

# Annual Review

# Vickery Coal Mine

<b>Name of operation</b>	Vickery Coal Mine
<b>Name of operator</b>	Whitehaven Coal Mining Ltd
<b>Development consent/project approval number</b>	SSD-5000 SSD-7480
<b>Name of holder of development consent/project approval</b>	Whitehaven Coal Mining Ltd
<b>Mining lease number</b>	ML 1471, CL 316, ML 1718, ML 1838
<b>Name of holder of mining lease</b>	Whitehaven Coal Mining Ltd (ML 1471), Whitehaven Coal Mining Ltd (CL 316), Whitehaven Coal Mining Ltd (ML 1718), Vickery Coal Pty Ltd (ML 1838)
<b>Water licence number</b>	WAL No. 12651 WAL No. 12653
<b>Name of holder of water licence</b>	Whitehaven Coal Mining Ltd
<b>EMOP start date</b>	1 <sup>st</sup> May 2020
<b>EMOP end date</b>	31 <sup>st</sup> December 2022
<b>RMP start date</b>	1 <sup>st</sup> August 2022
<b>Annual review start date</b>	1 <sup>st</sup> January 2022
<b>Annual review end date</b>	31 <sup>st</sup> December 2022
<p><b>I, Mark Stevens certify that this audit report is a true and accurate record of the compliance status of Vickery Coal Project for the period January 1<sup>st</sup> 2022 until December 31<sup>st</sup> 2022, and that I am authorised to make this statement on behalf of Whitehaven Coal Mining Pty Ltd.</b></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>	
<b>Name of authorised reporting officer</b>	Mark Stevens
<b>Title of authorised reporting officer</b>	EGM- Project Delivery
<b>Signature of authorised reporting officer</b>	
<b>Date</b>	27/02/23

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## STATEMENT OF COMPLIANCE

The compliance status of the Vickery Coal Mine as at the 31st December 2022, is summarised in **Table 1** and further detailed in Error! Reference source not found..

**Table 1 - Statement of Compliance**

<b>Approval</b>	<b>Were all conditions of the relevant approval(s) complied with?<sup>1</sup></b>
Development Consent SSD-5000 and SSD-7480	Yes
Coal Lease 316	Yes
ML 1471	Yes
ML 1718	Yes
ML 1838	Yes
WAL No. 12651	Yes
WAL No. 12653	Yes

<sup>1</sup>Vickery Coal Project Environmental Assessment referenced a number of water licences for the Project, however construction and mining, and hence utilisation of all licences, is yet to commence.

# 1. INTRODUCTION

This is the eighth Annual Review (AR) produced for the Vickery Coal Mine (VCM), and has been prepared in accordance with Schedule 5, Condition 4 of Development Consent SSD-5000 and Schedule 2, Condition E9 of Development Consent 7480. The AR follows the format required by the NSW Government Annual Review Guideline (October, 2015).

The VCM is located approximately 15 kilometres (km) south-east of Boggabri and approximately 25 km north of Gunnedah in New South Wales (refer to Figure 1 and Figure 2). Mining operations at the previous VCM ceased in 1998 when approval from the NSW Department of Primary Industries (DPI) was granted to suspend operations and complete rehabilitation works on-site. Rehabilitation activities at the open cut and waste emplacement areas are now complete and the site is currently in closure. Whitehaven (WHC) acquired 100 percent (%) of the Coal Lease (CL) 316 and Authorisation (AUTH) 406 from Rio Tinto Limited in January 2010. ML 1718 and ML 1838 were issued under Part 5 of the NSW *Mining Act, 1992* by the NSW Minister for Mineral Resources in September 2015 and September 2022 respectively.

The VCM (SSD 5000), to which this AR relates, was granted on the 19<sup>th</sup> September 2014. Construction and mining are yet to commence under SSD 5000.

Development Consent (SSD-7480) was granted to VCPL on 12 August 2020 by the NSW Independent Planning Commission as the declared consent authority, under Section 4.38 of the NSW *Environmental Planning and Assessment Act, 1979* (EP&A Act). The Development Consent allows for the development of an open cut mine and associated infrastructure with a 25 year mine life, extracting run-of-mine (ROM) coal at up to 10 million tonnes per annum (Mtpa) and processing the coal, as well as coal from WHC's Tarrawonga Mine, at an on-site coal handling and processing plant (CHPP) for off-site transport by rail.

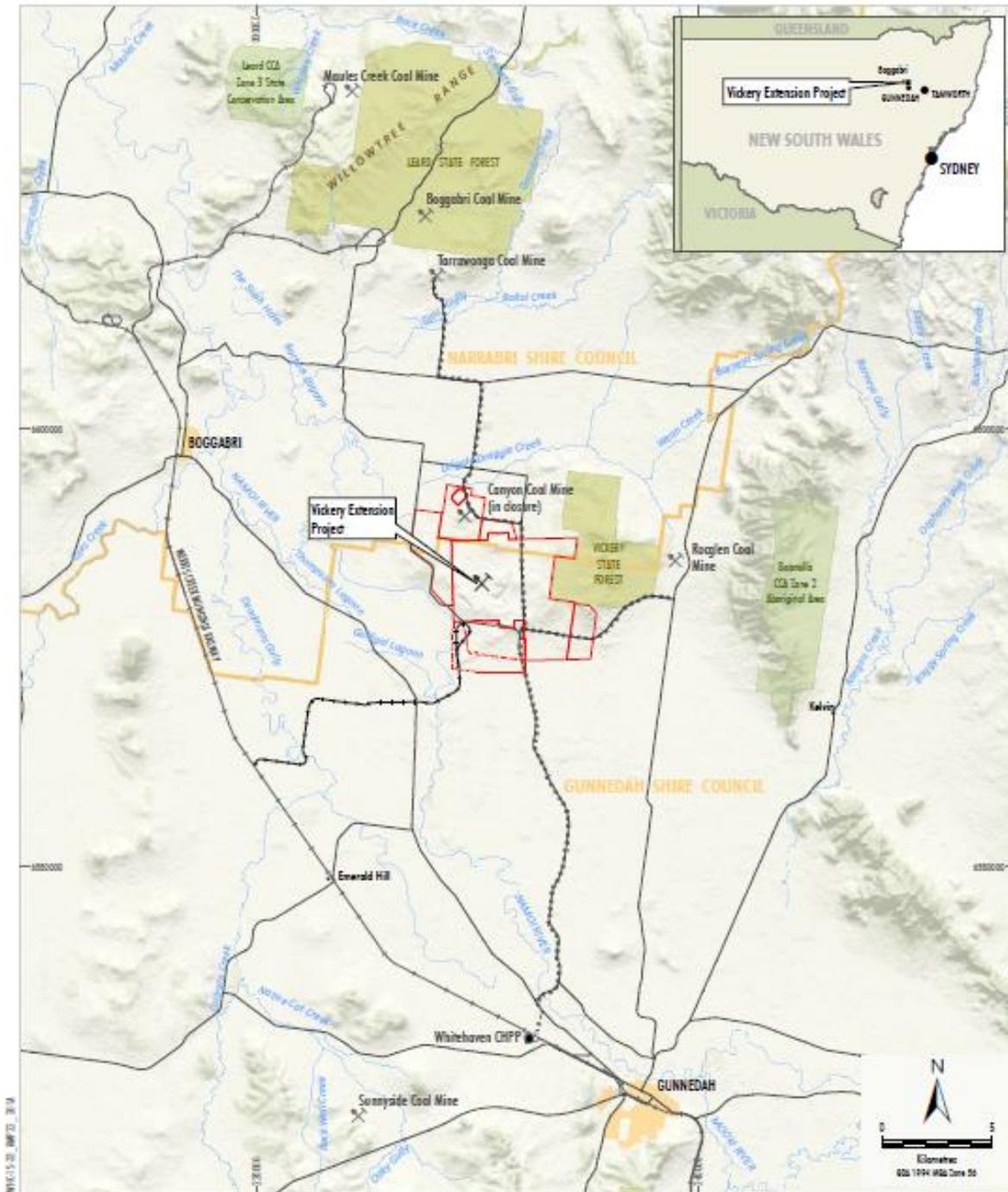
WHC commenced development under Development Consent SSD-7480 for the VCM on 28 April 2022 to undertake pre-construction activities. The Development Consent SSD-5000 was not surrendered in the reporting period; therefore, this AR address conditions relevant to Development Consent SSD-5000 and Development Consent SSD-7480.

