



Warkworth Mining Limited

EPBC 2002/629 and EPBC 2009/5081

Annual Compliance Report 1 February 2019 to 31 January 2020

Date of Submission: 1 May 2020

**Declaration of accuracy**

In making this declaration, I am aware that sections 490 and 491 of the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) make it an offence in certain circumstances to knowingly provide false or misleading information or documents.

I declare that all the information presented in this compliance report is technically accurate.

Signed  \_\_\_\_\_

Full name Gary Mulhearn \_\_\_\_\_

Position Manager Environment and Community

Organisation

Warkworth Mining Limited (ABN 42 001 385 842)

Date 1 May 2020

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# 1. Introduction

## 1.1 Objective

This annual Compliance Report has been prepared in accordance with the *Annual Compliance Report Guidelines* (Commonwealth of Australia 2014) to satisfy Condition 4 of the EPBC 2002/629 Approval and Condition 15 of the EPBC 2009/5081 Approval, for the period 1 February 2019 to 31 January 2020 (reporting period). Both Approvals are held by Warkworth Mining Limited (WML) which is operated by Coal & Allied (NSW) Pty Ltd, a wholly owned subsidiary of Yancoal Australia Limited (YAL).

## 1.2 Background

WML holds development consent SSD-6464 to construct and operate an open cut coal mine, located approximately 15 kilometres southwest of Singleton in the Hunter Valley, NSW. The Commonwealth Minister for the Environment, under provisions of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), has issued two approvals to WML to construct, operate and extend the open cut coal mine, the first in February 2004 (EPBC 2002/629) and the second in August 2012 (EPBC 2009/5081).

The EPBC 2002/629 approval (as varied) requires WML to offset the impact upon Matters of National Environmental Significance (MNES) by protecting and managing no less than 1,586 hectares (ha) of habitat for the Regent Honeyeater (*Anthochaera phrygia*) and Swift Parrot (*Lathamus discolor*).

The EPBC 2009/5081 approval (as varied) requires WML to offset the MNES by protecting and managing a total of no less than 2,626 ha, of habitat for the Regent Honeyeater (*Anthochaera phrygia*) and Swift Parrot (*Lathamus discolor*). There are also conditions relating to water management and rehabilitation on the mine site.

The Offset Areas for each of the EPBC approvals are presented in **Table 1**.

**Table 1 Location and size of the EPBC Offset Areas**

Locality	Biodiversity Area	Offset Area (ha)	EPBC2002/629	EPBC2009/5081 Phase 1	EPBC2009/5081 Phase 2
Local	Southern (Putty Road Offset Area)	94		94	
	Southern	892			892
	Southern Total	986		94	892
	Northern	341			341
Regional	North Rothbury	41			41
	Goulburn River	1,066	1,066		
	Bowditch	520	520		
	Bowditch	82			82
	Putty	383			383
	Seven Oaks	519			519
	Condon View	345			345
<b>Total</b>		<b>4,282</b>	<b>1,586</b>	<b>94</b>	<b>2,602</b>

## 2. Condition Compliance

### 2.1 EPBC 2002/629

EPBC2002/629 Condition Number	Condition	Compliance status	Evidence/Comments (Goulburn River BA, Bowditch BA)
1	<p>By no later than 31 July 2020, the person taking action must register the Biodiversity Management Areas identified in the map at Attachment A under a legally secured offset mechanism. The mechanism must provide enduring protection of no less than</p> <p>a) 1,586 ha of suitable habitat for <i>Anthochaera phrygia</i> (regent honeyeater) and <i>Lathamus discolor</i> (swift parrot).</p> <p>Evidence of registration must be provided to the Department within 30 days of registration of the legally binding covenant.</p>	Pending	<p>A request was sent to DoEE on 7 December 2017 to extend the due date for a legally binding conservation covenant over the biodiversity areas beyond 17 February 2018. The request was sought on the basis of aligning the timeframe with the NSW Project Approval SSD 6464. DoEE advised by email on 28 February 2018, that given the request was submitted well in advance of 17 February 2018, that no non-compliance would be recorded. After additional consultation and correspondence with DoEE and the NSW Office of Environment and Heritage (OEH), further information was sent to DoEE on 11 September 2018 which noted that WML has been working with the OEH to secure the offsets as Biodiversity Stewardship Agreement (BSA's) pursuant to the Biodiversity Conservation Act 2016. As this Act commenced in August 2017, many of the systems, processes and transitional arrangements are being developed by OEH and the newly created Biodiversity Conservation Trust (BCT). WML had consulted with OEH and developed a timeline to step through the process to register the BSA's, and an extension request was sent to DoEE based on the proposed timeline.</p> <p>Approval from DoEE was received on 14/10/2018, with reference to the 7 December 2017 extension request, for the variation to condition 1 to extend the timeframe by which legally binding covenants must be registered over the offset sites to 31 July 2020.</p>
2	<p>To offset the impacts to the regent honeyeater and swift parrot, the person taking the action must submit to the Minister for approval an Offset Management Plan (OMP) for all of the Biodiversity Management Areas by no later than 13 April 2014.</p> <p>The OMP must include, but not be limited to, the following information:</p>	Compliant	<p>Regional Offset Management Plan (ROMP) submitted to the Environment Assessment Branch of Department of Environment (DoE) for Minister approval 14 April 2014 (13 April 2014 was a Sunday). Regional OMP approved by Minister 06 August 2014.</p> <p>The Independent Audit completed in 2015 indicated that separate Offset Management Plans for Bowditch and Goulburn River BAs would be preferable. In addition separate plans are required for the legally binding mechanism. Therefore in February 2017 individual plans were submitted to the Department for approval. In response to comments received from the Department of Environment and Energy (DoEE), a further three versions of the individual plans were submitted during 2017. The final revision, submitted to DoEE in December 2017, was approved on 16 February 2018.</p>
2a	<p>a textual description and map to clearly define the location and boundaries of all of the Biodiversity Management Areas. This must be accompanied with the offset attributes and a shapefile</p>	Compliant	Section 2.1 MP Location and Description

EPBC2002/629 Condition Number	Condition	Compliance status	Evidence/Comments (Goulburn River BA, Bowditch BA)
2b	details of management actions to protect and enhance the extent and condition of habitat values of the offset areas including but not limited to rehabilitation, weed control, fire management, erosion and sediment control, management of livestock and restrictions on access of no less than 1,586 hectares of habitat for the regent honeyeater and swift parrot	Compliant	Section 3 Objectives, Key Performance Indicators and Completion Criteria and Section 4 Conservation Management Actions of the MP.
2c	the timing, responsibilities and performance criteria for management actions	Compliant	Section 4 Conservation Management Actions of the MP.
2d	a monitoring plan including the undertaking of ecological surveys by a qualified ecologist to assess the success of the management actions against identified milestones and objectives	Compliant	Section 5 Monitoring of the MP.
2e	a process to report, to the department, the management actions undertaken in the offset areas and the outcome of those actions, including identifying any need for improved management	Compliant	Section 1.3 Function of the MP.
2f	a description of the potential risks to successful management and rehabilitation in the offset areas, and a description of the contingency measures that would be implemented to mitigate these risks	Compliant	Section 4 Conservation Management Actions of the MP.
2g	details of parties responsible for management, monitoring and implementing the plan, including their position or status as a separate contractor.	Compliant	Section 1.3.2 Key Stakeholders and Roles.
	The approved OMP must be implemented. The person taking the action must publish the approved OMP on their website within 1 month of the OMP being approved by the Minister. The approved OMP must remain published until the expiry of the approval or until such time as agreed in writing by the Minister.	Compliant	<p>The <i>Regional Offset Management Plan Annual Report 2019 (Attachment A)</i> provides a summary of the management and monitoring activities completed in 2019.</p> <p>Approved Regional Offset Management Plan was originally published on Rio Tinto Coal Australia website on 5 September 2014 and is now published on the Yancoal Australia Insite website at the link below.</p> <p><a href="https://insite.yancoal.com.au/asset/download/150/ff0efb/warkworth-regionaloffsetmanagementplan-062014-1.pdf">https://insite.yancoal.com.au/asset/download/150/ff0efb/warkworth-regionaloffsetmanagementplan-062014-1.pdf</a></p> <p>The Regional Offset Management Plan has now been superseded by individual management plans for the relevant Biodiversity Areas. The Goulburn River and Bowditch Management Plans are published on the Yancoal Australia Insite website at the link below:</p> <p><a href="https://insite.yancoal.com.au/document-library/management-plans-mtw">https://insite.yancoal.com.au/document-library/management-plans-mtw</a></p>

EPBC2002/629 Condition Number	Condition	Compliance status	Evidence/Comments (Goulburn River BA, Bowditch BA)
	<p>Note: For clarity, the Biodiversity Management Areas in condition 1 and identified on the map in Attachment A can accommodate offset requirements for more than one species habitat within the one area, if a qualified ecologist verifies that suitable habitat is present and includes specific habitat requirements for the relevant species.</p>		
3	<p>The Compliance Report (referred to in condition 4) due in 2015, and Compliance Reports due in each subsequent fifth year until the expiry of the approval, must be audited by an independent auditor. Prior to the commencement of each audit, the independent auditor and the audit criteria must be approved by the Department.</p>	Complaint	<p>The 2015 Compliance Report was audited in 2015 by an independent auditor (Peter Horn), approved by DoE on 24 July 2015.</p> <p>The Independent Audit report was sent to DoE on 20 October 2015.</p> <p>Next audit due 2020.</p>
4	<p>Within three months of every 12 month anniversary of the Commencement of Construction, the person taking the action must publish a report (the Compliance Report) on their website addressing compliance with each of the conditions of this approval, including implementation of any plans as specified in the conditions. Documentary evidence providing proof of the date of publication and non-compliance with any of the conditions of this approval must be provided to the department at the same time as the Compliance Report is published. The person taking the action must also notify any non-compliance with this approval to the department in writing within 2 business days of becoming aware of the non-compliance. The person taking the action must continue to annually publish the Compliance Report until such time as agreed in writing by the Minister.</p>	Compliant	<p>This report Commencement of Construction June 2004.</p>
5	<p>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. If the Minister approves the revised plan that plan must be implemented in place of the plan originally approved.</p>	Compliant	<p>Individual management plans were submitted to the Department for approval in February 2017 and subsequent revisions were submitted in December 2017. The final revisions were approved on 16 February 2018.</p>

EPBC2002/629 Condition Number	Condition	Compliance status	Evidence/Comments (Goulburn River BA, Bowditch BA)
6	<p>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 require that the person taking the action make specified revisions to a management plan specified in the conditions and submit the revised plan for the Minister's written approval.</p> <p>The revised approved plan must be implemented. Unless the Minister has approved the revised plan the person taking the action must continue to implement the originally approved plan, as specified in the conditions.</p>	Compliant	<p>Comments on the individual management plans were received from DoEE on 13/04/2017 and 22/06/2017. Agreed changes were made to the revised management plans submitted in December 2017.</p>

## 2.2 EPBC 2009/5081

EPBC2009/5081 Condition Number	Condition	Compliance status	Evidence/Comments (Southern BA, Northern BA, Putty BA, Condon View BA, Seven Oaks BA, Bowditch BA, North Rothbury BA)
1	<p>To offset the impact on the foraging habitat for <i>Anthochaera Phrygia</i> (regent honeyeater) and <i>Lathamus discolor</i> (swift parrot), the person taking the action must register a legally binding conservation mechanism over 94ha of land, as illustrated in the map at Attachment A as the Phase 1 Offset. The conservation mechanism must provide enduring protection for the Phase 1 Offset (Putty Road) and must be registered by 31 July 2020.</p> <p>Evidence of registration must be provided to the Department within 30 days of registration of the legally binding conservation mechanism.</p>	Pending	<p>A request was sent to DoEE on 7 December 2017 to extend the due date for a legally binding conservation covenant over the biodiversity areas beyond 17 February 2018. The request was sought on the basis of aligning the timeframe with the NSW Project Approval SSD 6464. DoEE advised by email on 28 February 2018, that given the request was submitted well in advance of 17 February 2018, that no non-compliance would be recorded. After additional consultation and correspondence with DoEE and the NSW Office of Environment and Heritage (OEH), further information was sent to DoEE on 11 September 2018 which noted that WML has been working with the OEH to secure the offsets as Biodiversity Stewardship Agreement (BSA's) pursuant to the Biodiversity Conservation Act 2016. As this Act commenced in August 2017, many of the systems, processes and transitional arrangements are being developed by OEH and the newly created Biodiversity Conservation Trust (BCT). WML had consulted with OEH and developed a timeline to step through the process to register the BSA's, and an extension request was sent to DoEE based on the proposed timeline.</p> <p>Approval from DoEE was received on 14/10/2018, with reference to the 7 December 2017 extension request, for the variation to condition 1 to extend the timeframe by which legally binding covenants must be registered over the offset sites to 31 July 2020.</p>
2	<p>To offset the impacts on the foraging habitat of the regent honeyeater and swift parrot, the person taking the action must submit to the Minister for approval an Offset Management Plan (OMP) for the Phase 1 Offset identified in Attachment A by no later than 13 April 2014.</p>	Compliant	<p>Draft Putty Road Offset - Offset Management Plan (OMP) submitted to Department of Environment and Energy (DoEE) 14 April 2014 (13 April was a Sunday). DoEE approval of Putty Road Offset OMP dated 4 July 2014. In February 2017 a Southern BA Offset Management Plan was submitted to the Department for approval, as it contains the Phase</p>

The OMP must include, but not be limited to the following:

1 Offset (Putty Road Offset Area) and the Phase 2 Offset. This plan is to be used as part of the legally binding mechanism to secure both the Phase 1 and 2 Offsets. A revised version of the Southern BA Management Plan was submitted to DoEE in December 2017 to address comments provided by DoEE on the February 2017 version. The Southern BA Management Plan was approved by DoEE on 16 February 2018

2a	a textual description and map to clearly define the location and boundaries of all of the offset areas. This must be accompanied with the offset attributes and a shapefile	Compliant	Section 2.1 Location and description of the MP
2b	details of management actions to protect and enhance the extent and condition of habitat values of the offset areas including but not limited to rehabilitation, weed control, fire management, erosion and sediment control, management of livestock and restrictions on access to habitat for the regent honeyeater and swift parrot	Compliant	Section 3 Objectives, Key Performance Indicators and Completion Criteria and Section 4 Conservation Management Actions of the MP.
2c	the timing, responsibilities and performance criteria for management actions	Compliant	Section 4 Conservation Management Actions of the MP.
2d	a monitoring plan including the undertaking of ecological surveys by a qualified ecologist to assess the success of the management actions against identified milestones and objectives	Compliant	Section 5 Monitoring of the MP.
2e	a process to report, to the department, the management actions undertaken in the offset areas and the outcome of those actions, including identifying any need for improved management	Compliant	Section 1.3.2 Key Stakeholders and Roles.
2f	a description of the potential risks to successful management and rehabilitation in the offset areas, and a description of the contingency measures that would be implemented to mitigate these risks	Compliant	Section 4 Conservation Management Actions and Section 6 Risk Assessment of the MP.
2g	details of parties responsible for management, monitoring and implementing the plan, including their position or status as a separate contractor.	Compliant	Section 1.3.2 Key Stakeholders and Roles.

