as defined in the EPBC listing advice for that community and the requirements of condition 9.</p>
Correction dated 15/2/2013	10. The person taking the action must verify through independent review the quantity and condition class of White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community and the quantity and quality of habitat for the regent honeyeater, swift parrot and greater long-eared bat within all proposed offset areas including those proposed in the Environmental Assessment , as defined at <u>Attachment B</u> of these conditions, and any additional offsets as required at condition 9. Details of all independently verified offset areas must be submitted to the Minister for approval by 30 December 2013. The findings of the independent review must be published on the proponent's website.
Original dated 11/2/2013	11. If the independent review finds that the offset areas do not meet the requirements of conditions 9, 12 a and 12 b, then additional areas must be included in the offset areas until all relevant criteria under these conditions are met.
Original dated 11/2/2013	<p>12. The offset areas must be of an overall equivalent or better quality than the areas being cleared. This means:</p> <ul style="list-style-type: none"> a. for White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community, offset areas must meet the definition of the ecological community described in the listing advice, and must be of an overall equivalent or better condition class than the areas being cleared, based on the proportion of each condition class represented and other relevant ecological attributes; b. for the threatened species, the quality of the habitat for the species, taking account of its ecological requirements, must be equivalent to or better than the areas being cleared.
As varied on the date this instrument was signed	<p>13. The mechanism/s for registering a legally binding covenant must provide protection for the offset areas in perpetuity and be registered by 31 March 2021, except in respect of the Rocklea property, which must be registered by 15 December 2022.</p> <p>Evidence of compliance with condition 13 must be provided to the Department within 30 day of registering a legally binding covenant.</p>

Date of decision	Conditions attached to approval
	The approval holder must report on progress meeting these requirements of in each annual compliance report required under condition 34 and as otherwise requested by the Department .
Original dated 11/2/2013	14. If the person taking the action proposes to undertake any action within areas secured under condition 9, other than those management activities related to managing the offset areas or as set out in the conditions approval, then approval to undertake that action must be obtained in writing from the Minister . In seeking the Minister's approval, the person undertaking the action must provide a detailed assessment of the area where the action is proposed to take place and an assessment of all associated adverse impacts on matters of national environmental significance . If the Minister agrees to the action within the offset areas, the area identified for the action must be excised from the offset area and alternative offsets secured by the person taking the action at a ratio of at least 20:1 in relation to the impact on matters of national environmental significance .
Original dated 11/2/2013	<p>Indirect Offsets</p> <p>15. To compensate for the loss of the White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community and habitat for the regent honeyeater, swift parrot and greater long-eared bat the person taking the action must submit to the Minister for approval, within 2 years of the date of this approval, a project plan to invest \$1 million for research that will identify effective methodologies for achieving rehabilitation and restoration of functioning White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community on mining sites. The research must be undertaken by a third party and be available to industry and governments generally. The approved project plan must be implemented.</p>
Variation dated 16/3/2017	16. To compensate for the loss of the habitat for the regent honeyeater, swift parrot and greater long-eared bat the person taking the action must provide \$1.5 million over the life of the approval (comprising \$500,000 for each of the regent honeyeater, swift parrot and greater long-eared bat), to deliver activities that implement priority recovery actions for the regent honeyeater, swift parrot and greater long-eared bat. A detailed project plan governing the timing of the \$1.5 million funding for the activities and outcomes must be developed. The project plan must be submitted to the Minister for approval by 30 April 2017, or otherwise agreed in writing by the Minister . The project plan should demonstrate consultation with relevant species experts and be consistent with approved National Recovery Plans where they are available, and as agreed with the relevant Recovery Planning Teams. The approved project plan must be implemented.
Original dated 11/2/2013	<p>Offset management plan</p> <p>17. The person taking the action must submit to the Minister for approval an <i>Offset management plan</i> for all of the offset areas, specified in condition 9, within 12 months of the date of this approval. The approved Offset management plan must be implemented.</p> <p>Note: for consistency, the proponent may develop a Biodiversity Management plan that includes the requirements set for managing offsets and set out in these conditions, to align with the requirements of the NSW state government Project Approval dated 23 October 2012 (application number 10_0138) and this approval.</p>
Original dated 11/2/2013	<p>18. The <i>Offset management plan</i> must include, but not be limited to, the following:</p> <ul style="list-style-type: none"> a) a text description and map which clearly defines the location and boundaries of the offset areas. This must be accompanied by the offset attributes and shapefiles; b) a description of the methodology and results of surveys measuring the baseline ecological conditions in the offset areas. This must be consistent with the State and Transition Model and include but not be limited to:

Date of decision	Conditions attached to approval
	<ul style="list-style-type: none"> i. the extent and condition of all vegetation communities, including a description of the structure, floristics and tree age class representation of each community; ii. the extent and condition class of all areas of the White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community; iii. surveys targeting the regent honeyeater, swift parrot and greater long-eared bat; iv. the extent and quality of all areas of habitat for the regent honeyeater, swift parrot and greater long-eared bat; v. the location of all survey sites (including co-ordinates); vi. photo reference points at survey sites. <p>c) clearly defined ecological management objectives for the offset areas;</p> <p>d) detailed description of all ecological management activities proposed to be undertaken, including maps and/or diagrams showing areas to be managed and the timing of the proposed activities;</p> <p>e) details of ongoing ecological monitoring programs, performance criteria, targets and provisions for adaptive management, including but not limited to:</p> <ul style="list-style-type: none"> i. a set of measurable ecological indicators for detecting changes to the White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community, including those that may be ascribed to ongoing water stress; ii. a monitoring plan to assess the success of the management activities measured against the baseline condition. The monitoring must be statistically robust and able to quantify change in the condition of the White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community and habitat for the regent honeyeater, swift parrot and greater long-eared bat. This should include the use of control sites and periodic ecological surveys to be undertaken by a qualified ecologist; iii. a list of performance criteria based on the ecological management objectives for the White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community and habitat for the regent honeyeater, swift parrot and greater long-eared bat; iv. measures to exclude weeds from all offset areas for the period covered by this approval; v. a description of the potential risks to successful management against the performance criteria, and a description of the contingency measures that would be implemented to mitigate against these risks; vi. a process by which to report to the department the progress of management activities undertaken in the offset areas and the outcome of those activities, including identifying any need for improved management and activities to undertake such improvement. <p>f) details of all parties responsible for management, monitoring and implementing the management activities, including their position or status as a separate contractor.</p>

Date of decision	Conditions attached to approval
	g) details of the funding requirements for the ongoing management activities, including an estimate of the costs of the activities and details of the parties responsible for funding the activities.
Original dated 11/2/2013	19. Unless otherwise agreed to in writing by the department , the baseline surveys for threatened species must be conducted in accordance with the department's <i>Survey Guidelines for Australia's Threatened Birds</i> and the <i>Survey Guidelines for Australia's Threatened Bats</i> . Subsequent monitoring must be carried out annually at the same time of year as the baseline surveys, unless otherwise agreed to in writing by the department .
Correction dated 16/4/2013	Surface and groundwater management plans 20. The person taking the action must provide to the Minister for approval, the <i>surface and groundwater management plans</i> as identified in condition 40 of the NSW state government Project Approval dated 23 October 2012 (application number 10_0138). The <i>surface and groundwater management plans</i> must be approved by the Minister prior to commencement of construction .
Original dated 11/2/2013	21. The <i>surface and groundwater management plans</i> must be consistent with the National Water Quality Management Strategy .
Original dated 11/2/2013	22. The person taking the action must, prior to commencement of construction , in collaboration with the proponent to develop and operate the Boggabri Extension (EPBC 2009/5256) and any other approved mines within 20 kilometres (km) of the project area , provide written advice to the Minister demonstrating how the NSW government approved <i>surface and groundwater management plans</i> (condition 20), addresses the cumulative impact of groundwater drawdown as a result of mining and how this may impact on the consequent health of the remnant native vegetation in the Leard State Forest, the Leard State Conservation Area and surrounding areas. In particular the advice must address the following matters: <ul style="list-style-type: none"> a. maximum amount of allowable drawdown in the alluvial aquifer b. drawdown in hard rock c. trigger levels pertaining to drawdown in the alluvial aquifer when corrective actions will be required to be undertaken d. identify the depth of root zone of the native vegetation e. monitoring to assess the ongoing quality and quantity of both surface and groundwater to identify impacts on the native vegetation.
Original dated 11/2/2013	23. The person taking the action must within 6 months of the date of this approval, or such other timeframe specified by the Minister , provide to the Minister a report on: <ul style="list-style-type: none"> a. any updated modelling of surface and groundwater impacts that has been undertaken in preparing the <i>surface and groundwater management plans</i> b. how the <i>surface and groundwater management plans</i> addressed groundwater and surface water impacts on matters of national environmental significance.
Original dated 11/2/2013	Leard Forest Mining Precinct Regional Biodiversity Strategy 24. The person taking the action must implement the regional biodiversity strategy as required under condition 41 of the NSW state government project approval dated 23 October 2012 (application number 10_0138). The required scoping report for the development of the strategy must be submitted to the Minister for approval on or before 31 July 2013. The approved strategy must be implemented.
Original dated 11/2/2013	Mine site rehabilitation 25. To mitigate the impacts to the White Box-Yellow Box –Blakely's Red Gum Grassy Woodland and Derived Native Grassland and the habitat of the regent honeyeater,

