



APPIN MINE BIODIVERSITY MANAGEMENT PLAN

<i>This document UNCONTROLLED once printed</i>				Page 1 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



Table of Contents

1. INTRODUCTION.....	6
1.1 Objectives	6
1.2 Scope	7
1.3 Environmental Management System	7
1.4 Consultation	7
2. ROLES AND RESPONSIBILITIES	8
3. LEGISLATION AND PLANNING	8
3.1 Project Approval	8
3.2 Relevant Legislation	9
3.3 Guidelines and Standards	9
4. DEFINITIONS	10
5. BASELINE ASSESSMENT.....	11
5.1 Project Approval	11
5.2 AMVA Project	12
6. CLEARING OF NATIVE VEGETATION	13
6.1 Requirement for Tree Management.....	13
6.2 Approved Clearing Limits.....	13
6.3 Management Actions.....	14
7. VENTILATION SHAFT 6	15
7.1 Current Status	15
7.2 Description of VS6 Site.....	16
7.3 Site Management	20
7.4 VS6 Biodiversity Offset Strategy.....	24
8. APPIN EAST MINE SAFETY GAS MANAGEMENT PROJECT	25
8.1 Overview	25
8.2 Rehabilitation.....	25
8.3 Offset Provision	25
9. AMVA PROJECT.....	26
9.1 Overview	26
9.2 Vegetation and Biodiversity Management Protocols	26
9.3 Biodiversity Conservation Fund Payment	27
9.4 Tree Screening.....	27

<i>This document UNCONTROLLED once printed</i>				Page 2 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



10. OTHER PROJECTS	27
10.1 Appin West Surface Water Tanks Upgrade	28
10.2 Brennans Creek Dam Water Pipeline Upgrade.....	28
10.3 Appin West Turning Circle	28
11. OFFSET AREAS	28
12. COMPLAINTS AND NON-COMPLIANCE MANAGEMENT	29
12.1 Complaints and Dispute Resolution	29
12.2 Events, Non-Compliance, Corrective Action, and Preventative Action	29
12.3 Adaptive Management/Contingency Planning	30
13. REPORTING AND REVIEW	30
13.1 Annual Review	30
13.2 Incident and Non-compliance Notifications	31
13.3 Review of BMP	31
13.4 Audits	32
14. ACRONYMS	32
15. REFERENCES	34
16. FIGURES.....	36
Figure 1: Location of VS6.....	37
Figure 2: Vegetation Mapping of VS6 Study Area	38
Figure 3: Vegetation Management Zones in the VS6 Study Area.....	39
Figure 4: Biodiversity Offset Areas – Appin Mine.....	40
Figure 5: AMVA Project Vegetation Management	41
17. APPENDICES.....	42
Appendix 1: Project Approval Conditions: Biodiversity Management.....	42
Appendix 2: EPBC Approval Conditions: Biodiversity Management	51
Appendix 3: Management Actions, Performance Criteria, Corrective Actions and Timeframes – VS6.....	52
Appendix 4: Resilience Assessment – VS6.....	64
Appendix 5: Flora Recorded in VS6 Study Area.....	66
Appendix 6: Fauna Recorded in VS6 Study Area	69
Appendix 7: Credit Retirement Report – Appin East Mine Safety Gas Project.....	70
Appendix 8: Biodiversity Conservation Fund Payment – AMVA Project	72
Appendix 9: Revision History.....	73
Appendix 10: Agency Consultation.....	74

<i>This document UNCONTROLLED once printed</i>				Page 3 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



Appendix 11: Management Plan Approval - DPE76
Appendix 12: Management Plan Approval - DAWE.....76

This document UNCONTROLLED once printed

Document ID	APNMP0115	Version	2.0	Page 4 of 77
Last Date Updated	December 2022	Next Review Date	December 2025	



DOCUMENT REVISION LOG

Persons authorising this Plan

NAME	TITLE	DATE
Chris Schultz	Superintendent Environment	December 2022

Document Revisions

REVISION	DESCRIPTION OF CHANGES	DATE
1.0	New document incorporating previous Attachments and new document number. See Appendix 9 for version history. Incorporates comments from regulatory agencies as provided.	January 2021
2.0	Updated following approval of MOD 3.	December 2022

Persons involved in the review of this Plan

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<i>This document UNCONTROLLED once printed</i>				Page 5 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



1. INTRODUCTION

Appin Mine incorporates the underground mining operations, which extract coal from the Bulli Seam, and associated surface activities, including the West Cliff Coal Preparation Plant (WCCPP) and Coal Wash Emplacement Area (CWEA). Appin Mine is located approximately 25 kilometres (km) north-west of Wollongong in New South Wales. Appin Mine is owned and operated by Endeavour Coal Pty Ltd, a subsidiary of Illawarra Coal Holdings Pty Ltd (ICHPL), which is a wholly owned subsidiary of South32 Limited. Appin Mine, Cordeaux Colliery and Dendrobium Mine (and associated facilities) collectively operate as South32 Illawarra Metallurgical Coal (IMC).

ICHPL received Project Approval 08_0150 (the Project Approval)¹ from the Planning Assessment Commission of NSW under delegation of the Minister for Planning and Infrastructure² on 22 December 2011³ for current and proposed mining of the Bulli Seam Operations (BSO) for the next 30 years, and production of up to 10.5 million tonnes per annum of run of mine (RoM) coal. This approval incorporates underground mining, transport and coal wash emplacement activities undertaken 24 hours a day, seven days per week.

