

Annual Review

Rocglen Coal Mine

Name of operation	Rocglen Coal Mine
Name of operator	Whitehaven Coal Mining Pty Ltd
Development consent/project approval number	PA 10_0015
Name of holder of development consent/project approval	Whitehaven Coal Mining Pty Ltd
Mining lease number	ML 1620, ML 1662
Name of holder of mining lease	Whitehaven Coal Mining Pty Ltd
Water licence number	WAL29461 and WAL 36758
Name of holder of water licence	Whitehaven Coal Mining Pty Ltd
MOP start date	1 st November 2015
MOP end date	31 st October 2020
Annual review start date ¹	1 st August 2015
Annual review end date	31 st July 2016
<p>I, Nigel Wood, certify that this audit report is a true and accurate record of the compliance status of Rocglen Coal Mine for the period 1st August 2015 to 31st July 2016, and that I am authorised to make this statement on behalf of Whitehaven Coal Mining Pty Ltd.</p> <p><i>Note. a) The Annual Review is an 'environmental audit' for the purposes of section 122B (2) of the Environmental Planning and Assessment Act 1979. Section 122E provides that a person must not include false or misleading information (or provide information for inclusion in) an audit report produced to the Minister in connection with an environmental audit if the person knows that the information is false or misleading in a material respect. The maximum penalty is, in the case of a corporation, \$1 million and for an individual, \$250,000.</i></p> <p><i>b) The Crimes Act 1900 contains other offences relating to false and misleading information: section 192G (Intention to defraud by false or misleading statement—maximum penalty 5 years imprisonment); sections 307A, 307B and 307C (False or misleading applications/information/documents—maximum penalty 2 years imprisonment or \$22,000, or both).</i></p>	
Name of authorised reporting officer	Nigel Wood
Title of authorised reporting officer	Director – Whitehaven Coal Mining Pty Ltd
Signature of authorised reporting officer	
Date	28.10.2016
¹ NSW Annual Review Guideline was released in October 2015	

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1 STATEMENT OF COMPLIANCE

The compliance status of the Rocglen Coal Mine (RCM) as at 31st July 2016 is summarised in Table 1. Table 2 notes non-compliances that occurred during the reporting period, and non-compliances from previous reporting periods that still require management action.

Table 1 - Statement of Compliance

Were all conditions of the relevant approval(s) complied with?	
PA 10_0015	No
EPL 12870	No
ML 1620	Yes
ML 1622	Yes
WAL 29461	No
WAL 36758	No

Table 2 - Non-compliances

Relevant Approval	Condition Schedule and Number	Condition Description (summary)	Compliance status	Comment	Where Addressed in Annual Review
PA 10_0015	Schedule 2(2)	Works carried out in accordance with EA, approval, and statement of commitments.	NC	Non-compliances with licence detailed below.	Section 11.2
	Schedule 2(8)	Prior to the surrender of project approval 06_0198 the conditions of that approval will prevail to the extent of any inconsistency between the two approvals.	NC	Project Approval surrender has been submitted, but not finalised. To be completed during next reporting period.	Section 11.2
	Schedule 3(3)	Implement all reasonable and feasible best practice noise mitigation measures;	NC	Annual Sound Power testing not undertaken during period. Due to be undertaken during the next reporting period.	Section 11.2
	Schedule 3(4)	Prepare and implement a Noise Management Plan	NC	Annual Sound Power testing not undertaken during period. Due to be undertaken during the next reporting period.	Section 11.2
	Schedule 3(10)	Operate a suitable system to enable the public to get up-to-date information on the proposed blasting schedule on site, to the	NC	Not completed during period. The onsite blasting notice boards will be utilised during the next reporting	Section 11.2

		satisfaction of the Secretary.		period.	
	Schedule 3(18)	Requirement for continuous meteorological monitoring.	NC	Continuous monitoring was not achieved. An EPL variation has been submitted to relocate the monitor to address communication issues.	Section 11.2
	Schedule 3(31)	Establish and maintain an effective vegetative screen along the boundary of the site that adjoins public roads;	NC	Visual screen not adequate. Additional planting will be undertaken along the eastern boundary.	Section 11
	Schedule 5(4)	Reviews of strategies, plans or programs.	NC	All plans not reviewed during reporting period. All Environmental Management Plans will be reviewed during the next reporting period.	Section 11
EPL 12870	A3.1	Works carried out in accordance with licence.	NC	Non-compliances with licence detailed below.	Section 11.2
	M2.1, M2.2	Requirement to monitor pollution.	NC	Instances of non-monitoring at point 17 during reporting period, following power outages.	Section 11.2
	M4.1, M4.2	Requirement for continuous meteorological monitoring.	NC	Continuous monitoring was not achieved. An EPL variation has been submitted to relocate the monitor to address communication issues	Section 11.2
WAL 29461	MW0635-00001	The licence holder must record the following in the logbook: (vii) the volume of water taken in any water year from 1 July 2011, by comparison to the maximum volume of water permitted to be taken in that water year.	NC	Logbook not maintained during reporting period. A logbook will be developed and implemented during the next reporting period.	Section 11.2
	MW0633-00001	The licence holder must record the following in the logbook: (I) each date and period of time during which water is taken under this licence; (ii) the volume of water taken on that date; (iii) the water supply work approval number of the water supply work used to take the water on that date; (iv) the purpose or purposes for which the water taken on that date.	NC	Logbook not maintained during reporting period. A logbook will be developed and implemented during the next reporting period.	Section 11.2

	MW0632-00001	The licence holder must keep a log book, except where the access licence nominates only a metered work with a data logger. A "logbook" means a written record, kept in hard copy or electronic form, which accurately records all information required to be kept for this licence.	NC	Logbook not maintained during reporting period. A logbook will be developed and implemented during the next reporting period.	Section 11.2
	MW0637-00001	The licence holder must retain the information required to be recorded in the logbook for 5 years from the date to which that information relates.	NC	Logbook not maintained during reporting period. A logbook will be developed and implemented during the next reporting period.	Section 11.2
	MW0831-00001	The licence holder must notify the Minister, in writing, immediately upon becoming aware of a breach of any condition of this licence. Note: a notification does not authorise a breach, or continuing breach, of a condition of this licence.	NC	Notification made within this Annual Review.	Section 11.2
WAL 36758	MW0635-00001	The licence holder must record the following in the logbook: (vii) the volume of water taken in any water year from 1 July 2011, by comparison to the maximum volume of water permitted to be taken in that water year.	NC	Logbook not maintained during reporting period. A logbook will be developed and implemented during the next reporting period.	Section 11.2
	MW0633-00001	The licence holder must record the following in the logbook: (i) each date and period of time during which water is taken under this licence; (ii) the volume of water taken on that date; (iii) the water supply work approval number of the water supply work used to take the water on that date; (iv) the purpose or purposes for which the water taken on that date.	NC	Logbook not maintained during reporting period. A logbook will be developed and implemented during the next reporting period.	Section 11.2
	MW0632-00001	The licence holder must keep a log book, except where the access licence nominates only a metered work with a data logger. A	NC	Logbook not maintained during reporting period. A logbook will be developed and	Section 11.2

		"logbook" means a written record, kept in hard copy or electronic form, which accurately records all information required to be kept for this licence.		implemented during the next reporting period.	
	MW0637-00001	The licence holder must retain the information required to be recorded in the logbook for 5 years from the date to which that information relates.	NC	Logbook not maintained during reporting period. A logbook will be developed and implemented during the next reporting period.	Section 11.2
	W0831-00001	The licence holder must notify the Minister, in writing, immediately upon becoming aware of a breach of any condition of this licence. Note: a notification does not authorise a breach, or continuing breach, of a condition of this licence.	NC	Notification made within this Annual Review.	Section 11.2

Compliance status key for Table 2

Risk level	Colour code	Description
High	Non-compliant	Non-compliance with potential for significant environmental consequences, regardless of the likelihood of occurrence
Medium	Non-compliant	Non-compliance with: <ul style="list-style-type: none"> potential for serious environmental consequences, but is unlikely to occur; or potential for moderate environmental consequences, but is likely to occur
Low	Non-compliant	Non-compliance with: <ul style="list-style-type: none"> potential for moderate environmental consequences, but is unlikely to occur; or potential for low environmental consequences, but is likely to occur
Administrative non-compliance	Non-compliant	Only to be applied where the non-compliance does not result in any risk of environmental harm (e.g. submitting a report to government later than required under approval conditions)

2 INTRODUCTION

This is the seventh Annual Review (AR), previously Annual Environmental Management Report, produced for the RCM, and it has been prepared in accordance with Conditions 4 and 5 of Mining Lease (ML 1620) (Mining Act 1992), Condition 4 of Mining Lease (ML 1662) and Condition 3 Schedule 5 of PA 10_0015, as modified. The AR follows the format required by the NSW Government Annual Review Guideline (October, 2015).

The RCM is located approximately 28km north of Gunnedah (Refer Figure 1). The RCM is owned by Whitehaven Coal Limited (WCL) and operated by Whitehaven Coal Mining Pty Ltd (WCMPL).

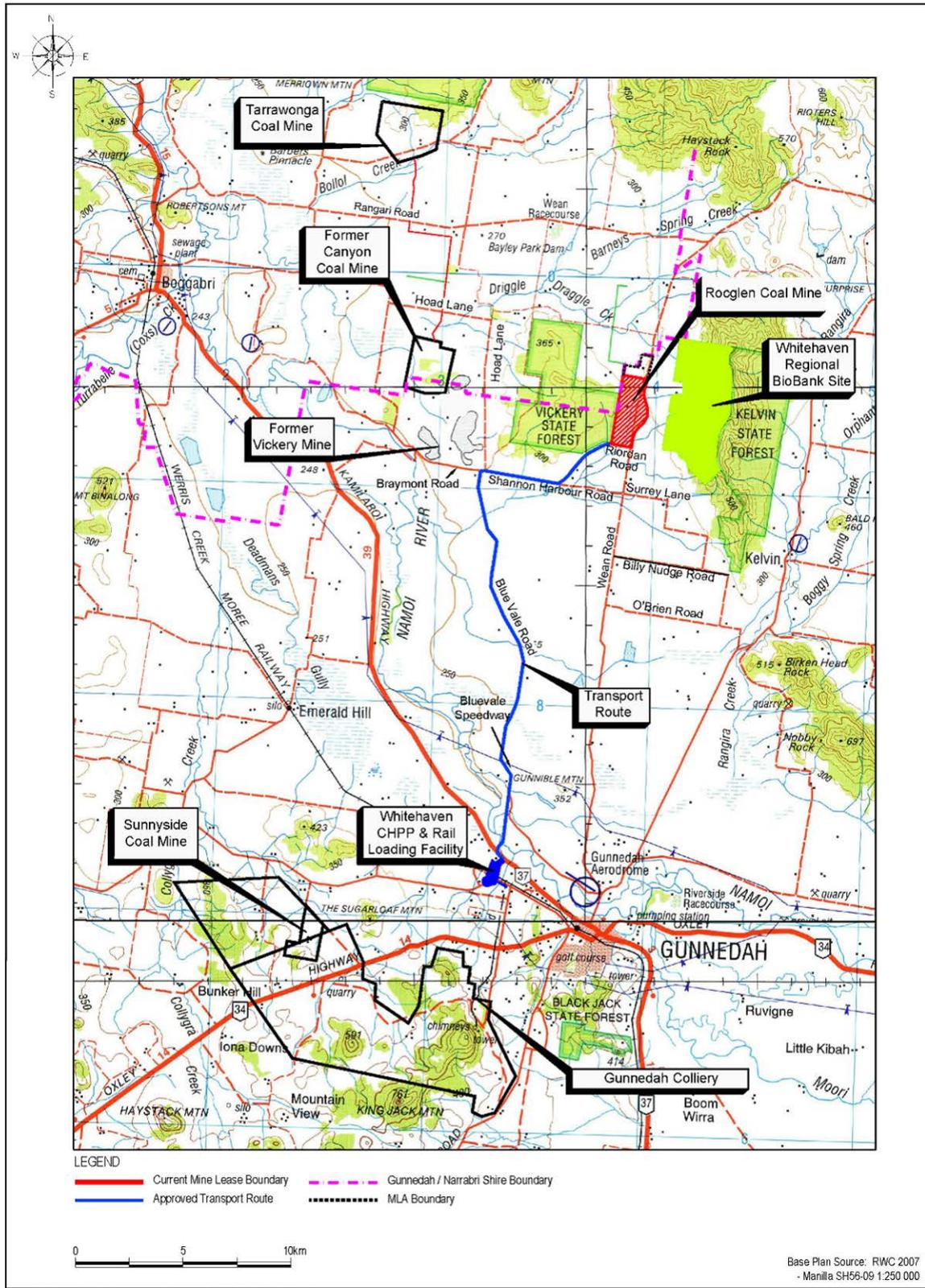
The RCM was initially approved on the 15th April 2008 under PA 06_0198 with a minor modification (PA 06_0198 MOD 1) granted in May 2010 to address highwall stability issues. Whitehaven submitted a Project Application, and accompanying Environmental Assessment, under Part 3A of the *Environmental Planning and Assessment Act 1979* in March 2010. PA 10_0015 was issued on the 27th September 2011 and allows for additional extraction of up to 5 million tonnes of coal at a maximum recovery rate of 1.5 million tonnes per annum (i.e. increased projected life of the operation for coal extraction by up to four years).