Date of decision	Conditions attached to approval
	<p>swift parrot and greater long-eared bat, the person taking the action must, within 12 months of the commencement of construction, submit to the Minister for approval a <i>mine site rehabilitation plan</i> for the progressive rehabilitation and revegetation of no less than 1665 ha of native forest and woodland (less the portion included in the biodiversity corridor identified in condition 3) in the project area including 544 ha using species consistent with a White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland Ecological Community. This approved <i>mine site rehabilitation plan</i> must be implemented.</p>
<p>Original dated 11/2/2013</p>	<p>26. The person taking the action must:</p> <ol style="list-style-type: none"> a. rehabilitate the site to be consistent with the proposed rehabilitation strategy as provided in the Environmental Assessment and, as required under the NSW State Government approval dated 23 October 2012 (Application 10_0138); and b. not replace topsoil and sub soil layers at a depth less than the minimum depths determined through pre-stripping soil surveys as described in condition 27(c). <p>Note: the NSW state government Project Approval dated 23 October 2012 (application number 10_0138) conditions require pre-stripping soil surveys and inventories to inform the availability, rehandling, stockpiling and management of soils, and maximising the salvaging of soil to be used, in the rehabilitation of the site.</p>
<p>Original dated 11/2/2013</p>	<p>27. The <i>mine site rehabilitation plan</i> must include, at a minimum, the following information:</p> <ol style="list-style-type: none"> a. targets and performance indicators to achieve effective restoration of potential habitat for the regent honeyeater, swift parrot and greater long-eared bat and White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community, including weed management; b. details of the vegetation communities to be rehabilitated and the timing of progressive rehabilitation (commencing as soon as practicable following disturbance); c. detailed soil depth surveys and analysis to inform the effective placement and restoration of soils underlying the proposed rehabilitation sites; including mapping of soils across the disturbance sites and soil sampling at no less than one sample point per 20 ha of each soil type identified. Sampling must identify; type, depth, water holding capacity, structure and physio-chemical properties of each of the soil and subsoil layers; d. processes and methodologies for the removal, storage and re-layering of the topsoil and sub soil layers underlying the disturbed sites being prepared for rehabilitation. These processes and methodologies must ensure the replacement of topsoil and sub soil layers: <ul style="list-style-type: none"> • meet the minimum depth requirements determined from sampling outcomes as identified in condition 27(c); and • replicate other existing soil parameters including, but not limited to, soil type, water holding capacity, structure and physio-chemical properties. e. a process to report annually to the department the rehabilitation management actions undertaken and the outcome of those actions, and the mechanisms to be used to identify the need for improved management; f. a description of the potential risks to successful management and rehabilitation on the project site, including weed invasion, and a

Date of decision	Conditions attached to approval
	<p>description of the contingency measures that would be implemented to mitigate these risks;</p> <p>g. details of long-term management and protection of the mine site, including details of the commitment of funds to achieve this.</p>
Original dated 11/2/2013	28. The <i>mine site rehabilitation plan</i> must be subject to an independent review by a qualified ecologist prior to being submitted to the Minister for approval. The findings of the independent review must be published on the proponent's website.
Original dated 11/2/2013	<p>Final Landform</p> <p>Note: for consistency, the person taking the action may develop a single mine rehabilitation plan to align with the requirements, including timing of reporting, of the NSW State Government approval dated 23 October 2012 (Application 10_0138) and this approval. The Offset Management Plan and the Rehabilitation management Plan need to be substantially integrated for achieving biodiversity objectives for the rehabilitated mine-site.</p> <p>29. The person taking the action must undertake rehabilitation to ensure the final landform provides the optimum opportunity for the successful restoration of native forest and woodland including the critically endangered White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community.</p> <p>Note: for consistency, the proponent may develop a single mine rehabilitation plan to align with the requirements of the NSW Government and this approval. The Offset Management Plan and the Rehabilitation management Plan need to be substantially integrated for achieving biodiversity objectives for the rehabilitated mine-site.</p>
Original dated 11/2/2013	<p>30. The person taking the action must undertake rehabilitation to ensure the final void and landform minimises the extent of any resulting pit lake, avoids salt scalding and ensures that drained waters do not adversely affect the downstream environment and avoids any impacts on matters of national environmental significance.</p> <p>Note: the State approval conditions for project 10_0138 require the preparation and implementation of an updated Final Void and Mine Closure Plan that considers interactions with the adjoining mines, including interaction between final voids, opportunities for integrated mine planning with adjoining mines to minimise environmental impacts, all reasonable and feasible landform options for the final void (including filling) and predicted hydrochemistry and hydrogeology (including long-term groundwater recovery and void groundwater quality).</p>
Original dated 11/2/2013	<p>Survey data</p> <p>31. All survey data collected for the project must be recorded so as to conform to data standards notified from time to time by the department. When requested by the department, the proponent must provide to the department all species and ecological survey data and related survey information from ecological surveys undertaken for matters of national environmental significance. This survey data must be provided within 30 business days of request, or in a timeframe agreed to by the department in writing. The department may use the survey data for other purposes.</p>
Original dated 11/2/2013	32. In the event that any additional matters of national environmental significance are recorded within the project area and a significant impact on the matter/s is likely, the department must be notified in writing within 14 days of the matter/s being recorded. In accordance with condition 37, the Minister may request that the person taking the action revise any relevant plans to ensure better protection of the relevant matter/s.
Original dated 11/2/2013	<p>Reporting and auditing</p> <p>33. Within 14 days after the commencement of construction, the person taking the action must advise the department in writing of the actual date of commencement of construction.</p>
Original dated 11/2/2013	34. By the end of March of each year after the commencement of the action, the person taking the action must publish a report on their website addressing compliance with the conditions of this approval over the previous 12 months, including implementation of any management plans as specified in the conditions. Non-

Date of decision	Conditions attached to approval
	compliance with any of the conditions of this approval must be reported to the department at the same time as the compliance report is published.
Original dated 11/2/2013	35. Upon the direction of the Minister , the person taking the action must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to the Minister . The independent auditor must be approved by the Minister prior to the commencement of the audit. Audit criteria must be agreed to by the Minister and the audit report must address the criteria to the satisfaction of the Minister .
Original dated 11/2/2013	36. If the person taking the action wishes to carry out any activity otherwise than in accordance with the plans, as specified in the conditions, the person taking the action must submit to the department for the Minister's written approval a revised version of that plan. The varied activity shall not commence until the Minister has approved the revised plan in writing. The Minister will not approve a revised plan, unless the revised plan would result in an equivalent or improved environmental outcome. If the Minister approves the revised plan that plan must be implemented in place of the plan originally approved.
Original dated 11/2/2013	37. If the Minister believes that it is necessary or convenient for the better protection of listed threatened species and communities or listed migratory species to do so, the Minister may request that the person taking the action make specified revisions to the management plan specified in the conditions and submit the revised plan for the Minister's written approval. The person taking the action must comply with any such request. The revised approved plan must be implemented. Unless the Minister has approved the revised plan then the person taking the action must continue to implement the originally approved plan, as specified in the conditions.
Original dated 11/2/2013	38. If, at any time after 5 years from the date of this approval, the person taking the action has not substantially commenced the action , then the person taking the action must not substantially commence the action without the written agreement of the Minister .
Original dated 11/2/2013	<p>Publication of plans</p> <p>39. The person taking the action must maintain accurate records substantiating all activities and outcomes associated with or relevant to the above conditions of approval, including measures taken to implement the management plans required by this approval, and make them available upon request to the department. Such records may be subject to audit by the department or an independent auditor in accordance with section 458 of the <i>Environment Protection and Biodiversity Conservation Act 1999</i> or used to verify compliance with the conditions of approval. Summaries of audits will be posted on the department's website. The results of audits may also be publicised through the general media.</p>
Original dated 11/2/2013	40. Unless otherwise agreed to in writing by the Minister , the person taking the action must publish all management plans referred to in these conditions of approval on their website. Each management plan must be published on the website within 1 month of being approved.

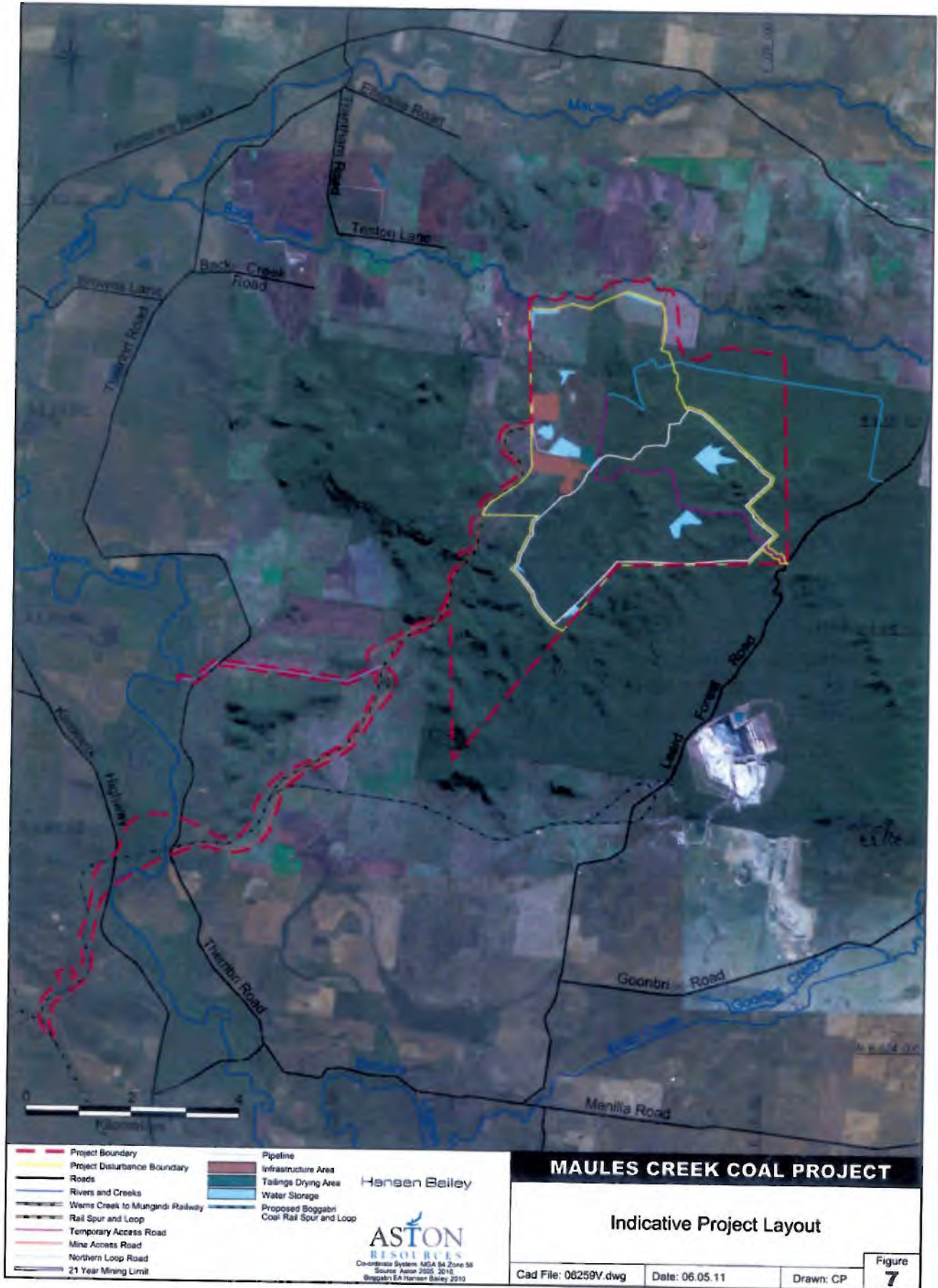
Date of decision	Definitions
Original dated 11/2/2013	<p>Biodiversity corridor – an area of native vegetation at least 250 m wide that has not been previously cleared for mining, which links the existing native vegetation to the east and west of the Maules Creek and Boggabri coal mine leases and is located within the Maules Creek coal mine lease where it is adjacent to the Boggabri coal mine lease boundary. The purpose is to ensure that a minimum 500 m wide native vegetation corridor is maintained between the Boggabri and Maules Creek mines and that any alternative corridor <i>provides equivalent or better ecosystem functionality (including habitat for the regent honeyeater, swift parrot and greater long-eared bat)</i>.</p>