The Environment Protection and Biodiversity Conservation (EPBC) Approval 2010/5722 was issued by the Department of Sustainability, Environment, Water, Population and Communities (DESEWPaC)⁴ on 1 April 2011 for the construction and operation of a mine ventilation shaft, access road and associated infrastructure.

The Biodiversity Management Plan (BMP) has been prepared to detail the measures to manage biodiversity and vegetation clearing associated with Appin Mine projects through offsets, mitigation, monitoring and rehabilitation. The BMP has been prepared to satisfy Condition 36 of Schedule 4 of the Project Approval for a Biodiversity Management Plan and Condition 3 of EPBC Approval 2010/5722 (the EPBC Approval) for a Vegetation Management Plan (VMP).

1.1 Objectives

The objectives of the BMP are to:

- propose measures in project planning and design to limit impacts to biodiversity to the greatest practicable extent;
- propose mitigation, controls and monitoring during project construction and following construction in the operational phase for rehabilitation of temporary construction-phase impacts and impacts associated within permanently

¹ The relevant conditions from Project Approval MP10_0079 for Appin Mine – Appin Ventilation Shaft No. 6 were incorporated into Project Approval 08_0150 through MOD 2.

² Now Department of Planning and Environment (DPE)

³ As modified by MOD 1 (April 2015), MOD 2 (October 2016) and MOD 3 (April 2022)

⁴ Now Department of Climate Change, Energy, Environment and Water (DCCEEW)

<i>This document UNCONTROLLED once printed</i>				
Document ID	APNMP0115	Version	1.0	Page 6 of 77
Last Date Updated	December 2022	Next Review Date	December 2025	



impacted areas; such as sediment and erosion control, on-site detention and waste management;

- minimise the impacts of threatening processes through specific management actions;
- meet the requirements of property/infrastructure owners and Government approvals;
- detail the process to offset biodiversity impacts from projects, consistent with Government approvals;
- outline practical monitoring and performance evaluation measures; and
- provide a framework for the actions to clear native vegetation and maintain the condition of surrounding native vegetation and natural habitats at the site, including Endangered Ecological Communities (EECs) and Critically Endangered Ecological Communities (CEECs).

IMC will take all reasonable and feasible measures to prevent and/or minimise any harm to the environment that may result from the construction, operation or rehabilitation of Appin Mine and associated facilities.

1.2 Scope

The BMP applies to potential impacts on biodiversity and vegetation communities associated with Appin Mine surface activities, outside of the boundary of the CWEA.

Biodiversity impacts associated with underground mining activities are addressed in the BMP submitted as part of the Extraction Plan (Condition 5 i) of Schedule 3 of the Project Approval).

Rehabilitation of disturbed areas is managed as described in the Appin Mine Rehabilitation Management Plan, except where specifically noted in Condition 36 of Schedule 4.

1.3 Environmental Management System

IMC has a comprehensive Environmental Management System (EMS) in place to minimise the impact of its operations on the local environment and community. The BMP is a component of the EMS which is certified to ISO 14001:2015.

1.4 Consultation

Consultation was undertaken as part of the Version 1.0 review of the BMP with the Biodiversity and Conservation Division (BCD) of DPE and the Department of Agriculture, Water and Environment (DAWE). The comments from the consultation process were incorporated into Version 1.0 of the BMP. ⁵

⁵ Consultation with DCCEEW was not undertaken for Version 2.0 as revisions to the BMP were not considered material in relation to Condition 3 of the EPBC Approval for the Ventilation Shaft 6 site. Consultation with BCD was not undertaken as previous consultation was undertaken 12 months ago.

<i>This document UNCONTROLLED once printed</i>				Page 7 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



Appendix 10 outlines comments from the relevant government agencies following consultation and the IMC response.

Consultation with relevant agencies will only be undertaken where there is a material change to the management of biodiversity and vegetation or if specifically requested by DPE or DCCEE. Administrative or descriptive changes do not constitute a material change.

2. ROLES AND RESPONSIBILITIES

Table 1 outlines the roles and responsibilities associated with the BMP.

Table 1: Roles and Responsibilities

Role	Responsibilities
Superintendent Environment	Implement and periodically review the BMP.
Principal Approvals	Liaise with government regulators and IMC senior leadership team in relation to any non-compliances with the BMP.
Specialist Environment	<p>Advise, coach and mentor IMC operations with respect to meeting the standards and requirements of the BMP.</p> <p>Monitor and review compliance against these requirements.</p> <p>Undertake monitoring as required.</p> <p>Coordinate contractors to undertake maintenance work and ecological assessments.</p> <p>Approve and verify compliance with Permits to Disturb.</p>
Ecologist or wildlife specialist	Undertake ecological assessments as required.

3. LEGISLATION AND PLANNING

3.1 Project Approval

Potential impacts from the BSO Project were assessed in the Environmental Assessment (EA) 2009 and the Biodiversity Development Assessment Report (Appendix E of the Modification Report) for the Appin Mine Ventilation and Access (AMVA) Project. The EA was assessed under the *Environmental Planning and Assessment Act 1979 (EP&A Act)* and *EPBC Act* and Modification Report assessed under the *EP&A Act*.

<i>This document UNCONTROLLED once printed</i>				Page 8 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



All activities carried out at Appin Mine will be in accordance with the conditions of the Project Approval and EPBC Approval, in accordance with any written directions of the Planning Secretary and generally in accordance with the Environmental Assessment (EA), Statement of Commitments and Preferred Project Report.