Commencement of construction and mining activities associated with SSD-7480 did not commence during the reporting period.

## 1.1 Mine Contacts

The management personnel responsible for the VCM, and their relevant contact details, are as follows:

- Mr Mark Stevens, Executive General Manager – Project Delivery. Contact (07) 3738 2003 or 0400 041 364.



- LEGEND**
- Mining Tenement Boundary (ML and CL)
  - Exploration Licence Boundary (EL)
  - Mining Lease Application (MLA)
  - Local Government Boundary
  - State Forest
  - State Conservation Area, Aboriginal Area
  - Major Roads
  - Railway
  - Approved Road Transport Route
  - Indicative Project Rail Spur

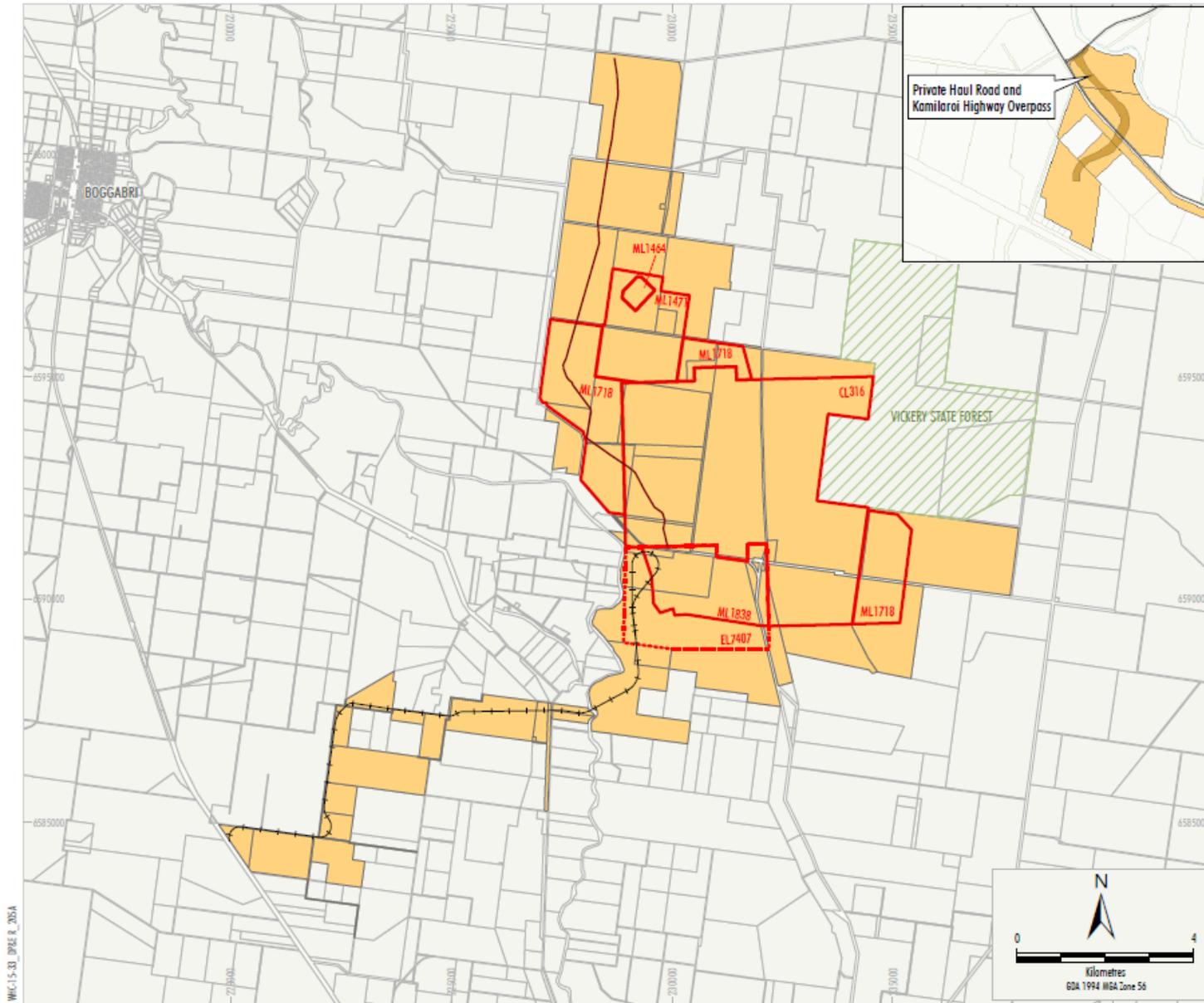
Source: LRMA - Topographic Base (2010); NSW Department of Industry (2013)

**WICKERY COAL MINE**  
 Project Location

Figure 1

Figure 1 Locality Plan<sup>1</sup>

<sup>1</sup> MLA is now ML 1838



- LEGEND**
- Mining Tenement Boundary (ML and CL)
  - Exploration Licence Boundary (EL)
  - Development Application Area
  - Indicative Rail Spur Alignment
  - Indicative Location of Groundwater Pipeline
  - Indicative Extent of Private Haul Road and Kamilaroi Highway Overpass

Source: Department of Land and Property Information - Land Tenure (2016); Department of Industry (2016); Whitehaven Coal (2016)

  
**VICKERY EXTENSION PROJECT**  
 Development Application Area  
 Figure 2

WVC-15-33\_DPR-E-R\_2024

## 2. APPROVALS

### 2.1 Tenements, Licences and Approvals

Table 2 identifies the approvals in place for the VCM at the end of the reporting period, the issuing/responsible Authority, date of issue and expiry date.

**Table 2 - Tenements, Licences and Approvals**

Issuing/Responsible Authority	Type of Lease, Licence, Approval	Date of Issue	Expiry
Independent Planning Commission of NSW	Development Consent SSD-7480	12 <sup>th</sup> August 2020	11 <sup>th</sup> August 2045
Department of Planning and Environment (DPE)	Development Consent SSD-5000	19 <sup>th</sup> September 2014	31 <sup>st</sup> December 2044
Australian Department of Climate Change, Energy, the Environment and Water (DCCEEW)	EPBC 2012/6263	17 <sup>th</sup> May 2012	Continuing
Australian Department of Climate Change, Energy, the Environment and Water (DCCEEW)	EPBC 2016/7649	15 <sup>th</sup> September 2021	31 <sup>st</sup> December 2051
Environment Protection Licence (EPL) – NSW (EPA)	EPL 21283	17 <sup>th</sup> May 2019	Continuing
Department of Regional NSW – Division of Mining, Exploration and Geoscience (MEG)	Mining Lease 1471 (ML 1471)	7 <sup>th</sup> September 2000	6 <sup>th</sup> September 2042
Department of Regional NSW – Division of Mining, Exploration and Geoscience (MEG)	Coal Lease 316 (CL 316)	15 <sup>th</sup> June 1988	15 <sup>th</sup> June 2033
Department of Regional NSW – Division of Mining, Exploration and Geoscience (MEG)	Mining Lease 1718 (ML 1718)	15 <sup>th</sup> September 2015	15 <sup>th</sup> September 2036
Department of Regional NSW – Division of Mining, Exploration and Geoscience (MEG)	Mining Lease 1464 (ML 1464)	21 <sup>st</sup> December 1999	20 <sup>st</sup> December 2020
Department of Regional NSW – Division of Mining, Exploration and Geoscience (MEG)	Mining Lease 1838 (ML 1838)	13 <sup>th</sup> September 2022	13 <sup>th</sup> September 2043
WaterNSW	Water Access Licence (WAL 12651)	-	In perpetuity
WaterNSW	Water Access Licence (WAL 12653)	-	In perpetuity
WaterNSW	Bore licence (90CA807002)	1 November 2006	31 October 2029

Note: Vickery Coal Project Environmental Assessment referenced a number of water licences for the Project however construction and mining, and hence utilisation of all licences, are yet to commence.