PA 10_0015 was modified (PA 10_0015 MOD 1) on the 10th November 2014, to condition cumulative coal haulage from the Tarrawonga/Vickery/RCM mines, with a further modification (PA 10_0015 MOD 2) approved on the 24th August 2015 allowing changes to coal reject haulage to the site.

2.1 Mine Contacts

The management personnel responsible for operational and environmental performance at the RCM and their relevant contact details are as follows:

- Mr Blair Meyers, Manager Mining Engineering - statutory responsibility for mining activities at the site. Contact: (02) 6740 7000.
- Mr Nigel Wood, General Manager, Open Cut Operations - oversees Open Cut Operations for the Whitehaven Group. Contact: (02) 6741 9309.
- Mrs Madeline Whitten – Graduate Environment – oversees day to day environmental and rehabilitation performance across the site. Contact: (02) 6741 9324.



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Figure 1 Locality Plan

3 APPROVALS

3.1 Tenements, Licences, and Approvals

Table 3 identifies the approvals in place for the RCM at the end of the reporting period, the issuing / responsible Authority, dates of issue, expiry date and relevant comments.

Table 3 - Tenements, Licences and Approvals

Issuing / Responsible Authority	Type of Lease, Licence, Approval	Date of Issue	Expiry	Comments
Department of Planning and Environment	Project Approval PA 10_0015 MOD 2	24 th August 2015	31 st December 2022	Modification allowing changes in coal reject haulage to the site.
Environment Protection Authority	Environment Protection Licence No. 12870	31 st July 2008	N/A Anniversary date 31 st July	Variation submitted in March 2016 for relocation of met station still pending.
Department of Primary Industries – Division of Resources and Energy	ML 1620	10 th June 2008	10 th June 2029	-
Department of Primary Industries – Division of Resources and Energy	ML 1662	9 th January 2012	9 th January 2033	-
Department of Primary Industries - Water	WAL 29461	25 th October 2012	In perpetuity	-
Department of Primary Industries - Water	WAL 36758	4 th September 2014	In perpetuity	-

4 OPERATIONS SUMMARY

4.1 Mining Operations

Table 4 – Production Summary

Material	Approved Limit (t)	Previous Reporting Period (t) (actual)	This Reporting Period (t) (actual)	Next Reporting Period (t) (forecast)
Waste Rock/Overburden	N/A	5,648,356	5,080,179	4,803,748
ROM Coal/Ore	1,500,000	1,170,755	1,260,349	1,231,673
Reject Material	700,000	387,333	322,707	287,244
Saleable Product	N/A	834,814	936,457	767,156

4.2 Other Operations

4.2.1 Hours of Operations

RCM hours of operation during the reporting period were within Project Approval limits, which permit mining 24 hours per day Monday to Saturday, with the exclusion of public holidays, except for blasting, which is restricted to 9:00am – 5:00pm Monday to Saturday. Currently the mine has two production shifts on weekdays which are day shift (7:00am to 3:00pm) and afternoon shift (3:00pm to 11:00pm). A Saturday shift is not currently rostered for RCM, although they are occasionally undertaken if required. Other ancillary tasks and maintenance activities continued 24 hours per day, seven days per week.

4.2.2 Coal Haulage

For the reporting period there were 29,651 trucks movements to transport 1,259,586t of along the approved haulage route from RCM to the Whitehaven Gunnedah CHPP. Combined haulage of ROM coal from RCM and Tarrawonga Coal Mine was 3,449,616t. There was also an additional 12,705 truck movements to transport 488,738t of chitter from the CHPP back to RCM.

Transport of coal from the site or receipt of coal reject from the Whitehaven CHPP by truck has only occurred during the approved hours of:

- (a) 7 am to 9.15 pm Monday to Friday;
- (b) 7 am to 5.15 pm Saturday; and

(c) at no time on Sundays or public holidays.

4.2.3 Exploration

No exploration was undertaken during the reporting period.

4.3 Next Reporting Period

The mine production rates are planned for approximately 1.2Mt of ROM coal and approximately 4.9 million bank cubic metres (Mbcm) of overburden during the next reporting period.

Vegetation clearing activities in mining areas over the next reporting period will be conducted in accordance with the approved MOP.

5 ACTIONS REQUIRED FROM PREVIOUS ANNUAL REVIEW

Actions from the previous Annual Review are noted in Table 5.

Table 5 - Actions Required from the Previous Annual Review

Action Required from Previous Annual Review	Requested By	Action Taken by the Operator	Where Discussed in Annual Review
Discussion of trends for each environmental issue	Department of Planning & Environment	Included within this Annual Review	Section 6 Environmental Performance, and Section 7 Water Management
Include a statement of compliance for each environmental issue	Department of Planning & Environment	Included within this Annual Review	Section 6.10 Environmental Performance Summary
Document the status of actions from any audits undertaken during AR period.	Department of Planning & Environment	Independent Environment Audit undertaken by ERM during the reporting period.	Section 10 Independent Audit

Further to the above actions, DP&E requested advice regarding the status of the Traffic Management Plan (TMP) for the Project, and the placement of the Plan on the Company website. The TMP, that is shared with Tarrawonga Coal Mine, was revised and approved within the reporting period, and is available on the WHC website.

6 ENVIRONMENTAL PERFORMANCE

The following sub-sections document the implementation and effectiveness of the various control strategies adopted at the RCM, together with monitoring data for the reporting period. Life of mine monitoring data is included as Appendices in this AR, where relevant, to allow for discussion on longer-term trends.

6.1 Air Quality

6.1.1 Criteria

The air quality criteria applicable to the RCM are specified in PA 10_0015, and are summarised below.

- Acceptable mean annual increase in deposited dust – 2 g/m²/month.
- Mean annual dust deposition (all sources) – 4 g/m²/month.
- Mean annual Total Suspended Particulate (TSP) matter (all sources) concentration – 90 µg/m³.
- Mean annual PM₁₀ particulate level – 30 µg/m³.
- 24 hour average PM₁₀ particulate level – 50 µg/m³.

6.1.2 Environmental Management Measures

Monitoring of deposited dust is undertaken on a monthly basis whilst PM₁₀ levels are monitored every 6 days.

Table 6 presents a summary of the deposited dust monitoring data.

Table 6 - Deposited Dust Monitoring Data Summary 2015-16

Site	EPL ID no.	Property Name	Annual Mean Total Insoluble Solids (g/m ² /month)	Annual Mean Ash (g/m ² /month)	Long term Insoluble Solids Average (g/m ² /month)
BD 3		Belah	1.8	0.6	1.2
BD4	4	Surrey	1.1	0.5	1.1
BD5		Stratford	0.8	0.5	1.1
BD6	6	Roseberry	0.9	0.4	1.2
BD7	7	Roseglass	0.6	0.3	1.0
BD8		Yarrowonga	0.7	0.4	1.1
BD2-A		Penryn	1.4	0.7	3.1

A review of Table 6 shows that the annual average limit for deposited dust was not exceeded at any location during the reporting period.

Whitehaven has two High Volume Air Samplers (PM₁₀). One is located at the project related property “Costa Vale”, to the north of the mine site. The other PM₁₀ monitoring location is

licensed (EPL ID – 10), and is located on the privately owned (under private agreement) “Roseberry” property to the south-east of the mine site. The PM₁₀ results for the reporting period show compliance with the annual average criteria, with annual averages of 15.74µg/m³ at Costa Vale, and 12.35µg/m³ at Roseberry, and comparable to results of 12.4µg/m³ and 10.5 µg/m³ respectively for the previous reporting period.

The 24 hour average PM₁₀ particulate level of 50µg/m³ was exceeded on one occasion during the reporting period, and occurred on the 29th April 2016 with a result of 81.7µg/m³. Notification was provided to the EPA on the 12th May 2016, and a follow up report provided on the 20th May. The report stated that given both the RCM weather station and Costa Vale HVAS are located to the north of operations and that recorded data indicated that there were no abnormal operations or dust observations to the north of the mine site, it is likely that the elevated PM₁₀ reading was not related to mining activity.

In accordance with Schedule 3 Condition 16 of PA 10_0015, RCM also operated a continuous real time dust monitor, or Tapered Element Oscillating Microbalance (TEOM) monitor (PM₁₀), at the “Roseberry” property during the period. Data is generated every 15 minutes and correlated against current weather conditions, with alarms notifying site personnel of elevated PM₁₀ results when wind conditions and direction is indicative of mining influence on the monitor. The monitor is used as a management tool for assessing dust levels on a real time basis through its web based platform.

The 24hr PM₁₀ criteria of 50 µg/m³ was exceeded once during the period, with notification provided to the EPA. This notification specified that prevailing wind conditions during the period of elevated results were from the south/south-east towards the mine site. The elevated PM₁₀ result was clearly not mine related, and the TEOM is not used as a compliance tool, but notification has been provided in accordance with the Rocglen Air Quality and Greenhouse Gas Management Plan.

6.1.3 Long term trends

A review of the life-of-mine data set for deposited dust shows that the results for this period are consistent with the long term average. BD3 was the only site which received a higher reading for the period than the long term average. The results are also consistent with predictions from the Environmental Assessment (EA) undertaken by PAE Holmes Pty Ltd, which forecast that dust deposition levels at all receptors would be well below the relevant criteria.

6.1.4 Key Environmental Performance/Management Issues

No key environmental performance/management issues were raised during the period. Compliant monitoring results for both deposited dust and PM₁₀ levels were maintained throughout the reporting period, notably being sustained through a very dry summer season. The only non-compliance with the 24 hour average PM₁₀ particulate level of 50µg/m³ was deemed to be non-mine related.

6.1.5 Proposed Improvements to Environmental Management

The HVAS unit currently located on the Roseberry property is proposed to be relocated to a privately owned neighbouring property which is not under agreement with RCM. Discussions with relevant landholders have commenced, and it is intended that the monitor will be relocated within the next reporting period.

6.2 Biodiversity

6.2.1 Threatened Flora

Whitehaven has prepared a Rehabilitation Management Plan (RMP) in accordance with Schedule 3 Condition 36 of PA 10_0015 which was approved by the Division of Resources and Energy in April 2012. The plan includes requirements for flora monitoring on rehabilitated areas. Rehabilitation monitoring was undertaken at RCM April 2015, and in accordance with the Rehabilitation Management Plan will be due again during the next reporting period. It is intended that in future the RCM Mining Operations Plan (MOP) will meet the requirements of Schedule 3 Condition 36 of PA 10_0015.