Appendix 1 outlines the biodiversity management requirements of the Project Approval and cross references where the requirements have been addressed within the BMP.

Appendix 2 outlines the vegetation management requirements of the EPBC Approval and cross references where the requirements have been addressed within the BMP.

Documents as listed in Condition 2 of Schedule 2 will be made available on the IMC website: <https://www.south32.net/our-business/australia/illawarra-metallurgical-coal/documents>.

3.2 Relevant Legislation

Key regulatory and BMP obligations are managed via an obligations management database. The obligations are allocated to responsible personnel. This process is detailed in the Environmental Compliance/Conformance Assessment and Reporting Procedure.

Legislation applicable to the BMP may include but is not limited to:

- *Biodiversity Conservation Act 2016⁶ (BC Act);*
- *Environment Protection and Biodiversity Conservation Act 1999;*
- *Environmental Planning and Assessment Act 1979;*
- *Local Land Services Act, 2013;*
- *State Environmental Planning Policy (Koala Habitat Protection), 2020;*
- *National Parks and Wildlife Act, 1974;* and
- *Protection of the Environment Operations Act, 1997.*

3.3 Guidelines and Standards

This BMP has been developed to be consistent with the principles of the following:

- ISO 14001:2015 Environmental Management Systems;
- South32 Sustainability Policy; and
- South32 Environment Standard.

⁶ Previously the *Threatened Species Conservation Act 1995 (TSC Act)* and components of other legislation, including the *Local Land Services Act*.

<i>This document UNCONTROLLED once printed</i>				Page 9 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



Other relevant guidelines for biodiversity management include:

- Recovering Bushland on the Cumberland Plain: Best practice guidelines for the management and restoration of bushland;
- NSW Biodiversity Offsets Policy for Major Projects;
- Threatened Species Test of Significance Guidelines 2018; and
- Biodiversity Assessment Method 2020.

4. DEFINITIONS

Term	Definition
Threatened biodiversity	Means threatened species, populations or ecological communities (or their potential habitats) as listed under the <i>BC Act</i> or <i>EPBC Act</i> .
Key Threatening Process (KTP)	<p>Defined in the <i>BC Act</i> as a process that threatens, or could threaten, the survival or evolutionary development of species, populations or ecological communities (DEC 2006b). Something can be a threatening process if it:</p> <ul style="list-style-type: none"> • adversely affects two or more threatened species, populations or ecological communities; or • could cause species, populations or ecological communities that are currently not threatened to become threatened. <p>A list of KTPs is maintained in the relevant sections of the <i>BC Act</i> and <i>EPBC Act</i> and includes such processes as bush rock removal, predation and competition by a variety of introduced plants and animals and the clearing of native vegetation.</p>
Improve or maintain	Is the key principle that underpins assessment of ecological impacts under Part 3A of the <i>EP&A Act</i> . Under the Part 3A guidelines for ecological assessment (DEC 2005a), developments must demonstrate that there has been at least a no net-loss and, if possible, a net gain to biodiversity as a result of the proposal.
Clearing of native vegetation ⁷	Defined as the destruction of a sufficient proportion of one or more strata (layers) within a stand or stands of native

⁷ As defined by the Scientific Committee, established by the *TSC Act*:

<https://www.environment.nsw.gov.au/topics/animals-and-plants/threatened-species/nsw-threatened-species-scientific-committee/determinations/final-determinations/2000-2003/clearing-of-native-vegetation-key-threatening-process-listing>

<i>This document UNCONTROLLED once printed</i>				Page 10 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



	vegetation so as to result in the loss, or long-term modification, of the structure, composition and ecological function of stand or stands. The definition of clearing does not preclude management activities to control exotic species, or Australian species growing outside their natural geographic range.
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5. BASELINE ASSESSMENT

5.1 Project Approval

Baseline flora surveys were conducted in accordance with the NSW Department of Environment and Conservation (DEC) (2004) Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities, Working Draft over 42 days between May 2008 and February 2009 with the objective of sampling during the flowering periods of as many species as possible. The vegetation was systematically surveyed using quadrats, spot sampling, random meanders and opportunistic observations. Targeted searches for threatened flora species and other plant species of conservation significance were conducted in areas of suitable habitat as part of the field surveys.

A total of 28 vegetation communities were mapped in the BSO Project area and surrounds. The vegetation communities identified include coastal upland swamps, sandstone ridgetop heaths and woodlands, shale/sandstone transition woodlands and forests, sandstone gully forests, sandstone riparian scrubs, shale cap woodlands and forests, Cumberland plain shale woodlands, western Sydney dry rainforests, Cumberland River flat forests and riverbank forests.

A total of 741 vascular plant species were recorded during the baseline flora surveys, including 670 native and 71 introduced species. Plant families or subfamilies with the highest number of species were the Myrtaceae (Eucalypts, Tea Trees and relatives); the Faboideae (Pea Flowers); the Poaceae (Grasses); the Asteraceae (Daisies); the Proteaceae (Banksias, Grevilleas and relatives); the Cyperaceae (Sedges); the Orchidaceae (Orchids); the Ericaceae (Heaths); and the Mimosoideae (Wattles). The largest families of introduced species were the Asteraceae (Daisies); the Poaceae (Grasses); the Solanaceae (Nightshades) and the Oleaceae (Olive and relatives).