Conditions in all tenements, except ML 1838, were updated by MEG through the modernisation of wording and omitting conditions that were duplicated across multiple approvals. CL 316, ML 1464 and ML 1471 were amended to add a new condition formalising the requirement for assessable prospective activities to be undertaken in accordance with any necessary development consent or, if development consent is not required, the written approval of the Minister has been obtained.

### 3. OPERATIONS SUMMARY

#### 3.1 Mining Operations

No mining operations have commenced for the VCM (refer to **Table 3**). Therefore, Schedule 2, Condition B76 of SSD-7480 relating to monitoring of coal transport is not relevant in this reporting period.

**Table 3 - Production Summary**

Material	Approved Limit	Previous Reporting Period (actual)	This Reporting Period (actual)	Next Reporting Period (forecast)
Waste Rock/Overburden	1,830 Mbcm <sup>1</sup>	0	0	0
ROM Coal/Ore	10 Mtpa <sup>2</sup>	0	0	0
Coarse Reject	25 Mt	0	0	0
Fine Reject (Tailings)	N/A	0	0	0
Saleable Product	N/A	0	0	0

<sup>1</sup> VEP Environmental Impact Statement – Life of Mine

<sup>2</sup> Development Consent SSD-7480. Note: Approved coal extraction limit under Development Consent SSD-5000 is 4.5 Mtpa.

#### 3.2 Next Reporting Period

WHC will continue to undertake an internal evaluation of project development throughout the 2023 reporting period. Activities in relation to the Project during the 2023 reporting period will include:

- detailed engineering and design studies in relation to infrastructure for the project;
- associated geotechnical investigations and other pre-construction activities; and
- various primary and secondary approvals (ie management plans).

Projects are subject to Whitehaven’s strict capital allocation framework for projects. The VEP will continue to target progression through internal ‘toll gates’ (ie the Future Investment Decision [FID] stage), for the Project.

The commencement of the construction stage of the Project is anticipated during the 2023 reporting period with the final design and establishment of required infrastructure to support the development of early mining.

Formal surrender of the development consent SSD-5000 is planned to occur during the 2023 reporting period in accordance with condition A18 of SSD-7480.

## 4. ACTIONS REQUIRED FROM PREVIOUS ANNUAL REVIEW

There were no actions required from DPE in relation to the 2022 Annual Review. However, **Table 4** indicates commitments identified by WHC from the last Annual Review.

**Table 4 - Actions from the previous Annual Review**

Action required from previous Annual Review	Requested by	Action taken by the Operator	Where discussed in Annual Review
Continue CCC Meetings	Operator	CCC Meeting held in May and September 2022	Section 8
Continuation of weed and feral animal monitoring on-site to guide management actions at VCM offset properties	Operator	Weed and feral animal monitoring was undertaken	Section 6.2.6 and 6.2.7
Environmental management related to exploration, and rehabilitation of previous boreholes	Operator	Historical boreholes from 2017 – 2019 drilling program have been rehabilitated.	Section 8
Continue environmental monitoring and reporting, as required	Operator	Environmental monitoring was continued	Section 5

## 5. ENVIRONMENTAL PERFORMANCE

### 5.1 Air Quality

Air quality criteria for VCM is noted in SSD-5000 and SSD-7480 however, they are not relevant as no operational activities have occurred during the reporting period.

#### 5.1.1 Environmental Performance/Management

##### Dust Monitoring

Construction or mining activities at the VCM did not commence in the reporting period and as such no air quality monitoring for compliance purposes is undertaken. Monitoring of deposited dust is undertaken on a monthly basis, with results within the mean annual dust deposition criterion of 4 g/m<sup>2</sup>/month (Error! Reference source not found.).

**Table 5 - Depositional Dust**

Site	Property Name	Annual mean total insoluble solids (g/m <sup>2</sup> /month)
DG1	Ingleburn	2.76
DG2	Mirrabinda	2.30
V1	Greenwood/Shannon Harbour	2.17
V2	Greenwood/Shannon Harbour	2.58
V3	Welkaree/Tralee	2.91
V4	Shannon Harbour	1.31
V5	Wilga	2.18

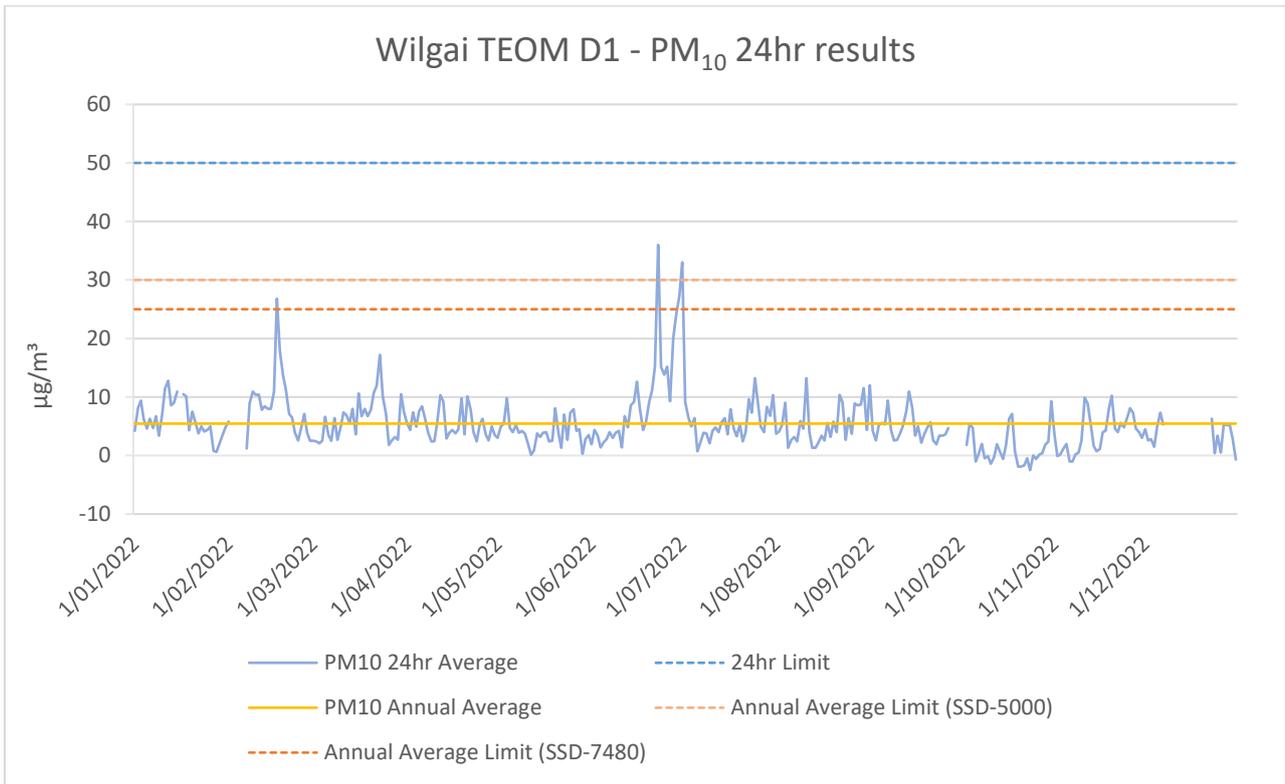
Due to flooding in the last quarter of the reporting period, access to DG2 was limited between September and November sample collection events. The sample collected from this site in November breached the Australian Standard for exposure time.