Date of decision	Definitions
Original dated 11/2/2013	Commencement of construction – the commencement of any activities within the project area which are included in this approval.
Original dated 11/2/2013	Condition class – One of three states in which the White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community may exist, as defined within the Commonwealth listing advice for the listing of this ecological community as critically endangered under the EPBC Act.
Original dated 11/2/2013	Department - the Australian Government Department responsible for the <i>Environment Protection and Biodiversity Conservation Act 1999</i> .
Original dated 11/2/2013	Environmental Assessment – The Maules Creek Coal Project Environmental Assessment July 2011, prepared by Hansen Bailey for Aston Coal 2 Pty Ltd, and submitted as part of the approval documents for the Maules Creek Coal Project.
Original dated 11/2/2013	Habitat – areas in which a species or community is known to occur or is thought to have the potential to occur based on the biophysical conditions prevailing in the area and the ecological requirements of the species or community
Original dated 11/2/2013	Independent review – an investigation conducted by an independent expert ecologist who has been approved by the department.
Original dated 11/2/2013	Minister - the Minister administering the <i>Environment Protection and Biodiversity Conservation Act 1999</i> and includes a delegate of the Minister
Original dated 11/2/2013	Matters of national environmental significance – all matters listed under Part 3 of the EPBC Act
Correction dated 15/2/2013	Offset areas – areas that are proposed to meet the criteria set out in conditions 9, 10, 11, 12 and 13 of the approval, to offset the impacts of the action on matters of national environmental significance.
Original dated 11/2/2013	Offset attributes -means an '.xls' file capturing relevant attributes of the Offset Area, including the EPBC reference ID number, the physical address of the offset site, coordinates of the boundary points in decimal degrees, the EPBC protected matters that the offset compensates for, any additional EPBC protected matters that are benefiting from the offset, and the size of the offset in hectares.
Original dated 11/2/2013	Project area – the area defined by the Maules Creek Coal Mine Project EPBC Act referral (EPBC Act reference 2010/5566) as lying within the Project Application Boundary.
Original dated 11/2/2013	Shapefiles -means an ESRI Shapefile containing '.shp', '.shx' and '.dbf' files and other files capturing attributes of the Offset Area, including the shape, EPBC reference ID number and EPBC protected matters present at the relevant site. Attributes should also be captured in '.xls' format. A geographically referenced raster 'img' file/s must be provided to provide context for the shapefiles.
Original dated 11/2/2013	State and Transition Model – Section 3.2 of <i>A Guide to Managing Box Gum Grassy Woodlands</i> (Caring for our Country Environmental Stewardship, 2010), depicts the different condition states (as reflected by disturbance, inputs and altered land use) in which a given vegetation can exist. This publication can be found at: http://www.nrm.gov.au/resources/publications/stewardship/bggw-handbook.html
Original dated 11/2/2013	Substantially commence the action – means the extraction of coal from the Maules Creek Coal Mine Project for the purpose of commercial production. Substantial commencement does not include test extraction or extraction of coal samples for quality assurance.

3

The Project

Attachment A



Attachment 5

Table 2.5 Summary of EPBC Matters - Condition Areas of Box Gum Woodland and Habitat for Threatened EPBC Fauna to be Conserved in the Eastern, Western, Northern and Shared Properties

Property (describe each discrete property separately)	Size property (ha)	Location property (map coordinates)		Current tenure (+security of acquisition)	Proposed long-term protection mechanism (covenant, CA, National Parks etc)	Box Gum Woodland and Derived Grasslands provided (ha)				HABITAT for EPBC Matters of National Environmental Significance (Regent Honeyeater, Swift Parrot and Greater Long-eared Bat)	
		LATITUDE	LONGITUDE			Condition 'A' (not included in EPBC listing)	Condition 'B' (patches of >0.1 ha with more than 12 species)	Condition 'C' (patches of >2 ha with at least 20 mature trees per ha)	Good condition vegetation (ha)	Low or moderate condition vegetation to be re-vegetated (ha)	
Blue Range	748	30°31'17.3 S	150°54'7.4 E	Private ownership	CA or other	0	0	21.7	0	127.4	
Cattle Plain	284	30°30'57.6 S	150°7'38.1 E	Private ownership	CA or other	0	0	36.0	36.0	118.3	
Toston (n/h)	292	30°31'58.8 S	150°6'38.7 E	Agreement in Place	CA or other	0	0	57.8	0.1	204.5	
Tralea	342	30°32'2.6 S	150°7'26.2 E	Agreement in Place	CA or other	0	0	17.2	0	103.2	
Wallandilly	1890	30°30'47.9 S	150°9'56.4 E	Private ownership	CA or other	0	0	98.3	122.8	699.7	
Warriahdool	1011	30°31'22.5 S	150°8'40.7 E	Agreement in Place	CA or other	0	0	64.5	64.5	138.1	
MI Lindesay	2430	30°19'42.1 S	150°16'57.1 E	Aston Coal Owned	NP, CA or other	0	577.3	1458.6	1456.7	821.2	
Wirradale	4321	30°22'54.6 S	150°15'47.8 E	Under option	NP, CA or other	0	818.7	1517.1	1942.2	1593.7	
Shared Property	884	30°38'44.7 S	150°11'12.7 E	Blagbarn / Aston Coal Owned	CA or other	0	0	5.5	124.1	232.1	
Kelso	508	30°36'26.1 S	150°3'36.3 E	Private ownership	CA or other	0	0	16.5	342.8	156.4	
Louenvilla	459	30°34'53.3 S	150°4'59.8 E	Agreement in Place	CA or other	0	0	151.0	188.6	115.0	
Olivedeen	193	30°35'24.4 S	150°3'9.4 E	Aston Coal Owned	CA or other	0	0	0	13.2	31.8	
Toston (s/h)	1273	30°34'5.7 S	150°7'0.1 E	Aston Coal Owned	CA or other	0	18.6	63.4	175.1	127.6	
Vejayama	919	30°36'9.5 S	150°5'5.9 E	Aston Coal Owned	CA or other	0	71.6	37.8	83.0	315.8	
TOTAL	15554					0	1486.2	3545.4	4549.1	4784.8	



Table 2.6 Condition Areas of Habitat for Threatened Species to be Conserved in the Eastern, Western, Northern and Shared Properties

OFFSETS	[a] HABITAT for Wide-foraging Bird Species (White-throated Noddy, Fork-tailed Swift, Square-tailed Kite, Spotted Harrier, Little Eagle)		[b] HABITAT for Forest and Woodland Species*		[c] Potential HABITAT for Koala		[d] Potential HABITAT for <i>Pultenaea setulosa</i>		[e] Potential HABITAT for <i>Pomaderris queenslandica</i>	
	Property (describe each discrete property separately)	Good condition vegetation (ha)	Low or moderate condition vegetation to be re-vegetated (ha)	Good condition vegetation (ha)	Low or moderate condition vegetation to be re-vegetated (ha)	Good condition vegetation (ha)	Low or moderate condition vegetation to be re-vegetated (ha)	Good condition vegetation (ha)	Low or moderate condition vegetation to be re-vegetated (ha)	
Blue Range	30.69	96.7	0	127.4	0	30.7	0	0	28.4	
Carilla Plain	38.6	115.6	36.0	118.3	36.0	2.7	0	0.0	2.7	
Foston (tbl)	66.1	138.4	0.1	204.5	0.1	63.3	0.1	2.8	15.7	
Traloe	35	66.1	0	103.2	0	26.5	0	8.6	9.5	
Wailandilly	266.7	555.8	122.8	899.7	122.8	143.9	10.5	0.0	58.2	
Warrawool	89.7	112.9	64.5	138.1	64.5	25.2	0	0.0	25.2	
Mt Lindsay	2260.4	17.5	1456.7	686.4	1.9	0	0	0.0	2261.1	
Wirradale	3486.9	40.1	1942.2	1509.7	432.9	853.4	0	853.4	420.1	
Shared Property	355.0	1.3	124.1	232.1	0	41.8	0	35.0	185.2	
Kelso	342.8	156.4	342.8	156.4	72.4	0	286.9	0	0.0	
Lourenville	188.6	115.0	188.6	115.0	151.0	0	188.1	0	34.5	
Olivegreen	13.2	31.8	13.2	31.8	13.2	0	0	0	8.3	
Foston (sh)	246.6	56.2	175.1	127.6	10.6	52.9	175.1	0	83.1	
Vejyama	116.9	281.9	83.0	315.8	25.2	16.1	79.5	0	57.8	
TOTAL	7546.3	1787.7	4549.1	4784.8	2271.4	837.9	1628.4	195.1	973.1	