	<p>The approved OMP must be implemented.</p> <p>Note: Offset areas can accommodate offset requirements for more than one species habitat within the one area, if a qualified ecologist verifies that suitable habitat is present and includes specific habitat requirements for the relevant species.</p>	Compliant	<p>Implementation of the conservation management strategies and monitoring as described in the Putty Road OMP and the broader Local OMP is supported by their Annual Reports. The Local OMP describes the management of the area surrounding the Putty Road Offset, this area is referred to as the Southern Biodiversity Area.</p> <p>The <i>Local Offset Management Plan Annual Report 2019 (Attachment B)</i> provides a summary of the management and monitoring activities completed in 2019.</p>
3	<p>Prior to Commencement of Construction of Phase 2 of the action, the person taking the action must submit to the Minister details of at least 2,532 hectares of suitable habitat for the Regent Honeyeater and Swift Parrot (Phase 2 Offset) to offset impacts on foraging habitat for these two species.</p> <p>The details of offset sites must include offset attributes and shapefiles and ecological assessment reports. If the offset sites are different to those offset sites previously approved under the approval granted on 9 August 2012, the new offset sites must be submitted to the Minister for approval.</p>	Compliant	<p>Submission of the Phase 2 offsets details was on the 12 January 2016.</p> <p>Approval of Phase 2 offsets was 17 February 2016.</p>
4	<p>To offset the impacts on the foraging habitat of the Regent Honeyeater and Swift Parrot, the person taking the action must register a legally binding conservation mechanism on all Phase 2 offsets by 31 July 2020.</p> <p>Evidence of registration must be provided to the Department within 30 days of registration of the legally binding conservation mechanism.</p>	Pending	<p>A request was sent to DoEE on 7 December 2017 to extend the due date for a legally binding conservation covenant over the biodiversity areas beyond 17 February 2018. The request was sought on the basis of aligning the timeframe with the NSW Project Approval SSD 6464. DoEE advised by email on 28 February 2018, that given the request was submitted well in advance of 17 February 2018, that no non-compliance would be recorded. After additional consultation and correspondence with DoEE and the NSW Office of Environment and Heritage (OEH), further information was sent to DoEE on 11 September 2018 which noted that WML has been working with the OEH to secure the offsets as Biodiversity Stewardship Agreement (BSA's) pursuant to the Biodiversity Conservation Act 2016. As this Act commenced in August 2017, many of the systems, processes and transitional</p>

arrangements are being developed by OEH and the newly created Biodiversity Conservation Trust (BCT). WML had consulted with OEH and developed a timeline to step through the process to register the BSA's, and an extension request was sent to DoEE based on the proposed timeline.

Approval from DoEE was received on 14/10/2018, with reference to the 7 December 2017 extension request, for the variation to condition 4 to extend the timeframe by which legally binding covenants must be registered over the offset sites to 31 July 2020.

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5	The approved OMP, as described in condition 2, must be revised by the person taking the action to include, but not be limited to, those activities as described in condition 2a-g for the Phase 2 Offset. The revised OMP must be submitted for approval by the Minister within 12 months of the submission of details/approval of Phase 2 Offset.	Compliant	The OMP is to be revised to include the approved Phase 2 offsets on or before 17 February 2017.  Plans were submitted for approval on 15 February 2017 for the Southern, Northern, North Rothbury, Seven Oaks, Condon View and Putty BAs.
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**Re-establishment of Woodland in Biodiversity Management and Offset Areas**

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6	<p>Within 12 months of the Commencement of Construction of Phase 1, the person taking the action must submit to the Minister for approval a Re-establishment Plan (REP) for the Phase 1 Offset area. The REP must include, but not be limited to the following:</p> <ul style="list-style-type: none"> <li>a. details of the areas to be re-established (re-establishment areas) including location and maps;</li> <li>b. documentation including mapping of current environmental values relevant to MNES of the re-establishment areas;</li> <li>c. where revegetation through planting seedlings and/or seeds is intended, details of appropriate species and ratios of species relevant to historically occurring listed migratory and listed threatened species' habitat;</li> <li>d. the source and provenance of the seeds and/or seedlings which will be used;</li> <li>e. measures to address threats to MNES including but not limited to grazing</li> </ul>	Compliant	<p>Draft Putty Road Offset REP submitted to DoE 2 February 2015.</p> <p>Comments were received on the 18 July 2016.</p> <p>WML sought approval to address these comments in the Southern BA Management Plan, which was submitted on 15 February 2017. This plan includes a compliance table to show that all elements of this condition are met.</p> <p><i>The Local Offset Management Plan Annual Report 2019 (Attachment B)</i> provides a summary of the management and monitoring activities completed in 2019.</p>
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- pressure and damage by livestock and adverse impacts from feral animals and weeds;
- f. measures to provide fire management regimes appropriate for the MNES;
- g. measures to manage the MNES in accordance with the recommendations of the approved recovery plan for the migratory and threatened species;
- h. monitoring measures including ecological surveys to measure the establishment and ongoing success of the revegetation based on a comparison with high quality habitat for the MNES;
- i. performance measures and reporting requirements against identified objectives, including trigger levels for contingency measures to be taken to ensure performance measures and objectives are met; and
- j. identify persons responsible and arrangements for implementing the REP and for reporting on performance.

The approved REP must be implemented.

7	The approved REP, as described in condition 6, must be revised by the person taking the action to include at least those activities as described in conditions 6a-j for the Phase 2 Offset. The revised REP must be submitted for approval by the Minister within 12 months of the Commencement of Construction of Phase 2 of the action. The approved revised REP must be implemented.	Compliant	The REP is to be revised to include the approved Phase 2 offsets on or before 16 February 2017.  The Management Plans submitted for the Southern, Northern, North Rothbury, Seven Oaks, Condon View and Putty BAs on 15 February 2017 for approval. These plans contained the requirements of the REP and include a compliance table to show that all elements of this condition are met.
8	As a precautionary approach, the person taking the action must within 6 months of the date of this approval, or such other timeframe as specified in writing by the Minister, provide to the Minister any NSW Government approved water management plans which apply to the approved action.	Compliant	Water Management Plan (WMP) approved by NSW regulator 10 September 2014. A copy of the WMP was sent to DoEE on 15 September 2014. No request has been received by DoEE to provide further copies of the WMP.  The Water Management Plan was revised and submitted to NSW Department of Planning and Environment (DPE) on 2/12/2015 following the WML and MTO Continuation Approvals. It was subsequently approved on 29/1/2016. A minor

revision to update monitoring programmes was completed on 21/3/2016. A major revision was submitted to DPE on 16/5/2017, following the incorporation of stream and riparian health monitoring in Wollombi Brook and Loders Creek. The plan was approved 26 June 2017. The WMP was revised and submitted to DPE on 30 November 2017 to reflect the change to Yancoal ownership. The plan was approved 12 February 2018. The WMP was revised and submitted to DPE on 27 July 2018 following the Annual Review submission. Changes were made on 18 September 2018 in response to DP&E feedback and the revised plan was approved 20 September 2018.

The latest version of the WMP can be found at <https://insite.yancoal.com.au/document-library/management-plans-mtw>

9	<p>The person taking the action must within 6 months of the date of this approval, or such other timeframe as specified by the Minister, provide to the Minister a report on:</p> <ul style="list-style-type: none"> <li>a. any updated modelling of surface and groundwater impacts that have been undertaken in preparing the water management plans</li> <li>b. how the water management plans have addressed groundwater and surface water impacts on nationally listed threatened species and ecological communities</li> </ul>	Compliant	These conditions are addressed in the WMP (refer Condition 8).
10	<p>If, after receiving the water management plans described in condition 8 and the report in condition 9, the Minister is not satisfied the water management plans adequately address impacts on listed threatened species and ecological communities, the Minister may require in writing that the person taking the action provide additional information within a specified timeframe.</p>	Not triggered	
11	<p>The person taking the action must, within 12 months of the Commencement of Construction of Phase 1, and within 12 months of the</p>	Compliant	The Mine Site Rehabilitation Plan (MSRP) is contained within the Mining Operations Plans; a copy was submitted to DoEE 2 February 2015.

Commencement of Construction of Phase 2, submit to the Minister for approval a Mine Site Rehabilitation Plan (MSRP) for the progressive rehabilitation and revegetation of no less than 32ha woodland of mined areas for Phase 1 and 2,303ha of woodland habitat on mined areas for Phase 2.

The MSRP must include, at a minimum, the following information:

- a. the desired outcomes/objectives of implementing the MSRP
- b. details of the vegetation communities to be rehabilitated and the timing of progressive rehabilitation
- c. a process to progressively report 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
- d. a description of the potential risks to successful management and rehabilitation on the project site, and a description of the contingency measures that would be implemented to mitigate these risks
- e. details of parties responsible for reviewing and implementing the plan
- f. details of long term management and protection of the mine site

The approved MSRP must be implemented.

Feedback was received from DoEE on the 18 July 2016.

RTCA sought and received approval to address these comments in the next revision of the Mining operations Plan. The revised Mining Operations Plan was submitted to DoEE for approval on 23 May 2019. Approval from DoEE was received on 11 March 2020.

12	<p>The person taking the action must submit to the Minister for approval a Mine Closure Plan (MCP) at least 6 months prior to the closure of the mine. The approved MCP must be implemented. Note: The person taking the action may develop a single mine rehabilitation plan to align with the requirements of this approval and those of the NSW Government.</p>	Not triggered	
13	<p>All survey data collected for the project must be collected and recorded so as to conform to data standards notified from time to time by the department. When requested by the department, the person taking the action must provide to the department all species and ecological survey data and related survey information from ecological surveys undertaken</p>	Compliant	<p>All survey data is retained by WML, the offset data is stored within the Biodiversity Offset Portal. Access to the portal was provided to DoEE in 2015. No requests for survey data have been received.</p>

for MNES. 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.

14	Within 14 days after the Commencement of Construction of Phases 1 and 2, the person taking the action must advise the department in writing of the actual date of Commencement of Construction.	Compliant	Phase 1 construction commenced on 3 February 2014 and WML notified DoEE in writing on 13 February 2014.  Phase 2 construction commenced on 16 February 2016 and WML notified DoEE in writing on 16 February 2016.
15	Within 3 months of every 12 month anniversary of the Commencement of Construction of Phase 1, the person taking the action must publish a report (the Compliance Report) on their website addressing compliance with each of the conditions of this approval, including implementation of any plans as specified in the conditions. Documentary evidence providing proof of the date of publication and non-compliance with any of the conditions of this approval must be provided to the department at the same time as the Compliance Report is published. The person taking the action must also notify any non-compliance with this approval to the department in writing within 2 business days of becoming aware of the noncompliance.  The person taking the action must continue to annually publish the Compliance Report until such time as agreed in writing by the Minister.	Compliant	Compliance report due before 3 May each year (based on date of commencement of construction 3 February 2014).  2019 Compliance Report published on Yancoal Australia Insite website 1 May 2020.
16	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.	Not triggered	
17	Where the conditions require the person taking the action to submit a plan for the Minister's approval, the person taking the action must maintain a register recording:	Compliant	Compliance Register submitted with this report ( <b>Attachment C</b> )

- a. the date on which each plan was approved by the Minister
  - b. if a plan has not been approved by the Minister, the date on which it was, or is expected to be, submitted to the Minister.
  - c. the dates on which reports on the outcomes of reviews have been approved by the Minister
  - d. the dates on which the subsequent reviews are due
- The register must be submitted to the department at the time as the Compliance Report, as described at condition 15.

18	<p>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. If the Minister approves the revised plan that plan must be implemented in place of the plan originally approved.</p>	Not triggered	
19	<p>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 require that the person taking the action make specified revisions to a management plan specified in the conditions and submit the revised plan for the Minister's written approval.</p> <p>The revised approved plan must be implemented. Unless the Minister has approved the revised plan the person taking the action must continue to implement the originally approved plan, as specified in the conditions.</p>	Not triggered	
20	<p>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.</p>	Not triggered	<p>The action has commenced as per the Commencement of Construction (3 February 2014)</p>
21	<p>The person taking the action must maintain accurate records substantiating all activities and</p>	Compliant	<p>Records of activities and outcomes are maintained by WML.</p>

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 appointed and/or approved by the department, and 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.

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22	<p>Unless otherwise agreed to in writing by the Minister, the person taking the action must publish all plans referred to in these conditions of approval on their website. Each plan must be published on the website within 1 month of being approved. The person taking the action must notify the department within 5 business days of publishing the plan on their website and the plan must remain on the website for the period this approval has effect.</p>	Compliant	<p>All approved plans have been published on the Yancoal Australia Insite website.</p>
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### **3. New environmental risks and potential threats to Matters of National and State Environmental Significance**

#### **Bushfire events at the Putty Biodiversity Area in 2019**

On 21 July 2019, a bushfire event occurred at the Putty Biodiversity Area in which 46ha of the offset was burnt with a moderate intensity fire with 1 to 4.5-meter scorch leaving approximately 80% mosaic. The fire occurred along the northern and eastern boundary. There is no damage to existing infrastructure.

On 14 December 2019, a bushfire event occurred at the Putty Biodiversity Area in which 82.3ha of the offset was burnt with a moderate to very high intensity fire with 2 to 7 meters' scorch burning approximately 90% coverage. The fire occurred in the entire western pocket of the offset. There is no damage to existing infrastructure and no identified damage to potential habitat.

## **ATTACHMENT A: Regional Offset Management Plan Annual Report 2019**



## Regional Biodiversity Areas

### Annual Report 2019

1 May 2020

Annual report for the period from January to December 2019, for activities described in the Management Plans for all regional Warkworth Mining Limited offsets including:

- Goulburn River Biodiversity Area
- Seven Oaks Biodiversity Area
- Bowditch Biodiversity Area
- Putty Biodiversity Area
- Condon View Biodiversity Area
- North Rothbury Biodiversity Area

Note that a portion of Condon View Biodiversity Area is an offset for Hunter Valley Operations to satisfy conditions of the Commonwealth approval EPBC 2016-760.

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## **1 INTRODUCTION**

This annual report is a requirement of the Management Plans for all regional Warkworth Mining Limited offsets for the 2019 reporting period from 1 January through to 31 December 2019.

The annual report provides a summary of the key management activities completed across the biodiversity offsets located within the Goulburn River, Seven Oaks, Bowditch, Putty, Condon View and North Rothbury Biodiversity Areas (BAs).

The management plans describe the conservation management strategies and monitoring to achieve and measure improvement and protection of the offsets biodiversity values. It is a compliance requirement of the Commonwealth and NSW environmental approvals to implement the management plans.

The Regional Offset Management Plan (ROMP) was prepared to satisfy the consent requirements for the New South Wales (NSW) Hunter Valley Operations (HVO) South Project Approval (PA 06\_0261) and the Warkworth Mine Commonwealth EPBC 2002/629 Approval. In November 2015, the NSW Warkworth Continuation Project Approval (SSD-6464) was granted providing both NSW and Commonwealth approval for the same disturbance area. Phase 2 of the EPBC2009/5081 action also commenced on 16 February 2016. In response to the granting of these new approvals, new Management Plans for the Bowditch and Goulburn River BA have been prepared to satisfy the Commonwealth approval EPBC2009/5081 and the NSW consent (SSD-6464), replacing the ROMP. On 10 October 2016 HVO was granted approval (EPBC2016/7604), The Condon View BA provides 168ha of suitable direct offset to be compliant with this approval. Management Plans have also been prepared and submitted for the new regional BAs: Seven Oaks, Putty, Condon View and North Rothbury.