To address and offset vegetation impacts of the RCM, a Biodiversity Offset Strategy was prepared as part of the Rocglen Extension Project. The area of offset required was calculated using the NSW BioBanking Assessment Methodology, which calculates the number of “credits” required at the impact site based on the area and condition of each vegetation type impacted, and the number of credits generated at a BioBank Site based on the improvement in biodiversity values via conservation management. On the 28th June 2012, the Whitehaven Regional BioBank site was formally established under BioBank Agreement 43. This BioBank site, which includes the “Yarrari” and “Belah” properties, now accounts for the RCM offset requirements. The BioBank credits required to be retired for these approvals

occurred on the 17th April 2013, and the area is now subject to active management in accordance with the Management Plan for the Regional BioBank site.

A BioBank Management Plan has been prepared for the site, with active management required to commence on release of the first years management costs from the BioBank Trust Fund. Management actions undertaken during the period are reported in the Biobank Annual Report, included in Appendix 1.

6.2.2 Threatened Fauna

Whitehaven engaged RPS Harper Somers O'Sullivan to undertake a Flora and Fauna Assessment to support the application for the Extension Approval. Further to Countrywide Ecological Service investigations in 2007, RPS recorded a total of 100 fauna species, including one additional threatened species, the Speckled Warbler (*Pyrrholaemus sagittatus*), present within the project area.

As discussed in Section 6.2.1, Whitehaven developed a Rehabilitation Management Plan (RMP), which includes detail on monitoring, and where fauna monitoring will be undertaken biennially. Fauna monitoring plots were established during spring 2009 in areas adjacent to the site.

No threatened fauna or active nests were identified during the reporting period. It is anticipated that the biennial fauna monitoring will continue in the next reporting period.

It has been found that due to RCM's proximity to Vickery State Forest, much of the fauna species richness can still be expected to continue to exist on the mine site throughout the life of the mine. It has also been noted that the abundance of water located at the RCM site has attracted many animals to congregate on the rehabilitation and in the woodlands around the mine.

6.2.3 Weeds

Weed management within the project area involves targeted monthly inspections to determine levels of weed infestation, followed by targeted campaign spraying of identified areas of concern. Weed control is undertaken by Whitehaven's own qualified personnel; all persons involved with weed control hold the required chemical handling certificates.

Minor ongoing weed management comprised general weed spraying on six occasions during the reporting period, in January, February, March, and July 2016. No major weed infestations were identified on rehabilitation areas.

6.2.4 Feral Animal Control

Feral animals are not a significant land management issue on RCM's landholding and are limited to isolated occurrences of pigs, foxes, hares and rabbits. In view of the low frequency of occurrence, and in the absence of an extensive programme by all surrounding landowners, no broad scale feral animal control programme was considered warranted during the reporting period. In accordance with prior commitments, mine personnel will continue to monitor feral animal occurrences and implement necessary control programmes if and when necessary.

6.2.5 Key Environmental Performance/Management Issues

African Boxthorn has been identified on site in previous years, and was targeted again during the period along the northern boundary of the site. Spot spraying has been effective at limiting the population on site, and ongoing management continues to address new plants regrowth.

6.2.6 Proposed Improvements to Environmental Management

No improvements are proposed within the next reporting period.

6.3 Blasting

6.3.1 Criteria

Blasting criteria for the RCM are noted in PA 10_0015, and included below:

The overpressure level from blasting operations must not:

- exceed 115dB (Lin Peak) for more than 5% of the total number of blasts over each reporting period; and
- exceed 120dB (Lin Peak) at any time, at any residence on privately-owned land.

Ground vibration peak particle velocity from the blasting operations must not:

- exceed 5mm/s for more than 5% of the total number of blasts during each reporting period; and
- exceed 10mm/s at any time, at any residence on privately-owned land.

6.3.2 Key Environmental Performance/Management Issues

RCM had two exceedances of the 95thtile limit of 115dB during the period, one of which was also an exceedance of the 120db 100thtile limit. This exceedance occurred on the 26th

May 2016 at the Roseberry property, with a result of 123.6dB. The Roseberry property is currently under private agreement, and as such compliance with PA 10_0015 is considered to have been maintained. Whitehaven are currently working with the NSW EPA and DP&E to select an alternate blast monitoring location on privately owned land that is not under private agreement.

Table 7 below summarises the blast monitoring results during the period.

Table 7 Blast Monitoring Results

Location	Parameter	100 th tile limit	Average	Max	95 th tile limit	>95 th tile
Roseberry	Air blast overpressure (dB(Lin Peak))	120	102.2	123.6	115	4.7%
	Vibration (mm/s)	10	0.29	1.01	5	0
Retreat	Air blast overpressure (dB(Lin Peak))	120	97.6	111.8	115	0
	Vibration (mm/s)	10	0.12	0.73	5	0

Post blast inspections of flyrock have demonstrated that current blast procedures are sufficient in ensuring that blasting carried out within 500 metres of privately owned land is not compromising the safety of the people or livestock, or damaging the buildings and/or structures, on that land.

6.3.3 Proposed Improvements to Environmental Management

Given that the Roseberry property is currently under private agreement, RCM intends to relocate the blast monitor located on that property to alternate privately owned land which is not under private agreement. Discussions with relevant landholders and regulators have commenced, and it is intended that the monitor will be relocated within the next reporting period.

6.4 Operational Noise

6.4.1 Criteria

The operational noise criteria specified in PA 10_0015 and EPL 12870 are as follows:

Noise Criteria dB(A)

<i>Location</i>	<i>Day</i>	<i>Evening</i>	<i>Night</i>	
	<i>L_{Aeq} (15 min)</i>	<i>L_{Aeq} (15 min)</i>	<i>L_{Aeq} (15 min)</i>	<i>L_{A1} (1 min)</i>
<i>All privately-owned land</i>	35	35	35	45

The cumulative road noise criteria specified in PA 10_0015 (RCM) and PA 11_0047 MOD1 (Tarrawonga) is:

Road Traffic Noise Criteria dB(A)

<i>Location</i>	<i>Day L_{Aeq} (15 hour)</i>	<i>Evening L_{Aeq} (15 hour)</i>	<i>Night L_{Aeq} (9 hour)</i>
<i>All privately-owned residences</i>	60	60	55

6.4.2 Environmental Management Measures

Control of noise generation and propagation at the mine is by a combination of general source and propagation path methods including:

- Where operationally feasible, scheduling activities to minimise operation of equipment in exposed locations when winds are blowing towards residences and elevated locations when temperature inversions are present;
- Equipment removal or replacement;
- Changing operational procedures;
- Restricting hours of operations;
- Enclosure of fixed items of plant, e.g. generators;
- Bunding close to noise sources to create obstructions to the propagation path;
- On-going site road maintenance using the mine-based grader; and
- Regular equipment maintenance.

6.4.3 Key Environmental Performance/Management Issues

In accordance with the Condition 3(c) of Schedule 3 of PA 10_0015 RCM is required to regularly assess real-time noise levels and meteorological forecasting data to ensure compliance with the operational noise criteria. RCM utilises a mobile real time noise monitor which is used to actively monitor noise at surrounding properties which are likely to receive the greatest impact from operations. The unit monitors operational noise levels in comparison with compliance levels and when noise levels approach criteria an alarm system is triggered to operations personnel. Operations and environmental personnel are able to log on to a web based platform where real time noise and weather data is viewable. The web based platform may also be used to live stream from the monitor to identify specific sources of noise which will be used to confirm if the source is mining related.

Attended noise monitoring was undertaken on a quarterly basis during the reporting period (September 2015, December 2015, March 2016 and June 2016). Cumulative road noise monitoring occurred in December 2015 and June 2016, as required under the Road Traffic Noise Management Plan.

No exceedances of either operational or road transport noise criteria were noted during the reporting period, nor were any noise related complaints received during the period.

6.4.4 Long term trends

The road noise monitoring results are consistent with the predictions of the Whitehaven ROM Coal Haulage Modification Environmental Assessment for the southern section of the approval transport route, and show consistent trends within compliance limits. Mine noise trends continue to show improvement following a number of exceedances during the early years of production, with no non-compliances recorded in the previous two reporting periods.

6.4.5 Proposed Improvements to Environmental Management

No improvements are proposed within the next reporting period.

6.5 Aboriginal Heritage Management

6.5.1 Environmental Management Measures

In 2010, RPS archaeologists conducted an assessment and field survey of the potential impact of the Rocglen Extension on Aboriginal heritage. The archaeological field survey,

which covered the area proposed to be disturbed by the expansion of the Northern Emplacement Area, was undertaken with members of four local Aboriginal Stakeholder groups. In summary, three stone artefact sites were located comprising of one isolated find (IF1) and two artefacts scatters (AS1 and AS2). To date, the measures in place to protect Aboriginal Cultural Heritage are considered satisfactory, with all measures identified in the EA and consent criteria in place.

6.5.2 Consultation

No further stripping or clearing was undertaken during the reporting period, and as such no consultation has been undertaken.

6.5.3 Key Environmental Performance/Management Issues

No key environmental performance/management issues were identified during the reporting period.

6.5.4 Proposed Improvements to Environmental Management

A review of the Heritage Management Plan is proposed to be undertaken during the next reporting period.

6.6 Natural Heritage

There are no features of natural heritage within the Project Approval area and hence, no specific management procedures are required.

6.7 Bushfire Management

6.7.1 Environmental Management Measures

The mine maintains firebreaks around both its landholding and the mine area and maintains firefighting equipment as well as earthmoving equipment, a water truck and fire tender which would be used in the control of fires. RCM personnel also liaise with the local (Nandewar) Rural Fire Service and the Regional Fire Control, as required.

6.7.2 Key Environmental Performance/Management Issues

No key environmental performance/management issues were identified during the reporting period, with no fires occurring on site or on project-related mine owned land.

6.7.3 Proposed Improvements to Environmental Management

No improvements are proposed within the next reporting period.

6.8 Waste

6.8.1 Environmental Management Measures

Waste oils from maintenance activities were pumped from equipment to bulk storage tanks banded in accordance with EPA requirements. When breakdown maintenance was undertaken away from the workshop, oil was pumped from the equipment to a tank on the service truck and subsequently transferred to the bulk storage tank.

Waste oil and filters stored at the maintenance workshop were collected and disposed of by a licensed contractor.

Runoff from the concrete vehicle and equipment wash pad was directed to an oil separator and containment system for subsequent pump out and disposal.

RCM also continues to record waste streams such as general domestic-type waste and recycling, overburden and interburden, mine reject waste, and mine equipment tyres.

No incidents relating to waste management occurred during the reporting period.

6.8.2 Key Environmental Performance/Management Issues

No key environmental performance/management issues were identified during the reporting period.

6.8.3 Proposed Improvements to Environmental Management

No improvements are proposed within the next reporting period.

6.9 Public Safety

The mine is located wholly on Whitehaven owned land in a rural area, with a private access road entering the site on the south-western boundary and the Wean Road positioned adjacent to the eastern side of the mine boundary. The site is fenced with lockable access gates and visible signs installed.

Visitors to the mine are required to report to the mine office and unauthorised personnel are not permitted to move around the mine area unaccompanied. Procedures are in place

with respect to blasting to ensure the area around each blast site (exclusion zone) is clear of personnel and that all surrounding residents are advised in advance of proposed blasts.

6.9.1 Environmental Management Measures

No key environmental performance/management issues were identified during the reporting period.

6.9.2 Proposed Improvements to Environmental Management

No improvements are proposed within the next reporting period.

6.10 Environmental Performance Summary

An environmental performance summary for RCM is presented in Table 8 below.