* Grey-crowned Babbler
 Speckled Warbler
 Little Lorikeet
 Swift Parrot
 Turquoise Parrot
 Barking Owl
 Masked Owl
 Rainbow Bee-eater
 Brown Treecreeper
 Black-chinned Honeyeater
 Regent Honeyeater
 Painted Honeyeater
 Varied Sittella
 White-browed Woodswallow
 Saint Flycatcher
 Hooded Robin
 Diamond Firetail
 Yellow-bellied Shearwater
 Little Pied Bat
 Eastern False Pipistrelle
 Eastern Bentwing-bat
 Greater Long-eared Eul
 Eastern Cave Bat

Black-necked Stork:
 It is difficult to estimate the area of habitat for the Black-necked Stork. The Black-necked Stork has foraging habitat on those properties where there are farm dams and shallow creeks supporting open, still water. Properties in the Eastern and Western offsets with frontage to the Namoi River and Back Creek (such as Kelso, Olivegreen and Warriahood), containing such water frontages and comprising floodplain areas of the Namoi River, are suitable foraging areas for the species. The draft BOMP makes provision for the rehabilitation of creekline areas and riparian habitat in offset areas, which is intended to protect and improve the foraging habitat of this species.

The habitat estimates that appear in the above table are based on the following assumptions about habitat:

- [a] These are wide-foraging species that forage over forest, woodland and grassland areas and are fairly adaptable to modified habitats. These species have been detected, or are likely to occur in the offset areas from time to time.
- [b] These are species that rely on forest and woodland areas. These species have been detected, or are likely to occur in the offset areas.
- [c] Koalas were not detected within the Project Boundary despite an intensive survey. In spite of this, Koalas are anecdotally known to occur in the Project Boundary but at very low densities. Grassy box woodlands and riparian forests are potential habitat for the Koala in the offset areas.
- [d] *Pultenaea setulosa* is known to occur in ironbark forests. Ironbark woodland and forests in the offset areas provide potential habitat for the species; and
- [e] *Pomaderris queenslandica* has potential habitat in forest and woodlands where there is a shrubby understorey, as well as in creekline vegetation.

Table – comparison of Maules Creek approval conditions and draft variation

Date of decision	Current Conditions attached to approval as at 19/3/2020	Draft Variation	Justification
Original dated 11/2/2013	<p>Disturbance areas</p> <p>1. The person taking the action must not clear more than 544 hectares (ha) of the EPBC listed White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland critically endangered ecological community within the Maules Creek project area, as identified in <u>Attachment A</u> of these conditions.</p>		
Original dated 11/2/2013	<p>2. The person taking the action must not clear more than 1665 ha of habitat for the regent honeyeater (<i>Anthochaera phrygia</i>: formerly <i>Xanthomyza phrygia</i>), swift parrot (<i>Lathamus discolor</i>) or greater long-eared bat (<i>Nyctophilus corbeni</i>), within the Maules Creek project area. The 1665 ha of habitat specified includes the 544 ha of the critically endangered ecological community at condition 1.</p>		
Original dated 11/2/2013	<p>3. The person taking the action must submit a Biodiversity Corridor plan for the approval of the Minister within three months of the date of this approval. The plan must address the following matters:</p> <ul style="list-style-type: none"> a) protection of native vegetation of a total width of 500 metres (m) where the Maules Creek coal lease boundary is adjacent to the Boggabri coal mine lease boundary; b) maintenance in perpetuity of this area as a biodiversity corridor, and c) evidence that the biodiversity corridor will be protected in perpetuity through a legal mechanism that would provide the equivalent protection of a conservation covenant. <p>The approved Biodiversity Corridor must be implemented.</p>	<p>3. The person taking the action must submit a Biodiversity Corridor plan for the approval of the Minister within three months of the date of this approval. The plan must address the following matters:</p> <ul style="list-style-type: none"> a) protection of native vegetation of a total width of 500 metres (m) where the Maules Creek coal lease boundary is adjacent to the Boggabri coal mine lease boundary; b) maintenance in perpetuity of this area as a biodiversity corridor, and c) evidence that the biodiversity corridor will be protected in perpetuity through a legal mechanism that would provide the equivalent protection of a conservation covenant. <p>The approved Biodiversity Corridor must be implemented.</p>	Correct spelling error
Original dated 11/2/2013	<p>4. The person taking the action is required to submit a Conservation and Biodiversity Bond under condition 55 of the NSW state government project approval dated 23 October 2012 (Application 10_0138). It is noted that this bond may be combined with the rehabilitation security deposit as required by the NSW Trade & Investment - Division of Resources and Energy under the NSW <i>Mining Act 1992</i>. The person taking the action must submit details of this bond and the rehabilitation security deposit, to the Minister. If the Minister is not satisfied that the bond and the rehabilitation security deposit lodged by the person taking the action is adequate to provide for the implementation of the requirements referred to under conditions 3, 17, 25- 28 the Minister may require the person taking the action establish an additional bond or equivalent financial instrument in trust, under conditions approved in writing by the Minister.</p>	<p>4. The person taking the action is required to submit a Conservation and Biodiversity Bond under condition 55 of the NSW state government project approval dated 23 October 2012 (Application 10_0138). It is noted that this bond may be combined with the rehabilitation security deposit as required under the NSW Mining Act 1992. The person taking the action must submit details of this bond and the rehabilitation security deposit, to the Minister. If the Minister is not satisfied that the bond and the rehabilitation security deposit lodged by the person taking the action is adequate to provide for the implementation of the requirements referred to under conditions 3, 17, 25-28 the Minister may require the person taking the action establish an additional bond or equivalent financial instrument in trust, under conditions approved in writing by the Minister.</p>	Remove reference to specific NSW agency

Date of decision	Current Conditions attached to approval as at 19/3/2020	Draft Variation	Justification
Original dated 11/2/2013	5. The person taking the action must provide a map to the Minister showing the area of the biodiversity corridor within the Maules Creek coal mine lease boundary within one month of this approval decision and detail the amount (in hectares) of White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland critically endangered ecological community and habitat or potential habitat for the regent honeyeater, swift parrot and greater long-eared bat within this area.		
Original dated 11/2/2013	6. The person taking the action must submit to the Minister for approval, within three months of the commencement of the action, an approach that: <ul style="list-style-type: none"> a) limits the maximum disturbance (in hectares) specified for each of the years 5, 10, 15 and 21 from the date of this approval of the White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community and the habitat or potential habitat for the regent honeyeater, swift parrot and greater long-eared bat; b) incorporates an analysis, undertaken by independent ecological experts approved by the Department, that demonstrates the maximum disturbance limits which will minimise any impacts on relevant matters of national environmental significance; c) demonstrates collaboration with the person taking the action to develop and operate the Boggabri Coal Project (EPBC 2009/5256), in order to minimise progressive project area disturbance limits across both sites. The progressive disturbance limits are to be reflected in the development of the Leard Forest Mining Precinct Biodiversity Strategy. 		
Original dated 11/2/2013	7. The person taking the action must not clear more than the maximum project area disturbance limits specified for each of the years 5, 10, 15 and 21 as described in condition 6, unless otherwise approved by the Minister .		
Original dated 11/2/2013	8. The person taking the action must publish the analysis under condition 6 on their website.	8. The person taking the action must publish the analysis required under condition 6.b) on their website.	Clarify meaning

Date of decision	Current Conditions attached to approval as at 19/3/2020	Draft Variation	Justification
Original dated 11/2/2013	<p>Direct Offsets</p> <p>9. The person taking the action must register a legally binding conservation covenant over offset areas of no less than:</p> <p>a. 9,334 ha of an equivalent or better quality of habitat for the regent honeyeater, swift parrot and greater long-eared bat; and</p> <p>b. 5,532 ha of an equivalent or better quality of the White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community.</p> <p>Note: the 5,532 ha of White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community may be included within the 9,334 ha of offset area for the threatened species if it meets the listing criteria for the EPBC-listed critically endangered ecological community as defined in the EPBC listing advice for that community and the requirements of condition 9.</p>	<p>Direct Offsets</p> <p>9. The person taking the action must register legally binding conservation covenants over offset areas containing, to the satisfaction of the Minister, no less than:</p> <p>a. 9,334 ha of an equivalent or better quality of habitat for the regent honeyeater, swift parrot and greater long-eared bat; and</p> <p>b. 5,532 ha of an equivalent or better quality of the White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community.</p> <p>Note: the 5,532 ha of White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community may be included within the 9,334 ha of offset area for the threatened species if it meets the listing criteria for the EPBC-listed critically endangered ecological community as defined in the EPBC listing advice for that community and the requirements of condition 9.</p>	Clarify Minister approval of offset calculation
		<p>9A. The offset areas must be of an overall equivalent or better quality than the areas being cleared. This means:</p> <p>a. for White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community, offset areas must meet the definition of the ecological community described in the listing advice, and must be of an overall equivalent or better condition class than the areas being cleared, based on the proportion of each condition class represented and other relevant ecological attributes;</p> <p>b. for the threatened species, the quality of the habitat for the species, taking account of its ecological requirements, must be equivalent to or better than the areas being cleared.</p>	Move from c. 12 to be grouped where it belongs logically with offsets requirement
Correction dated 15/2/2013	<p>10. The person taking the action must verify through independent review the quantity and condition class of White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community and the quantity and quality of habitat for the regent honeyeater, swift parrot and greater long-eared bat within all proposed offset areas including those proposed in the Environmental Assessment, as defined at <u>Attachment B</u> of these conditions, and any additional offsets as required at condition 9. Details of all independently verified offset areas must be submitted to the Minister for approval by 30</p>	<p>10. The person taking the action must verify through independent review the quantity and condition class of White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community and the quantity and quality of habitat for the regent honeyeater, swift parrot and greater long-eared bat within all offset areas proposed in the Environmental Assessment, as specified at Attachment B of these conditions, and any additional offsets as required under condition 11. Details of all independently verified offset areas proposed in the Environmental Assessment must be submitted to the Minister for approval by 30 December 2013.</p>	<p>Minor change to clarify original additional offsets process</p> <p>Completed in December 2013</p>