The Biodiversity Offset Portal contains all the supporting documentation for this report, including photo point monitoring. Access to the portal is restricted, relevant regulators have been provided with login details; please contact Mount Thorley Warkworth should you require assistance.

## 2 LOCATION AND LANDHOLDER DETAILS

The locations of the regional BAs are shown in **Figure 1**, further details are provided in **Table 1**. The land is owned by Warkworth Mining Limited (WML). The Goulburn River and Condon View BAs are owned by Warkworth Mining Limited and have a portion of the total area designated as an offset for Hunter Valley Operations (HVO). Details of the Warkworth Offset and HVO Offset areas are in **Table 2 and Figure 1, 2 and 3**.

**Table 1 Regional Biodiversity Areas**

Biodiversity Area	Local Government Area	Land Owner	Area (ha)	Offset Area (ha)	Location
Goulburn River	Upper Hunter / Mid-Western	Warkworth Mining Limited	1,539	1,206	'The Rivers' 30km west of Merriwa, via Dulhunty Road, Comialla Road and Golden Hwy.
Bowditch	Muswellbrook	Warkworth Mining Limited	607	602	3km north of Sandy Hollow, 3450 Wybong Road, via Golden Hwy.
Seven Oaks	Mid-Western	Warkworth Mining Limited	521	519	35km west of Merriwa via Ulan Road, Summer Hill Road, Durridgerie Road and Smedes Road.
Condon View	Singleton	Warkworth Mining Limited	553	345	5km west of Putty via Box Tree Clearing Trail off Putty Valley Road.
Putty	Singleton	Warkworth Mining Limited	386	383	5km south of Putty via Box Gap Road.
North Rothbury	Cessnock	Warkworth Mining Limited	41	41	1km south of North Rothbury via Wine Country Drive.

**Table 2 Goulburn River and Condon View Biodiversity Areas**

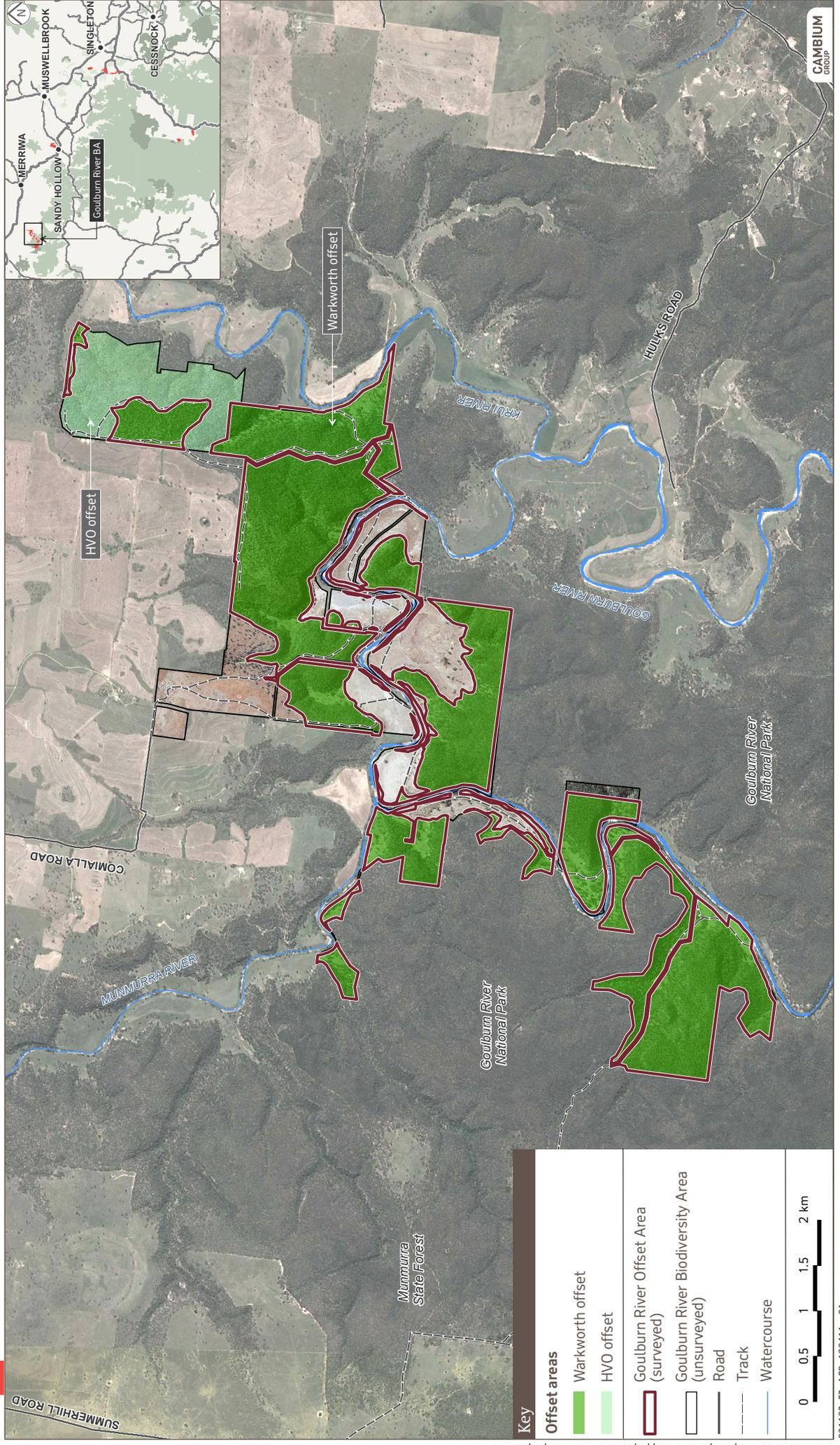
Biodiversity Area	Land Owner	Area (ha)	Warkworth Offset Area (ha)	HVO Offset Area (ha)
Goulburn River	Warkworth Mining Limited	1,539	1,066	140
Condon View	Warkworth Mining Limited	553	345	168



Offset areas at the Goulburn River Biodiversity Area

Annual Compliance Report

Figure 2



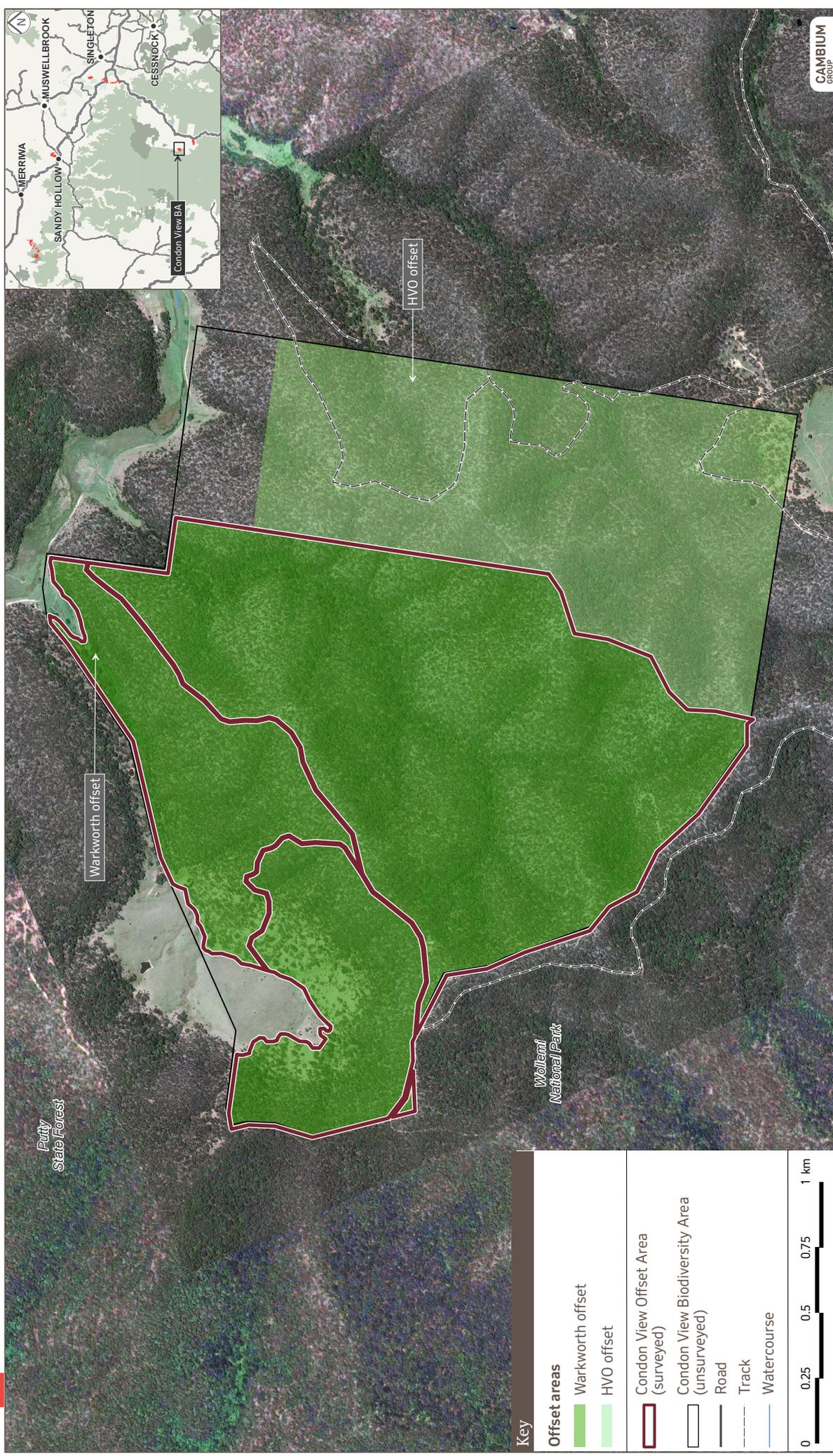
Key	
<b>Offset areas</b>	
<span style="display:inline-block; width:15px; height:15px; background-color:lightgreen; border:1px solid green;"></span>	Warkworth offset
<span style="display:inline-block; width:15px; height:15px; background-color:lightgreen; border:1px solid lightgreen;"></span>	HVO offset
<span style="display:inline-block; width:15px; height:15px; border:2px solid red;"></span>	Goulburn River Offset Area (surveyed)
<span style="display:inline-block; width:15px; height:15px; border:2px solid black;"></span>	Goulburn River Biodiversity Area (unsurveyed)
<span style="display:inline-block; width:15px; border-bottom:2px solid black;"></span>	Road
<span style="display:inline-block; width:15px; border-bottom:2px dashed black;"></span>	Track
<span style="display:inline-block; width:15px; border-bottom:2px solid blue;"></span>	Watercourse
0    0.5    1    1.5    2 km	

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### Offset areas at the Condon View Biodiversity Area

Annual Compliance Report

Figure 3



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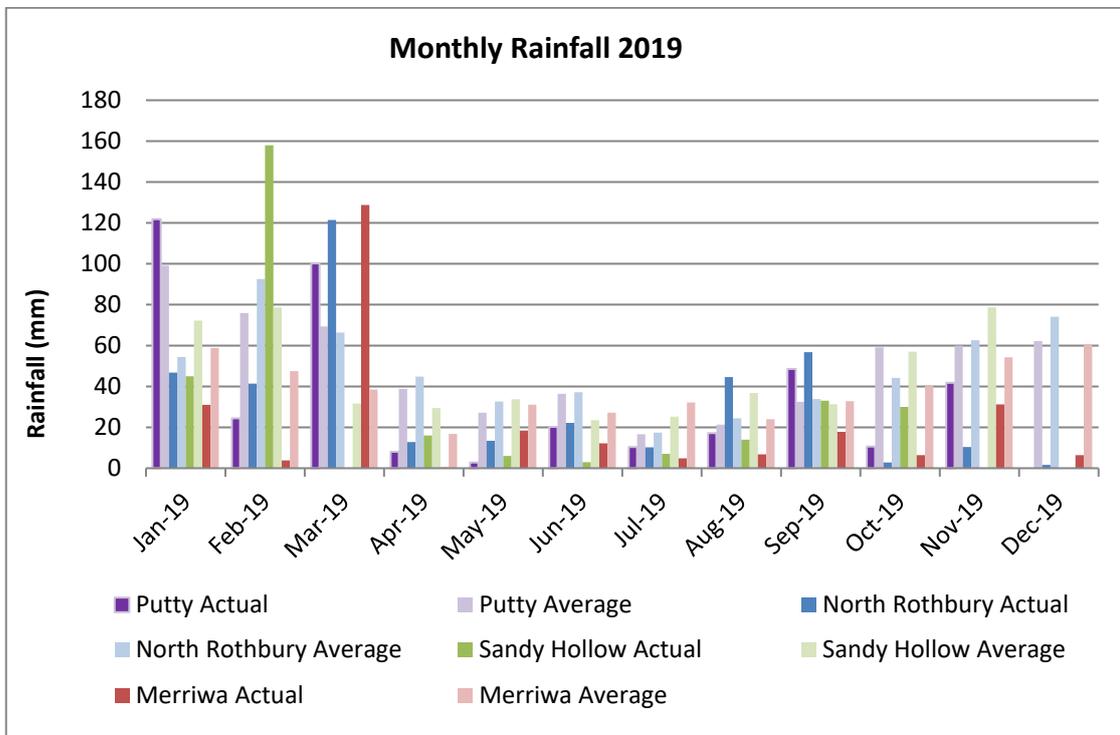
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### 3 SUMMARY OF ACTIVITIES – 2019

**Table 3** provides a summary of the activities undertaken during the reporting period (year 3) and the progress in attaining the Performance Criteria for the key Conservation Management Strategies in the management plans.

#### 3.1 Summary of climatic conditions

Figure 4 shows the monthly actual rainfall compared to the long-term average for the regional Biodiversity Areas for the reporting period. In 2019, rainfall was well below average except for February and March. The Putty region received 406mm which was 192mm below the long-term average. North Rothbury received 384mm, 200mm below the long-term average. Sandy Hollow received 312mm which was 186mm below the long-term average and the Merriwa region received 268mm, 196mm below the long-term average.