##### Air Quality Monitoring

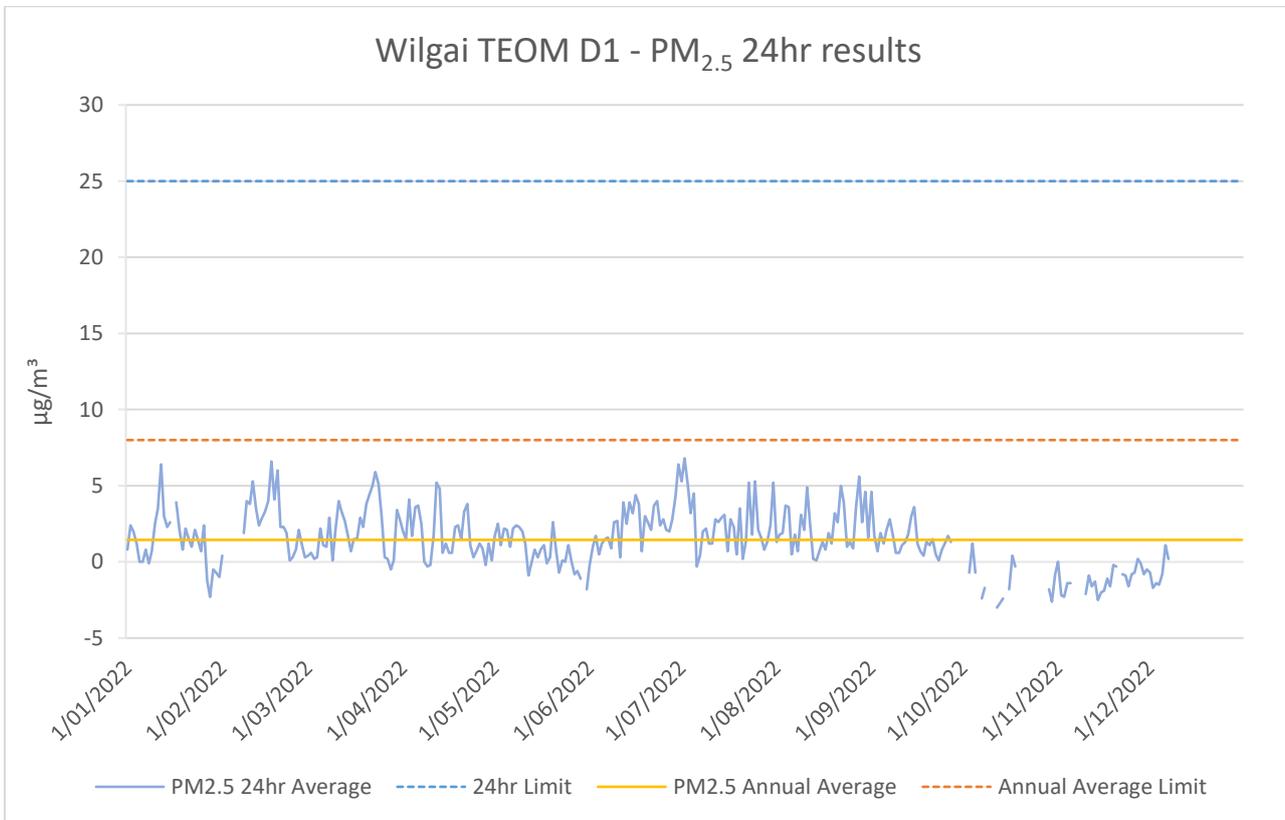
Particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) is measured at a Whitehaven Coal owned property, approximately 1.5 km to the east of the north-eastern boundary of ML 1471. Sampled data was analysed from the real time monitoring unit, with a validation process undertaken. There were limited periods during the course of ongoing operation where the TEOM recorded negative values in February, and some minor operational matters in September and December were rectified as part of regular maintenance inspections.

For the 2022 reporting period, the mean annual PM<sub>10</sub> particulate level (5.5 µg/m<sup>3</sup>) was within the criteria noted in SSD-5000 and SDD-7480 (30 µg/m<sup>3</sup> and 25 µg/m<sup>3</sup> respectively) (**Figure 3**). This value is below the predicted mean annual PM<sub>10</sub> particulate levels in the EIS (between 15 µg/m<sup>3</sup> and 35 µg/m<sup>3</sup>). The 24-hour average PM<sub>10</sub> particulate level (50 µg/m<sup>3</sup>) was not exceeded during the 2022 reporting period (**Figure 3**).

The mean annual PM<sub>2.5</sub> particulate level (1.4 µg/m<sup>3</sup>) was also within the criterion noted in SSD-7480 of 8 µg/m<sup>3</sup> (**Figure 4**). The 24-hour average PM<sub>2.5</sub> particulate level criterion (25 µg/m<sup>3</sup>) was not exceeded during the reporting period (**Figure 4**).



**Figure 3 “Wilgai” Particulate Matter (PM<sub>10</sub>)**



**Figure 4 “Wilgai” Particulate Matter (PM<sub>2.5</sub>)**

Total suspended particulate matter was within target criterion (90 µg/m<sup>3</sup>) noted in SSD-5000 and SSD-7480 during the year with a value of 10.2 µg/m<sup>3</sup>.

### **5.1.2 Key Environmental Management/Performance Issues**

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

### **5.1.3 Proposed Improvements to Environmental Management**

A second TEOM will be installed at the southern end of the approved project boundary. The TEOM will measure both PM<sub>10</sub> and PM<sub>2.5</sub>.

## **5.2 Biodiversity**

### **5.2.1 Biodiversity Offset Area (BOA) Management**

VCM commits to implementing the Biodiversity Offset Strategy (BOS) in particular the requirements of SSD 7480 Conditions B56/B57 and B58/B59 plus EPBC Approval 2016/7649 Conditions 19-21 within 2 years of the date of commencement of the development (28 April 2024). The initial component of the BOS is the Willeroi East Biodiversity Offset Area (BOA); located in Maules Creek valley (tributary of Namoi River) adjacent to the south eastern boundary of Mount Kaputar National Park. Please refer to **Figure 5**.

### **5.2.2 Offset Security Management**

VCM has commenced compliance with SSD 7480 Condition B56 and B57 by securing in perpetuity the Conservation Agreement CA0060 over the whole Willeroi property (including Willeroi East BOA) which was registered on the land title on 24 June 2021. VCM will reengage with NPWS whom have previously shown interest in the Willeroi Offset property being transferred to National Park Estate; while in parallel VCM assesses the potential of other company owned properties as BOAs to be substituted into the BOS (as per Condition B56). Following commencement of the VCM development being triggered on 28 April 2022; VCM submitted the first six-monthly report to the Department in October 2022 on the progress towards the retirements of Biodiversity Credits required by SSD 7480 Condition B58/B59 until 2 years post commencement of the development including the initial retirement of 869 Biobanking Credits (or reasonably equivalent 370 Biodiversity Credits).

### **5.2.3 Weather Summary of Offset Properties**

Regionally central meteorological station to the BOAs is the Gunnedah Pool site (BOM 2023) which has recorded highly variable rainfall over the last 4 years; from driest in 140 years of 237 mm in 2019, followed by above average rainfall years in 2020, 2021 and 2022 of 833 mm, 990 mm and 860 mm respectively resulting in major flooding of the Namoi River in October and November 2022. A meteorological station is maintained for the BOA with a summary of weather conditions experienced at the Willeroi Offset property during the 2022 reporting period being a maximum monthly average temperature of 30°C in January 2022 and a minimum monthly average temperature of 7°C in June 2022. Annual temperature ranges were 3°C to 34°C in 2022. The total annual rainfall in 2022 was 606 mm with the maximum in October (143 mm) and minimum in June (12 mm).

#### **5.2.4 Infrastructure & Waste Management**

During the reporting period, a total of 6.04 km of new fencing (fauna friendly) was constructed along the perimeter of potential VCM Offset properties of Costavale and Mt Somner as well as maintenance of signage and gates undertaken as required to continue to restrict unauthorised access and minimise livestock incursion. Also during the reporting period, 9.06 km of redundant internal fences were deconstructed from the Willeroi East, Mt Somner and Costavale properties and 3 items of redundant or derelict assets/ infrastructure were removed, previously associated with the former agricultural use of the VCM BOA. Waste removed is either recycled (in the case for scrap metal) or disposed offsite (general municipal waste and tyres) at local waste management facilities. Any remaining derelict assets/infrastructure items will continue to be assessed, removed and remediated as required prior to potential transfer of certain VCM Offset properties to National Park Estate. Further, there was one site of hazardous material identified on Mt Somner Offset property with a 62m demarcation fence constructed around the perimeter of the site.

#### **5.2.5 Seed Management**

No seed was collected on the VCM BOA during the reporting period as not required.

#### **5.2.6 Revegetation Management**

During the reporting period, no specific revegetation management works were undertaken as not required.