Table 8 Environmental Performance Summary

Aspect	Approval Criteria / EIS Prediction	Performance during the reporting period	Trend / Key Management Implications	Implemented / proposed management actions
Air Quality	Refer section 6.1	One exceedance of HVAS criteria on Roseberry property (under private agreement), determined to be non-mine related.	Nil	Nil
Biodiversity	Refer section 6.2	Approval criteria met.	Nil	Nil
Blasting	Refer section 6.3	Two exceedances of approval criteria occurred on land under agreement with RCM.	Nil	Relocate blast monitor to privately owned land which is not under agreement with RCM.
Noise	Refer section 6.4	Approval criteria met.	Nil	Nil
Heritage	Refer section 6.5	Approval criteria met.	Nil	Nil
Bushfire Management	Refer section 6.7	No bushfires on site or in biobank site during reporting period.	Nil	Nil
Rehabilitation	Refer	Section 240 Notice issued	Nil	Earth works

	section 11.3	by DRE requiring earth works to address failed contour drainage in rehabilitation area.		undertaken in accordance with notice, with report submitted by due date.
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7 WATER MANAGEMENT

7.1.1 Surface Water Management

The mine lies within the catchment of the Namoi River, and in close proximity to Driggle Draggie Creek. The design of sediment detention basins on site aims to limit the opportunity of discharge of runoff from mine-disturbed areas, until such time as the licenced discharge criteria are met. All sediment basins, storage dams and associated banks and drains have been designed and constructed in accordance with the Managing Urban Stormwater: Soils and Construction Vol 2E Mines and Quarries (DECC, 2008) in conjunction with the references to Volume 1 (Landcom, 2004). At the end of the reporting period onsite water levels were at 63.6 ML, down considerably from 246.9ML recorded at the end of the previous reporting period, as a result of a very hot and dry summer season.

7.1.2 Surface Water Monitoring Results

RCM has a requirement to undertake surface water monitoring on a quarterly basis, in addition to any monitoring required during discharge events. Whilst there are no criteria or concentration limits specified for the quarterly surface water samples, the results do provide an indication as to the quality of waters on-site. The assessment of sediment load, salinity, pH, oil and grease and other monitoring parameters during these quarterly water monitoring events also provides an indication of the capacity for those storages to meet water quality criteria should a wet weather discharge occur, and if additional treatment methods would be warranted to minimise potential for a non-compliant discharge. The quarterly surface water testing includes the void water dam (Void), 3 additional out of pit surface water storages, (SD3, SB19, Dam B), and one offsite upstream dam (SD7).

Overall, samples taken throughout the reporting period indicate relative consistency across all monitoring parameters, with the exception of Total Organic Carbon (TOC) which showed slight fluctuations for some sites. SD3 showed results returning to normal levels following high results for pH and Total Organic Carbon in early 2015. Long term trends continue to show a slight rise in Electrical Conductivity (EC).

7.1.3 Long term trends

The surface water assessment carried out by GSS Environmental for the Extension EA predicted that there would be minimal impact on flow regimes downstream of the Project

Site due to the RCM, which has proven to be generally correct over the long term operations of the site.

Soil and water assessments for the site suggested that Total Suspended Solids (TSS) is likely to be the key water quality parameter requiring management during the life of the Project to ensure the water quality in downstream watercourses is not impacted. During the period TSS has not been as problematic in surface water at RCM, compared to previous years due to a high focus on water management. A number of surface water management recommendations were made in the surface water assessment for the Extension Project including the installation of sediment basins, targeting final discharge dams for water use and using flocculants to settle suspended solids. These measures have been implemented throughout the reporting period, and ensured that, as predicted in EA investigations, downstream water courses were minimally impacted by TSS, ensuring continuing long-term adherence to the EA predictions.

7.1.4 Discharges

There are two licenced wet weather discharge points nominated in the current EPL 12870: LDP11 to the south of the site, and LDP12 to the north of the site.

During the reporting period there were no controlled or wet weather discharges of water from the site.

7.1.5 Water Take

The water taken by the operation is summarised in Table 9, and shows compliance with licence entitlements.

Table 9 Water Take

Water Licence Number	Water Sharing Plan, Source and Management Zone (as applicable)	Entitlement	Passive take/ inflows	Active Pumping	TOTAL
WAL 29461	Gunnedah - Oxley Basin Mdb Groundwater Source	120 units	0	27,000L	27,000L
WAL 36758	Gunnedah - Oxley Basin Mdb Groundwater Source	700 units	0	133.17ML ¹	133.17ML

¹ Includes incidental pit surface water runoff

7.2 Groundwater Management

7.2.1 Environmental Performance/Management

The mine's performance with respect to groundwater performance/management, the prevention of pollution, and the assessment of impacts on groundwater availability to other surrounding users, has been assessed through groundwater level and chemistry monitoring undertaken at a series of bores within the Project Area and adjacent properties.

7.2.2 Groundwater Monitoring

The details of the groundwater monitoring program utilised throughout the reporting period are listed below in Table 10.

Groundwater sampling and analysis was undertaken by ALS Acirl Pty Ltd during the reporting period.

Table 10 Groundwater Monitoring Program

Site (See Figure 3)	Registered Bore No. / Licence No	Property / Location	Frequency		Purpose
			SWL* ² , EC* ³ and pH	Representative Metals and Ions* ⁴	
MP-2	GW968534 90BL254856	Mine site	Quarterly	Six monthly	To determine existing status and any impacts
MP-2a	90BL256103	Mine site	Quarterly	Six monthly	To determine existing status and any impacts
MP-3	GW968535 90BL254857	"Stratford"	Quarterly	Six monthly	To determine existing status and any impacts
MP-3a	90BL256108	"Stratford"	Quarterly	Six monthly	To determine existing status and any impacts
MP-4* ¹	GW968536 90BL254858	Surrey Lane	Quarterly	Six monthly	To determine existing status and any impacts
MP-4a* ¹	90BL256140	Surrey Lane	Quarterly	Six monthly	To determine existing status and any impacts
MP-4b* ¹	90BL256141	Surrey Lane	Quarterly	Six monthly	To determine existing status and any impacts
MP-5	GW968537 90BL254859	"Yarrowonga"	Quarterly	Six monthly	To determine existing status and any impacts
MP-5a	90BL256106	"Yarrowonga"	Quarterly	Six monthly	To determine existing status and any impacts
MP-6	90BL256105	"Costa Vale"	Quarterly	Six Monthly	To determine existing status and any impacts
MP-7	90BL256104	Mine site	Quarterly	Six Monthly	To determine existing status and any impacts

Site (See Figure 3)	Registered Bore No. / Licence No	Property / Location	Frequency		Purpose
			SWL* ² , EC* ³ and pH	Representative Metals and Ions* ⁴	
MP-8	90BL256102	Mine site	Quarterly	Six Monthly	To determine existing status and any impacts
WB-1* ¹	GW000743	"Costa Vale"	Quarterly	Six monthly	To determine existing status and any impacts
WB-2* ¹	GW050395 90BL111536	"Roseberry"	Quarterly	Six monthly	To determine existing status and any impacts
WB-3	GW050166 90BL110883	"Glenroc"	Quarterly	Six monthly	To determine existing status and any impacts
WB-4	GW045621 90BL104367	"Yarrowonga"	Quarterly	Six monthly	To determine existing status and any impacts
WB-5* ¹	GW011066 90BL004169	"Roseberry"	Quarterly	Six monthly	To determine existing status and any impacts
WB-6	GW044068 90BL102845	"Yarrari"	Quarterly	Six monthly	To determine existing status and any impacts
WB-7* ¹	GW022319 90BL013922	"Roseberry"	Quarterly	Six monthly	To determine existing status and any impacts
WB-8* ¹	GW052958 90BL107181	"Surrey"	Quarterly	Six monthly	To determine existing status and any impacts
WB-9* ¹	N/A	"Carlton"	Quarterly	Six monthly	To determine existing status and any impacts
WB-10* ¹	N/A	"Brolga"	Quarterly	Six monthly	To determine existing status and any impacts
WB-11* ¹	N/A	"Brolga"	Quarterly	Six monthly	To determine existing status and any impacts
WB-12* ¹	N/A	"Brolga"	Quarterly	Six monthly	To determine existing status and any impacts
WB-13* ¹	N/A	"Carlton"	Quarterly	Six monthly	To determine existing status and any impacts
WB-14* ¹	N/A	"Barock"	Quarterly	Six monthly	To determine existing status and any impacts
WB-15* ¹	N/A	"Kahana"	Quarterly	Six monthly	To determine existing status and any impacts
Yarrari	N/A	"Yarrari"	Quarterly	Six monthly	To determine existing status and any impacts
Surrey No.2* ¹	N/A	"Surrey"	Quarterly	Six monthly	To determine existing status and any impacts
<p>*¹ Non-Company owned bore</p> <p>*² SWL – Standing Water Level</p> <p>*³ EC = Electrical Conductivity</p> <p>*⁴ As specified in SWMP</p>					

Groundwater levels

Groundwater levels have remained relatively consistent at the majority of monitoring sites during the reporting periods, with limited exceptions detailed below.

- WB5, located on the Roseberry property, and WB13 continue to show fluctuating levels associated with non-mining influences.
- MP-5a is a piezometer installed directly adjacent to MP-5. Since monitoring commenced in March 2013, it showed a reasonably consistent SWL until September 2013, where the SWL dropped 4.4m to 71.25m. The SWL dropped a further 5.3m in November 2013, where it remained consistent at around 76.6m. For the previous reporting period and this reporting period the bore has remained relatively consistent, dropping only 1.66m since the beginning of 2014. There remains insufficient data at this point to verify any ongoing trend, however being in relatively close proximity to the open cut pit (within 1km), drawdown is not unexpected.

The pressure transducers/loggers installed in monitoring bores on site in accordance with the EA show consistent groundwater levels at all 5 recording sites. These results are generally consistent with the results of quarterly monitoring undertaken in the reporting period for these monitoring bores. A summary of the pressure transducer monitoring data is provided in Figure 2.

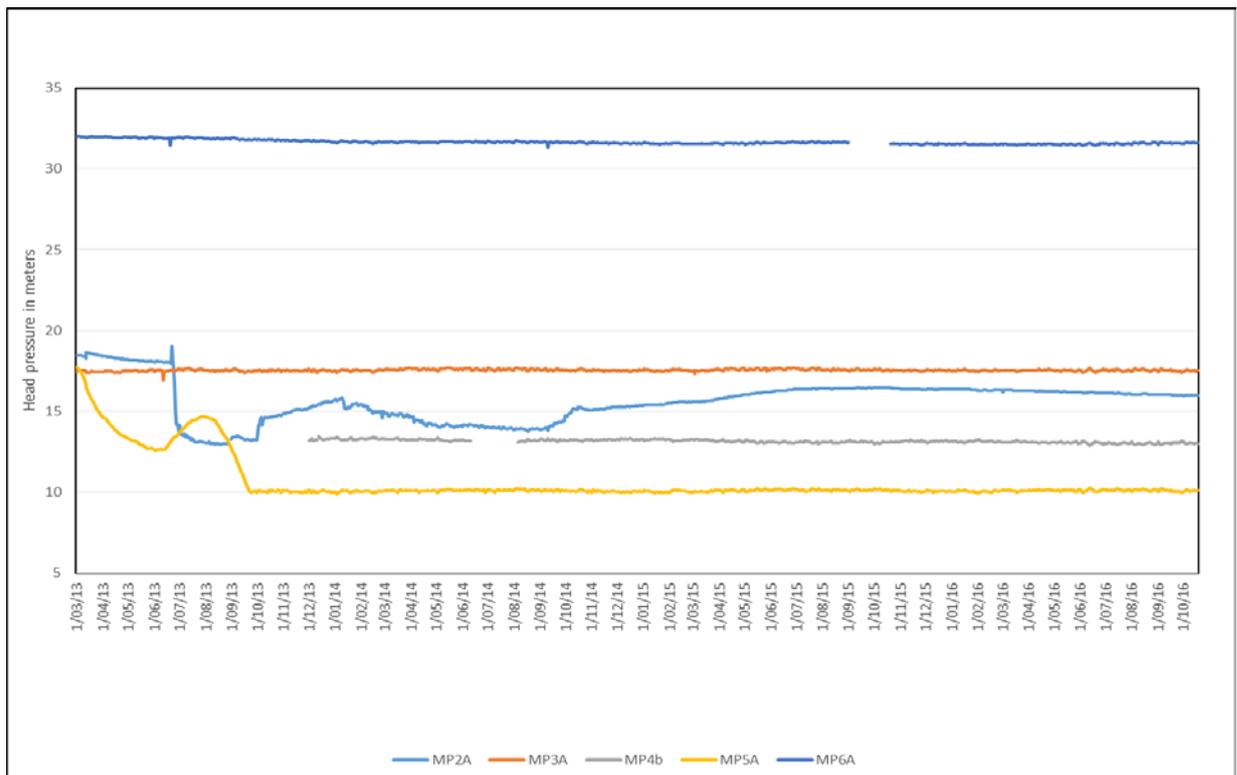


Figure 2 Rocglen VW Piezometers Ground Water Head Pressure

Groundwater quality

With the exception of fuels and oils, no materials occur, or are retained on the mine sites which are likely to be a source of groundwater pollution.