**FIGURE 4 MONTHLY RAINFALL - 2019**

**Table 3 Summary of progress against Performance Criteria**

Conservation Actions	Year 1 to Year 4 (2019 is Year 3)	Year 5 to Year 10	Completion Criteria	Actions 2020
<b>ACTIVE RESTORATION</b>				
Goulburn River BA Yellow Box – Grey Box – Red Gum grassy woodland (21.5ha) and River Oak riparian woodland (24.2ha)				
<i>Performance Criteria</i>	<i>Collection of seed. Plant propagation. Tubestock planted.</i>		<i>Planting achieves above 70% survival.</i>	
	<i>Completed survival assessment.</i>			
Activity / Progress	<p>Seed collection was undertaken at the Goulburn River BA in 2019.</p> <p>In 2019 17,000 tube stock was planted into 21.5ha of Yellow Box-Red Gum grassy woodland and 24.2ha of River Oak riparian woodland.</p> <p>The site preparation for these sites included ripping by dozer and weed control. To mimic nature the tree species were planted at a spacing of 5 -30m. All plants were watered, fertilised and protected with a tree guard.</p> <p>Survival assessments undertaken.</p>			<p>Collect seed and propagate plants.</p> <p>Undertake survival assessments.</p> <p>Undertake infill planting of 21.5ha of Yellow Box – Grey Box – Red Gum grassy woodland and 24.2ha of River Oak riparian woodland in the Goulburn River BA.</p>
<b>All Regional BAs</b>				
<i>Performance Criteria</i>	<i>Review monitoring data to identify areas that require re-planting.</i>			
	<i>If re-planting is identified, develop a re-establishment plan and implement within 12 months</i>			
Activity / Progress	No re-planting identified from ecological monitoring results/recommendations.			Undertake ecological monitoring.

Conservation Actions	Year 1 to Year 4 (2019 is Year 3)	Year 5 to Year 10	Completion Criteria	Actions 2020
<b>PASSIVE RESTORATION</b>				
Weed control and monitoring				
<i>Performance Criteria</i>	<i>At least two weed control events each year for species listed in Table 14 of Management Plans and other weeds recorded from monitoring activities.</i>	<i>At least one weed control event each year for species listed in Table 14 of Management Plans and other weeds recorded from monitoring activities.</i>	<i>Ecological monitoring data indicates a trajectory for reduction in exotic plant cover over three consecutive assessments.</i>	
	<i>Complete Rapid Condition Assessment and Property Inspections.</i>	<i>Complete Rapid Condition Assessment and Property Inspections.</i>		
Activity / Progress	<p>Weed contractor engaged to undertake weed control activities in Autumn and Spring 2019 across all Regional BAs to control noxious species and stop weeds spreading into previously uninfested areas.</p> <p>In 2019 weed control targeted the following species: Blackberry (<i>Rubus fruticosus</i>), Bridal creeper (<i>Asparagus asparagoides</i>), Caltrop or cat heads (<i>Tribulus terrestris</i>), Farmers friends (<i>Bidens pilosa</i>), Fireweed (<i>Scenecio madagascariensis</i>), Galenia (<i>Galenia pubescens</i>), Green cestrum (<i>Cestrum parqui</i>), Lamb's ear (<i>Stachys byzantine</i>), Lamb's tongue or Mullein (<i>Verbascum thapsus</i>), Lavender scallops (<i>Bryophyllum fedtschenkoi</i>), Narrow leaf cotton bush (<i>Gomphocarpus fruticosus</i>), Paddy's lucene (<i>Sida rhombifolia</i>), Prickly pear (<i>Opuntia stricta</i>), Scotch thistle (<i>Onopordum acanthium</i>), Stinging nettle (<i>Urtica dioica</i>), Tiger pear (<i>Optunia aurantiaca</i>), Variegated thistle (<i>Silybum marianum</i>), and Willow (<i>Salix spp</i>).</p> <p>Rapid Condition Assessment and Property Inspections were completed in 2019.</p>			<p>Control noxious species and stop weeds spreading into previously uninfested areas.</p> <p>Undertake Rapid Condition Assessment.</p> <p>Undertake Property Inspections.</p> <p>Undertake ecological monitoring.</p>

Conservation Actions	Year 1 to Year 4 (2019 is Year 3)	Year 5 to Year 10	Completion Criteria	Actions 2020
Pest control and monitoring				
<i>Performance Criteria</i>	<p><i>At least two control events each year for species listed in Management Plans, and any other species recorded from monitoring activities.</i></p> <p><i>All actions recorded in the Annual Report.</i></p> <p><i>Active participation in programme coordinated by HLLS, this may include local control actions.</i></p> <p><i>Complete Rapid Condition Assessment and Property Inspections.</i></p>	<p><i>At least one control event each year for species listed in Management Plans, and any other species recorded from monitoring activities.</i></p> <p><i>All actions recorded in the Annual Report.</i></p> <p><i>Active participation in programme coordinated by HLLS, this may include local control actions.</i></p> <p><i>Complete Rapid Condition Assessment and Property Inspections.</i></p>	<p><i>No observed vertebrate pest or damage.</i></p> <p><i>Ecological monitoring demonstrates a trajectory to benchmark values for all attributes measured over three consecutive assessments (the average of all plots).</i></p>	
Activity / Progress	<p>In 2019 vertebrate pest contractors were engaged to undertake programmes across all Regional BAs.</p> <p>Two 1080 ground baiting programmes targeting wild dogs and foxes were undertaken in autumn and spring and was undertaken in conjunction with neighbouring landholders and HLLS where possible.</p> <p>A Noisy Miner ground shoot was undertaken at the Goulburn River BA in August to assist the survivability of the Regent Honeyeater: 353 Noisy Miners controlled under Licence to Harm Protected Animals (Biodiversity Conservation Act 2016).</p> <p>An additional programme undertaken by ANU/Birdlife Australia involved the implementation of direct nest protection measures including putting collars on nest trees to exclude possums and other predators and a cull of noisy miners and pied currawongs that occur within 200m of an active regent honeyeater nest.</p> <p>Participation in HLLS Wild Dog Association programme.</p> <p>Shooting for other vertebrate pests was undertaken across the BAs.</p> <p>Rapid Condition Assessment and Property Inspections were completed in 2019.</p>			<p>Participate in HLLS Aerial Baiting/shooting programmes.</p> <p>Participate in HLLS Wild Dog Association programme.</p> <p>Undertake shooting, baiting and trapping programmes.</p> <p>Undertake a control programme for noisy miners in the Regent Honeyeater breeding area at GRBA</p> <p>Undertake Rapid Condition Assessment.</p> <p>Undertake Property Inspections.</p> <p>Undertake ecological monitoring.</p>

Conservation Actions	Year 1 to Year 4 (2019 is Year 3)	Year 5 to Year 10	Completion Criteria	Actions 2020
<b>Grazing</b>				
<i>Performance Criteria</i>	<i>Grazing is conducted in accordance with the Management Plan.</i>			
	<i>Boundary fences maintained.</i>			
	<i>Complete Rapid Condition Assessment and Property Inspections.</i>			
<b>Activity / Progress</b>	Cattle excluded from all BAs.			Undertake Rapid Condition Assessment.
	Rapid Condition Assessment and Property Inspections were completed in 2019.			Undertake Property Inspections.
	Boundary fences repaired at North Rothbury BA.			
<b>Regional BA Bushfire Management Plan (BFMP) and monitoring</b>				
<i>Performance Criteria</i>	<i>Actions implemented.</i>	<i>Actions implemented.</i>	<i>All required actions of BFMP have been implemented.</i>	
	<i>Review and revise if required.</i>	<i>Review and revise if required.</i>		
	<i>Complete Rapid Condition Assessment and Property Inspections</i>	<i>Complete Rapid Condition Assessment and Property Inspections.</i>	<i>BFMP has been reviewed annually and revised if required.</i>	
		<i>Completed ecological fire management plan.</i>		
<b>Activity / Progress</b>	BFMP reviewed.			Review BFMP.
	In 2019 Fire contractors were engaged to undertake overall fuel load assessments on all Regional BAs to identify current exposure to bushfire fuel hazard.			Implement a bushfire fuel hazard reduction programme.
	Slashing of fire breaks was undertaken at the Goulburn River BA.			Undertake annual fuel load assessments on all Regional BAs.
	Impact damage assessment undertaken on Putty BA after bushfire in July and December 2019.			Undertake Rapid Condition Assessment.
	Rapid Condition Assessment and Property Inspections were completed in 2019.			Undertake Property Inspections.

Conservation Actions	Year 1 to Year 4 (2019 is Year 3)	Year 5 to Year 10	Completion Criteria	Actions 2020
Erosion monitoring inspections and reports				
<i>Performance Criteria</i>	<i>Complete Rapid Condition Assessment and Property Inspections</i>			
Activity / Progress	No significant erosion issues identified during monitoring.			Undertake Rapid Condition Assessment. Undertake Property Inspections.
Dam conversion and rehabilitation and monitoring				
<i>Performance Criteria</i>	<i>Prepare dam conversion plan.</i>	<i>Observed natural flow regime and no erosion.</i>	<i>All works completed.</i>	
	<i>Dam conversion complete and rehabilitation has stabilised the site.</i>	<i>Property inspections.</i>		
	<i>Property inspections.</i>			
Activity / Progress	Property inspections undertaken in 2019.			Prepare a dam conversion plan. Undertake Property Inspections.
Natural Regeneration and monitoring				
<i>Performance Criteria</i>	<i>Annual weed control, vertebrate pest and fire management actions implemented as per management plans.</i>		<i>Ecological monitoring demonstrates a trajectory to benchmark values for all attributes measured over three consecutive assessments (the average of all plots).</i>	
	<i>Complete Rapid Condition Assessment and Property Inspections.</i>			
Activity / Progress	Rapid Condition Assessment and Property Inspections undertaken in 2019. Actions implemented as per management plans – see above.			Implement actions as per Management plans. Undertake Rapid Condition Assessment. Undertake Property Inspections. Undertake ecological monitoring.

Conservation Actions	Year 1 to Year 4 (2019 is Year 3)	Year 5 to Year 10	Completion Criteria	Actions 2020
<b>Controlled Activities</b>				
<i>Performance Criteria</i>	<p><i>No reported incidents of prohibited actions undertaken Yancoal, contractors, consultants or other agents of Yancoal.</i></p> <p><i>Any clearing of vegetation reported in Annual Report.</i></p> <p><i>Signage and locks (where required) maintained.</i></p> <p><i>Complete risk assessment for any recreation activities.</i></p> <p><i>All occupants of residents compliant with requirements of the MP.</i></p> <p><i>No Cultural Heritage sites knowingly disturbed and any protective barricading maintained.</i></p> <p><i>Damaged and unwanted fences removed.</i></p> <p><i>All Property Inspections completed.</i></p>			
Activity / Progress	<p>No reported incidents of prohibited actions undertaken in 2019.</p> <p>Regular property inspections were undertaken in 2019.</p>			Undertake Property Inspections.

## 4 MONITORING ACTIVITIES

The following table provides a summary of the monitoring activities undertaken as detailed in the management plans. Monitoring reports and results are available on the Biodiversity Offset Portal.

**Table 4 Monitoring Activity Summary**

<b>Monitoring</b>	<b>2019</b>	<b>Date/s</b>	<b>Completed by</b>
Bird Assemblage	X	September 2018, next due July – August 2020	Niche Environment and Heritage
Habitat Restoration	X	September – November 2018, next due September – November 2020	Niche Environment and Heritage
Rapid Condition Assessment	X	September – November 2019, next due September – November 2020	Advisor – Land Management
Property Inspection	X	April/November 2019, next due April/November 2020	Rural and Environmental Management

### 4.1 Bird assemblages monitoring

Bird Assemblage monitoring was not required to be undertaken during 2019. The results from the 2018 Bird Assemblage monitoring were presented in the 2018 Annual Report for Regional Offsets. The next Bird Assemblage monitoring is scheduled for July 2020.

### 4.2 Habitat restoration monitoring

Habitat Restoration monitoring was not required to be undertaken during 2019. The results from the last round of Habitat Restoration monitoring conducted in 2018 were presented in the 2018 Annual Report for Regional Offsets. The next Habitat Restoration monitoring is scheduled for September 2020.

## 5 PROGRESS IN ATTAINING CONSERVATION OBJECTIVES AGAINST KEY PERFORMANCE INDICATORS

The primary conservation objectives for the Regional BAs are to:

- enhance landscape connectivity within the surrounding landscape;
- improve fauna movement and flora dispersal opportunities within the surrounding landscape;
- increased condition and area of suitable habitats for threatened fauna species within protected reserves, specifically for the Regent Honeyeater and Swift Parrot;
- provide refuge and habitat for local fauna populations and transient species, particularly threatened species; and
- enhance network of protected vegetation within the Hunter Valley.

Table 3 details the progress in attainment of the long-term conservation objectives. The baseline data presented is from the first monitoring completed in 2014. The Rapid

Condition Assessment (RCA) monitoring results indicate that the vegetation and habitat health is being maintained in comparison to the baseline data Table 5– Table 10.

**Table 5 Goulburn River BA: Biodiversity Values and KPIs**

Biodiversity Value	Nested Conservation Value(s)	Description and baseline metric	KPI	Progress comment
Woodland (MZ2, MZ3, MZ4, MZ5 and MZ7)		Total area: 1,169ha RCA Average Health rating 17.5/20	Maintain or increase area, connectivity and habitat condition over 10 years	RCA Average health rating 2015 – 17/20 2016 – 17.1/20
	Fauna Habitat	Moderate potential habitat for Swift Parrot and Regent Honeyeater	improved habitat condition over 10 years	2017 – 17.1/20 2018 - 18.1/20 2019 – 18.4/20 Area and health maintained

**Table 6 Bowditch BA: Biodiversity Values and KPIs**

Biodiversity Value	Nested Conservation Value(s)	Description and baseline metric	KPI	Progress comment
Woodland (MZ1, MZ2 and MZ4)		Total area: 602ha RCA Average Health rating 17.8/20	Observed and measured increase or maintained RCA scores over 10 years	RCA Average Health rating 2015 – 18/20 2016 – 18.4/20
	Fauna Habitat	Moderate potential habitat for Swift Parrot and Regent Honeyeater	Maintain or increase the condition and extent of habitat and bird usage over 10 years	2017 – 17.1/20 2018 – 17.7/20 2019 – 17.7/20 Area and health maintained

**Table 7 Seven Oaks BA: Biodiversity Values and KPIs**

Biodiversity Value	Nested Conservation Value(s)	Description and baseline metric	KPI	Progress comment
Woodland (MZ3, MZ4 and MZ5)		Total area: 519ha RCA Average Health rating 17.6/20	Observe an increase in area, connectivity and habitat condition over 10 years	RCA Average Health rating 2016 – 18/20 2017 – 17.3/20
	Fauna Habitat	Moderate potential habitat for Swift Parrot and Regent Honeyeater	Maintain or increase the condition and extent of habitat and bird usage over 10 years	2018 – 17.6/20 2019 – 17.6/20 Area and health maintained

**Table 8 Condon View BA: Biodiversity Values and KPIs**

Biodiversity Value	Nested Conservation Value(s)	Description and baseline metric	KPI	Progress comment
Woodland (MZ2 and MZ4)		Total area: 515ha RCA Average Health rating 18.9/20	Maintain or increase area, connectivity and habitat condition over 10 years	RCA Average Health rating 2016 – 20/20 2017 – 18.2/20
	Fauna Habitat	Moderate potential habitat for Swift Parrot and Regent Honeyeater	Maintain or increase the condition and extent of habitat and bird usage over 10 years	2018 – 18.6/20 2019 – 18.6/20 Area and health maintained

**Table 9 Putty BA: Biodiversity Values and KPIs**

<b>Biodiversity Value</b>	<b>Nested Conservation Value(s)</b>	<b>Description and baseline metric</b>	<b>KPI</b>	<b>Progress comment</b>
Woodland (MZ2, MZ3 and MZ4)		Total area: 383ha RCA Average Health rating 17.1/20	Observe an increase in area, connectivity and habitat condition over 10 years	RCA Average Health rating 2016 – 17.3/20 2017 – 17.6/20
	Fauna Habitat	Moderate potential habitat for Swift Parrot and Regent Honeyeater	Maintain or increase the condition and extent of habitat and bird usage over 10 years	2018 – 17.8/20 2019 – 15.6/20 (Bushfire in July and December reduced the health rating)

**Table 10 North Rothbury BA: Biodiversity Values and KPIs**

<b>Biodiversity Value</b>	<b>Nested Conservation Value(s)</b>	<b>Description and baseline metric</b>	<b>KPI</b>	<b>Progress comment</b>
Woodland (MZ1 and MZ2)		Total area: 41ha RCA Average Health rating 18.4/20	Observe an increase in area, connectivity and habitat condition over 10 years	RCA Average Health rating 2016 – 18/20 2017 – 18.2/20
	Fauna Habitat	Moderate potential habitat for Swift Parrot and Regent Honeyeater	Maintain or increase the condition and extent of habitat and bird usage over 10 years	2018 – 19/20 2019 – 18.7/20 Area and health maintained

## **ATTACHMENT B: Local Offset Management Plan Annual Report 2019**



## Local Biodiversity Areas

### Annual Report 2019

1 May 2020

Annual report for the period from January to December 2019, for activities described in the Management Plans for all Local Warkworth Mining Limited offsets including:

- Southern Biodiversity Area (including the Putty Road Offset Area)
- Northern Biodiversity Area

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## 1 INTRODUCTION

This annual report is a requirement of the management plans for all Local Warkworth Mining Limited offsets for the 2019 reporting period (1 January 2019 to 31 December 2019).