#### **5.2.7 Heritage Management**

During the reporting period, annual heritage inspections were completed on the 91 known Aboriginal archaeological heritage sites within the VCM BOA and prospective BOAs. Each site is maintained with 11.6 km of demarcation fencing around the heritage site perimeter and signage to mitigate access and inadvertent disturbance. During this reporting period, 73 new Aboriginal archaeological heritage sites were identified on the prospective offset properties of Gundawarra, Wean, Wear, Bull Mountain, Greenwood, Blue Vale properties as well as the Willeroi East offset property.

#### **5.2.8 Habitat Management**

During the reporting period, no specific habitat management works were undertaken as not required.

#### **5.2.9 Weed Management**

WHC coordinated routine formal weed monitoring/inspections undertaken across VCM BOA in February, May, September and December 2022. The priority weeds identified included legacy weeds inherited from previous owners management regimes such as Box Thorn, Mother of Millions and Coolatai Grass as well as a range of broadleaf weeds within revegetation areas. The weed monitoring/inspections ensure that timely and prioritised weed control is undertaken on a seasonal basis with the spatial information directly given to spraying contractors to identify what, where, when and how to target appropriate resources across the VCM BOA for weed control.

During the reporting period, WHC implemented a weed control program across the VCM BOA including 225ha treated across the Offset properties including spraying of fire break tracks, Sweet Briar and Coolatai Grass. Only appropriately qualified and experienced weed contractors (AQF3 accreditation or higher for use of herbicide) were engaged to undertake weed control works for WHC.

### **5.2.10 Pest Animal Management**

WHC undertook routine pest animal monitoring across the VCM BOA adopting the “monitor, measure and manage” approach to pest animal management; which will allow WHC to implement adaptive management in response to changes being measured through monitoring in pest animal abundance specific to the different geographical regions of the VCM BOA. Pest animal monitoring primarily utilises remote sensor cameras for pest animals generally in accordance with the NSW DPI Monitoring Techniques for Vertebrate Pests as cameras now provide the best option of detection for the greatest range of species as well as being complemented by pest animal sighting reports. Monitoring demonstrated that certain animals like Eastern Grey Kangaroos can be high abundance all year; while Feral Pigs and Foxes are seasonally variable between high to medium abundance and all other pest animal species recorded as scarce to low abundance levels across 2022. The pest animal monitoring ensures that timely and prioritised pest animal control is undertaken on a seasonal basis identifying what, where, when and how to target appropriate resources across the VCM BOA for pest animal management.

During the reporting period, WHC implemented a comprehensive feral animal control program across the VCM BOA with routine 1080 baiting and canid pest ejectors plus Hoggone baiting and trapping programs for Feral Pigs undertaken throughout 2022. During the reporting period; the 1080 baiting program removed 30 Foxes and/or Wild Dogs from 198 baits presented. The Feral Pig control programs resulted in 6 of 6 Hoggone baits taken; resulting in 15% and 100% of the baits respectively being taken by target pest animals with a further 11 Feral Pigs trapped in 2022 across VCM BOA. Only appropriately qualified and experienced feral animal contractors (appropriate feral animal management qualifications, NSW fire arm licence and pesticide accreditation where relevant) were engaged to undertake feral animal control works for WHC.

### **5.2.11 Soil & Erosion Management**

Annual inspections were undertaken including unsealed fire break tracks and associated drainage structures across the VCM BOA to review appropriate erosion and sediment control measures required in accordance with the Blue Book (Managing Urban Stormwater: Soils and Construction Volume 1 (Landcom 2004)). Throughout the reporting period there was above average rainfall, with a number of flood events in the region. A total of 14 observations were recorded within the VCM BOA with only 1 location requiring targeted additional track maintenance to mitigate further erosion and sedimentation. The remaining tracks/drainage structures are maintained during routine WHC Biodiversity fire break track maintenance program. There are also a number of legacy erosion sites inherited from previous owners management regimes that are subject to a separate annual inspection process and updates to the WHC erosion register made. During the reporting period, monitoring or remediation actions and investigations commensurate to the risk were undertaken for the 5 erosion sites identified within VCM BOA.

### **5.2.12 Grazing Management**

VCM BOAs continued to be destocked and no strategic grazing occurring during the reporting period. There were 2 instances of stock incursion during the reporting period; with the stock on each occasion retrieved and fencing repaired as required.

### **5.2.13 Bushfire Management**

Annual fuel load monitoring was undertaken between September and November 2022 as part of planning and assessment of bushfire hazard and ecological burn program for 2023; with the results indicating moderate overall fuel loads present. During the reporting period, no bushfires occurred, and no ecological burns were undertaken. Other fire management implemented by WHC during the reporting period was maintenance carried out as required on 83.8km of fire trails to a zero-fuel barrier standard across the VCM BOA. WHC maintains regular communications throughout the reporting period with both the Liverpool Range and Namoi-Gwydir Zone RFS teams around planning of WHC Biodiversity's ecological burn programs as well as maintaining contact points in case of emergency. WHC maintains a specialist firefighting contractor for an on-call engagement during the fire season to respond in the event of a bushfire on WHC BOAs and non-mining lands.

### **5.2.14 *Lepidium monoplocoides* Management**

In accordance with SSD-7480 and EPBC approval requirements, monitoring of Winged Peppergrass was undertaken in late spring and summer 2022 during good growing conditions. A total of 61 and 53 plants were observed during the November and December surveys respectively within the Canyon Protection Area. Within the Pilliga National Park, the number of plants observed varied greatly ranging from 97 to 21 individuals per site. During the reporting period, the previously translocated Winged Peppergrass plant from the Vickery Impact Area to the Canyon Protection Area continued to produce flowers and seeds with a cumulative 4574 seeds and individual plants translocated in total into the Canyon Protection Area. Monitoring continued of the germination and propagation trial for the Winged Peppergrass undertaken in 2021 with a total of 216 seedlings grown from seed collected from the Canyon Protection Area in October 2020 was planted as well as 1,000 seeds direct seeded within the Canyon Protection Area. Monitoring of the 216 seedlings grown from seed collected from the Canyon Protection Area recorded fruit production and self-sowing indicating that the species was able to complete its life-cycle following translocation and reinforce the Winged Peppergrass population within the Canyon Protection Area. A further four Winged Peppergrass plants were observed within direct seeding cells during the reporting period.

### **5.2.15 Monitoring**

During the reporting period, the ecological monitoring program of the Willeroi East BOA included winter bird surveys that were undertaken in June/July 2022, and inaugural flora monitoring of six plots across two vegetation zones (VZs), undertaken during October and November 2022 while the annual fauna monitoring was undertaken between January and October 2022 at 28 bird survey sites, 12 echolocation sites and 4 passive acoustic recorder sites. During the winter bird surveys, two threatened species (Little Lorikeet and Turquoise Parrot) were recorded. During flora monitoring, one VZ (North-west Slopes Dry Sclerophyll Woodlands – Good condition) was recorded as meeting or exceeding completion criteria for all four biometrics. Native plant species richness (NPS) completion criteria (native species richness benchmark for relevant biometric vegetation communities) was met or exceeded at both VZs. Native overstorey cover (NOS) completion criteria (minimum overstorey cover benchmark for relevant biometric vegetation communities) was met or exceeded at 1 out of 2 VZs. Native midstorey cover (NMS) completion criteria (minimum midstorey cover benchmark for relevant biometric vegetation communities) was met or exceeded at both VZs. Native