The baseline flora survey identified seven flora species listed as threatened under the *TSC Act*, including five that are also listed under the *EPBC Act*. These species were Rigid Heath (*Epacris purpurascens* var. *purpurascens*), Small-flower Grevillea (*Grevillea parviflora* subsp. *parviflora*), Woronora Beard-heath (*Leucopogon exolasius*), Bargo Geebung (*Persoonia bargoensis*), Hairy Geebung (*Persoonia hirsuta* subsp. *hirsuta*), Sublime Point Pomaderris (*Pomaderris adnata*) and Prickly Beard-heath (*Pultenaea aristata*)

Eleven species listed as rare or poorly known in Rare or Threatened Australian Plants (RoTAP) were recorded during the baseline flora surveys, viz. Shining Guinea Flower (*Hibbertia nitida*), Small-flower Darwinia (*Darwinia diminuta*), Prostrate Darwinia (*Darwinia grandiflora*), a Broom-heath (*Monotoca ledifolia*), Narrow-leaved Mallee

<i>This document UNCONTROLLED once printed</i>				Page 11 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



Ash (*Eucalyptus apiculata*), Yellow Top Mallee Ash (*Eucalyptus luehmanniana*), Long-leaved Grevillea (*Grevillea longifolia*), Native Rose (*Boronia serrulata*), Long-leaf Raspwort (*Gonocarpus longifolius*), Neglected Tetratheca (*Tetratheca neglecta*) and Cascade Mat-rush (*Lomandra fluviatilis*).

Seven EECs listed under the *TSC Act* were identified by the BSO Project baseline survey, however one of these, the ‘Southern Sydney Sheltered Forest on Transitional Sandstone Soils in the Sydney Basin Bioregion’ EEC occurs (as mapped by NPWS, 2003) outside but close to the north-eastern parts of the North Cliff domain.

Further baseline information can be sourced from Section 5 of the EA (available [here](#)) or Appendix E of the EA (available [here](#)).

5.2 AMVA Project

Two plant community types (PCT) were mapped within the subject land:

- PCT 835 Forest Red Gum - Rough-barked Apple grassy woodland on alluvial flats of the Cumberland Plain, Sydney Basin Bioregion.
- PCT 849 Grey Box - Forest Red Gum grassy woodland on flats of the Cumberland Plain, Sydney Basin Bioregion.

PCT 835 aligns with River-Flat Eucalypt Forest on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and Southeast Corner Bioregions (RFEF) Threatened Ecological Community (TEC). RFEF is listed as Endangered under the *BC Act* and Critically Endangered under the *EPBC Act*. However, with reference to the NSW Scientific Committee’s definition of RFEF, PCT 835 within the subject land did not meet the *BC Act* definition of the TEC. Similarly, it did not satisfy the condition thresholds provided in the Commonwealth conservation advice for RFEF to make it eligible for Commonwealth listing. The Project will not impact on the RFEF TEC.

PCT 849 aligns with Cumberland Plain Woodland in the Sydney Basin Bioregion (CPW) TEC. CPW is listed as Critically Endangered under both the *BC Act* and *EPBC Act*. However, with reference to the Commonwealth conservation advice for CPW, PCT 849 within the subject land did not satisfy the condition thresholds provided to make it eligible for Commonwealth listing. The Project will therefore only impact the CPW TEC protected at a State level (*BC Act*). Therefore, the Project will not have an impact on any TECs listed on the *EPBC Act*.

No threatened flora were recorded within the subject land. No threatened flora are considered to have a moderate or higher likelihood of occurrence in the subject land.

No threatened fauna were recorded within the subject land. No threatened fauna are considered to have a moderate or higher likelihood of occurrence in the subject land.

<i>This document UNCONTROLLED once printed</i>				Page 12 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



6. CLEARING OF NATIVE VEGETATION

6.1 Requirement for Tree Management

Clearing, removal or maintenance of vegetation may be required for:

- construction of new surface infrastructure or access to infrastructure;
- maintenance of post-disturbance revegetation on previously disturbed areas;
- undertaking bushfire hazard reduction works, including but not limited to establishing and maintaining asset protection zones; or
- reducing the risk of harm to personnel, infrastructure or equipment following storm events or based on an assessment of tree health.

6.2 Approved Clearing Limits

The Project Approval allows for clearing of vegetation that is listed under the *TSC Act 1995* (now *BC Act*). The following is stated in the BSO Project EA:

Clearing of EECs would be avoided apart from some minor clearing in the widely distributed Shale/Sandstone Transition Forest EEC⁸ and the Moist Shale Woodland in the Sydney Basin Bioregion EEC⁹ ... in which clearing would be kept to a maximum of 9 hectares (ha) and 3 ha respectively.

In addition, Section 5.8.2 of the BSO Project EA considers potential impacts associated with the project. At page 5-108, the following is noted in consideration of vegetation clearance:

In addition to clearing for the Stage 4 Coal Wash Emplacement, it is estimated that the Project would involve approximately 37 ha of other vegetation clearance activities primarily associated with ongoing surface exploration activities, the upgrade and extension of surface infrastructure (e.g. gas wells and service boreholes), access tracks, environmental monitoring and management activities (e.g. installation of monitoring equipment), potential stream restoration activities and other localised Project-related surface activities. The specific locations of these vegetation clearance activities would be detailed in the relevant Extraction Plans as required by the DoP.