Analysis of samples taken during the reporting period has shown that groundwater quality has remained generally in line with historical data at all locations monitored. Water quality has been compared to the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (2000) (ANZECC) guidelines for stock watering (cattle).

Previous monitoring has shown that after unusually elevated results, analyte concentrations usually return to more typical levels and it is expected that this trend will continue.

7.2.3 Long term trends

The hydrogeological assessment undertaken by Douglas Partners for the Extension EA concluded that drawdown on the surrounding groundwater system as a result of the expanded mining operation would be limited during the operation of the mine. This is due to faulting in the vicinity of the mine and generally low permeability of the Maules Creek Formation strata, with hydraulic connectivity within the alluvium at the north and south of the site considered to be limited. As found during the reporting period, standing water levels generally have not lowered at the monitoring and groundwater bores surrounding the mine, with the exception of MP-5a. Douglas Partners predicted that at the end of the northern phase of mining during the extension of the pit, MP-5 / MP-5a could be drawn down by up to 13.4m. Results indicate that the actual drop of approximately 15.26m in SWL is slightly higher than this prediction.

7.2.4 Groundwater Management

At the end of the reporting period an there was no water held in the pit. Inflows into the open cut at other times during the period result from a combination of:

- Direct rainfall runoff and infiltration through the emplaced overburden which flows down to the open cut; and
- Inflows from the exposed coal seam.

Contamination of groundwater is controlled by the management of chemical, oil and grease spills and storage, with:

- Vehicle maintenance carried out in designated areas;

- Any spills being cleaned up, with contaminated soil placed in designated bioremediation areas; and
- Fuels, oil, and grease being stored within a bunded area, constructed in accordance with EPA requirements.

Groundwater from surrounding bores is monitored on a regular basis to detect and assess any changes in groundwater quality or level that may be attributable to the mine.

8 REHABILITATION

8.1 Rehabilitation Performance during the Reporting Period

8.1.1 Status of Mining and Rehabilitation

The status of mining and rehabilitation at the completion of the reporting period is presented in Table 11 and Figure 3.

Table 11 Rehabilitation Status

Mine Area Type ¹	Previous Reporting Period (Actual)	This Reporting Period (Actual)	Next Reporting Period (Forecast)
	2014/15 (ha)	2015/16 (ha)	2016/17 (ha)
A. Total Mine Footprint	360	360	360
B. Total Active Disturbance	NA	231.4	217.6
C. Land Being Prepared for Rehabilitation	NA	12.4	26.2
D. Land Under Active Rehabilitation	NA	116	116
E. Completed Rehabilitation	0	0	0

¹ Refer Annual Review Guideline (p.11) for description of mine area types.

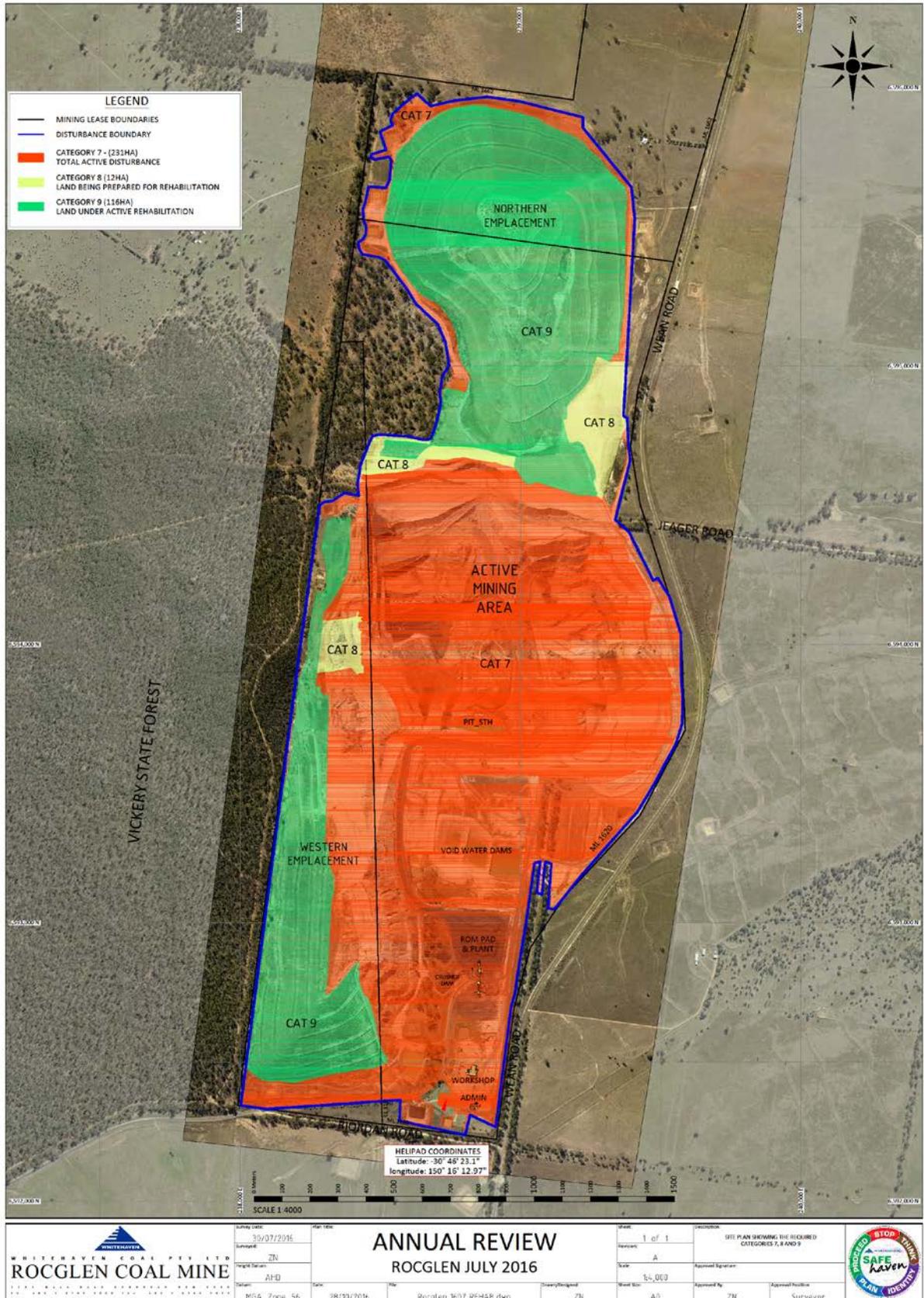


Figure 3 Rehabilitation and Mining Status

8.1.2 Post Rehabilitation Land Uses

The disturbed area within the Project Site will be restored to either rehabilitated bushland or rehabilitated pasture, with approximately 5 hectares (1 percent) remaining as a stabilised highwall of the final void.

8.1.3 Rehabilitation Monitoring

As stated in Section 6.2, monitoring required under the Rehabilitation Management Plan is undertaken biennially, and is due to occur again in the next reporting period. This monitoring is planned to be undertaken in late spring, and will cover flora, fauna, and soil monitoring commitments.

8.1.4 Renovation or Removal of Buildings

No renovation or removal of buildings occurred during the reporting period.

8.1.5 Other Rehabilitation Undertaken

No additional rehabilitation of explorations areas, infrastructure, shafts, adits, dams, fence lines or bunds occurred during the reporting period.

8.1.6 Departmental Sign-off of Rehabilitated Areas

Departmental sign-off has not been requested for any rehabilitated areas.

8.1.7 Variations in Activities against MOP (RMP)

Operations and activities during the reporting period were undertaken in accordance with the 2015 MOP, with no rehabilitation activities proposed for the Year 1 MOP period, covering November 2015-October 2016. A Closure MOP will be developed for the RCM within the next reporting period.

8.1.8 Trials, Research Projects and Initiatives

No rehabilitation trials, research projects or other initiatives were undertaken during the reporting period.

8.1.9 Key Issues to Achieving Successful Rehabilitation

There are four key issues in achieving successful rehabilitation, including:

- Poor vegetation establishment and growth due to poor soils/lack of nutrient;

- Weed and feral animal infestation;
- Excessive erosion and sedimentation resulting in land stability and vegetation growth issues; and
- Harsh weather conditions limiting growth, i.e. extended periods of drought.

In cases where performance is sub-optimal, additional management measures will be implemented (e.g. replanting, repairing landform and water management features, application of mulch/fertilisers, feral animal and weed control etc.) Advice may also be sought from the Whitehaven Biodiversity Specialist to determine best course of action.

8.2 Actions for Next Reporting Period

Rehabilitation is undertaken on site in accordance with the MOP. RCM have committed to rehabilitating 21.2ha during the next MOP year (November 2016-October 2017). This will consist of a section of the northern active pit, and the western section of the northern overburden emplacement area. Additional planting will also be undertaken on the northern emplacement area following poor vegetation establishment previously.

Rehabilitation monitoring will be undertaken in spring and reported in the next AR.

9 COMMUNITY

9.1 Community Consultation

In accordance with Condition 5 of Schedule 5 of PA 10_0015 a Community Consultative Committee (CCC) continues to be operated for RCM. The committee comprises representatives of Gunnedah Shire Council, RCM and the community.

Since its inception, the CCC has met on a regular basis, moving from quarterly to six-monthly meetings in March 2015. During the reporting period meetings were held on 9th September 2015 and 15th June 2016. The June meeting was originally scheduled during March, in line with the six-monthly program, but had to be delayed due to availability of committee members.

9.2 Community Complaints

RCM has a designated complaints line advertised on the Whitehaven Coal website and, in the event of a complaint, details pertaining to the complainant, complaint, and action taken are recorded. A complaints register is maintained on Whitehaven's website.

There were 3 complaints received during the reporting period, all pertaining to blasting activities. One of these complaints included a request for a structural inspection, which was undertaken and the subsequent report provided to the complainant. Each complaint was investigated and documented, with feedback provided to the Complainant.

10 INDEPENDENT AUDIT

RCM had one independent environmental audit (IEA) during the reporting period, undertaken by Environmental Resource Management Australia Pty Ltd (ERM). The IEA was undertaken in May 2016, and covered the period beginning April 2013 until 6 May 2016 (the date of the site inspection). Numerous IEA actions relating to water management and Environmental Management Plan content were addressed during the reporting period. IEA actions scheduled for the 2016/17 reporting period are noted below in Table 10.