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	December 2013. The findings of the independent review must be published on the proponent's website.	The findings of the independent review must be published on the website of the person taking the action and remain published until the expiry of this approval.	Specify deadline for publishing on website
Original dated 11/2/2013	11. If the independent review finds that the offset areas do not meet the requirements of conditions 9, 12 a and 12 b, then additional areas must be included in the offset areas until all relevant criteria under these conditions are met.	11. If the independent review finds that the offset areas proposed in the Environmental Assessment do not meet the requirements of conditions 9 and 9A, then additional areas must be included in the offset areas until the independent review finds that the relevant criteria under these conditions are met.	Update as per varied conditions
		<p>Replacement and new offsets</p> <p>11A. For the purpose of condition 9, the offset areas may include additional offset areas to the offset areas which were the subject of independent review under conditions 10 and 11 if:</p> <p>a) the person taking the action submits a report to the Minister for approval, which has been subject to additional independent review, that identifies and verifies the quantity and condition classes of White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community and the quantity and quality of habitat for the regent honeyeater, swift parrot and greater long-eared bat within the additional offset areas;</p> <p>b) that report is submitted to the Minister for approval by 30 June 2022, unless otherwise agreed by the Minister in writing; and</p> <p>c) the Minister has approved that report.</p> <p>The person taking the action must publish the report on its website within 30 days of the Minister's approval, unless otherwise agreed by the Minister in writing.</p>	<p>New</p> <p>Condition to identify and verify additional offsets and replacements for original</p>
Original dated 11/2/2013	<p>12. The offset areas must be of an overall equivalent or better quality than the areas being cleared. This means:</p> <p>a. for White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community, offset areas must meet the definition of the ecological community described in the listing advice, and must be of an overall equivalent or better condition class than the areas being cleared, based on the proportion of each condition class represented and other relevant ecological attributes;</p> <p>b. for the threatened species, the quality of the habitat for the species, taking account of its ecological</p>	12. Revoked	Moved to 9A

Date of decision	Current Conditions attached to approval as at 19/3/2020	Draft Variation	Justification
	requirements, must be equivalent to or better than the areas being cleared.		
		<p>Offset Management Plans</p> <p>12A. The person taking the action must submit to the Minister for approval an Offset management plan for all of the offset areas proposed in the Environmental Assessment, specified in Attachment B, within 12 months of this approval. The approved Offset management plan must be implemented for all of the offset areas proposed in the Environmental Assessment, specified in Attachment B, and any offset areas agreed as a result of independent verification process as specified in conditions 10 and 11, unless the Minister agrees to the removal of any specific properties as an offset area under this approval.</p> <p>If, after 31 October 2021, the Minister informs the person taking the action that the submitted Offset management plan is not suitable for approval, the Minister may, after 30 December 2021, approve a version of the Offset management plan revised by the Department.</p> <p>Note: for consistency, the person taking the action may develop a Biodiversity Management plan that includes the requirements set for managing offsets and set out in these conditions, to align with the requirements of the NSW state government Project Approval dated 23 October 2012 (application number 10_0138) and this approval.</p>	<p>Moved from original 17 to be more logically grouped with offsets</p> <p>Provides mechanism to replace offsets with more suitable</p> <p>Provides mechanism to ensure OMP is finalised</p>
		<p>12B. The person taking the action must submit to the Minister for approval an Additional Offset management plan for the additional offset areas within 6 months of their approval under condition 11A. The person taking the action must implement the approved Additional offset management plan.</p> <p>If, after a further 3 months, the Minister informs the person taking the action that the submitted Additional Offset management plan is not suitable for approval, the Minister may, after a further 3 months, approve a version of the Additional Offset management plan revised by the Department.</p> <p>Notes:</p> <p>(1) for consistency, the person taking the action may develop a Biodiversity Management plan that includes the requirements set for managing offsets and set out in these conditions, to align with the requirements of the NSW state government Project Approval dated 23 October 2012 (application number 10_0138) and this approval.</p>	<p>New condition to provide for additional OMP</p>

Date of decision	Current Conditions attached to approval as at 19/3/2020	Draft Variation	Justification
		(2) with the agreement of the Minister , the person taking the action may combine the Offset management plan and the Additional Offset management plan.	
		<p>12C. Each <i>offset management plan</i> must include, but not be limited to, the following:</p> <ul style="list-style-type: none"> a) a text description and map which clearly defines the location and boundaries of the offset areas. This must be accompanied by the offset attributes and shapefiles; b) a description of the methodology and results of surveys measuring the baseline ecological conditions in the offset areas. This must be consistent with the State and Transition Model and include but not be limited to: <ul style="list-style-type: none"> i. the extent and condition of all vegetation communities, including a description of the structure, floristics and tree age class representation of each community; ii. the extent and condition class of all areas of the White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community; iii. surveys targeting the regent honeyeater, swift parrot and greater long-eared bat; iv. the extent and quality of all areas of habitat for the regent honeyeater, swift parrot and greater long-eared bat; v. the location of all survey sites (including co-ordinates); vi. photo reference points at survey sites. c) clearly defined ecological management objectives for the offset areas; d) detailed description of all ecological management activities proposed to be undertaken, including maps and/or diagrams showing areas to be managed and the timing of the proposed activities; e) details of ongoing ecological monitoring programs, performance criteria, targets and provisions for adaptive management, including but not limited to: <ul style="list-style-type: none"> i. a set of measurable ecological indicators for detecting changes to the White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived 	Moved from original c.18 to be more logically grouped with offsets

Date of decision	Current Conditions attached to approval as at 19/3/2020	Draft Variation	Justification
		<p>Native Grassland ecological community, including those that may be ascribed to ongoing water stress;</p> <ul style="list-style-type: none"> ii. a monitoring plan to assess the success of the management activities measured against the baseline condition. The monitoring must be statistically robust and able to quantify change in the condition of the White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community and habitat for the regent honeyeater, swift parrot and greater long-eared bat. This should include the use of control sites and periodic ecological surveys to be undertaken by a qualified ecologist; iii. a list of performance criteria based on the ecological management objectives for the White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community and habitat for the regent honeyeater, swift parrot and greater long-eared bat; iv. measures to exclude weeds from all offset areas for the period covered by this approval; v. a description of the potential risks to successful management against the performance criteria, and a description of the contingency measures that would be implemented to mitigate against these risks; vi. a process by which to report to the department the progress of management activities undertaken in the offset areas and the outcome of those activities, including identifying any need for improved management and activities to undertake such improvement. f) details of all parties responsible for management, monitoring and implementing the management activities, including their position or status as a separate contractor; g) details of the funding requirements for the ongoing management activities, including an estimate of the costs of the activities and details of the parties responsible for funding the activities. 	
		12D. Unless otherwise agreed to in writing by the department , the baseline surveys for threatened species must be conducted in accordance with the department's <i>Survey Guidelines for Australia's</i>	Moved to be more logically grouped with offsets

Date of decision	Current Conditions attached to approval as at 19/3/2020	Draft Variation	Justification
		<i>Threatened Birds and the Survey Guidelines for Australia's Threatened Bats.</i> Subsequent monitoring must be carried out annually at the same time of year as the baseline surveys, unless otherwise agreed to in writing by the department .	
Variation dated 19/3/2020	<p>13. The mechanism/s for registering a legally binding covenant must provide protection for the offset areas in perpetuity and be registered by 31 March 2021, except in respect of the Rocklea property, which must be registered by 15 December 2022.</p> <p>Evidence of compliance with condition 13 must be provided to the Department within 30 day of registering a legally binding covenant.</p> <p>The approval holder must report on progress meeting these requirements of in each annual compliance report required under condition 34 and as otherwise requested by the Department.</p>	<p>Mechanisms to protect offset areas</p> <p>13. The mechanism/s for registering a legally binding covenant must provide protection for the offset areas proposed in the Environmental Assessment as specified at <u>Attachment B</u> of these conditions, in perpetuity and be registered by 30 June 2021, unless the Minister agrees in writing to removal of any specific properties.</p> <p>Evidence of compliance with condition 13 must be provided to the Department within 30 days of registering a legally binding covenant.</p> <p>The person taking the action must report on progress meeting these requirements of in each annual compliance report required under condition 34 and as otherwise requested by the Department.</p>	Provides additional time to register mechanisms for current approved offsets
		<p>13A. For any approved replacement and new offset area, the person taking the action must:</p> <ul style="list-style-type: none"> a. implement an approved offset management plan (as per condition 12B); b. by 30 December 2022, submit an application to establish legally binding covenants that provide protection for the offsets areas in perpetuity; and c. by 31 March 2024, register the legally binding covenants that provide protection for the offset areas in perpetuity. <p>The approval holder must report on progress meeting these requirements in each annual compliance report required under condition 34 and as otherwise requested by the Department.</p>	Provides timetable for new offsets
Original dated 11/2/2013	<p>14. If the person taking the action proposes to undertake any action within areas secured under condition 9, other than those management activities related to managing the offset areas or as set out in the conditions approval, then approval to undertake that action must be obtained in writing from the Minister. In seeking the Minister's approval, the person undertaking the action must provide a detailed assessment of the area where the action is proposed to take place and an assessment of all associated adverse impacts on matters of national environmental significance. If the Minister agrees to the action within the offset areas, the area identified for the action must be excised from the</p>	<p>Mining activity affecting offsets areas</p> <p>14. If the person taking the action proposes to undertake any mining activity within or beneath areas secured in accordance with conditions 9, 13 and 13A, then approval to undertake that action must be obtained in writing from the Minister before undertaking any mining activity within or beneath such areas. In seeking the Minister's approval, the person undertaking the action must provide a detailed assessment of the area where the mining activity is proposed to take place and an assessment of all associated adverse impacts on matters of national environmental significance. If the Minister</p>	Clarifies intent of condition