The report provides a summary of the key management activities completed across the biodiversity offset located within the Southern (includes the Putty Road Offset Area) and Northern Biodiversity Areas (BAs).

The management plans describe the conservation management strategies and monitoring to achieve and measure improvement and protection of the offsets biodiversity values. It is a compliance requirement of the Commonwealth and NSW environmental approvals to implement the management plans.

The Local OMP (November 2014) was prepared to satisfy the consent requirements for the New South Wales (NSW) Warkworth Mine Development Approval (DA 300-9-2002i) and replaces the former *Flora and Fauna Management Plan* and *Warkworth Sands Woodland (WSW) Offset Area OMP*. In November 2015 the NSW Warkworth Continuation Project Approval (SSD-6464) was granted providing both NSW and Commonwealth approval for the same disturbance area. Phase 2 of the EPBC2009/5081 action also commenced on 16 February 2016. In response to the granting of these new approvals, new Management Plans for the Southern and Northern BA have been prepared to satisfy the Commonwealth approval EPBC2009/5081 and the NSW consent (SSD-6464), replacing both the Local and Putty Road OMPs.

The Biodiversity Offset Portal contains the supporting documentation for this report, including photo point monitoring. Access to the portal is restricted, relevant regulators have been provided with login details; please contact Mount Thorley Warkworth should you require assistance.

## 2 LOCATION AND LANDHOLDER DETAILS

The locations of the local BAs are shown in **Figure 1**, **Figure 2** and **Figure 3**, details are provided in **Table 1**.

**Table 1 Local Biodiversity Areas**

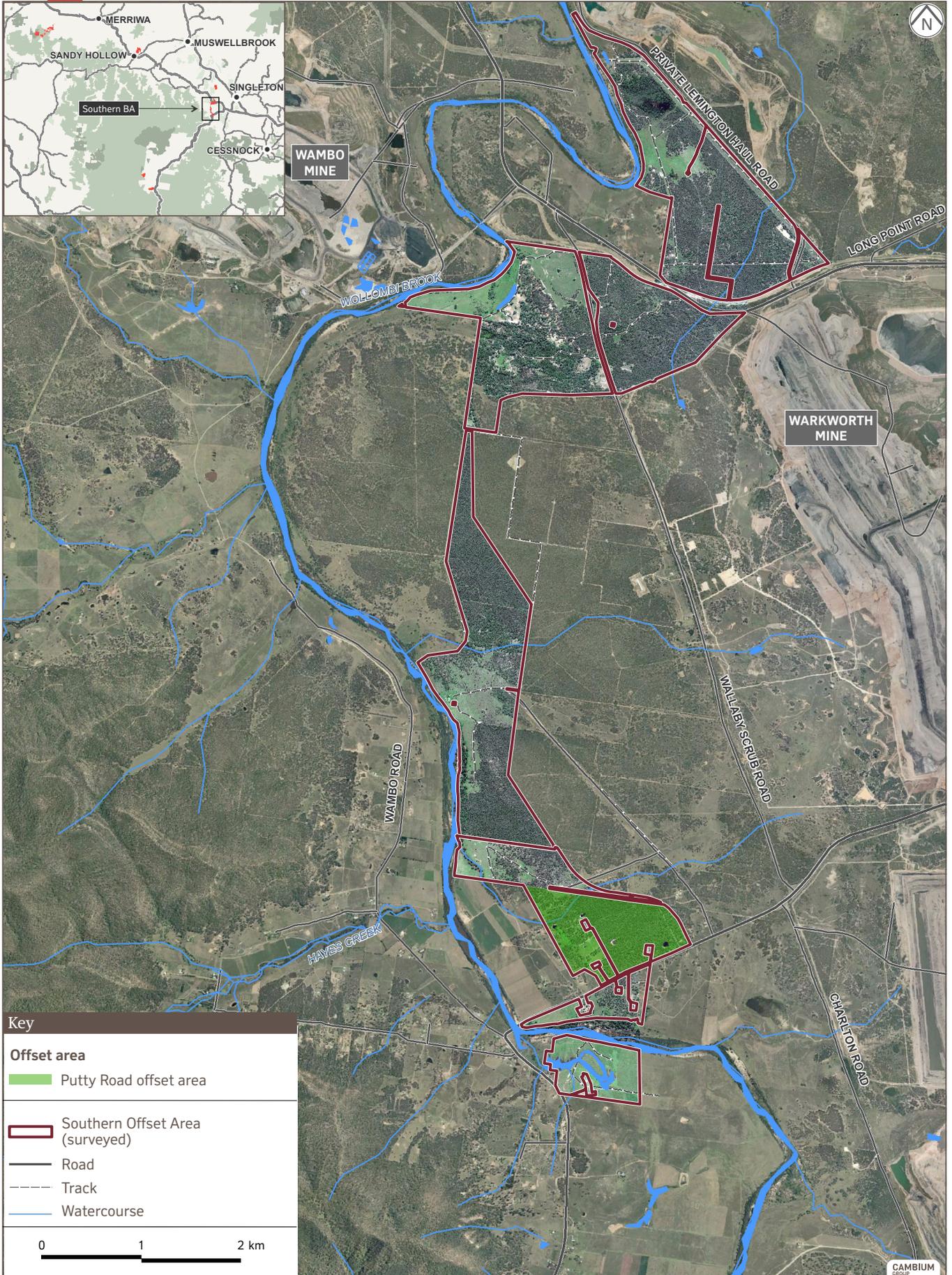
Biodiversity Area	Land Owner	Area (ha)	Offset Area (ha)	Location
Northern BA	Coal & Allied Operations Pty Ltd	344	341	Approximately 7km north of the Warkworth Mining Lease and in close proximity to the Hunter Valley Operations. Accessed via Comleroi Road.
Southern BA (including the Putty Road Offset)	Coal & Allied Operations Pty Ltd Miller Pohang Coal Company Pty Ltd Warkworth Mining Limited	1,023	986	Immediately west and north of Warkworth Mine. Intersected by Putty Road in the south, and Wallaby Scrub Road and the Golden Highway in the north.



### Southern Biodiversity Area - Putty Road offset area

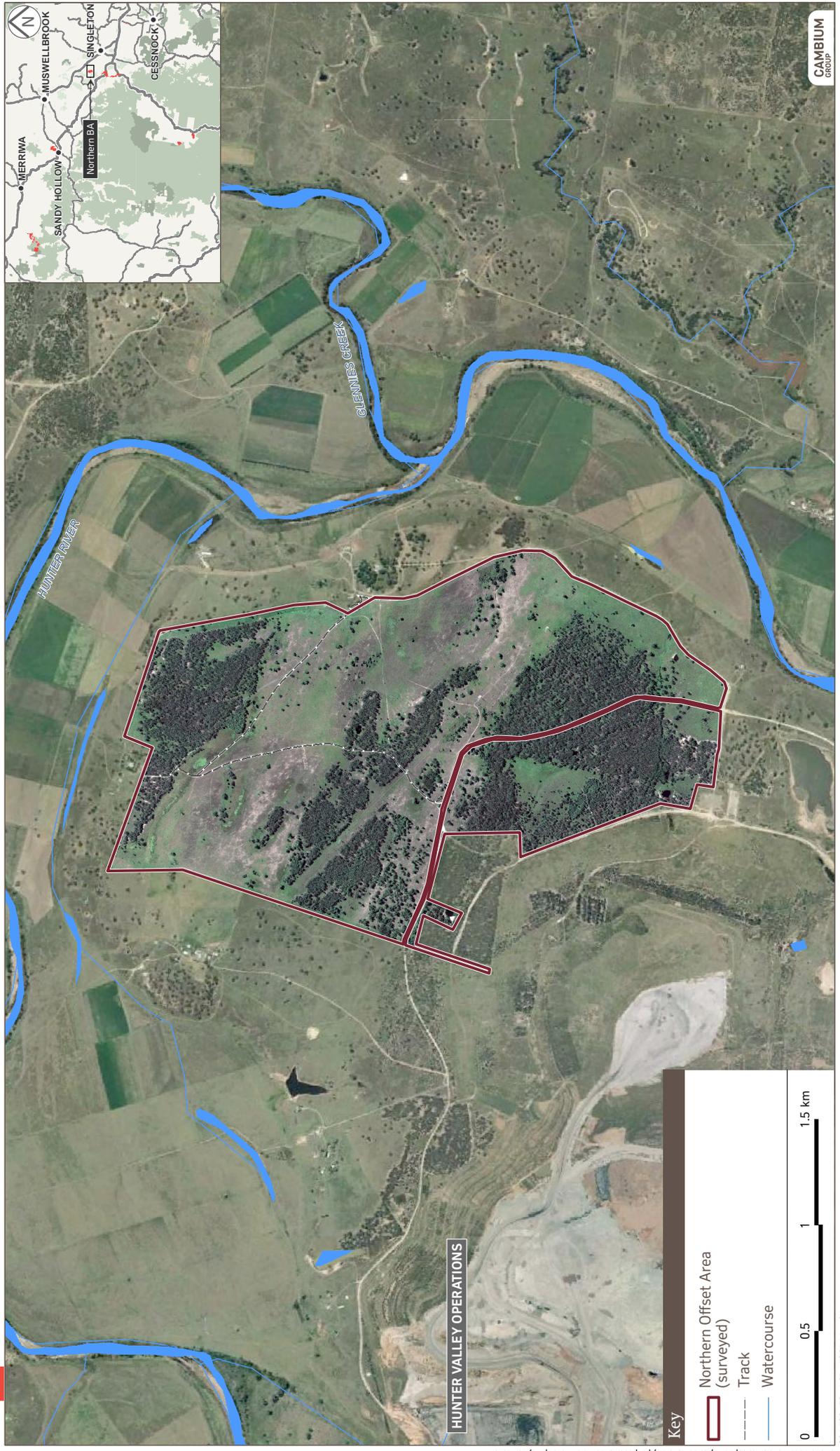
Annual Compliance Report

Figure 2



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Figure 3

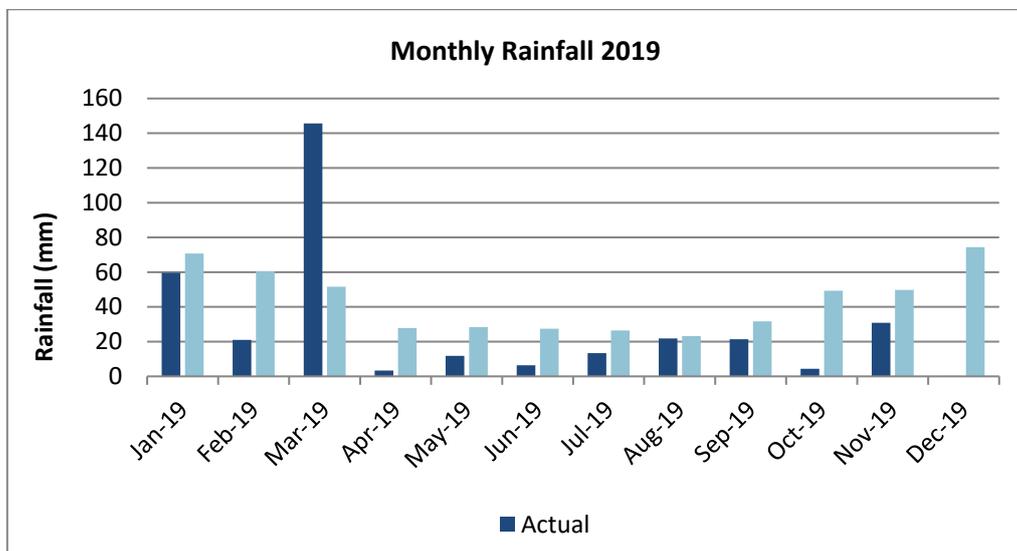


### 3 SUMMARY OF ACTIVITIES – 2019

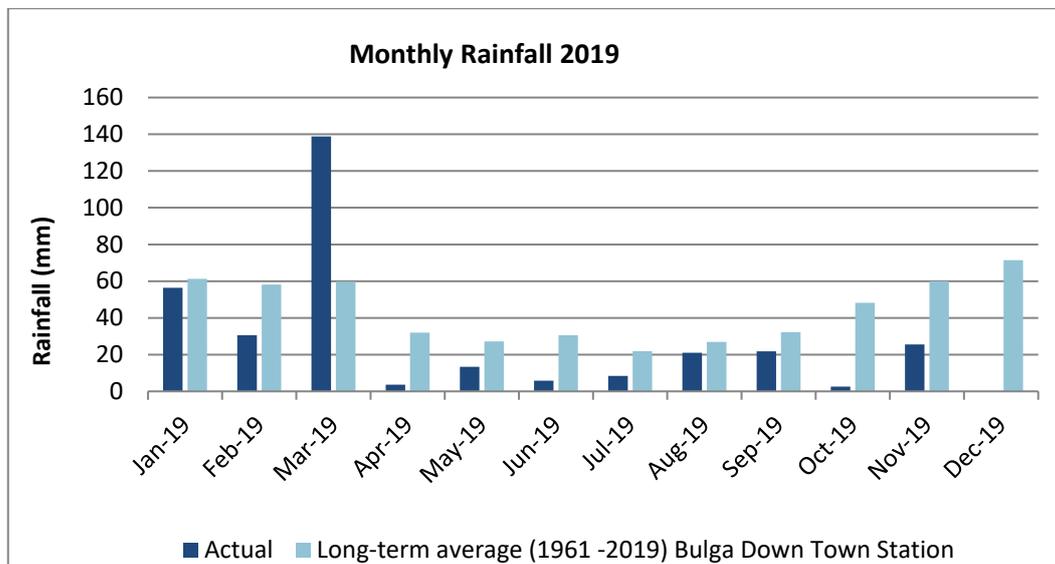
**Table 2** provides a summary of the activities undertaken during the reporting period (year 3) and the progress in attaining the Performance Criteria for the key Conservation Management Strategies in the management plans.