Table 12 2016 Independent Environmental Audit (IEA) – 2016/17 Actions

Condition/Plan	IEA Proposed Action	IEA Action Plan Timing
PA 10_0015	Consider formally completing the surrender of PA 06_0198.	31/10/2016
	The AEMR should also report the maximum daily results from the TEOM for comparison to the 24hour criteria rather than using monthly averages which is not a recognised averaging timeframe in the Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales (DEC 2007)).	28/02/2017
	Consider including following in the Road Traffic Noise Management Plan: <ul style="list-style-type: none"> • protocol for maximising the backfilling of haul trucks with coarse and/or fine rejects from the Whitehaven CHPP • arrangements to comply with cumulative coal haulage limits • description of a monitoring program to audit vehicle movements, including the origin and destination of employees, against predictions in the EA 	31/10/2016
	Consider reporting all exceedances of criteria to the affected landholder to fulfil the requirement of this MCoA.	Ongoing
Minister's Conditions of Approval 06_0198	Consider the surrender of this approval or advertise the complaints/information line annually in the local newspaper.	31/10/2016
	Consider the surrender of this approval or include number of total truck movements into Figure 2 of the Annual Reviews.	31/10/2016
Statement of Commitments	Consider sending link to plans on website to relevant agencies and requesting comment.	Ongoing.
	Consider diverting water to the newly constructed eastern channel in the northern emplacement area to prevent further scouring alongside this channel. In addition, consider installing a batter shoot where water is ponding in the recently repaired tunnel erosion area or complete works to divert water to the rock lined drain on the western face of the northern emplacement area.	31/12/2016
	Consider the requirement to test equipment prior to being brought on site. Consider developing a list of equipment and their sound power levels (design and measured) with comparison to previous	31/12/2016

	assessments as a record of conformance.	
	Consider fitting all mobile mining equipment with mid-high frequency reverse beepers.	30/11/2016
	Consider using the blast notice boards prior to blasting.	31/08/2016
	Consider removing erosion and sediment control structures that are damaged/no longer required. Consider installing additional controls where erosion is evident to prevent the need for extensive rework/repairs.	31/12/16
	Continue to investigate alternative rehabilitation methods to increase success.	Ongoing
	Consider downloading data every two months as stated in the commitment.	9/09/2016
	Consider installing bund along Wean Rd to provide a visual screen. Focus to be on additional tree planting to establish long term visual screen.	31/03/2017
ML1662	Consider the review of compliance tracking and reporting procedures to ensure DRE is informed of any environmental incidents.	31/12/2016
EPL12870	Consider including in a separate file of all discharges from the licensed discharge points and report both active and passive discharges (both points are included in EPL as discharge points)	31/12/2016
	The EPL lists N3 as a monitoring location and therefore monitoring should be completed at this location. Alternatively consider submitting an amendment to the EPL to reflect actual monitoring locations if N3 is not considered necessary to confirm compliance with noise limits.	Ongoing
	Consider reviewing compliance tracking procedures/methods to improve reporting times.	31/12/2016

11 INCIDENTS AND NON-COMPLIANCES DURING THE REPORTING PERIOD

11.1 Reportable Incidents

RCM reported the following incidents during the reporting period:

- Notification provided following overpressure exceedances detailed in Section 6.3. These exceedances were not deemed to be non-compliant, given that they were recorded on land under agreement with RCM.
- Notification provided following an exceedance of the 24 hour average PM₁₀ particulate level of 50µg/m³ on the 29th April 2016 on the mine owned property "Costa Vale". The report stated that it is likely that the elevated PM₁₀ reading was not related to mining activity, see section 6.1.3.
- Notification of an exceedance of the 24 hour average PM₁₀ particulate level of 50µg/m³ from the TEOM monitor at the "Roseberry" property. The report stated that the results were not considered to be mine related, and further the TEOM is not used for compliance purposes (see section 6.1.3).

11.2 Non-compliances

All of the non-compliances with relevant approvals have been ranked as either administrative or low, with very limited potential for significant environmental harm, and are addressed below.

- Schedule 2 Condition 8 of PA 10_0015 refers to the surrender of project approval 06_0198. WHC has made application to surrender this approval, but has not finalised the process, and therefore is still subject to the approval conditions. RCM is non-compliant with two conditions of PA 06_0198, being the advertising of the complaints number annually in the local newspaper, and the inclusion of truck movements records in the Annual Review. The surrender of PA 06_0198 is intended to be completed in the next reporting period.
- Schedule 3(3) of PA 10_0015 requires that all reasonable and feasible best practice noise mitigation measures are implemented on site, and Schedule 3(4) requires that a Noise Management Plan be implemented on site. Both of these conditions require

that sound power level testing is carried out on site annually, which did not occur during this reporting period. This testing is scheduled to be undertaken during the next reporting period, and before the end of the 2016 calendar year, as per the IEA actions listed in Table 9.

- Schedule 3 Condition 10 of PA 10_0015 requires that the site operate a suitable system to enable the public to get up to date information on the proposed blasting schedule on site, however the IEA identified that the blasting notice boards on the public road were not being utilised by operations. RCM has accepted an IEA recommended action to address this issue in the next reporting period.
- Schedule 3 Condition 18 of PA 10_0015 and conditions M4.1 and M4.2 of EPL 12870 all refer to the requirement of continuous real time meteorological monitoring. Periodic connection failure and equipment malfunction resulted in minor data gaps during the reporting period. Regular maintenance is performed on the meteorological station, with several repairs undertaken during the reporting period, including rebuilding the antenna cables and replacing the battery, however the meteorological station continues to suffer connectivity problems. An EPL Variation Application has been submitted to relocate the meteorological station to the mine site in an attempt to address these connectivity issues.
- Schedule 3 Condition 31 of PA 10_0015 requires that RCM establishes and maintains an effective vegetative screen along the boundaries of the site that adjoin public roads. This condition was found to be non-compliant in the IEA, and RCM have agreed to undertake additional planting along the eastern boundary within the next reporting period.
- Schedule 5 Condition 4 requires that all strategies, plans and programs are reviewed following the submission of an annual review, an incident report, an audit report, or any modifications to the conditions of the approval. Not all management plans for RCM were reviewed during the reporting period, but are scheduled to be undertaken throughout the next reporting period, following the submission of the IEA and this Annual Review.
- Conditions M2.1 and M2.2 require the continuous monitoring of PM₁₀ at the Roseberry property, however instances of non-monitoring occurred during the reporting period, following power outages beyond RCM control.
- Non compliances with WAL 29461 and WAL 36758 will be addressed during the next reporting period with the implementation of logbooks on site.

11.3 Regulatory Actions

Following a site inspection, RCM received an s.240 Notice on 4th April 2016 from the DRE directing RCM to undertake specified measures in relation to failed contour drainage, and associated rill erosion, on the western emplacement area. The required works were undertaken as per the notice, and a report containing photographic evidence of completion was provided by the due date. No further actions have been requested of RCM.

Further to the above, RCM also received a Show Cause notice from DP&E during the reporting period, in relation to the overpressure exceedances detailed in Section 6.3. A response was provided by RCM to the DP&E within the required time frame, and following an evaluation against the Department's Compliance Policy, an Official Caution was issued, together with a request for undertaking to mitigate the breaches. It should be noted that the Official Caution was received on 21st September 2016, which does not fall within the reporting period.

12 ACTIVITIES TO BE COMPLETED IN THE NEXT REPORTING PERIOD

The following measures will be continued, or implemented, in the next reporting period:

- Undertake rehabilitation and mining activities in accordance the MOP;
- The continuation of environmental monitoring and management;
- Compliance with all relevant conditions of the lease, licences and consents;
- Completion of outstanding IEA actions;
- Review and revision of various Environmental Management Plans; and
- Continued community liaison and engagement with local stakeholders.

Appendix 1

Biobank Annual Report



Whitehaven Coal Mining Pty Ltd

ABN: 65 086 426 253

Biobank Site Annual Report 2015-2016



View from top of Kelvin Range to the south, Yarrari property

Biodiversity Banking and Offsets Scheme

Biobanking agreement

ID Number 43

Annual reporting template

Biobank Site Annual Report						
Location details						
Biobanking agreement ID: 43				Name of landowner/s: <i>Whitehaven Coal Mining Pty Limited</i>		
Reporting date: <i>29th July 2016</i>				Property address: <i>“Yarrari” & “Belah”, Wean Road, Kelvin 2380</i>		
Records of management actions undertaken						
Management Action	Item Reference Number	Required completion time and frequency	Action completed (Yes/No)	Actual completion date/s	Description of actions undertaken (including where undertaken (including reference to management zones), any variations and the reasons for variation).	Visual observations and other comments (including reasons for non completion)
1. Management of grazing for conservation	<i>1.1</i>	<i>Ongoing from commencement date</i>	<i>Yes Ongoing</i>	<i>Ongoing</i>	<i>Grazing excluded from all areas of biobank during Year 4, except for introduction of stock to reduce bulk of Lovegrass prior to Spring.</i>	<i>Grazing excluded across the biobank with good groundcover % retained across the site as a consequence.</i>
	<i>1.2</i>	<i>Ongoing from first payment date (i.e. Year 1) until end of Year 4</i>	<i>Yes Ongoing</i>	<i>Ongoing</i>	<i>Stock grazing was used within fenced paddocks of MZ1.</i>	<i>As per 1.1</i>
	<i>1.3</i>	<i>Ongoing from first payment date</i>	<i>NA in this period</i>	<i>Ongoing</i>	<i>As per 1.1</i>	<i>As per 1.1</i>

Biodiversity Banking and Offsets Scheme

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ID Number 43

	1.4	<i>Ongoing from commencement date</i>	<i>Yes Ongoing</i>	<i>Ongoing</i>	<i>As per 1.1</i>	<i>As per 1.1</i>
2. Weed control	2.1	<i>Ongoing from first payment date</i>	<i>Yes</i>	<i>Various</i>	<i>Weed spraying (including African Boxthorn, Noogoora Burr, Horehound and Bathurst Burr) as required, weather/season dependent.</i>	<i>Biobank site generally retains minor areas of weeds, with active management ongoing.</i>
	2.2	<i>Ongoing from first payment date</i>	<i>NA in this period</i>	<i>Ongoing</i>	<i>NA in this reporting period.</i>	<i>NA in this reporting period.</i>
3. Management of fire for conservation	3.1	<i>Ongoing from commencement date</i>	<i>Not yet required</i>	<i>Not yet required</i>	<i>Ecological burns not required during early years of active management.</i>	<i>Ecological burns not required under management plan at this stage.</i>
	3.2	<i>Ongoing from first payment date</i>	<i>Yes</i>	<i>Ongoing</i>	<i>NA in this reporting period.</i>	<i>NA in this reporting period.</i>
	3.3	<i>Ongoing from commencement date</i>	<i>Yes</i>	<i>Ongoing</i>	<i>NA in this reporting period.</i>	<i>NA in this reporting period.</i>
4. Management of human disturbance	4.1	<i>Ongoing from commencement date</i>	<i>Yes Ongoing</i>	<i>Ongoing</i>	<i>The biobank site has generally been off-limits to the public, with only the property manager permitted on site.</i>	<i>No additional human disturbance has been undertaken on the site other than through general site management activities such as fence line repairs, track maintenance, and feral animal control.</i>

Biodiversity Banking and Offsets Scheme

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	4.2	<i>Ongoing from commencement date</i>	<i>Ongoing</i>	<i>Ongoing</i>	<i>As per 4.1</i>	<i>As per 4.1</i>
	4.4	<i>Ongoing from commencement date</i>	<i>Ongoing</i>	<i>Ongoing</i>	<i>As per 4.1</i>	<i>As per 4.1</i>
	4.5	<i>Ongoing from commencement date</i>	<i>Ongoing</i>	<i>Ongoing</i>	<i>As per 4.1</i>	<i>As per 4.1</i>
	4.6	<i>Ongoing from commencement date</i>	<i>Yes Ongoing</i>	<i>Ongoing</i>	<i>As per 4.1</i>	<i>As per 4.1</i>
5. Retention of native vegetation	5.1	<i>Ongoing from commencement date</i>	<i>Yes Ongoing</i>	<i>Ongoing</i>	<i>No vegetation removal during Year 4.</i>	<i>No activities have been undertaken on site that have resulted in vegetation removal.</i>
	5.2	<i>Ongoing from commencement date</i>	<i>Ongoing</i>	<i>Ongoing</i>	<i>There have been no requirements to burn native vegetation under the fire management plan.</i>	<i>NA in this reporting period.</i>
6. Planting or seeding	6.1	<i>Commence from first payment date</i>	<i>No – from Year 4 onwards</i>	<i>Commenced Planting in 2014-2015</i>	<i>No planting or seeding during Year 4.</i>	<i>Planting commenced in 2014-2015 of 9 plots with approximately 1180 trees planted.</i>