Date of decision	Current Conditions attached to approval as at 19/3/2020	Draft Variation	Justification
	<p>offset area and alternative offsets secured by the person taking the action at a ratio of at least 20:1 in relation to the impact on matters of national environmental significance.</p>	<p>agrees to the action within the offset areas, the area identified for the action must be excised from the offset area and alternative offsets secured by the person taking the action at a ratio of at least 20:1 in relation to the impact on matters of national environmental significance.</p> <p>Notes:</p> <p>(1) For the avoidance of any doubt, condition 14 does not apply to an offset area proposed in the Environmental Assessment, as specified at Attachment B of these conditions, if the Minister has agreed in writing to the removal of the property as an offset area pursuant to condition 13 of this approval.</p> <p>(2) In accordance with the EPBC Act, if the proposed mining activity is not part of the approved action, the proposed mining activity cannot be approved as part of this EPBC Act approval.</p>	
Original dated 11/2/2013	<p>Indirect Offsets</p> <p>15. To compensate for the loss of the White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community and habitat for the regent honeyeater, swift parrot and greater long-eared bat the person taking the action must submit to the Minister for approval, within 2 years of the date of this approval, a project plan to invest \$1 million for research that will identify effective methodologies for achieving rehabilitation and restoration of functioning White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community on mining sites. The research must be undertaken by a third party and be available to industry and governments generally. The approved project plan must be implemented.</p>		
Variation dated 16/3/2017	<p>16. To compensate for the loss of the habitat for the regent honeyeater, swift parrot and greater long-eared bat the person taking the action must provide \$1.5 million over the life of the approval (comprising \$500,000 for each of the regent honeyeater, swift parrot and greater long-eared bat), to deliver activities that implement priority recovery actions for the regent honeyeater, swift parrot and greater long-eared bat. A detailed project plan governing the timing of the \$1.5 million funding for the activities and outcomes must be developed. The project plan must be submitted to the Minister for approval by 30 April 2017, or otherwise agreed in writing by the Minister. The project plan should demonstrate consultation with relevant species experts and be consistent with approved National Recovery Plans where they are available, and as agreed with the relevant Recovery Planning Teams. The approved project plan must be implemented.</p>		

Date of decision	Current Conditions attached to approval as at 19/3/2020	Draft Variation	Justification
Original dated 11/2/2013	<p>Offset management plan</p> <p>17. The person taking the action must submit to the Minister for approval an <i>Offset management plan</i> for all of the offset areas, specified in condition 9, within 12 months of the date of this approval. The approved Offset management plan must be implemented.</p> <p>Note: for consistency, the proponent may develop a Biodiversity Management plan that includes the requirements set for managing offsets and set out in these conditions, to align with the requirements of the NSW state government Project Approval dated 23 October 2012 (application number 10_0138) and this approval.</p>	17. Revoked	Moved to be more logically grouped with offsets
Original dated 11/2/2013	<p>18. The <i>Offset management plan</i> must include, but not be limited to, the following:</p> <p>a. a text description and map which clearly defines the location and boundaries of the offset areas. This must be accompanied by the offset attributes and shapefiles;</p> <p>b. a description of the methodology and results of surveys measuring the baseline ecological conditions in the offset areas. This must be consistent with the State and Transition Model and include but not be limited to:</p> <ul style="list-style-type: none"> i. the extent and condition of all vegetation communities, including a description of the structure, floristics and tree age class representation of each community; ii. the extent and condition class of all areas of the White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community; iii. surveys targeting the regent honeyeater, swift parrot and greater long-eared bat; iv. the extent and quality of all areas of habitat for the regent honeyeater, swift parrot and greater long-eared bat; v. the location of all survey sites (including co-ordinates); vi. photo reference points at survey sites. 	18. Revoked	Moved to be more logically grouped with offsets

Date of decision	Current Conditions attached to approval as at 19/3/2020	Draft Variation	Justification
	<p>c. clearly defined ecological management objectives for the offset areas;</p> <p>d. detailed description of all ecological management activities proposed to be undertaken, including maps and/or diagrams showing areas to be managed and the timing of the proposed activities;</p> <p>e. details of ongoing ecological monitoring programs, performance criteria, targets and provisions for adaptive management, including but not limited to:</p> <ul style="list-style-type: none"> vii. a set of measurable ecological indicators for detecting changes to the White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community, including those that may be ascribed to ongoing water stress; viii. a monitoring plan to assess the success of the management activities measured against the baseline condition. The monitoring must be statistically robust and able to quantify change in the condition of the White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community and habitat for the regent honeyeater, swift parrot and greater long-eared bat. This should include the use of control sites and periodic ecological surveys to be undertaken by a qualified ecologist; ix. a list of performance criteria based on the ecological management objectives for the White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community and habitat for the regent honeyeater, swift parrot and greater long-eared bat; x. measures to exclude weeds from all offset areas for the period covered by this approval; xi. a description of the potential risks to successful management against the performance criteria, and a description of the contingency measures that would be implemented to mitigate against these risks; 		

Date of decision	Current Conditions attached to approval as at 19/3/2020	Draft Variation	Justification
	<p>xii. a process by which to report to the department the progress of management activities undertaken in the offset areas and the outcome of those activities, including identifying any need for improved management and activities to undertake such improvement.</p> <p>f. details of all parties responsible for management, monitoring and implementing the management activities, including their position or status as a separate contractor.</p> <p>g. details of the funding requirements for the ongoing management activities, including an estimate of the costs of the activities and details of the parties responsible for funding the activities.</p>		
Original dated 11/2/2013	19. Unless otherwise agreed to in writing by the department , the baseline surveys for threatened species must be conducted in accordance with the department's <i>Survey Guidelines for Australia's Threatened Birds</i> and the <i>Survey Guidelines for Australia's Threatened Bats</i> . Subsequent monitoring must be carried out annually at the same time of year as the baseline surveys, unless otherwise agreed to in writing by the department .	19. Revoked	Moved to be more logically grouped with offsets
Correction dated 16/4/2013	<p>Surface and groundwater management plans</p> <p>20. The person taking the action must provide to the Minister for approval, the <i>surface and groundwater management plans</i> as identified in condition 40 of the NSW state government Project Approval dated 23 October 2012 (application number 10_0138). The <i>surface and groundwater management plans</i> must be approved by the Minister prior to commencement of construction.</p>		
Original dated 11/2/2013	21. The <i>surface and groundwater management plans</i> must be consistent with the National Water Quality Management Strategy .		
Original dated 11/2/2013	22. The person taking the action must, prior to commencement of construction , in collaboration with the proponent to develop and operate the Boggabri Extension (EPBC 2009/5256) and any other approved mines within 20 kilometres (km) of the project area , provide written advice to the Minister demonstrating how the NSW government approved <i>surface and groundwater management plans</i> (condition 20), addresses the cumulative impact of groundwater drawdown as a result of mining and how this may impact on the consequent health of the remnant native vegetation in the Leard State Forest, the Leard State Conservation		

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	<p>Area and surrounding areas. In particular the advice must address the following matters:</p> <ul style="list-style-type: none"> a. maximum amount of allowable drawdown in the alluvial aquifer b. drawdown in hard rock c. trigger levels pertaining to drawdown in the alluvial aquifer when corrective actions will be required to be undertaken d. identify the depth of root zone of the native vegetation e. monitoring to assess the ongoing quality and quantity of both surface and groundwater to identify impacts on the native vegetation. 		
Original dated 11/2/2013	<p>23. The person taking the action must within 6 months of the date of this approval, or such other timeframe specified by the Minister, provide to the Minister a report on:</p> <ul style="list-style-type: none"> a. any updated modelling of surface and groundwater impacts that has been undertaken in preparing the <i>surface and groundwater management plans</i> b. how the <i>surface and groundwater management plans</i> addressed groundwater and surface water impacts on matters of national environmental significance. 		
Original dated 11/2/2013	<p>Leard Forest Mining Precinct Regional Biodiversity Strategy</p> <p>24. The person taking the action must implement the regional biodiversity strategy as required under condition 41 of the NSW state government project approval dated 23 October 2012 (application number 10_0138). The required scoping report for the development of the strategy must be submitted to the Minister for approval on or before 31 July 2013. The approved strategy must be implemented.</p>		
Original dated 11/2/2013	<p>Mine site rehabilitation</p> <p>25. To mitigate the impacts to the White Box-Yellow Box – Blakely's Red Gum Grassy Woodland and Derived Native Grassland and the habitat of the regent honeyeater, swift parrot and greater long-eared bat, the person taking the action must, within 12 months of the commencement of construction, submit to the Minister for approval a <i>mine site rehabilitation plan</i> for the progressive rehabilitation and revegetation of no less than 1665 ha of native forest and woodland (less the portion included in the biodiversity corridor identified in condition 3) in the project area</p>		