The proposed vegetation clearance (and subsequent rehabilitation) would be progressive over the life of the mine. As a result, at any one time some small areas (i.e. outside of the Stage 4 Coal Wash Emplacement area), of the order of 4 ha, are likely to be disturbed, while other areas would be in various stages of rehabilitation. Vegetation mapping indicates that there is approximately 9,845 ha of native vegetation within the Project extent of longwall mining area (Appendix E).

⁸ The community has been listed as Critically Endangered since 2014 in the *TSC Act* and *EPBC Act*.

⁹ Listed as EEC only in *BC Act / TSC Act* since 2002 and listed as CEEC in *EPBC Act* since 2013.

<i>This document UNCONTROLLED once printed</i>				Page 13 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



Given the flexibility of locating the surface activities described above (excluding the Stage 4 Coal Wash Emplacement), proposed surface disturbance sites would be located to avoid impacts to threatened flora species, where practicable. ...

Given the variable location and scale of project related surface activities described above, project specific plans (e.g. for gas wells and service boreholes), will be prepared where required.

Where clearing of native vegetation is considered to be undertaken as detailed in the EA, it will be undertaken as detailed in the BMP and additional approval will not be sought from regulatory agencies.

The area of disturbance associated with clearing activities will be recorded in the Permit to Disturb Register to ensure vegetation clearing limits are not exceeded.

6.3 Management Actions

The following management measures will be undertaken where required prior to, during and following¹⁰ construction or other activities requiring vegetation removal to manage and where possible minimise impacts to native vegetation:

- Completion of a Permit to Disturb, including identification of management measures to minimise impacts on flora, prior to, during and, if necessary, following the completion of the surface works including natural regeneration and/or rehabilitation measures.
- Undertaking site inspections of the proposed disturbance area to identify areas where vegetation clearance could be avoided or limited, for example, within TECs (disturbance limited) and populations of threatened flora species (disturbance avoided).
- Selecting sites and designing works to minimise the amount of vegetation clearance required. Where possible, surface infrastructure will be sited in previously disturbed areas.
- Utilising existing fire trails or tracks where possible.
- Lopping of branches, rather than the removal of trees.
- Visually inspecting trees prior to felling and relocating of any identified habitat or fauna by a qualified ecologist or environmental specialist. Should any nests or fauna be present within the tree, a suitability qualified ecologist or fauna handler will be engaged to relocate the nest or fauna prior to clearing. If potential habitat is identified (e.g. tree stem or branch hollows) a two stage clearing and spotlighting process would be utilised where possible.
- Restricting vegetation clearance to the slashing of vegetation (i.e. leaving the lower stem and roots in-situ to maximise the potential for natural regrowth).

¹⁰ As applicable.

<i>This document UNCONTROLLED once printed</i>				Page 14 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



- Limiting the amount of soil disturbance to the minimum required for moving, placing and operating equipment, and for maintaining access to equipment.
- Implementing measures to encourage natural regeneration, for example, placing stockpiled seed bearing vegetative material over cleared areas.
- Implementing rehabilitation measures including weed control or the planting of tube stock cultivated from locally collected seed (where available) where natural regeneration is not progressing satisfactorily.
- Implementing pest management programs, particularly in areas of rehabilitation, to assist seedling/tube stock establishment.
- Implementing buffer zones around any plants within an identified exclusion zone (e.g. two metre buffer around *Persoonia hirsuta* plants).
- Verifying machinery is free of weeds prior to the commencement of clearing works.
- Removing all waste materials from site.
- Progressively rehabilitating the site to meet final landowner/infrastructure owner requirements and expectations.
- Managing grazing and agriculture (if applicable) on the respective site.
- Controlling unauthorised access and maintaining security fencing and signage on sites.

Site specific controls as listed on the Permit to Disturb will also be undertaken and the permit will not be signed off until those actions have been completed.

To minimise impacts to TECs, the following additional measures will be implemented:

- On-site validation that the vegetation present represents the relevant TEC as mapped.
- Re-location of infrastructure to avoid validated TECs, wherever possible within the technical constraints of the necessary surface activities.
- Location of infrastructure along existing landowner access tracks or existing disturbed portions of validated TECs wherever possible within the technical constraints of the necessary surface activities.

If clearing is required, implementation of appropriate management measures (e.g. pre-clearance ecological and services surveys of the specific location to be cleared, demarcation of clearance zone to constrain clearance to a minimum, implementation of erosion and sediment control works and progressive rehabilitation works).

7. VENTILATION SHAFT 6

7.1 Current Status

Construction of Ventilation Shaft 6 (VS6) was completed in August 2015.

The VS6 BMP has been implemented including:

<i>This document UNCONTROLLED once printed</i>				Page 15 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



- installation of fencing to isolate vegetation from cattle grazing and security breaches;
- engagement of a bushland restoration consultant to undertake a regular weed management program;
- regular monitoring during weed maintenance work, with a detailed annual survey undertaken by an ecologist; and
- reporting of progress in the relevant Annual Review.

Details in the previously approved VS6 BMP relating to the construction phase have not been incorporated into this BMP as they have been completed and are no longer relevant.

The location of VS6 is shown in Figure 1.