Biodiversity Banking and Offsets Scheme

Biobanking agreement

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	6.3	<i>Conduct the first survey 24 months after the completion of planting or seeding in each area of planting or seeding and then every 12 months thereafter.</i>	<i>As per 6.1</i>	<i>As per 6.1</i>	<i>As per 6.1</i>	<i>As per 6.1</i>
	6.4	<i>As required; from the date that planting or seeding areas are established</i>	<i>As per 6.1</i>	<i>As per 6.1</i>	<i>As per 6.1</i>	<i>As per 6.1</i>
	6.5	<i>As required (from commence ment date if relevant to prepare for future planting)</i>	<i>Ongoing</i>	<i>Ongoing</i>	<i>During 2015-2016, seed collection was undertaken on Yarrari & Belah.</i>	<i>In April 2016, seed was collected from White Box, Narrow-leaf Ironbark, Wilga, Rosewood, Belah and Senna.</i>

Biodiversity Banking and Offsets Scheme

Biobanking agreement

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	6.6	<i>From the start of Year 4 until the end of Year 6. Enhancement planting start of Year 7 until end of Year 10</i>	<i>As per 6.1</i>	<i>As per 6.1</i>	<i>As per 6.1</i>	<i>As per 6.1</i>
7. Retention of dead timber	7.1	<i>Ongoing from commencement date</i>	<i>Yes Ongoing</i>	<i>Ongoing</i>	<i>No dead timber removed during Year 4.</i>	<i>Dead timber is retained on site in accordance with the management plan.</i>
	7.2	<i>When required</i>	<i>Not yet required</i>	<i>Not yet required</i>	<i>NA in this reporting period.</i>	<i>NA in this reporting period.</i>
8. Erosion control	8.1	<i>Commence from first payment date</i>	<i>No – not yet required</i>	<i>Ongoing</i>	<i>No active erosion identified during Year 4.</i>	<i>There have been no areas of active erosion identified as a cause of concern during this reporting period.</i>
9. Retention of rocks	9.1	<i>Ongoing from commencement date</i>	<i>Yes Ongoing</i>	<i>Ongoing</i>	<i>No rocks have been removed during Year 4.</i>	<i>Rocks retained on site in accordance with the management plan.</i>
	9.2	<i>When required</i>	<i>Not yet required</i>	<i>Not yet required</i>	<i>NA in this reporting period.</i>	<i>NA in this reporting period.</i>
10. Control of feral and over abundant native herbivores	10.1	<i>Ongoing from first payment date</i>	<i>Yes</i>	<i>Ongoing</i>	<i>The resident property manager has undertaken feral animal control throughout the reporting period, removing 1,220 goats and approximately 70 rabbits from the property since 2008.</i>	<i>Feral animal control has been ongoing by the resident property manager.</i>

Biodiversity Banking and Offsets Scheme

Biobanking agreement

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	10.2	<i>Ongoing from first payment date</i>	<i>NA in this reporting period.</i>	<i>Ongoing</i>	<i>NA in this reporting period.</i>	<i>NA in this reporting period.</i>
11. Vertebrate pest management	11.1	<i>Ongoing from first payment date</i>	<i>Yes</i>	<i>Ongoing</i>	<i>The resident property manager has undertaken vertebrate pest management, removing 376 pigs and 40 foxes from the property since 2008 by opportunistic shooting and/or trapping. Baiting for foxes occurred during the reporting period.</i>	<i>Vertebrate pest control has been ongoing by the resident property manager.</i>
	11.2	<i>Ongoing from first payment date</i>	<i>NA in this reporting period.</i>	<i>Ongoing</i>	<i>NA in this reporting period.</i>	<i>NA in this reporting period.</i>
12. Nutrient control	12.1	<i>Ongoing from commencement</i>	<i>Yes Ongoing</i>	<i>Ongoing</i>	<i>No fertilisers were applied during Year 4.</i>	<i>Pesticides and herbicides may be applied to the Biobank in accordance with the management plan requirements.</i>
13. Control of exotic fish species	13.1	<i>Not Applicable</i>	<i>Not Applicable</i>	<i>Not Applicable</i>	<i>Not Applicable.</i>	<i>Not Applicable</i>
14. Maintenance or reintroduction of natural flow regimes	14.1	<i>Commence from first payment date</i>	<i>Yes Ongoing</i>	<i>Ongoing</i>	<i>Natural flow regimes maintained during Year 4.</i>	<i>All nominated dams on the bio bank site were filled and seeded in September 2014.</i>

Biodiversity Banking and Offsets Scheme

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	14.2	<i>When required from date an artificial structure is removed</i>	<i>Yes Ongoing</i>	<i>Ongoing</i>	<i>A Japanese Millet cover crop was used following original earthworks in September 2014.</i>	<i>Further revegetation of former dam sites is planned to be combined/ incorporated with the revegetation program for MZ1 and will involve a combination of native trees, shrubs and grasses commensurate with a White Box woodland.</i>
	14.3	<i>Ongoing from commencement</i>	<i>Yes Ongoing</i>	<i>Ongoing</i>	<i>NA in this reporting period.</i>	<i>NA in this reporting period.</i>

Biodiversity Banking and Offsets Scheme

ID Number 43

Biobanking agreement

Incident or event that has adverse effect on biodiversity values on biobank site	
Incident or event including adverse impacts (eg. natural events)	Action taken and proposed recommended actions
None.	Not required.
Records submitted with this report	
✓ Photographs taken at the photo points set in the biobanking agreement	
✓ Results of the inspections required to be conducted in item 1.3 of Annexure D to the biobanking agreement	
✓ Results of any monitoring, inspections or surveys required in Annexures C and D to the biobanking agreement	
Signature and certification	
I hereby declare that the information supplied in this report is accurate and complies with the reporting requirements under item 2 of the Annexure D to the biobanking agreement. Note: If the land that forms the biobank site is owned by multiple persons, each landowner must sign this annual report.	
Signed	Signed
Date	Date
	28/07/2016

Biodiversity Banking and Offsets Scheme

Biobanking agreement

ID Number 43

Photo Points

Photo Point 1	E 240629	N 6593772	23/07/16	4:24pm
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From South West Corner



From North West Corner



Biodiversity Banking and Offsets Scheme

Biobanking agreement

ID Number 43

From North East Corner



From South East Corner



Biodiversity Banking and Offsets Scheme

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Photo Point 2	E240925	N6593562	24/07/16	4:40pm
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From South West Corner



From North West Corner



Biodiversity Banking and Offsets Scheme

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ID Number 43

From North East Corner



From South East Corner



Biodiversity Banking and Offsets Scheme

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Photo Point 4	E240439	N6592054	23/07/16	4:39pm
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From South West Corner



From North West Corner



Biodiversity Banking and Offsets Scheme

Biobanking agreement

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From North East Corner



From South East Corner



Biodiversity Banking and Offsets Scheme

Biobanking agreement

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Photo Point 5	E240595	N6593324	23/07/16	4:29pm
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From South West Corner



From North West Corner



Biodiversity Banking and Offsets Scheme

Biobanking agreement

ID Number 43

From North East Corner



From South East Corner



Biodiversity Banking and Offsets Scheme

Biobanking agreement

ID Number 43

Photo Point 8	E241170	N6594590	24/07/16	4:20pm
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From South West Corner



From North West Corner



From North East Corner



From South East Corner



Biodiversity Banking and Offsets Scheme

Biobanking agreement

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Photo Point 9	E241424	N6594095	24/07/16	2:26pm
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From South West Corner



From North West Corner



Biodiversity Banking and Offsets Scheme

Biobanking agreement

ID Number 43

From North East Corner



From South East Corner



Biodiversity Banking and Offsets Scheme

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ID Number 43

Photo Point 10	E241780	N6591054	25/07/16	7:16am
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From South West Corner



From North West Corner



From North East Corner



From South East Corner



Biodiversity Banking and Offsets Scheme

Biobanking agreement

ID Number 43

Photo Point 11	E241101	N6591953	23/07/16	4:51pm
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From South West Corner



From North West Corner



From North East Corner



From South East Corner



Biodiversity Banking and Offsets Scheme

Biobanking agreement

ID Number 43

Photo Point 12	E241321	N6593399	23/07/16	5:33pm
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From South West Corner



From North West Corner



From North East Corner



From South East Corner



Biodiversity Banking and Offsets Scheme

Biobanking agreement

ID Number 43

Photo Point 14	E241172	N6593839	24/07/16	4:29pm
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From South West Corner



From North West Corner



Biodiversity Banking and Offsets Scheme

Biobanking agreement

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From North East Corner



From South East Corner



Biodiversity Banking and Offsets Scheme

Biobanking agreement

ID Number 43

Photo Point 15	E243373	N6594221	25/07/16	4:00pm
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From South West Corner



From North West Corner



Biodiversity Banking and Offsets Scheme

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From North East Corner



From South East Corner



Biodiversity Banking and Offsets Scheme

Biobanking agreement

ID Number 43

Photo Point 17	E243026	N6593081	25/07/16	3:36pm
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From South West Corner



From North West Corner



Biodiversity Banking and Offsets Scheme

Biobanking agreement

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From North East Corner



From South East Corner



Biodiversity Banking and Offsets Scheme

Biobanking agreement

ID Number 43

Photo Point 20	E241993	N6595399	24/07/16	2:43am
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From South West Corner



From North West Corner



From North East Corner



From South East Corner



Biodiversity Banking and Offsets Scheme

Biobanking agreement

ID Number 43

Photo Point 21	E241317	N6594719	24/07/16	4:11pm
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From South West Corner



From North West Corner



Biodiversity Banking and Offsets Scheme

Biobanking agreement

ID Number 43

From North East Corner



From South East Corner



Biodiversity Banking and Offsets Scheme

Biobanking agreement

ID Number 43

Photo Point 22	E241476	N6595059	25/06/15	8:45am
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From South West Corner



From North West Corner



From North East Corner



From South East Corner



Biodiversity Banking and Offsets Scheme

Biobanking agreement

ID Number 43

Photo Point 23	E241304	N6595199	24/07/16	3:57pm
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From South West Corner



From North West Corner



From North East Corner



From South East Corner



Biodiversity Banking and Offsets Scheme

Biobanking agreement

ID Number 43

Photo Point 24	E241672	N6597031	24/07/16	3:28pm
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From South West Corner



From North West Corner



Biodiversity Banking and Offsets Scheme

Biobanking agreement

ID Number 43

From North East Corner



From South East Corner



Biodiversity Banking and Offsets Scheme

Biobanking agreement

ID Number 43

Photo Point 26	E241410	N6596513	26/07/16	11:48am
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From South West Corner



From North West Corner



Biodiversity Banking and Offsets Scheme

Biobanking agreement

ID Number 43

From North East Corner



From South East Corner



Biodiversity Banking and Offsets Scheme

Biobanking agreement

ID Number 43

Photo Point 27	E241465	N6591717	25/07/16	7:38am
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From South West Corner



From North West Corner



Biodiversity Banking and Offsets Scheme

Biobanking agreement

ID Number 43

From North East Corner



From South East Corner



Biodiversity Banking and Offsets Scheme

Biobanking agreement

ID Number 43

Photo Point 30	E241383	N6592453	25/07/16	7:48am
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From South West Corner