#### 3.1 Summary of climatic conditions

**Figure 4** and **Figure 5** show the monthly actual rainfall compared to the long term average for the Northern BA and Southern BA for the reporting period. In 2019 rainfall was well below average in February, May, June and July with minimal rainfall in April, October and December. The Southern BA received 328mm of rainfall which was 201mm below the long-term average and the Northern BA received 340mm which was 181mm below the long-term average. The low rainfall was a significant factor in the survival of the Central Hunter Grey Box – Ironbark Woodland River Oak Forest and Warkworth Sands Woodland tube stock planted from May to September 2019



**FIGURE 4 MONTHLY RAINFALL – NORTHERN BA**



**FIGURE 5 MONTHLY RAINFALL –SOUTHERN BA**

**Table 2 Summary of progress against Performance Criteria**

Conservation Actions	Year 1 to Year 5 (2019 is Year 3)	Year 6 to Year 10	Completion Criteria	Actions 2020
<b>ACTIVE RESTORATION</b>				
Southern BA WSW planting (40ha)				
<i>Performance Criteria</i>	<i>Collection of seed. Plant propagation. Tubestock planted.  Completed survival assessment.</i>	<i>Ecological monitoring completed</i>	<i>Ecological monitoring demonstrates a trajectory toward the reference site or the benchmark values for HU872 for all attributes measured over the three consecutive assessments (the average of all plots).</i>	
Activity / Progress	Seed collection and plant propagation was undertaken.  In 2017 1ha of WSW tubestock was planted in the Southern BA.  In 2018 14 ha of WSW Tubestock planted in the Southern BA including replanting the sand quarry and old orchard areas.  In 2019 maintenance of planting areas was undertaken and included infill planting of over 9,000 WSW tubestock.  Survival Assessments were completed for all planting areas			Collect seed and propagate plants.  Undertake survival assessments.  Undertake infill planting to restore Warkworth Sands Woodland in the Southern BA.  Undertake ecological monitoring.
Southern BA CHGBIW planting (240ha)				
<i>Performance Criteria</i>	<i>Collection of seed. Plant propagation. Tubestock planted.  Completed survival assessment.</i>	<i>Ecological monitoring completed.</i>	<i>Ecological monitoring demonstrates a trajectory toward the reference site or the NSW Biometric HU817 for all attributes measured over three consecutive assessments (the average of all plots).</i>	

Conservation Actions	Year 1 to Year 5 (2019 is Year 3)	Year 6 to Year 10	Completion Criteria	Actions 2020
Activity / Progress	<p>Seed collection and plant propagation was undertaken.</p> <p>Restoration activities included tubestock planting of Central Hunter Grey Box – Ironbark Woodland in the Southern BA.</p> <p>In 2017, 89 ha of the Southern BA was planted with over 13,000 tubestock planted into rip lines.</p> <p>In 2018 118 ha of the Southern BA was planted with over 20,000 tubestock planted into rip lines.</p> <p>In 2019 maintenance of planting areas was undertaken and included infill planting of over 10,000 Central Hunter Grey Box – Ironbark Woodland tubestock.</p> <p>The site preparation for these sites included ripping by dozer and weed control. To mimic nature the tree species were planted at a spacing of 5 -10m and shrubs species planted in clumps as commonly found with understory species within this vegetation type. All plants were watered, fertilised and protected with a tree guard.</p> <p>Survival Assessments were completed for all planting areas.</p> <p>Ecological monitoring was undertaken in 2018.</p>			<p>Collect seed and propagate plants.</p> <p>Undertake survival assessments.</p> <p>Undertake infill planting of 118ha of Central Hunter Grey Box – Ironbark Woodland in the Southern BA.</p> <p>Undertake ecological monitoring.</p>

Conservation Actions	Year 1 to Year 5 (2019 is Year 3)	Year 6 to Year 10	Completion Criteria	Actions 2020
Southern BA ROF planting (26ha)				
<i>Performance Criteria</i>	<p><i>Collection of seed. Plant propagation. Tubestock planted.</i></p> <p><i>Completed survival assessment.</i></p>		<i>Survival assessment greater than 70%</i>	
Activity / Progress	<p>Seed collection and plant propagation was undertaken.</p> <p>Restoration activities included planting River Oak Forest in the Southern BA.</p> <p>In 2018, 11ha of the Southern BA was planted with over 2,000 tubestock planted into rip lines.</p> <p>In 2019 maintenance of planting areas was undertaken and included infill planting of over 800 River Oak Forest tubestock.</p> <p>The site preparation for this site included ripping by dozer and weed control. To mimic nature the tree species were planted at a spacing of 5 -10m and shrubs species planted in clumps as commonly found with understory species within this vegetation type. All plants were watered, fertilised and protected with a tree guard.</p> <p>Survival Assessments were completed for all planting areas.</p> <p>Ecological monitoring was undertaken in 2018.</p>			<p>Collect seed and propagate plants.</p> <p>Undertake survival assessments.</p> <p>Undertake infill planting of 11ha of River Oak Forest in the Southern BA.</p> <p>Undertake ecological monitoring.</p>

Conservation Actions	Year 1 to Year 5 (2019 is Year 3)	Year 6 to Year 10	Completion Criteria	Actions 2020
Northern BA WSW planting (195ha)				
<i>Performance Criteria</i>	<i>Collection of seed. Plant propagation. Tubestock planted.</i>  <i>Completed survival assessment.</i>	<i>Ecological monitoring completed.</i>	<i>Ecological monitoring demonstrates a trajectory toward the reference site or the benchmark values for HU872 for all attributes measured over three consecutive assessments (the average of all plots).</i>	
Activity / Progress	<p>Seed collection and plant propagation was undertaken.</p> <p>Restoration activities included planting Warkworth Sands Woodland in the Northern BA.</p> <p>In 2014 work commenced to restore over 80 hectares of Warkworth Sands Woodland, this involved the planting of seedlings and the relocation of sand salvaged ahead of mining activities.</p> <p>In 2017, 10,800 tubestock were planted into 44 50x50m patches. Topsoil from ahead of mining operations at MTW was salvaged and hauled to the Biodiversity Area prior to planting commencing. In total Ten patches received 50mm of topsoil over the whole patch, two received 50mm of topsoil over half the patch, 12 received 25mm of topsoil over the patch and ten received no topsoil. Holes were dug for tubestock, either by hand or auger and all plants were watered, fertilised and protected with a tree guard.</p> <p>In 2018 maintenance of planting areas was undertaken and included infill planting of over 8,000 tubestock.</p> <p>In 2019 maintenance of planting areas was undertaken and included infill planting of over 3,000 tubestock.</p> <p>Survival Assessments were completed for all planting areas</p> <p>Ecological monitoring was undertaken in 2018.</p>		<p>Collect seed and propagate plants.</p> <p>Undertake survival assessments</p> <p>Salvage 7ha of topsoil from ahead of mining operations at MTW and haul to the 2020 Northern BA planting area.</p> <p>Undertake planting of 7ha of Warkworth Sands Woodland in the Northern BA</p> <p>Undertake ecological monitoring.</p>	

Conservation Actions	Year 1 to Year 5 (2019 is Year 3)	Year 6 to Year 10	Completion Criteria	Actions 2020
Northern BA CHGBIW planting (23ha)				
<i>Performance Criteria</i>	<i>Collection of seed. Plant propagation. Tubestock planted. Completed survival assessment.</i>	<i>Ecological monitoring completed.</i>	<i>Ecological monitoring demonstrates a trajectory toward the reference site or the NSW Biometric HU817 for all three attributes measured over three consecutive assessments (the average of all plots).</i>	
Activity / Progress	<p>Restoration activities included tubestock planting of Central Hunter Grey Box – Ironbark Woodland in the Northern BA.</p> <p>In 2017, 6ha of the Northern BA was planted with 2,780 tubestock planted into rip lines. The site preparation for this site included ripping by dozer and weed control. To mimic nature the tree species were planted at a spacing of 5 -10m and shrubs species planted in clumps as commonly found with understory species within this vegetation type. All plants were watered, fertilised and protected with a tree guard.</p> <p>In 2018 maintenance of planting areas was undertaken and included infill planting. Survival Assessments were completed for all planting areas. Ecological monitoring was undertaken in 2018.</p>			<p>Collect seed and propagate plants.</p> <p>Undertake survival assessments.</p> <p>Undertake infill planting of Central Hunter Grey Box – Ironbark Woodland in the Northern BA.</p> <p>Undertake ecological monitoring.</p>

Conservation Actions	Year 1 to Year 5 (2019 is Year 3)	Year 6 to Year 10	Completion Criteria	Actions 2020
<b>PASSIVE RESTORATION</b>				
Weed control and monitoring				
<i>Performance Criteria</i>	<p>At least two weed control events each year for species listed in Table 14 of Management Plans and other weeds recorded from monitoring activities.</p> <p>All actions recorded in Annual Report.</p> <p>Complete Rapid Condition Assessment and Property Inspections.</p>	<p>At least one weed control event each year for species listed in Table 14 of Management Plans and other weeds recorded from monitoring activities.</p> <p>All actions recorded in Annual Report.</p> <p>Complete Rapid Condition Assessment and Property Inspections.</p>	<p>Ecological monitoring data indicates a trajectory for reduction in exotic plant cover over three consecutive assessments.</p>	
Activity / Progress	<p>Weed contractor engaged to undertake weed control activities at the Northern and Southern BA throughout the year.</p> <p>In 2019 weed control targeted the following species: African boxthorn (<i>Lycium ferocissimum</i>), African lovegrass (<i>Eragrostis curvulva</i>), African olive (<i>Olea europaea</i> subsp. <i>Cuspidate</i>), Blue heliotrope (<i>Heliotropium amplexicaule</i>), Bridal Creeper (<i>Asparagus asparagoides</i>), Cats claw creeper (<i>Dolichandra unguis-cati</i>), Castor oil plant (<i>Ricinus communis</i>), Coolatai grass (<i>Cynodon dactylon</i>), Couch grass (<i>Cynodon dactylon</i>), Fireweed (<i>Scenecio madagascariensis</i>), Galenia (<i>Galenia pubescens</i>), Green cestrum (<i>Cestrum parqui</i>), Lantana (<i>Lantana camara</i>), Mother of millions (<i>Bryophyllum delagonesse</i>), Natal grass (<i>Melinis repens</i>), Paterson's curse (<i>Echium plantagineum</i>), Prickly pear (<i>Opuntia stricta</i>), Tree of heaven (<i>Ailanthus altissima</i>), Tiger pear (<i>Optunia aurantiaca</i>), Tree pear (<i>Optunia tomentose</i>).</p> <p>Rapid Condition Assessment and Property Inspections were completed in 2019.</p>			<p>Control noxious species and stop weeds spreading into previously un-infested areas.</p> <p>Undertake Rapid Condition Assessment.</p> <p>Undertake Property Inspections.</p>

Conservation Actions	Year 1 to Year 5 (2019 is Year 3)	Year 6 to Year 10	Completion Criteria	Actions 2020
Pest control and monitoring				
<i>Performance Criteria</i>	<p><i>At least two control events each year for species listed in Table 20 of Management Plans, and any other species recorded from monitoring activities.</i></p> <p><i>Active participation in programme coordinated by HLLS, this may include local control actions.</i></p> <p><i>Complete biannual inspection and report all works completed and actions for next year.</i></p>	<p><i>At least one control events each year for species listed in Table 17 of Management Plans, and any other species recorded from monitoring activities.</i></p> <p><i>Active participation in programme coordinated by HLLS, this may include local control actions.</i></p> <p><i>Complete biannual inspection and report all works completed and actions for next year.</i></p>	<p><i>No observed vertebrate pest or damage.</i></p> <p><i>Ecological monitoring demonstrates a trajectory to benchmark values for all attributes measured over three consecutive assessments (the average of all plots).</i></p>	
Activity / Progress	<p>In 2019 a vertebrate pest contractor was engaged to undertake programmes across the Southern and Northern BA.</p> <p>Two 1080 ground baiting programmes were undertaken targeting wild dogs and foxes in autumn and spring.</p> <p>One feral pig 1080 baiting programme was carried out in autumn in conjunction with a HLSS coordinated program, 29 feral pigs were poisoned.</p> <p>Shooting of vertebrate pests undertaken throughout the year.</p> <p>Biannual property inspections were undertaken in 2019.</p>			<p>Undertake vertebrate pest management including 1080 ground baiting programmes scheduled for autumn and spring to target wild dogs and foxes.</p> <p>Undertake 1080 baiting programmes scheduled for winter to target feral pigs and rabbits.</p> <p>Undertake Property Inspections.</p>

Conservation Actions	Year 1 to Year 5 (2019 is Year 3)	Year 6 to Year 10	Completion Criteria	Actions 2020
<b>Grazing</b>				
<i>Performance Criteria</i>	<i>Grazing is conducted in accordance with the Management Plan.</i> <i>Boundary fences maintained.</i> <i>Complete Rapid Condition Assessment and Property Inspections.</i>			
<i>Activity / Progress</i>	Boundary fence installation in SBA5 in 2017 to exclude cattle. No strategic grazing was undertaken in the BAs in 2019. Property Inspections and Rapid Condition Assessments were undertaken in 2019.			Undertake Property Inspections. Undertake Rapid Condition Assessment. Maintain boundary fences.
<b>Bushfire Management Plan (BFMP), Ecological burn and monitoring</b>				
<i>Performance Criteria</i>	<i>Actions implemented.</i> <i>Review and revise if required.</i> <i>Complete Rapid Condition Assessment and Property Inspections.</i>	<i>Actions implemented.</i> <i>Review and revise if required.</i> <i>Complete Rapid Condition Assessment and Property Inspections.</i> <i>Completed ecological fire management plan for MZ1, MZ3, MZ5, MZ7, MZ8 and MZ9.</i>	<i>All required actions of BFMP have been implemented.</i> <i>BFMP has been reviewed annually and revised if required.</i>	
<i>Activity / Progress</i>	BFMP reviewed. Property Inspections and Rapid Condition Assessment were undertaken in 2019.			Review BFMP. Undertake Property Inspections. Undertake Rapid Condition Assessment. Undertake fuel load assessments.