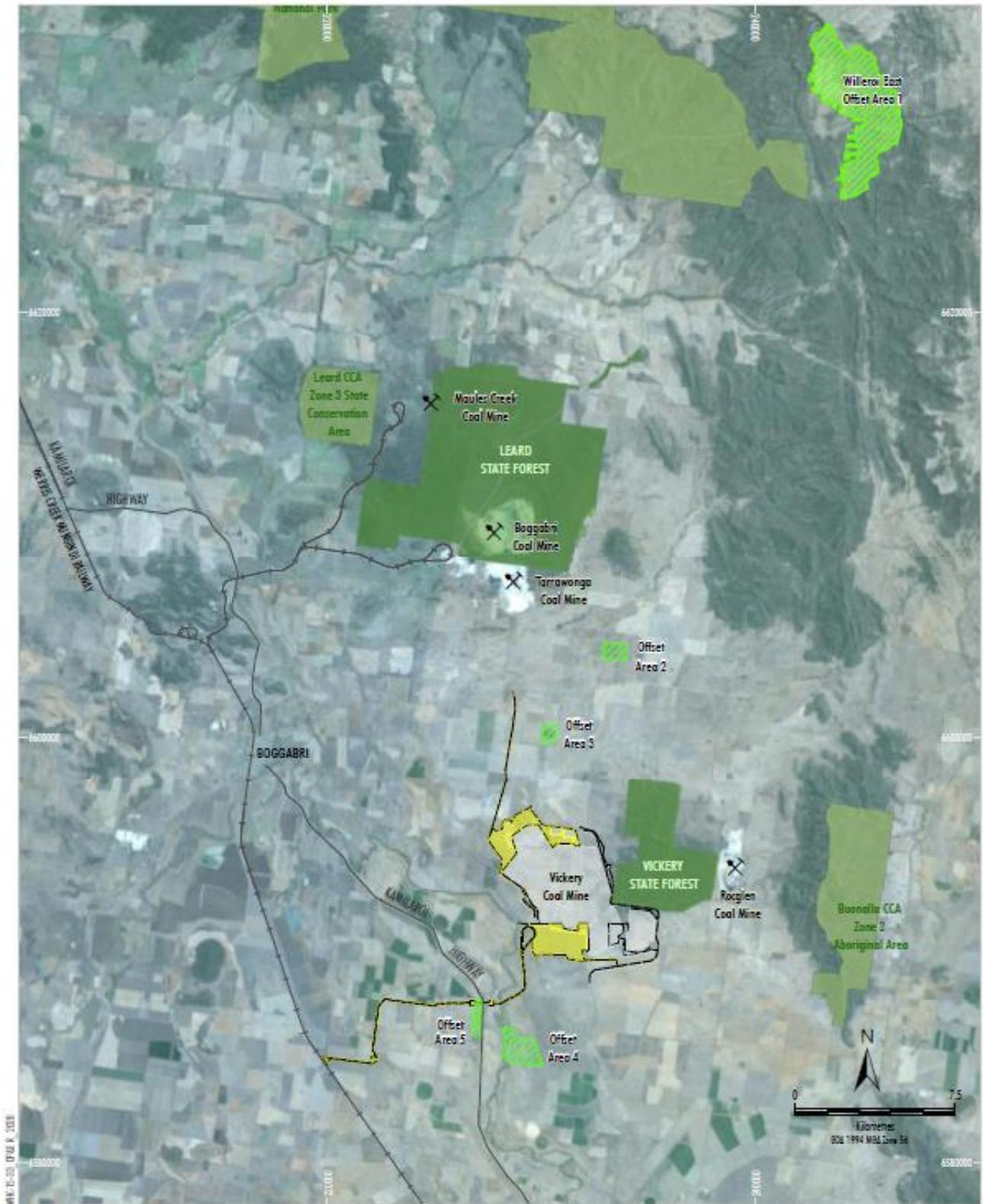
ground cover grass (NGCG) completion criteria (minimum groundcover benchmark for relevant biometric vegetation communities) was met or exceeded at both VZs. Analysis of individual plot data shows that 100% of plots met or exceeded NPS, NMS and NGCG completion criteria and 50% of plots met or exceeded NOS completion criteria in 2022. A total of 96 bird species were recorded during standardised bird surveys compared with 81 bird species in 2021 were detected and 105 bird species in 2020. Across 28 sites, species richness ranged from 1 to 30 per site. By habitat, bird species richness across 10 woodland sites was 72 (average 23.6; range 19 to 30), 23 species were detected at revegetation/rehabilitation sites (average = 8.25; range 1 to 14), and 56 species were recorded at naturally regenerating sites (average 18.9; range 11 to 27). Bird survey site access and survey replication was heavily impacted by large rainfall events and flooding. Up to 19 species of microbat were positively identified from echolocation recordings across 12 sites including six species listed as threatened under the BC Act with species richness values ranging between 0 and 15 per site. By habitat, 15 species were detected in remnant woodland sites (average 11.6, range 11 - 14), 18 species in naturally regenerating sites (average = 13, range 9 - 15) and 12 species in revegetated woodland sites (average 5.66, range 0 - 12).

#### **5.2.16 Key Environmental Performance/Management Issues**

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

#### **5.2.17 Proposed Improvements to Environmental Management**

No improvements are proposed within the next reporting period.



WK 75-20, 0105 R, 2016

- LEGEND**
- State Forest
  - State Conservation Area, Aboriginal Area
  - Approximate Extent of Approved Mine
  - Approximate Extent of Vickers Extension Project (EPBC 2016/7649) Footprint
  - Biodiversity Assessment Report Development Site Footprint
  - Existing Approved Offset Area for the Approved Mine

Source: Department of Land and Property Information (2015);  
 Whitehaven Coal Limited (2015); Umwelt (2017)  
 Orthophoto: Department of Customer Service (2020)



**VICKERY EXTENSION PROJECT**  
 Local Biodiversity Enhancement Measures  
 Figure 5

## **5.3 Blasting**

Blasting criteria for the VCM are noted in SSD 5000 and SSD-7480 however, they are not relevant for this reporting period as no blasting has been undertaken on site.

## **5.4 Operational Noise**

Noise criteria for the VCM are noted in SSD 5000 and SSD-7480 however, they are not relevant for this reporting period as site operations and coal haulage have not begun on site.

## **5.5 Aboriginal Heritage Management**

### **5.5.1 Environmental Performance/Management**

A number of cultural heritage items have been identified on the site. A total of 34 Aboriginal cultural heritage sites (including those sites that have been previously recorded and were reinspected as part of the field surveys) were identified during the field surveys of the Project mining area in 2012.

Protective fencing and signage were installed at 18 Aboriginal cultural heritage sites within CL316 which were identified to be in proximity to exploration and geotechnical activities undertaken in 2022. The condition and extent of fencing at nine Aboriginal cultural heritage sites was inspected by a qualified archaeologist, accompanied by two Registered Aboriginal Parties (RAPs), as part of periodic inspections.

No new confirmed Aboriginal cultural heritage sites were identified in the reporting period.

### **5.5.2 Key Environmental Performance/Management Issues**

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

### **5.5.3 Proposed Improvements to Environmental Management**

In accordance with the VCM Aboriginal Cultural Heritage Management Plan, annual inspections of the fencing will be undertaken in accordance with the ACHMP.

Aboriginal cultural heritage sites will be salvaged in accordance with the ACHMP.

## **5.6 Non-Aboriginal Heritage Management**

The Kurrumbede Homestead Complex was listed on the State Heritage Register during the reporting period, in accordance with the decision made by the Minister for Environment and Planning made on 28 April 2022.

The Kurrumbede Homestead Complex is managed in accordance with the approved Vickery Coal Mine Historic Heritage Management Plan. Management activities in this reporting period were limited to ongoing maintenance of the gardens.

## **5.7 Waste**

VCM aims to implement all reasonable and feasible measures to minimise waste and ensure it is appropriately stored, handled and disposed of. Waste materials at VCM are managed in accordance with:

- Schedule 2 Condition 92 of SSD-7480

- Schedule 3 Condition 40 of SSD-5000
- VCM Waste Management Plan
- NSW legislative requirements

VCM waste streams include general waste and sewage, and are collected and disposed of at authorised waste disposal sites by a licenced contractor. Sewage is treated on site and serviced by a licenced waste disposal contractor on an as needs basis.

## 5.8 Environmental Performance Summary

An environmental performance summary for VCM is presented in **Table 6** below.