7.2 Description of VS6 Site

7.2.1 Landscape

VS6 is located in the Hawkesbury – Nepean Catchment Management Authority (CMA) region, Cumberland CMA sub-region and the Cumberland Plain Mitchell Landscape. The Cumberland Plain Mitchell Landscape is characterised by low rolling hills and valleys in a low rainfall area between the Blue Mountains and the coast on Triassic shales and lithic sandstones on the coastal side of the Lapstone monocline (DECC 2002).

7.2.2 Vegetation Communities

The vegetation communities in the VS6 study area are listed in Table 2, mapped in Figure 2 and described in further detail in the ecological assessment for the VS6 Project (Niche 2010). Shale Plains Woodland and Exotic Pasture have been impacted by the project, whilst both of these units and Shale Hills Woodland will be subject to on-going management as discussed further in this BMP.

Table 2: Vegetation in the VS6 Study Area

Vegetation Types (NPWS 2003) ¹¹	Study Area (ha)	Impact (ha)	TEC	TEC in Study Area	% of TEC impacted
1. Shale Plains Woodland	12.15	3.1	CPW (critically endangered in both BC Act and EPBC Act)	41.18	8.6%
2. Shale Hills Woodland	29.03	0.4			

¹¹ Mapping utilised at time of initial assessment in 2010

<i>This document UNCONTROLLED once printed</i>				Page 16 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



3. Alluvial Woodland	6.95	0	River Flat Eucalypt Forest on coastal floodplains (<i>BC Act</i> and <i>EPBC Act</i> ¹²)	6.95	0
4. Shale Sandstone Transition Forest (High Sandstone Influence)	1.22	0	Shale Sandstone Transition Forest (SSTF) (listed in both <i>BC Act</i> and <i>EPBC Act</i> as CEEC)	1.22	0
5. Exotic Pasture	83.24	2.37	Impact area including the homestead	0	0
Total	132.59	5.91		49.35	7.12%

7.2.3 Flora and Fauna

A habitat-based terrestrial ecology survey of the study area, threatened flora random meanders and vegetation mapping and validation was conducted 3 June 2010. Five Biobanking Plots were conducted within the impact area on 4 August 2010. Biodiversity Assessment Method (BAM) Plots have replaced Biobanking Plots as the standard method of collecting data consistent with updated methodologies, PCTs and benchmarks since 2017.¹³

A total of 89 flora species were recorded from the study area (Niche 2010), comprising 32 introduced species (36%) (refer to Appendix 5). No threatened flora, as listed on either the *BC Act* or *EPBC Act*, were recorded in the study area during the field survey in 2010. *Pomaderris brunnea*, which is listed as Vulnerable on both the *BC Act* and *EPBC Act* has been previously recorded in the Alluvial Woodland vegetation community within the study area. No Alluvial Woodland was impacted by VS6.

A further assessment of the offset area revealed the presence of a population of the threatened plant species *Pimelea spicata* which is listed as Endangered on both the *BC Act* and *EPBC Act*. This species was predicted as likely to occur in the area in the Niche (2010) ecological assessment of VS6 and was subsequently recorded within the proposed offset area during further investigations. This population is the only recorded occurrence within 10 km of the study area. The current population within the offset area as of the 2021 population census is estimated to be approximately 25,974 individuals. This is an increase from an estimated population of 9,702 individuals in the previous 2017 monitoring. This increase in population

¹² This community has been listed in the 'Finalised Priority Assessment List' (FPAL) of the *EPBC Act* since 2016. In mid-December 2020 the community was listed as a CEEC under the *EPBC Act*.

¹³ A new industry standard was developed in association with the *BC Act* in 2017.

<i>This document UNCONTROLLED once printed</i>				Page 17 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



demonstrates that site management to date has been beneficial to the species. In addition to existing plants, a soil seed bank for the species potentially exists within areas of the proposed offset which are currently dominated by introduced species (or native grasses). In this manner weeds may be preventing establishment of *P. spicata* seedlings.

Fifteen fauna species were recorded during the initial 2010 field survey (refer to Appendix 6), one of which, the Common Myna, is introduced. Scratchings were present on some trees that were possibly made by a koala. The koala feed tree species *Eucalyptus tereticornis* was present in the study area¹⁴ and some were removed by the project. These trees were mature and some had significant hollows. A total of 25 threatened fauna were considered to have potential habitat within the study area (Niche 2010).

7.2.4 Key Threatening Processes

There are 14 KTPs as listed on the *BC Act* and/or *EPBC Act*, applicable to terrestrial environments that are occurring or have historically occurred on the site. These 14 KTPs constitute threats to biodiversity that may require management at the site. The relevant KTPs include:

1. Alteration to the natural flow regimes of rivers, streams, floodplains & wetlands.
2. Clearing of native vegetation.
3. Competition and grazing by the feral European rabbit.
4. Competition and habitat degradation by feral goats.
5. Competition from feral honeybees.
6. Herbivory and environmental degradation caused by feral deer.
7. Human-caused climate change.
8. Invasion of native plant communities by exotic perennial grasses.
9. Invasion, establishment and spread of *Lantana camara*.
10. Loss of hollow-bearing trees.
11. Predation by feral cats.
12. Predation by the European Red Fox.
13. Predation, habitat degradation, competition and disease transmission by Feral Pigs (*Sus scrofa*).
14. Removal of dead wood and dead trees.

Of these 14 KTPs under the *BC Act*, nine have equivalent listings on the *EPBC Act*.

¹⁴ One of the feed trees listed in SEPP 44 (now the *Koala SEPP 2020*), however, other known / reported / published feed trees (*Eucalyptus moluccana*, *E. punctata*) are also listed as in the study area.