Conservation Actions	Year 1 to Year 5 (2019 is Year 3)	Year 6 to Year 10	Completion Criteria	Actions 2020
Infrastructure Improvements and monitoring				
<i>Performance Criteria</i>	<i>Completed GDP for all infrastructure improvement actions.</i> <i>Maintenance of tracks and fences completed at least every 3 years.</i> <i>Property Inspections undertaken.</i>			.
Activity / Progress	GDP completed for new boundary fence at Southern and Northern BAs in 2017. Boundary fences maintained and Property Inspections undertaken in 2019.			Maintain tracks and boundary fences. Undertake Property Inspections
Erosion monitoring inspections and reports				
<i>Performance Criteria</i>	<i>Complete Rapid Condition Assessment and Property Inspections</i>			
Activity / Progress	Rapid Condition Assessment and Property Inspections undertaken in 2019 No significant erosion issues identified at either BA			Undertake Rapid Condition Assessment. Undertake Property Inspections.
Dam conversion and rehabilitation and monitoring				
<i>Performance Criteria</i>	<i>Prepare dam conversion plan.</i> <i>Dam conversion complete and rehabilitation has stabilised the site.</i> <i>Property inspections.</i>	<i>Observed natural flow regime and no erosion.</i> <i>Property inspections.</i>	<i>All works completed.</i>	
Activity / Progress	Property inspections undertaken in 2019.			Prepare a dam conversion plan. Undertake Property Inspections.
Natural Regeneration and monitoring				
<i>Performance Criteria</i>	Annual weed control, vertebrate pest and fire management actions implemented as per management plans. <i>Complete Rapid Condition Assessment and Property Inspections.</i>	<i>Ecological monitoring demonstrates a trajectory to benchmark values for all attributes measured over three consecutive assessments (the average of all plots).</i>		
Activity / Progress	All actions implemented in 2019 as per management plans. Rapid Condition Assessment and Property Inspections undertaken in 2019.			Undertake Property Inspections. Undertake Rapid Condition Assessment.

Conservation Actions	Year 1 to Year 5 (2019 is Year 3)	Year 6 to Year 10	Completion Criteria	Actions 2020
<b>Controlled Activities</b>				
<i>Performance Criteria</i>	<p><i>No reported incidents of prohibited actions undertaken Yancoal, contractors, consultants or other agents of Yancoal.</i></p> <p><i>Any clearing of vegetation reported in Annual Report.</i></p> <p><i>Signage and locks (where required) maintained.</i></p> <p><i>Complete risk assessment for any recreation activities.</i></p> <p><i>All occupants of residents compliant with requirements of the MP.</i></p> <p><i>No Cultural Heritage sites knowingly disturbed and any protective barricading maintained.</i></p> <p><i>Damaged and unwanted fences removed.</i></p> <p><i>All Property Inspections completed.</i></p>			
<b>Activity / Progress</b>	<p>In 2017 trespassing and illegal tree clearing and timber getting within the Southern Biodiversity Area resulted in felling approximately 40 full sized trees and 100 small trees. This unauthorised activity was reported to both Department of Environment and Energy and Department of Planning and Environment in October 2017.</p> <p>Internal fences and waste were removed from the Southern BA areas to be planted in 2018 and sections of boundary fence at the Northern BA and Southern BA were repaired and replaced where needed.</p> <p>New Biodiversity Area signs were installed in 2017.</p> <p>Regular property inspections were undertaken.</p> <p>In 2019 there were no reported incidents or prohibited actions undertaken on the Biodiversity Areas.</p>			Undertake Property Inspections.

## 4 MONITORING ACTIVITIES

The following table provides a summary of the monitoring activities undertaken as detailed in the MP. Monitoring reports and results are available on the Biodiversity Offset Portal.

**Table 3 Monitoring Activity Summary**

<b>Monitoring</b>	<b>2019</b>	<b>Date/s</b>	<b>Completed by</b>
Bird Assemblage	N/A	September 2018, next due July – August 2020	Niche Environment and Heritage
Habitat Restoration	N/A	November 2018, next due September – November 2020	Niche Environment and Heritage
Rapid Condition Assessment	X	November 2019 next due September – November 2020	Advisor – Land Management
Property Inspection	X	April/November 2019, next due April/November 2020	Advisor – Land Management

### 4.1 Bird assemblages monitoring

Bird Assemblage monitoring was not required to be undertaken during 2019. The results from the 2018 Bird Assemblage monitoring were presented in the 2018 Annual Report for Local Offsets.

The next Bird Assemblage monitoring is scheduled for July 2020.

### 4.2 Habitat restoration monitoring

Habitat Restoration monitoring was not required to be undertaken during 2019. The results from the last round of Habitat Restoration monitoring conducted in 2018 were presented in the 2018 Annual Report for Local Offsets.

The next Habitat Restoration monitoring is scheduled for September 2020.

## 5 PROGRESS IN ATTAINING CONSERVATION OBJECTIVES AGAINST KEY PERFORMANCE INDICATORS

The primary conservation objectives for the local offset areas (including the Putty Road Offset) are to:

- enhance biodiversity values across the BAs;
- protect the WSW Offset Area and Putty Road Offset Area under a legally binding conservation covenant;
- increase the condition of WSW and Ironbark EECs and observe a transition from grassland to woodland;
- enhance habitat and foraging opportunities for the woodland birds; and

- contribute to and enhance the existing network of protected vegetation within the Hunter Valley.

Table 7 indicates the progress in attainment of the long-term conservation objectives, the ecological monitoring data supports the continued implementation of the conservation management strategies.

## **6 ADAPTIVE MANAGEMENT**

No new environmental risks have been identified during the reporting period.

**Table 4 Local Offset Areas Biodiversity Values and Key Performance Indicators**

Area	Biodiversity Value	Description and baseline metric	KPI	Progress comment
Southern BA	Ironbark Woodland	Total area: 446.7ha RCA Average Health rating 18.1/20 (MZ1)	Extent and condition of woodland over 10 years.	RCA results: 2014 – 18/20 2015 – 18/20 2016 – 18/20 2017 – 18.5/20 2018 – 18.5/20 2019 – 18/20 Area and health maintained.
	Ironbark Grassland	Total area: 258.4ha	Transition of grassland to woodland.	2018 monitoring supports continued implementation of the conservation management strategies.
WSW		Total area: 137ha RCA Average Health rating 17.8 /20 (MZ3)	Extent and condition of woodland over 10 years.	RCA results: 2014 – 16/20 2015 – 18/20 2016 – 17/20 2017 – 18/20 2018 – 19/20 2019 – 19/20A rea and health maintained.
	WS Grassland	Total area:40.3ha	Transition of grassland to woodland.	
Hunter Lowland Red Gum Forest		Total area: 32.4ha RCA Average Health rating 18.5/20 (MZ5)	Extent and condition over 10 years.	RCA results: 2014 – 17/20 2015 – 19/20 2016 – 19/20 2017 – 19/20 2018 – 18.5/20 2019 – 18.5/20 Area and health maintained.
	Fauna Habitat	Low potential habitat	Observe maintenance or increase habitat condition rating over 10 years	2018 monitoring supports continued implementation of the conservation management strategies.

Area	Biodiversity Value	Description and baseline metric	KPI	Progress comment
Northern BA	Ironbark Woodland	Total area: 103.6ha RCA Average Health rating 18.6/20 (MZ1)	Extent and condition of woodland over 10 years.	RCA results: 2014 – 18/20 2015 – 18.5/20 2016 – 19.5/20 2017 – 19.5/20 2018 – 18/20 2019 – 18/20 Area and health maintained.
	Ironbark Grassland	Total area: 23.1ha	Transition of grassland to woodland.	
WSW		Total area: 19.5ha RCA Average Health rating 18.4/20 (MZ3)	Maintain woodland extent over 10 years.	RCA results: 2014 – 17.5/20 2015 – 18/20 2016 – 19/20 2017 – 19/20 2018 – 18.5/20 2019 – 18.5/20 Area and health maintained.
	WS Grassland	Total area: 194.5	Transition of grassland to woodland	2018 monitoring supports continued implementation of the conservation management strategies.
	Fauna Habitat		Observe maintenance or increase habitat condition rating over 10 years	2018 monitoring supports continued implementation of the conservation management strategies.

## **ATTACHMENT C: EPBC 2009/5081 Compliance Register (Condition 17)**

**EPBC 2009/5081 Compliance Register (Condition 17)**

Condition	Documents	Date due (as per Approval)	Date submitted	Date approved	Date Plan on website	Date DoEE notified	Date review due
2	Putty Road Offset Management Plan	13-Apr-2014	14-Apr-2014	04-Jul-2014	31-Jul-2014	31-Jul-2014	within 12 months of the approval of the Phase 2 Offset (refer Condition 5)
5	Southern BA Management Plan	17-Feb-2017	15-Feb-2017 14-Dec-2017 (revised version)	30-Apr-2018	28-Feb-2019	N/A	N/A
6	Re-Establishment Management Plan	03-Feb-2015	02-Feb-2015	Not yet received	N/A	N/A	within 12 months of the Commencement of Construction of Phase 2
7	Putty, Seven Oaks, Goulburn River, Bowditch and North Rothbury Biodiversity Area Management Plans	17-Feb-2017	15-Feb-2017 14-Dec-2017 (revised versions)	16-Feb-2018 (DoEE) 30-Apr-2018 (DPE)	28-May-2018	N/A	N/A
	Northern Management Plan		15-Feb-2017 14-Dec-2017 (revised version)	16-Feb-2018 (DoEE) 25-Sep-2018 (DPE)	27-Sep-2018	N/A	N/A
	Condon View Biodiversity Area Management Plan		15-Feb-2017 10-Oct-2017 (revised version)	26-Jun-2017 (DPE) Not yet received (DoEE)	N/A	N/A	N/A
8	Water Management Plan	03-Aug-2014	15-Sep-2014 (following approval by NSW regulator 10-Sep-2014)	20-Sep-2018 (DPE)	27-Sep-2018 (most recent version)	15-Sep-2014	N/A
11	Mine Site Rehabilitation Plan (Phase 1)	03-Feb-2015	02-Feb-2015	Not yet received	N/A	N/A	within 12 months of the Commencement of Construction of Phase 2
	Mine Site Rehabilitation Plan (Phase 2)	17-Feb-2017	23-Jan-2019 (following approval by NSW regulator 14-Dec-2018)	11-Jun-2019 (DPE) 11-Mar-2020 (DAWE)	N/A	N/A	N/A
12	Mine Closure Plan	6 months prior to mine closure	N/A	N/A	N/A	N/A	N/A
15	Compliance Report	3-May-2015 (and annually thereafter)	28-Apr-2015	N/A	28-Apr-2015	28-Apr-2015	03-May-2016
		3-May-2016	3-May-2016	N/A	3-May-2016	3-May-2016	03-May-2017

3/05/2017	01-Jun-2017	N/A	10-Jun-2017	01-Jun-2017	03-May 2018
3/05/2018	3-May-2018	N/A	3-May-2018	3-May-2018	03-May 2019
3/05/2019	3-May-2019	N/A	3-May-2019	3-May-2019	03 -May 2020
3/05/2020	3-May-2020	N/A	3-May-2020	3-May-2020	03-May 2021

## **ATTACHMENT D: Impact Damage Assessment**

## IMPACT DAMAGE ASSESSMENT

<b>CLIENT NAME</b>		<b>CLIENT CONTACT</b>	
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### 1.0 ORIGIN, CAUSE & PATH OF FIRE

<b>INCIDENT DATE</b>		<b>INCIDENT TIME</b>	
<b>SEASON</b>		<b>PREFERRED FIRE REGIME</b>	Within / Outside of
<b>INCIDENT LOCATION</b>		<b>GRID REF</b> <i>(Indicate whether GPS or include map name)</i>	
<b>CAUSE DESCRIPTION</b>			
<b>KNOWN?</b>	Yes / No	<b>SUSPECTED?</b>	Yes / No
<b>UNKNOWN?</b>	Yes / No	<b>FOR INFORMATION?</b>	Yes / No
<b>FOR ACTION?</b>	Yes / No	<b>RFS DISTRICT</b>	
<b>RFS ZONE</b>			

### 2.0 DESCRIPTION OF FIRE

<b>LAND STATUS/TENURE</b> <i>e.g.: Agricultural, Roadside, Park, Forest etc</i>	<b>AREA BURNT</b> <i>(Hectares)</i>
<b>BOUNDARIES OF FIRE</b> <i>Include features, distances, compass bearings, grid references etc.</i>	
<b>DISTINGUISHING FEATURES</b> <i>e.g.: Areas of high intensity, low intensity, height of scorch/charring etc.</i>	
<b>PROPERTY DAMAGE</b> <i>Describe property, locality. Use street names and numbers, grid references etc.</i>	
<b>% DAMAGE &amp; DESTROYED</b> <i>Type of Asset - (residential, other structure, outbuilding (garage, shed, farm), Vehicles (boat, car, trucks, caravan), No. of stock losses, fences (in distance destroyed / damaged)</i>	

### 3.0 AREA INFORMATION

AREA INFORMATION	
Gross area burnt	ha
Estimated burn coverage	%
Estimated post burn fuel load	t/ha Score: <input type="checkbox"/> Low <input type="checkbox"/> Mod <input type="checkbox"/> High <input type="checkbox"/> V. High <input type="checkbox"/> Extreme
Estimated crown scorch	%
Estimated % of canopy removal	%
OPERATIONAL PERFORMANCE	
	Comment (if no, why?)
Burn contained within planned boundaries?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Fuel reduction objective met?	<input type="checkbox"/> Yes <input type="checkbox"/> No
OH&S requirements met	<input type="checkbox"/> Yes <input type="checkbox"/> No
Environmental requirements met?	<input type="checkbox"/> Yes <input type="checkbox"/> No
REMEDIAL ACTION	
Prompt: Describe any remedial action required	
Remedial Action Completed	Date:

#### 4.0 SOCIAL

	TOTAL QTY	ORIGINATING LOCATION	HOSPITALISED	INJURY TYPES	VALIDATION
Fatalities					
Serious Injuries					
Minor Injuries					

#### EVACUATIONS

STATUS	EVACUATION CENTRE LOCATION	ADDRESS	EST. CAPACITY	POTENTIAL NUMBERS	# AT CENTRE / # DVR

#### 5.0 PROPERTY

**HOMES** *including public housing stock and relocatable homes*

LOCATION	DAMAGE TYPES AND QTY	PORTION UNINHABITABLE

**OTHER STRUCTURES** *Fences, Sheds, Garages, Barns, Animal Shelters etc*

LOCATION	DAMAGE TYPES AND QTY	TYPE

#### MOTOR VEHICLES

LOCATION	DAMAGE TYPES AND QTY

## 6.0 INFRASTRUCTURE

### TELECOMS

LOCATION	Nº OF CONSUMERS EFFECTED	ESTIMATED RECONNECTION	SERVICE TYPE

### COMMUNITY ASSETS

ASSET TYPE	LOCATION	AFFECTING Nº PEOPLE	ESTIMATED REINSTATEMENT

## 7.0 RECOVERY ISSUES

### RECOVERY REQUIREMENTS

TYPE	REQUIRED	ESTABLISHED	NOTES

IMPACT ASSESSMENT COMPLETED BY		DATE	
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**Impact Damage Assessment – Putty Offset Photos**  
**21 July 2019**