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	including 544 ha using species consistent with a White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland Ecological Community. This approved <i>mine site rehabilitation plan</i> must be implemented.		
Original dated 11/2/2013	<p>26. The person taking the action must:</p> <ul style="list-style-type: none"> a. rehabilitate the site to be consistent with the proposed rehabilitation strategy as provided in the Environmental Assessment and, as required under the NSW State Government approval dated 23 October 2012 (Application 10_0138); and b. not replace topsoil and sub soil layers at a depth less than the minimum depths determined through pre-stripping soil surveys as described in condition 27(c). <p>Note: the NSW state government Project Approval dated 23 October 2012 (application number 10_0138) conditions require pre-stripping soil surveys and inventories to inform the availability, rehandling, stockpiling and management of soils, and maximising the salvaging of soil to be used, in the rehabilitation of the site.</p>		
Original dated 11/2/2013	<p>27. The <i>mine site rehabilitation plan</i> must include, at a minimum, the following information:</p> <ul style="list-style-type: none"> a. targets and performance indicators to achieve effective restoration of potential habitat for the regent honeyeater, swift parrot and greater long-eared bat and White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community, including weed management; b. details of the vegetation communities to be rehabilitated and the timing of progressive rehabilitation (commencing as soon as practicable following disturbance); c. detailed soil depth surveys and analysis to inform the effective placement and restoration of soils underlying the proposed rehabilitation sites; including mapping of soils across the disturbance sites and soil sampling at no less than one sample point per 20 ha of each soil type identified. Sampling must identify; type, depth, water holding capacity, structure and physio-chemical properties of each of the soil and subsoil layers; 		

Date of decision	Current Conditions attached to approval as at 19/3/2020	Draft Variation	Justification
	<p>d. processes and methodologies for the removal, storage and re-layering of the topsoil and sub soil layers underlying the disturbed sites being prepared for rehabilitation. These processes and methodologies must ensure the replacement of topsoil and sub soil layers:</p> <ul style="list-style-type: none"> • meet the minimum depth requirements determined from sampling outcomes as identified in condition 27(c); and • replicate other existing soil parameters including, but not limited to, soil type, water holding capacity, structure and physio-chemical properties. <p>e. a process to report annually to the department the rehabilitation management actions undertaken and the outcome of those actions, and the mechanisms to be used to identify the need for improved management;</p> <p>f. a description of the potential risks to successful management and rehabilitation on the project site, including weed invasion, and a description of the contingency measures that would be implemented to mitigate these risks;</p> <p>g. details of long-term management and protection of the mine site, including details of the commitment of funds to achieve this.</p>		
Original dated 11/2/2013	28. The <i>mine site rehabilitation plan</i> must be subject to an independent review by a qualified ecologist prior to being submitted to the Minister for approval. The findings of the independent review must be published on the proponent's website.		
Original dated 11/2/2013	<p>Final Landform</p> <p>Note: for consistency, the person taking the action may develop a single mine rehabilitation plan to align with the requirements, including timing of reporting, of the NSW State Government approval dated 23 October 2012 (Application 10_0138) and this approval. The Offset Management Plan and the Rehabilitation management Plan need to be substantially integrated for achieving biodiversity objectives for the rehabilitated mine-site.</p> <p>29. The person taking the action must undertake rehabilitation to ensure the final landform provides the optimum opportunity for the successful restoration of native forest and woodland including the</p>	<p>Final Landform</p> <p>Note: for consistency, the person taking the action may develop a single mine rehabilitation plan to align with the requirements, including timing of reporting, of the NSW State Government approval dated 23 October 2012 (Application 10_0138) and this approval. The Offset Management Plan and the Rehabilitation management Plan need to be aligned so as to achieve the biodiversity objectives of condition 29 for the rehabilitated mine-site.</p> <p>29. The person taking the action must undertake rehabilitation to ensure the final landform provides the optimum opportunity for the successful restoration of native forest and woodland</p>	Removes duplication and better wording

Date of decision	Current Conditions attached to approval as at 19/3/2020	Draft Variation	Justification
	<p>critically endangered White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community.</p> <p>Note: for consistency, the proponent may develop a single mine rehabilitation plan to align with the requirements of the NSW Government and this approval. The Offset Management Plan and the Rehabilitation management Plan need to be substantially integrated for achieving biodiversity objectives for the rehabilitated mine-site.</p>	<p>including the critically endangered White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community.</p>	
Original dated 11/2/2013	<p>30. The person taking the action must undertake rehabilitation to ensure the final void and landform minimises the extent of any resulting pit lake, avoids salt scalding and ensures that drained waters do not adversely affect the downstream environment and avoids any impacts on matters of national environmental significance.</p> <p>Note: the State approval conditions for project 10_0138 require the preparation and implementation of an updated Final Void and Mine Closure Plan that considers interactions with the adjoining mines, including interaction between final voids, opportunities for integrated mine planning with adjoining mines to minimise environmental impacts, all reasonable and feasible landform options for the final void (including filling) and predicted hydrochemistry and hydrogeology (including long-term groundwater recovery and void groundwater quality).</p>		
Original dated 11/2/2013	<p>Survey data</p> <p>31. All survey data collected for the project must be recorded so as to conform to data standards notified from time to time by the department. When requested by the department, the proponent must provide to the department all species and ecological survey data and related survey information from ecological surveys undertaken for matters of national environmental significance. This survey data must be provided within 30 business days of request, or in a timeframe agreed to by the department in writing. The department may use the survey data for other purposes.</p>		
Original dated 11/2/2013	<p>32. In the event that any additional matters of national environmental significance are recorded within the project area and a significant impact on the matter/s is likely, the department must be notified in writing within 14 days of the matter/s being recorded. In accordance with condition 37, the Minister may request that the person taking the action revise any relevant plans to ensure better protection of the relevant matter/s.</p>		

Date of decision	Current Conditions attached to approval as at 19/3/2020	Draft Variation	Justification
Original dated 11/2/2013	<p>Reporting and auditing</p> <p>33. Within 14 days after the commencement of construction, the person taking the action must advise the department in writing of the actual date of commencement of construction.</p>		
Original dated 11/2/2013	<p>34. By the end of March of each year after the commencement of the action, the person taking the action must publish a report on their website addressing compliance with the conditions of this approval over the previous 12 months, including implementation of any management plans as specified in the conditions. Non-compliance with any of the conditions of this approval must be reported to the department at the same time as the compliance report is published.</p>	<p>34. By the end of March of each year after the commencement of the action, the person taking the action must publish a report on their website addressing compliance with the conditions of this approval over the previous 12 months, including implementation of any approved management plans as specified in the conditions. Non-compliance with any of the conditions of this approval must be reported to the department at the same time as the compliance report is published.</p>	Clarify that applies to approved plans
Original dated 11/2/2013	<p>35. Upon the direction of the Minister, the person taking the action must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to the Minister. The independent auditor must be approved by the Minister prior to the commencement of the audit. Audit criteria must be agreed to by the Minister and the audit report must address the criteria to the satisfaction of the Minister.</p>		
Original dated 11/2/2013	<p>36. If the person taking the action wishes to carry out any activity otherwise than in accordance with the plans, as specified in the conditions, the person taking the action must submit to the department for the Minister's written approval a revised version of that plan. The varied activity shall not commence until the Minister has approved the revised plan in writing. The Minister will not approve a revised plan, unless the revised plan would result in an equivalent or improved environmental outcome. If the Minister approves the revised plan that plan must be implemented in place of the plan originally approved.</p>	<p>36. If the person taking the action wishes to carry out any activity otherwise than in accordance with the approved plans, as specified in the conditions, the person taking the action must submit to the department for the Minister's written approval a revised version of that plan. The varied activity shall not commence until the Minister has approved the revised plan in writing. The Minister will not approve a revised plan, unless the revised plan would result in an equivalent or improved environmental outcome. If the Minister approves the revised plan that plan must be implemented in place of the plan originally approved.</p>	Clarify that applies to approved plans
Original dated 11/2/2013	<p>37. If the Minister believes that it is necessary or convenient for the better protection of listed threatened species and communities or listed migratory species to do so, the Minister may request that the person taking the action make specified revisions to the management plan specified in the conditions and submit the revised plan for the Minister's written approval. The person taking the action must comply with any such request. The revised approved plan must be implemented. Unless the Minister has approved the revised plan then the person taking the action must continue to implement the originally approved plan, as specified in the conditions.</p>	<p>37. If the Minister believes that it is necessary or convenient for the better protection of listed threatened species and communities or listed migratory species to do so, the Minister may request that the person taking the action make specified revisions to the approved management plan specified in the conditions and submit the revised plan for the Minister's written approval. The person taking the action must comply with any such request.</p> <p>The revised approved plan must be implemented. Unless the Minister has approved the revised plan then the person taking the action must continue to implement the originally approved plan, as specified in the conditions.</p>	Provides power to require plans to be finalised in a reasonable timeframe

Date of decision	Current Conditions attached to approval as at 19/3/2020	Draft Variation	Justification
Original dated 11/2/2013	38. If, at any time after 5 years from the date of this approval, the person taking the action has not substantially commenced the action , then the person taking the action must not substantially commence the action without the written agreement of the Minister .		
Original dated 11/2/2013	Publication of plans 39. The person taking the action must maintain accurate records substantiating all activities and outcomes associated with or relevant to the above conditions of approval, including measures taken to implement the management plans required by this approval, and make them available upon request to the department . Such records may be subject to audit by the department or an independent auditor in accordance with section 458 of the <i>Environment Protection and Biodiversity Conservation Act 1999</i> or used to verify compliance with the conditions of approval. Summaries of audits will be posted on the department's website. The results of audits may also be publicised through the general media.		
Original dated 11/2/2013	40. Unless otherwise agreed to in writing by the Minister , the person taking the action must publish all management plans referred to in these conditions of approval on their website. Each management plan must be published on the website within 1 month of being approved.	40. Unless otherwise agreed to in writing by the Minister , the person taking the action must publish all approved management plans referred to in these conditions of approval on their website. Each management plan must be published on the website within 1 month of being approved and remain published until the expiry of the approval .	Clarify that applies to approved plans