**Table 6 - Environmental Performance**

Aspect	Approval Criteria/ EIS Prediction	Performance During the Reporting Period	Trend/Key Management Implications	Implemented/Proposed Management Actions
Noise	N/A – site not operational			
Blasting	N/A – site not operational			
Mean annual dust deposition	4 g/m <sup>2</sup> /month (SSD-5000 only)	Compliant with criterion.	No operational activities at VCM – exceedances not deemed to be mine related	N/A - site not operational
Mean annual PM <sub>10</sub> particulate level	30 µg/m <sup>3</sup> (SSD-5000) 25 µg/m <sup>3</sup> (SSD-7480)	5.5 µg/m <sup>3</sup>	Within criteria	N/A - site not operational
24 hour average PM <sub>10</sub> particulate level	50 µg/m <sup>3</sup>	Compliant with criterion.	Within criterion	N/A - site not operational
Mean annual Total Suspended Particulate (TSP) matter	90 µg/m <sup>3</sup> (SSD-5000 only)	10.2 µg/m <sup>3</sup>	Within criterion	N/A - site not operational
Biodiversity	EPBC 2012/6263 and 3(33) of SSD-5000, requires the translocation and protection of the Winged Peppercross.	Progress made towards protecting the species.	N/A	Continue regular monitoring and maintenance of fence.

## 6. WATER MANAGEMENT

### 6.1 Surface Water Management

#### 6.1.1 Environmental Performance/Management

Construction of the VCM is yet to commence and as such no water quality monitoring for compliance purposes is undertaken. No active water take occurred during the reporting period.

#### 6.1.2 Key Environmental Performance/Management Issues

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

#### 6.1.3 Proposed Improvements to Environmental Management

No improvements are proposed for the next reporting period.

### 6.2 Groundwater Management

#### 6.2.1 Environmental Performance/Management

No groundwater monitoring for compliance purposes has been undertaken during the reporting period, as construction of the VCM is yet to commence.

One extraction point was used in the 2021-22 water year to supply water to the BIS workshop. The two WALs (12651 and 12653) associated with this extraction point and usage are summarised in **Table 9**.

**Table 7 - Water take for the 2021-2022 Water Year**

Water Licence #	Water sharing plan, source and management zone	Entitlement (unit shares)	Passive take / inflows	Active pumping	Total
12651	<i>Water Sharing Plan for the Namoi Alluvial Groundwater Sources Order 2020</i>	52 unit shares (104 ML)	N/A – site not operational	104 ML	104 ML
12653	Upper Namoi Zone 4, Namoi Valley (Keepit Dam to Gin's Leap) Groundwater Source	166 unit shares (332 ML)	N/A – site not operational	78.6 ML	78.6 ML

#### 6.2.2 Key Environmental Performance/Management Issues

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

#### 6.2.3 Proposed Improvements to Environmental Management

No improvements are proposed for the next reporting period.

## 7. REHABILITATION PERFORMANCE DURING THE REPORTING PERIOD

### 7.1 Status of Mining and Rehabilitation

Rehabilitation activities were undertaken over disturbed areas from exploration drilling in CL 316 and geotechnical activities in the Vickery Extension Project footprint. **Table 10** summarises the rehabilitation status at Vickery.

Above average rainfall fell at VCM and the broader region between August and November 2022 resulting in delays in the preparation of exploration boreholes for rehabilitation and active rehabilitation due to restricted site access from flooding.

**Table 10 - Rehabilitation Status**

Mine Area Type <sup>1</sup>	Previous Reporting Period (Actual) (ha)	This Reporting Period (Actual) (ha)	Next Reporting Period (Forecast) (ha) <sup>2</sup>
	2021	2022	2023
Total Mine Footprint <sup>3</sup>	0.2	10.2	12.9
Total Active Disturbance	0.2	6.5	0
Land Being Prepared for Rehabilitation	0	1.7	0
Land Under Active Rehabilitation	0	2 <sup>4,5,6</sup>	12.9
Completed Rehabilitation	0	0	0

<sup>1</sup> Refer to Annual Review Guidelines (p.11) for description of mine area types.

<sup>2</sup> Exploration activities only. Construction and mining related disturbance are under review and will be provided in the revised VCM RMP during the 2023 reporting period.

<sup>3</sup> Disturbance created by activities described in the EMOP and RMP only.

<sup>4</sup> Includes 0.2 ha from 2017-19 historical exploration disturbance.

<sup>5</sup> Areas have been rehabilitated, but yet to be signed off by the Resources Regulator.

<sup>6</sup> Includes 0.3 ha disturbed by geotechnical activities.

### 7.2 Post Rehabilitation Land Uses

Two final rehabilitation land uses are to be established at Vickery – land suitable for grazing (780 ha) and native forest/woodland (1,360 ha).

### 7.3 Key Rehabilitation Performance Indicators

No rehabilitation occurred during the reporting period related to mining.

### 7.4 Renovation or Removal of Buildings

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

### 7.5 Other Rehabilitation Undertaken

Exploration drilling / disturbance related to drilling was undertaken in the reporting period in CL316. Twenty-three boreholes were rehabilitated in the reporting period, while the remaining boreholes are currently being prepared for grouting and rehabilitation, and will be rehabilitated in the next reporting period (refer Figure 6 of

exploration bore drilling locations during the reporting period). Formal sign-off from the Resources Regulator will be sought in the next reporting period for all rehabilitated boreholes.

The historic 2017-2019 active exploration disturbance of 0.2 ha was rehabilitated in the reporting period. Formal sign off from the Resources Regulator will be sought in the next reporting period.

All disturbance from geotechnical activity was rehabilitated in the reporting period. Please refer

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

## **7.6 Departmental Sign-off of Rehabilitated Areas**

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

## **7.7 Variations in Activities against MOP/RMP**

Not applicable.

## **7.8 Trials, Research Projects and Initiatives**

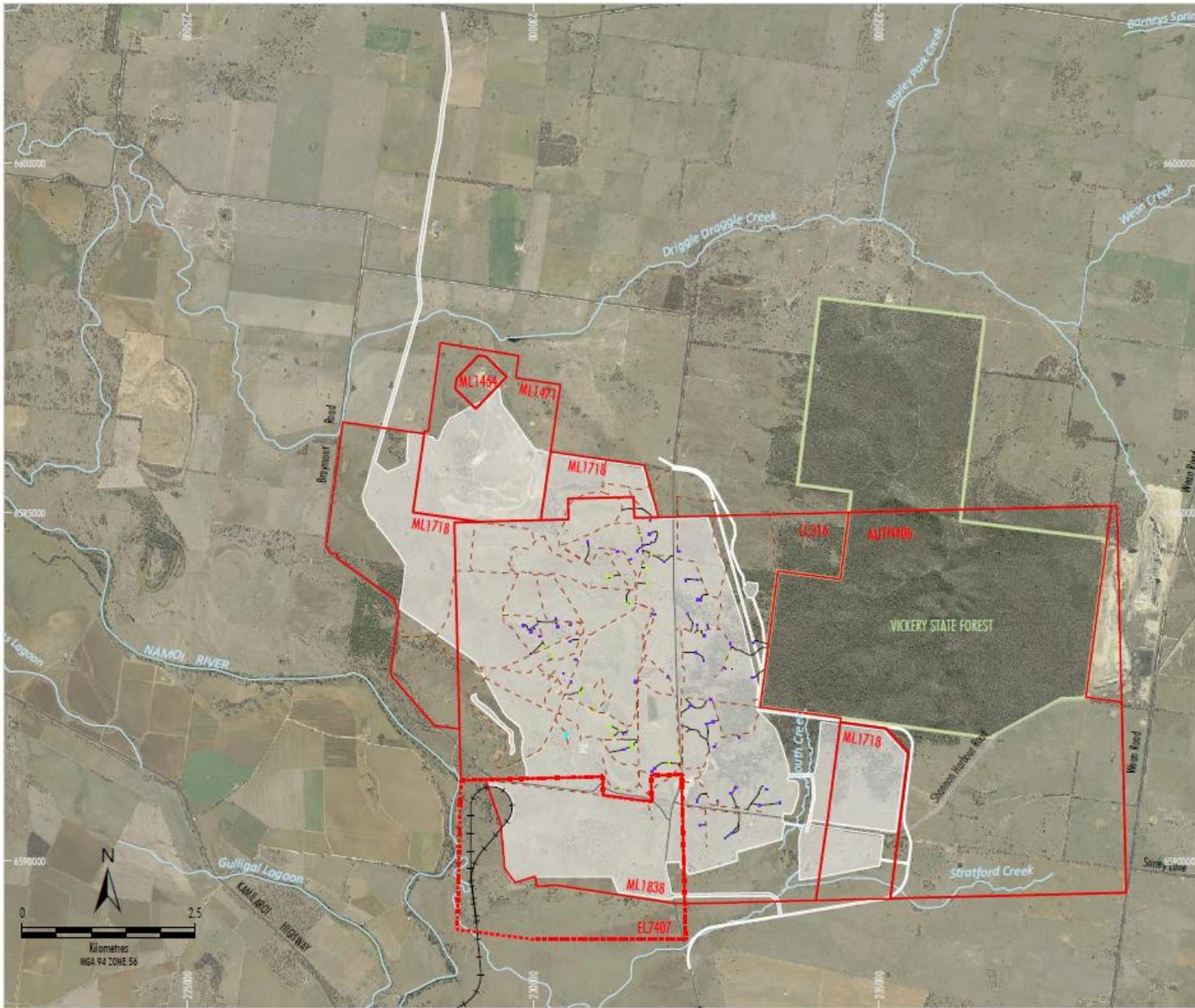
No rehabilitation trials, research projects or other initiatives were undertaken during the reporting period.