Image 1



**Impact Damage Assessment – Putty Offset Photos**  
**21 July 2019**

Image 2



**Impact Damage Assessment – Putty Offset Photos**  
**21 July 2019**

Image 3



**Impact Damage Assessment – Putty Offset Photos**  
**21 July 2019**

Image 4



**Impact Damage Assessment – Putty Offset Photos**  
**21 July 2019**

Image 5



**Impact Damage Assessment – Putty Offset Photos**  
**21 July 2019**

Image 6



Image 7



**Impact Damage Assessment – Putty Offset Photos**  
**21 July 2019**

Image 8



Image 9



**Impact Damage Assessment – Putty Offset Photos**  
**21 July 2019**

Image 10



## IMPACT DAMAGE ASSESSMENT

<b>CLIENT NAME</b>		<b>CLIENT CONTACT</b>	
--------------------	--	-----------------------	--

### 1.0 ORIGIN, CAUSE & PATH OF FIRE

<b>INCIDENT DATE</b>		<b>INCIDENT TIME</b>	
<b>SEASON</b>		<b>PREFERRED FIRE REGIME</b>	Within / Outside of
<b>INCIDENT LOCATION</b>		<b>GRID REF</b> <i>(Indicate whether GPS or include map name)</i>	
<b>CAUSE DESCRIPTION</b>			
<b>KNOWN?</b>	Yes / No	<b>SUSPECTED?</b>	Yes / No
<b>UNKNOWN?</b>	Yes / No	<b>FOR INFORMATION?</b>	Yes / No
<b>FOR ACTION?</b>	Yes / No	<b>RFS DISTRICT</b>	
<b>RFS ZONE</b>			

### 2.0 DESCRIPTION OF FIRE

<b>LAND STATUS/TENURE</b> <i>e.g.: Agricultural, Roadside, Park, Forest etc</i>	<b>AREA BURNT</b> <i>(Hectares)</i>
<b>BOUNDARIES OF FIRE</b> <i>Include features, distances, compass bearings, grid references etc.</i>	
<b>DISTINGUISHING FEATURES</b> <i>e.g.: Areas of high intensity, low intensity, height of scorch/charring etc.</i>	
<b>PROPERTY DAMAGE</b> <i>Describe property, locality. Use street names and numbers, grid references etc.</i>	
<b>% DAMAGE &amp; DESTROYED</b> <i>Type of Asset - (residential, other structure, outbuilding (garage, shed, farm), Vehicles (boat, car, trucks, caravan), No. of stock losses, fences (in distance destroyed / damaged)</i>	

### 3.0 AREA INFORMATION

AREA INFORMATION	
Gross area burnt	ha
Estimated burn coverage	%
Estimated post burn fuel load	t/ha Score: <input type="checkbox"/> Low <input type="checkbox"/> Mod <input type="checkbox"/> High <input type="checkbox"/> V. High <input type="checkbox"/> Extreme
Estimated crown scorch	%
Estimated % of canopy removal	%
OPERATIONAL PERFORMANCE	
	Comment (if no, why?)
Burn contained within planned boundaries?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Fuel reduction objective met?	<input type="checkbox"/> Yes <input type="checkbox"/> No
OH&S requirements met	<input type="checkbox"/> Yes <input type="checkbox"/> No
Environmental requirements met?	<input type="checkbox"/> Yes <input type="checkbox"/> No
REMEDIAL ACTION	
Prompt: Describe any remedial action required	
Remedial Action Completed	Date:

#### 4.0 SOCIAL

	TOTAL QTY	ORIGINATING LOCATION	HOSPITALISED	INJURY TYPES	VALIDATION
Fatalities					
Serious Injuries					
Minor Injuries					

#### EVACUATIONS

STATUS	EVACUATION CENTRE LOCATION	ADDRESS	EST. CAPACITY	POTENTIAL NUMBERS	# AT CENTRE / # DVR

#### 5.0 PROPERTY

**HOMES** *including public housing stock and relocatable homes*

LOCATION	DAMAGE TYPES AND QTY	PORTION UNINHABITABLE

**OTHER STRUCTURES** *Fences, Sheds, Garages, Barns, Animal Shelters etc*

LOCATION	DAMAGE TYPES AND QTY	TYPE

#### MOTOR VEHICLES

LOCATION	DAMAGE TYPES AND QTY

## 6.0 INFRASTRUCTURE

### TELECOMS

LOCATION	Nº OF CONSUMERS EFFECTED	ESTIMATED RECONNECTION	SERVICE TYPE

### COMMUNITY ASSETS

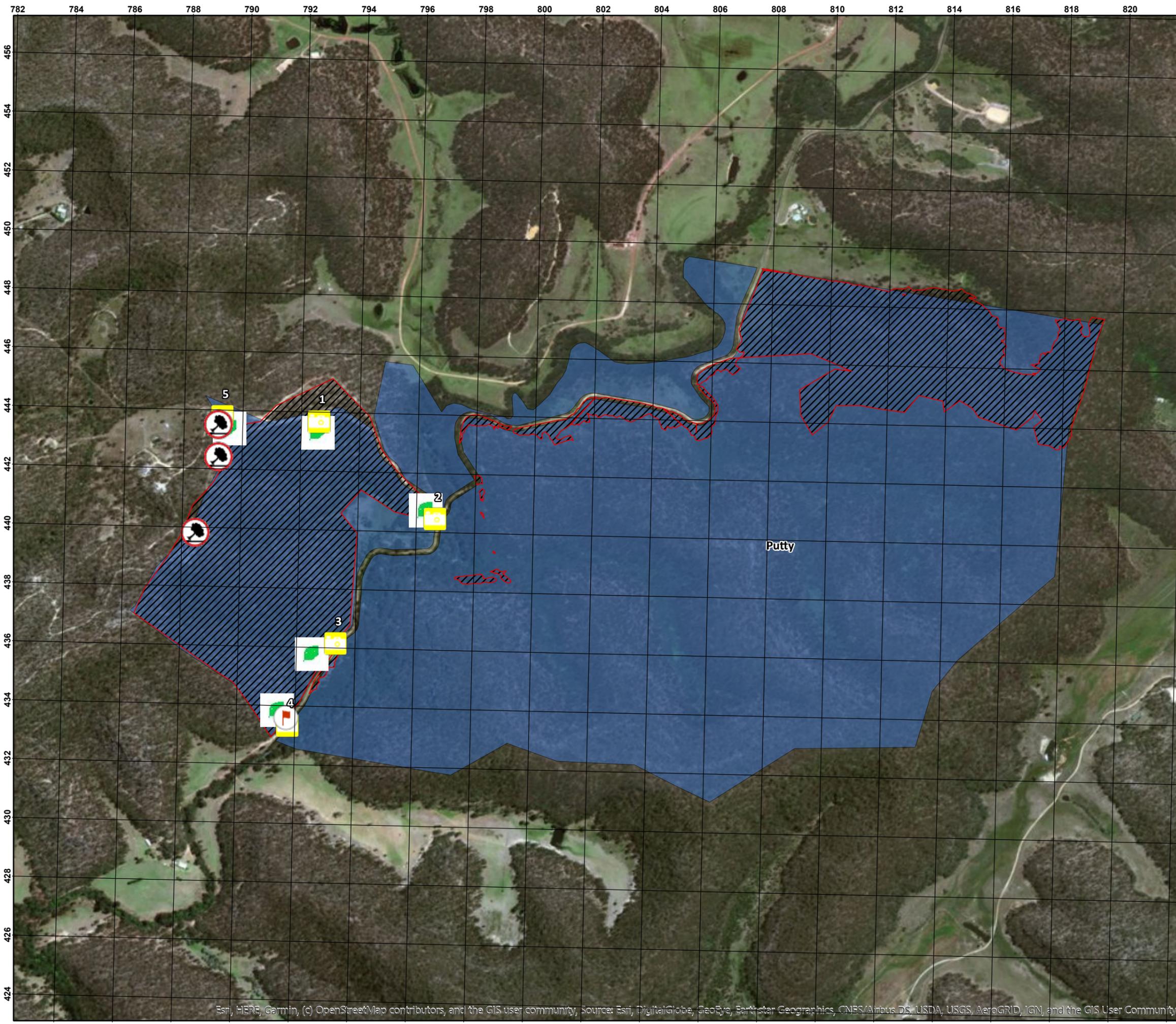
ASSET TYPE	LOCATION	AFFECTING Nº PEOPLE	ESTIMATED REINSTATEMENT

## 7.0 RECOVERY ISSUES

### RECOVERY REQUIREMENTS

TYPE	REQUIRED	ESTABLISHED	NOTES

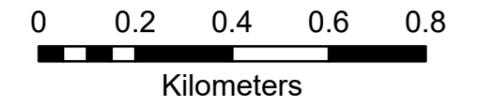
IMPACT ASSESSMENT COMPLETED BY		DATE	
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# LRM

## FIRE & RESCUE

Mt Thorley Warkworth  
Putty  
Damage Assessment



### LEGEND

-  Point Of Interest
-  Low
-  Mt Thorley Offsets
-  Putty Scar
-  Tree Down
-  Waste

### PRODUCTION INFORMATION

**Plot Information:**  
Date: 30/01/2020  
Total Area Burnt: 103ha



**Map Details:**  
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community  
Base Data (NSW): © LPI; (QLD): © QTopo

Map Projection: (MGA Zone 56 (GDA94))  
Print Date / Time: 30/01/2020  
Produced by: Jacob Brown

### WARNING INFORMATION

1. LRM has tried to make the information on this map as accurate as possible however it does not guarantee that the information is totally accurate or complete.
2. LRM accepts no responsibility for any injury loss or damage arising from the use of this map or any errors or omissions in the information recorded on the map.

# Impact Damage Assessment – Putty Offset Photos 30 Jan 2020

Image 1

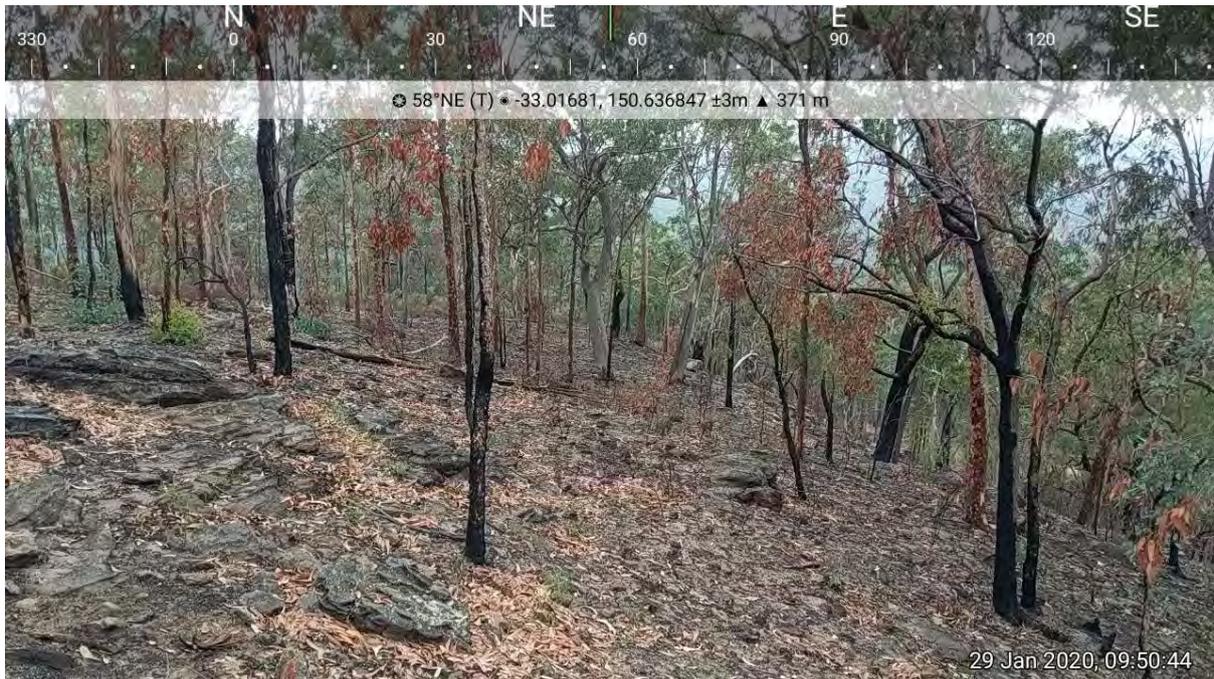


Image 2



# Impact Damage Assessment – Putty Offset Photos

## 30 Jan 2020

Image 3

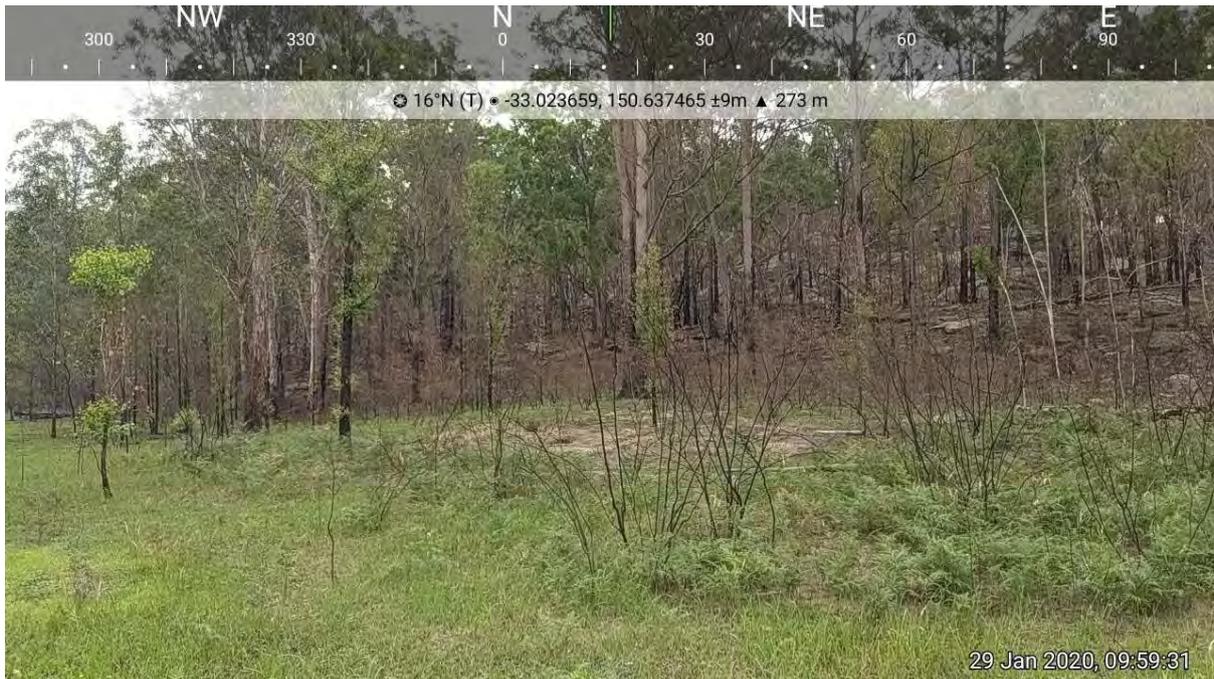


Image 4



# Impact Damage Assessment – Putty Offset Photos 30 Jan 2020

Image 5