Date of decision	Current Conditions attached to approval as at 19/3/2020	Draft Variation	Justification
		Additional independent review means a review of the report under condition 11A of this approval undertaken by a person(s) that: does not have any individual, or by employment or family affiliation, conflicting or competing interests with the approval holder; the approval holder's staff, representatives or associated persons; or the project, including any personal, financial, business or employment relationship, other than receiving payment for undertaking the role for which the condition requires an independent expert; and has professional qualifications and at least three (3) years of work experience designing and implementing surveys for or managing or studying and preparing prescriptions for the management of White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community and flora species associated with habitat for the regent honeyeater, swift parrot and greater long-eared bat, and can give an authoritative assessment and advice on the presence and management requirements of White Box—Yellow	New definition to support new condition

Date of decision	Current Conditions attached to approval as at 19/3/2020	Draft Variation	Justification
		Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community and the quantity and quality of habitat for the regent honeyeater, swift parrot and greater long-eared bat using relevant protocols, standards, methods and/or literature.	
Original dated 11/2/2013	Biodiversity corridor – an area of native vegetation at least 250 m wide that has not been previously cleared for mining, which links the existing native vegetation to the east and west of the Maules Creek and Boggabri coal mine leases and is located within the Maules Creek coal mine lease where it is adjacent to the Boggabri coal mine lease boundary. The purpose is to ensure that a minimum 500 m wide native vegetation corridor is maintained between the Boggabri and Maules Creek mines and that any alternative corridor <i>provides equivalent or better ecosystem functionality (including habitat for the regent honeyeater, swift parrot and greater long-eared bat).</i>		
Original dated 11/2/2013	Commencement of construction – the commencement of any activities within the project area which are included in this approval.		
Original dated 11/2/2013	Condition class – One of three states in which the White Box—Yellow Box—Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community may exist, as defined within the Commonwealth listing advice for the listing of this ecological community as critically endangered under the EPBC Act.		
Original dated 11/2/2013	Department - the Australian Government Department responsible for the <i>Environment Protection and Biodiversity Conservation Act 1999</i> .		
Original dated 11/2/2013	Environmental Assessment – The Maules Creek Coal Project Environmental Assessment July 2011, prepared by Hansen Bailey for Aston Coal 2 Pty Ltd, and submitted as part of the approval documents for the Maules Creek Coal Project.		
Original dated 11/2/2013	Habitat – areas in which a species or community is known to occur or is thought to have the potential to occur based on the biophysical conditions prevailing in the area and the ecological requirements of the species or community		
Original dated 11/2/2013	Independent review – an investigation conducted by an independent expert ecologist who has been approved by the department.		
Original dated 11/2/2013	Minister - the Minister administering the <i>Environment Protection and Biodiversity Conservation Act 1999</i> and includes a delegate of the Minister		

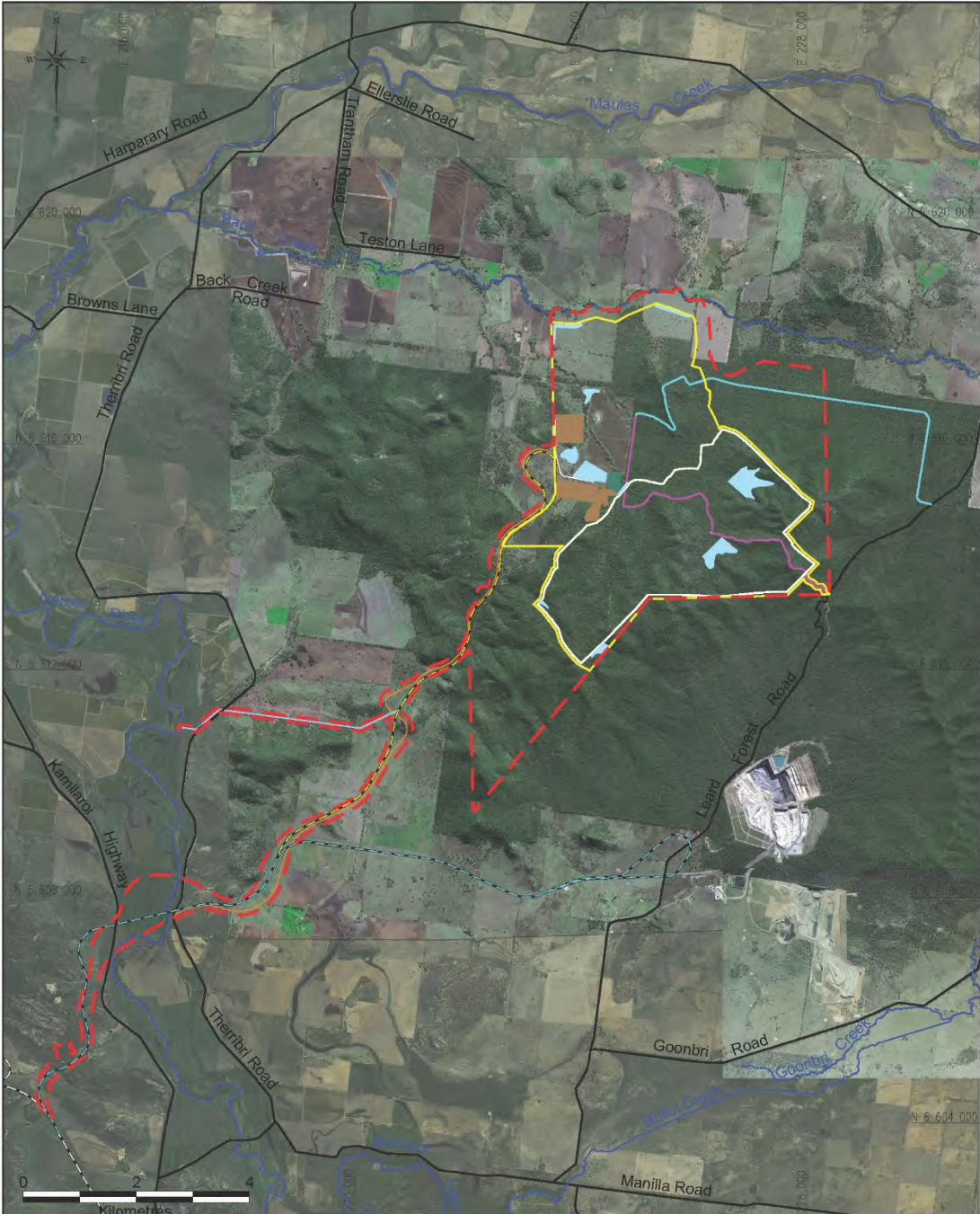
Date of decision	Current Conditions attached to approval as at 19/3/2020	Draft Variation	Justification
Original dated 11/2/2013	Matters of national environmental significance – all matters listed under Part 3 of the EPBC Act		
Correction dated 15/2/2013	Offset areas – areas that are proposed to meet the criteria set out in conditions 9, 10, 11, 12 and 13 of the approval, to offset the impacts of the action on matters of national environmental significance.	Offset Areas - Revoked	Definition not needed as the conditions set out what is required
Original dated 11/2/2013	Offset attributes -means an '.xls' file capturing relevant attributes of the Offset Area, including the EPBC reference ID number, the physical address of the offset site, coordinates of the boundary points in decimal degrees, the EPBC protected matters that the offset compensates for, any additional EPBC protected matters that are benefiting from the offset, and the size of the offset in hectares.		
Original dated 11/2/2013	Project area – the area defined by the Maules Creek Coal Mine Project EPBC Act referral (EPBC Act reference 2010/5566) as lying within the Project Application Boundary.		
Original dated 11/2/2013	Shapefiles -means an ESRI Shapefile containing '.shp', '.shx' and '.dbf' files and other files capturing attributes of the Offset Area, including the shape, EPBC reference ID number and EPBC protected matters present at the relevant site. Attributes should also be captured in '.xls' format. A geographically referenced raster 'img' file/s must be provided to provide context for the shapefiles.		
Original dated 11/2/2013	State and Transition Model – Section 3.2 of <i>A Guide to Managing Box Gum Grassy Woodlands</i> (Caring for our Country Environmental Stewardship, 2010), depicts the different condition states (as reflected by disturbance, inputs and altered land use) in which a given vegetation can exist. This publication can be found at: http://www.nrm.gov.au/resources/publications/stewardship/bggw-handbook.html	State and Transition Model – Section 3.2 of <i>A Guide to Managing Box Gum Grassy Woodlands</i> (Caring for our Country Environmental Stewardship, 2010), depicts the different condition states (as reflected by disturbance, inputs and altered land use) in which a given vegetation can exist. This publication can be found at: https://openresearch-repository.anu.edu.au/bitstream/1885/65871/2/01_Rawlings_A_Guide_to_Managing_Box_Gum_2010.pdf	Correcting out of date weblink
Original dated 11/2/2013	Substantially commence the action – means the extraction of coal from the Maules Creek Coal Mine Project for the purpose of commercial production. Substantial commencement does not include test extraction or extraction of coal samples for quality assurance.		

Date of decision	Current Conditions attached to approval as at 19/3/2020	Draft Variation	Justification
Original dated 11/2/2013	Attachment A – Indicative project layout (6/5/2011)	Attachment A – Indicative project layout (6/5/2011)	Improved copy provided for clarity
Original dated 11/2/2013	Attachment B: Table 2.5 – Summary of EPBC Matters (25/2/2012) Table 2.6 – Condition Areas for Habitat of Threatened Species to Conserved in the Eastern, Western, Northern and Shared Properties (25/2/2012)	Attachment B - Table B1 - Offset Properties Proposed in the Environmental Assessment	Replace original attachment with simpler table directly relevant to the conditions

3

The Project

Attachment A



NEW - ATTACHMENT B**Table B1 Offset Properties Proposed in the Environmental Assessment**

Property	Size Property (ha)
Blue Range	748
Cattle Plain	284
Teston (nth)	292
Tralee	342
Wallandilly	1890
Warriahdool	1011
Mt Lindesay	2430
Wirradale	4321
Shared Property	884
Kelso	508
Louenville	459
Olivedeen	193
Teston (sht)	1273
Velyama	919

Subject to third party review rights, s 47F(1), and s 22(1)(a)(ii)