<i>This document UNCONTROLLED once printed</i>				Page 18 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



7.2.5 Threats to *Pimelea spicata*

The main historical threats to *P. spicata* within the proposed offset area are land clearing, grazing, slashing and weed invasion. Grazing by livestock, clearing and slashing will be prevented within the offset area through appropriate management actions, whilst weed invasion will be controlled.

It is expected that management of these threats will allow for a sustainable population of *P. spicata*, and potential expansion of the current population. This is reflected by continuous increases in *P. spicata* populations found during the 2012, 2017 and 2021 population censuses following active management.

Fire intervals that are too short are likely to threaten the population of *P. spicata*, and therefore fire intervals of less than 10 years will be avoided where possible for the management of *P. spicata* areas.¹⁵

7.2.6 *Pimelea spicata* Population Ecology

The Recovery Plan for *P. spicata* (DEC 2005) states the following about the species:

- Mature plants of *P. spicata* develop a tap root which enables the plants to re-sprout following grazing, slashing, fire, drought or herbicide application.
- It is not known what proportion of a population may survive a disturbance event.
- It is not known at what age the plants may develop a tap root which would be of sufficient size to enable a plant to survive a disturbance event but plants under six (6) months old do not retain such a tap root. It is estimated that plants must be older than three years old to develop such a tap root.
- Plants vary in size from one or two stems to up to 50. Disturbance stimulates stem growth, though plants which have not experienced recent disturbance have significantly fewer stems.
- *Pimelea spicata* has been noted to grow actively during winter and can exhibit rapid growth when conditions are favourable. When conditions are favourable, *P. spicata* can flower, fruit and produce seed from re-sprouting stems within two months of a fire.
- Plants have been observed to set seed 1.5 - 2 years after germination.
- Work to date suggest that the species is able to exist in a stable, long term seed bank and that the *P. spicata* seed bank appears to be about as extensive beneath infestations of Bridal Creeper and African Olive as it is in relatively weed free areas.
- Germination from the soil stored seed bank has been observed following fire, slashing/mowing, grazing and soil disturbance. Occasional seedlings have

¹⁵ Fire intervals will be periodically reviewed based on monitoring results and review of available research.

<i>This document UNCONTROLLED once printed</i>				Page 19 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



also been observed in areas that had not experienced recent disturbance. It appears seedling emergence is not a rare event.

- Too frequent disturbance and the long term absence of disturbance are likely to be detrimental to the persistence of the species in an area.
- Disturbance appears to stimulate the production of flowers and fruits due to the increased production of stems following disturbance events. Disturbances that create canopy gaps are required to maximise potential for recruitment.

The critical fire or physical disturbance frequencies for survival have not yet been determined. In the absence of this information, a precautionary approach will be taken, and disturbance will not be actively implemented at less than 10-year intervals.

7.3 Site Management

7.3.1 Resilience and Condition

Resilience of the vegetation of the study area was assessed using a modified version of Jones and Brodie (1999). This method assesses resilience of non-rainforest vegetation types primarily based on the degree to which the soil profile has been disturbed. Resilience categories are provided in Appendix 4. The purpose of utilising this method is to direct resources for bushland management most effectively.

7.3.2 Current and Future Land Use

Prior to construction of VS6, the predominant land use in the study area was grazing, with Mountbatten Stud and Homestead located on the property.

During the operations phase for the project, the site will be used for VS6 (shaft and fans), biodiversity offset area, grazing and gas drainage wells (as required).

7.3.3 Management Zones

The assessment of resilience and future land use resulted in five management zones for the purposes of this BMP (refer to Figure 3). They include:

1. MZ1 – Shaft Site Operational Area (Permanent Impact);
2. Shaft Site Construction Phase Rehabilitation Area (Temporary Impact);
 - MZ2 – construction phase site sheds and facilities;
 - MZ3 - contingency liner storage area;
 - MZ4 – primary liner storage area and settling ponds;
3. MZ5 – Offset Area; and
4. MZ6 – Native Vegetation Area.

7.3.4 Management Actions

Appendix 3 describes the 14 management actions proposed for the Shaft Site and the Offset Site. The actions apply to Management Zones 1 - 6 (MZ1 – MZ6). These

<i>This document UNCONTROLLED once printed</i>				Page 20 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



actions should be read in conjunction with Figure 3 and the VS6 Biodiversity Offset Strategy (BOS).

As part of the Project Approval and EPBC Approval, IMC was required to provide a suitable offset for the 3.5 ha of CPW impacted as part of the VS6 project in order to demonstrate an ‘improve or maintain’ outcome for biodiversity values associated with the development. The offset area required is at least 8.7 ha of CPW under in-perpetuity improve or maintain management as outlined in Appendix 3. The VS6 BOS has been developed as required by the Project Approval.

7.3.5 **Monitoring and Performance Evaluation**

A monitoring and performance evaluation program has been implemented for the life of the project to ensure the stabilisation of the site and the success of the management of MZ5 as an ‘improve or maintain’ offset. Appendix 3 aligns the key performance criteria to the relevant management actions and this section describes the monitoring program within MZ5.

The Recovering Bushland on the Cumberland Plain: Best practice guidelines for the management and restoration of bushland (DEC 2005b) notes that monitoring is important for two reasons:

- it provides feedback on the effectiveness of management actions, and hence whether these actions need to be modified; and
- it provides data to determine whether natural resources are stable, improving or declining.