## **7.9 Key Issues to Achieving Successful Rehabilitation**

No specific issues in achieving rehabilitation success have been determined to date.

## **7.10 Actions for Next Reporting Period**

Continued rehabilitation of existing boreholes and ongoing environmental monitoring and management, as per SSD-5000 and SSD-7480. The RMP will be revised to support the commencement of construction activities required for early mining activities and resubmitted.



- LEGEND**
- State Forest
  - Mining Tenement Boundary (ML, CL and AUTH)
  - Vickers Extension Project Disturbance Boundary
  - Indicative Rail Spur Alignment
  - Vickers Drill Sites (Rehabilitated)
  - Vickers Drill Sites (In progress)
  - Vickers Core Shed
  - Vickers Sites Access
  - Vickers Existing Roads

Source: Orthophoto - Department of Land and Property Information, Aerial Photography Flown (July 2011)

**WHITEHAVEN COAL**  
**VICKERY EXTENSION PROJECT**  
**Vickers Coal Mine Disturbance and Rehabilitation Areas**

**Figure 6**



## 8. COMMUNITY

In accordance with Schedule 5, Condition 6 of SSD-5000 and Schedule 2, Condition A23 of SSD-7480, the Community Consultative Committee (CCC) met in May and September 2022 in conjunction with the Canyon Coal Mine. Minutes of the CCC meetings were published on the project website.

No complaints were received during the 2022 reporting period.

Community contributions are managed in accordance with the Whitehaven Coal Donations and Sponsorship Policy. Whitehaven Coal donated \$147,172.72 to various local Gunnedah and groups and over \$135,000 to support local groups in Narrabri during the reporting period. Groups and activities which received contributions included, but were not limited to the following;

### **Gunnedah LGA**

Gunnedah Rural Museum  
Gunnedah Ladies Golf Club  
Gunnedah Bulldogs Rugby League  
Gunnedah District Aeromodellers  
Gunnedah District Australian Football Club  
Gunnedah Shire Council  
Black & Blue Boxing  
Gunnedah Show Society  
G S Kidd School  
Gunnedah Rugby League  
Gunnedah Pistol Club  
Gunnedah Eisteddfod Society  
Gunnedah High School  
Whitbread Memorial Fund  
Gunnedah Netball Association  
Gunnedah Netball Association  
Gunnedah Athletics Centre Incorporated  
White Cockatoos Gomeri Roos  
Gunnedah Public School  
Gunnedah & District Historical Society Inc  
Gunnedah Meals on Wheels  
GHFC Pty Ltd  
Swimming Gunnedah Incorporated  
Gunnedah Touch Association  
Gunnedah Baptist Community Preschool  
Gunnedah Homes for the Aged  
Gunnedah Basketball Association  
Swimming Gunnedah Incorporated  
Gunnedah High School  
Black and Blue Boxing Gunnedah  
Dorothea Mackellar Poetry Awards  
Winanga-Li Aboriginal Child and Family Centre  
McLean Care Mackellar  
Gunnedah Ministers Fraternal

Gunnedah Public School P&C Association  
St Mary's College  
Rotary Club of Gunnedah West Inc  
Week of Speed  
Curlewis Public School P&C  
Winanga-Li Aboriginal Child and Family Centre  
The Rotary Club of Gunnedah

### **Narrabri LGA**

Sponsorship seed funding to establish and innovation hub in Narrabri  
Sponsorship for Create 2022  
Assistance to cover daily operation expenses  
Upgrade a new food safe BBQ trailer  
purchase more resources for the kids  
Assistance to help high school students further their education  
Costs of installation of new electronic scoreboard  
Donation to help run race meeting  
Sponsorship for 2022 season  
Funding for more sports equipment  
Sponsorship of 2022 Camp Draft  
Platinum Sponsorship of 2022 Narrabri Show  
Purchase 10 new student laptops and charging station  
Funding Costs to hold the 2022 Science and Engineering Challenge  
NIN Gala Evening  
NIN Gold Membership Level  
Donation towards the cost of office & kitchen equipment  
Repairs to the hall to keep the club running  
New Trailer & dolly to move their boat around the local water ways  
Sponsorship for the B to B Bash 2022  
Send players on a South Sydney Trip  
Narrabri LALC NAIDOC Week 2022  
Sponsorship for the 2023 Drovers Campfire  
Replacement of the fort  
Sponsorship Lucas Summers Lawler for NW Primary Boys Softball  
Purchase a new keyboard and licenced music sheets  
2022 Annual Presentation Night  
Sponsorship of event  
Carols in the Park  
Sponsorship for Create 2023  
Advertising in the Boggabri Weekly  
Narrabri town street Christmas party

## **9. INDEPENDENT AUDIT**

No independent audit was undertaken for the VCM during the reporting period. The first scheduled Independent Environmental Audit (IEA) will take place within 2 years from the commencement of construction or as required per SSD 7480 within 12 months of commencement of development.

## **10. INCIDENTS AND NON-COMPLIANCES DURING THE REPORTING PERIOD**

### **10.1 Reportable Incidents**

There were no reportable incidents recorded during the reporting period.

### **10.2 Non-compliances**

There were no non-compliances during the reporting period.

### **10.3 Regulatory Actions**

One penalty notice was received in 2022 relating to the incomplete rehabilitation of exploration drilling boreholes between 2017-2019 identified as a non-compliance in the 2021 reporting period.

Exploration drilling undertaken between 2017-2019 was not completely rehabilitated in accordance with all commitments prescribed by the Exploration MOP. Borehole capping, waste removal and drill site rehabilitation activities have been completed for all exploration drilling undertaken between 2017-2019, with outstanding rehabilitation limited to the final grouting of drill holes and removal of collar casing. The non-compliance was investigated by the Resource Regulator during the 2022 reporting period and penalty notice issued. The boreholes were rehabilitated in the 2022 reporting period.

## **11. ACTIVITIES TO BE COMPLETED IN THE NEXT REPORTING PERIOD**

Projects are subject to Whitehaven's strict capital allocation framework for projects. The VEP will continue to target progression through internal 'toll gates' (ie the Future Investment Decision [FID] stage), for the Project.

The commencement of the construction stage of the Project is anticipated during the 2023 reporting period with the final design and establishment of required infrastructure to support the development of early mining.

Formal surrender of the development consent SSD-5000 will occur during the 2023 reporting period in accordance with condition A18 of SSD-7480.

The following measures will continue, or be implemented, in the next reporting period to improve the environmental or community performance of the operation:

- Continuation of the CCC meetings;
- Continuation of weed and feral animal monitoring on-site to guide management actions,
- Inspection of completion and condition of fencing at Aboriginal cultural heritage sites;
- Environmental management related to exploration, and rehabilitation of previous boreholes;
- Continued environmental monitoring and reporting, as required; and
- Implementation of applicable approved Environmental Management Plans to support construction activities.

## 12. REFERENCES

Annual Review Guideline – Post Approval requirements for State significant mining developments (October 2015), NSW Government, available: <https://www.planning.nsw.gov.au/en/Policy-and-Legislation/Mining-and-Resources/-/media/3AA21D35168042FE813DD0FB92E00E58.ashx>, accessed on 19/01/2022.