From North West Corner



Biodiversity Banking and Offsets Scheme

Biobanking agreement

ID Number 43

From North East Corner



From South East Corner



Biodiversity Banking and Offsets Scheme

Biobanking agreement

ID Number 43

Photo Point 35	E241839	N6595941	24/07/16	2:54pm
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From South West Corner



From North West Corner



Biodiversity Banking and Offsets Scheme

Biobanking agreement

ID Number 43

From North East Corner



From South East Corner



Biodiversity Banking and Offsets Scheme

Biobanking agreement

ID Number 43

Photo Point 38	E242139	N6596965	24/07/16	3:16pm
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From South West Corner



From North West Corner



From North East Corner



From South East Corner



Biodiversity Banking and Offsets Scheme

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Photo Point 40	E241161	N6595487	24/07/16	3:50pm
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From South West Corner



From North West Corner



Biodiversity Banking and Offsets Scheme

Biobanking agreement

ID Number 43

From North East Corner



From South East Corner



Biodiversity Banking and Offsets Scheme

Biobanking agreement

ID Number 43

Photo Point 42	E240603	N6597014	24/07/16	3:31pm
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Dam site that has been in-filled
From South West Corner



From North West Corner



Biodiversity Banking and Offsets Scheme

Biobanking agreement

ID Number 43

From North East Corner



From South East Corner



Biodiversity Banking and Offsets Scheme

Biobanking agreement

ID Number 43

Photo Point 43	E240603	N6591987	23/07/16	4:44pm
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From South West Corner



From North West Corner



Biodiversity Banking and Offsets Scheme

Biobanking agreement

ID Number 43

From North East Corner



From South East Corner



Biodiversity Banking and Offsets Scheme

Biobanking agreement

ID Number 43

BIOBANKING VERTEBRATE PEST MANAGEMENT ACTIVITIES FORM

MANAGEMENT ACTIVITIES FORM			
Date	Management Zone/s	Description and type of activity undertaken (This column must include details of the feral and overabundant herbivores targeted, control techniques applied and no. controlled.)	Observations & assessment of monitoring
2008-2015	1, 2 and 3	310 pigs removed from biobank through opportunistic trapping and shooting and 36 foxes removed by opportunistic shooting.	Pig numbers were very high when WHC acquired the property. General management by the property manager over this time has significantly reduced pig numbers.
July 2015	2 & 3	7 pigs removed by trapping and shooting	Pig numbers in decline, but there is still evidence of active pigs on site.
August 2015	2 & 3	15 pigs removed by trapping and shooting	Pig numbers in decline, but there is still evidence of active pigs on site.
September 2015	2 & 3	4 pigs removed by trapping and shooting	Pig numbers in decline, but there is still evidence of active pigs on site.
September to October 2015	1/2/3	44 fox baits laid. 12 baits were taken.	Fox numbers relatively low due to stock control on site and ongoing baiting.
October 2015	3	1 pig removed by trapping and shooting	Pig numbers in decline, but there is still evidence of active pigs on site.
October 2015	1 & 2	2 foxes removed by opportunistic shooting	Fox numbers relatively low due to stock control on site and ongoing baiting.
December 2015	2 & 3	7 pigs removed by trapping and shooting	Pig numbers in decline, but there is still evidence of active pigs on site.
April 2016	2 & 3	7 pigs removed by trapping and shooting	Pig numbers in decline, but there is still evidence of active pigs on site.
May 2016	2 & 3	19 pigs removed by trapping and shooting	Pig numbers in decline, but there is still evidence of active pigs on site.
May 2016	1	2 foxes removed by opportunistic shooting	Fox numbers relatively low due to stock control on site and ongoing baiting.
June 2016	2 & 3	6 pigs removed by trapping and shooting	Pig numbers in decline, but there is still evidence of active pigs on site.



 Signature

29-7-2016

 Date

Biodiversity Banking and Offsets Scheme

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BIOBANKING VERTEBRATE PEST MONITORING ACTIVITIES FORM

MONITORING ACTIVITIES FORM			
Date	Management Zone/s	Current level of impact on vegetation or native fauna <small>(This column must record impact As Negligible, Minimal, Moderate or High)</small>	Minor Variations <small>(details/reasons)</small>
18/1/16	1,2 & 3	Minimal - Pig numbers had generally been high within the biobank site, particularly as they have direct access to site from the adjoining Kelvin range, with thick scrub providing suitable habitat. Evidence of pig activity has been visible throughout the biobank for several years, however, the extent of ground disturbance by pigs is gradually decreasing as a consequence of the management measures in place and the removal of 376 pigs since 2008. Fox numbers have been relatively low as a consequence of no domestic stock held on the biobank site and continued 1080 baiting. There is no direct evidence of excessive fox numbers impacting on native fauna.	Opportunistic shooting and trapping of pigs and foxes will continue to be undertaken across the biobank site to reduce potential impacts on native flora and fauna.



 Signature

29-7-2016

 Date

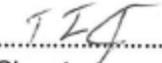
Biodiversity Banking and Offsets Scheme

Biobanking agreement

ID Number 43

BIOBANKING FERAL ANIMAL AND OVERABUNDANT HERBIVORE MANAGEMENT ACTIVITIES FORM

MANAGEMENT ACTIVITIES FORM			
Date	Management Zone/s	Description and type of activity undertaken <small>(This column must include details of the feral and overabundant herbivores targeted, control techniques applied and numbers controlled.)</small>	Observations & assessment of monitoring
2008-2015	1,2 & 3	1,173 feral goats and 70 rabbits have been removed from site through both trapping and opportunistic shooting.	At commencement of ownership feral goat numbers were excessive, however ongoing management by the property manager has reduced this number substantially to now only occasional sightings. The removal of large numbers of goats will provide better opportunities for native vegetation restoration.
July 2015	2 & 3	6 feral goats removed by trapping and opportunistic shooting.	Goat numbers have substantially reduced across the site and now only being infrequently sighted.
October 2015	1 & 2	41 feral goats removed by trapping and opportunistic shooting.	Goat numbers have substantially reduced across the site and now only being infrequently sighted.


 Signature

29-7-2016
 Date

Biodiversity Banking and Offsets Scheme

Biobanking agreement

ID Number 43

BIOBANKING FERAL ANIMAL AND OVERABUNDANT HERBIVORE MONITORING ACTIVITIES FORM

MONITORING ACTIVITIES FORM			
Date	Management Zone/s	Current level of impact on vegetation or native fauna <small>(This column must record impact As Negligible, Minimal, Moderate or High)</small>	Minor Variations <small>(details/reasons)</small>
18/01/16	1	Negligible - No observable detrimental impact from overabundant herbivores on native vegetation or fauna. Gradual removal of goats has decreased pressure on native vegetation regeneration.	Removal of goats on an opportunistic basis will continue to enhance native vegetation regeneration opportunities. No evidence of excessive grazing by kangaroos.
18/01/16	2	Negligible - No observable detrimental impact from overabundant herbivores on native vegetation or fauna. Gradual removal of goats has decreased pressure on native vegetation regeneration.	Removal of goats on an opportunistic basis will continue to enhance native vegetation regeneration opportunities. No evidence of excessive grazing by kangaroos.
18/01/16	3	Negligible - No observable detrimental impact from overabundant herbivores on native vegetation or fauna. Gradual removal of goats has decreased pressure on native vegetation regeneration.	Removal of goats on an opportunistic basis will continue, however this can be difficult in this zone due to heavy vegetation cover and steep terrain.



 Signature

29-7-2016

 Date

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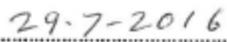
REPORTING FORM – FIRE FOR CONSERVATION MANAGEMENT

Who: Trevor Jones, Property Manager

Date: 15th July 2015

MANAGEMENT ZONES	DATE	OBSERVATIONS AND ASSESSMENT OF MONITORING
All	21 st July 2016	During the Reporting Period burning for conservation purposes was not carried out within the Biobank site. It is not intended that burning for conservation purposes will be utilised for a substantial period (approximately 6 years). Monitoring for bushfire control will continue, and appropriate firebreaks maintained as much as possible in advance of the summer bushfire period.


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BIOBANK SITE VISUAL INSPECTION PROFORMA – ANNUAL GROUNDCOVER %, AND CONDITION OF FENCING INSPECTION

Who: Trevor Jones, Property Manager

Date: 23rd/24th June 2016

INSPECTION ITEM	PHOTO NO.	CO-ORDINATES	COMMENT	ACTION COMPLETED
Percentage of Groundcover across Biobank Site	See all Photo Monitoring Point Photo's.	As per Photo Monitoring Points	Groundcover across the Biobank site would be at approximately 90%, with excellent grasscover across the site, comparative to the initial photo points in the Biobank Management Plan.	No action required.
Physical condition of fencing to determine if they can control the movement of stock, control human disturbance, control movement of overabundant native herbivores and control vertebrate pests	N/A	N/A	General maintenance is ongoing to maintain control of stock movements. As there is no fencing between the Biobank and adjoining Kelvin Aboriginal Area, it can be difficult to control movement of goats and pigs, however ongoing pest control will improve this aspect over time.	No action required.

T. J. H.
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BIOBANK SITE VISUAL INSPECTION PROFORMA – 6 MONTHLY HUMAN DISTURBANCE, EROSION AND WASTE INSPECTION

Who: Trevor Jones, Property Manager

Date: 16th July 2015

INSPECTION ITEM	PHOTO NO.	CO-ORDINATES	COMMENT	ACTION COMPLETED
Evidence of Disturbance	N/A	N/A	Biobank Site is in good condition with no evidence of active human disturbance present across the site.	No action required.
Evidence of Erosion	N/A	N/A	No evidence of active erosion occurring within the Biobank site requiring remediation activities.	No action required.
Evidence of Waste	N/A	N/A	No evidence of waste disposal occurring within the Biobank site.	No action required.

Who: Trevor Jones, Property Manager

Date: 18th January 2016

INSPECTION ITEM	PHOTO NO.	CO-ORDINATES	COMMENT	ACTION COMPLETED
Evidence of Disturbance	N/A	N/A	Biobank Site is in good condition with no evidence of active human disturbance present across the site.	No action required.
Evidence of Erosion	N/A	N/A	No evidence of active erosion occurring within the Biobank site requiring remediation activities.	No action required.
Evidence of Waste	N/A	N/A	No evidence of waste disposal occurring within the Biobank site.	No action required.

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Date

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INSPECTION OUTCOMES (SECTION 1.3 OF ANNEXURE D)

BIOBANK SITE VISUAL INSPECTION PROFORMA – QUARTERLY STOCK ACCESS INSPECTION

Who: Trevor Jones, Property Manager

Date: 17th July 2015

INSPECTION ITEM	PHOTO NO.	CO-ORDINATES	COMMENT	ACTION COMPLETED
Evidence of Stock accessing the Biobank	N/A	N/A	No evidence of stock within Biobank site during this inspection.	No action required.

Who: Trevor Jones, Property Manager

Date: 30th October 2015

INSPECTION ITEM	PHOTO NO.	CO-ORDINATES	COMMENT	ACTION COMPLETED
Evidence of Stock accessing the Biobank	N/A	N/A	60 cows put on Lovegrass to reduce growth for Spring between 5 th September 2015 and 10 th December 2015.	No action required.

Who: Trevor Jones, Property Manager

Date: 18th January 2016

INSPECTION ITEM	PHOTO NO.	CO-ORDINATES	COMMENT	ACTION COMPLETED
Evidence of Stock accessing the Biobank	N/A	N/A	No evidence of stock within Biobank site during this inspection.	No action required.

Who: Trevor Jones, Property Manager

Date: 4th April 2016

INSPECTION ITEM	PHOTO NO.	CO-ORDINATES	COMMENT	ACTION COMPLETED
Evidence of Stock accessing the Biobank	N/A	N/A	12 sheep entered from northern boundary and were removed.	Fence repaired where sheep entered.


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29-7-2016
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Date

Appendix 2

Surface Water Data

Appendix 3

Groundwater Data