Monitoring records will be consistent, comparable and easily interpreted by any interested person.

Several key monitoring steps have been implemented as detailed in the following sections.

7.3.5.1 *Fixed Plot Vegetation Monitoring – BAM Plots*

The Biobanking methodology was used to determine an appropriate offset ratio for the vegetation within MZ5.

This methodology allows collection of data on vegetation structure, species composition and in a modified form, cover abundance estimates. This methodology also accounts for fauna habitat through the record of hollow bearing trees/limbs and ground fauna habitat such as logs. The consistent application of the Biobanking survey methodology at fixed locations with the offset area facilitates the collection of benchmark data prior to any management or treatment of MZ5 against which management success may be managed.

Five fixed BAM Plots within MZ5 are monitored annually.

7.3.5.2 *Pimelea spicata Population Monitoring*

Based on the population dynamics described in Section 7.2.6 it is expected that the population of *P. spicata* will at least remain stable. It is considered more likely however that with the reduction in disturbance pressures the population may grow.

<i>This document UNCONTROLLED once printed</i>				Page 21 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



Population decline may be encountered in the controlled environment in the event of a stochastic disturbance such as wildfire. It would be unlikely that the population would become extinct under a one-off fire event and it may even display increased germination and reproductive response to a single fire event. Frequent fire is likely to cause the population to decline.

It is also possible, however, that in the total absence of periodic disturbance, germination and recruitment would be hindered. Disturbance at periods of less than 10-year intervals will not be implemented.

The population of *P. spicata* within MZ5 is monitored in two ways:

1. An initial population census was undertaken through all of MZ5 and MZ6. This census counted all individuals present within the population and recorded the location of each plant using accurate GPS equipment. The *P. spicata* population census was undertaken as a baseline assessment in 2012 and will occur every five years. The last census was conducted in 2021¹⁶ and the next census is due in 2027.

As previously noted, each individual plant may have more than one stem. Care was taken to count individual plants rather than individual stems so far as is practical. Where uncertainty exists as to the connectedness or otherwise of more than one stem, stems separated by more than 50 cm are considered and recorded as separate plants unless an event such as plant death proves that all nearby stems emanate from a single plant.

2. An annual count of *P. spicata* is undertaken within the fixed BAM Plots as a representative subset of the overall community. BAM Plots are located such that 10 - 20% of the overall population of *P. spicata* occurs within one or more of the fixed plots. Where practical, each recorded plant within the plots is flagged using a fire proof metal tag and its location within the plot recorded using accurate GPS equipment. Any new *P. spicata* seedling will be flagged and counted.

General observation of the population outside of BAM Plots also occurs annually to identify any obvious declines in population health.

7.3.5.3 *Pimelea spicata* Population Change – Management Intervention Triggers

All natural plant populations will vary in size and behaviour (reproductive display, recruitment and germination etc.) over time in response to environmental changes. Management techniques provided in this BMP will likely lead to population changes over time. Table 3 summarises the proposed monitoring, triggers and response actions.

¹⁶ Census also undertaken in 2017.

<i>This document UNCONTROLLED once printed</i>				Page 22 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



Table 3: *Pimelea spicata* Trigger Action Response Table

Aspect	Trigger	Response
Annual count	>20% decline from one year to the next in population across BAM Plots	<ul style="list-style-type: none"> Undertake full scale census
5 yearly population census (or census triggered following an annual count with >20% decline)	<p>>35% decline in population from preceding census; or</p> <p>Two consecutive (over two census') declines of >20%; or</p> <p>Area of occupancy is mapped to decrease to 50% or lower than originally mapped.</p>	<ul style="list-style-type: none"> Stop regeneration works. Consult with experts (e.g. Mt Annan Botanic Gardens). Implement actions as recommended by experts. <p>Additional actions may include:</p> <ul style="list-style-type: none"> slashing of competing native grasses, thinning of competing native shrubs or trees (e.g. <i>Bursaria spinosa</i>), ecological burning or resting of weed management until the population stabilises. Crash grazing should only be utilised as a last resort. In emergency situations, plant rescue and re-introduction may be required.
Stochastic events	Wildfire or other environmental disturbance	<ul style="list-style-type: none"> Undertake a population census immediately after the event, and again at twelve and twenty-four months post disturbance¹⁷.

7.3.5.4 *Pimelea spicata* Management Actions

It is not feasible to prescribe management actions for any particular population change scenario. It is envisaged however that any population change exceeding the management intervention trigger levels will result in some form of management being prescribed for the population. It is also possible that further research into the species

¹⁷ As the species has been observed flowering and setting seed at 18 – 24 months post germination following a disturbance (i.e. at which point plants are sexually mature), the population census at 24 months post disturbance shall be considered the new baseline census count and annual and five yearly monitoring programs shall commence again from that point.



in future years may better define management techniques for the species and any such work should be incorporated into the BMP.

Management actions for the population of *P. spicata* including the exclusion of stock, weed removal and fire management will likely lead to a population increase. The absence of any disturbance over time may however cause the population to stagnate and possibly decline. In the event of population decline, expert advice would be sought from Mount Annan Botanic Gardens' personnel and actions may include the collection of seed from the population for ex-situ plant production and possible re-introduction and/or the implementation of controlled disturbance to stimulate germination and recruitment.

7.3.5.5 Photo Point Monitoring

Photo point monitoring of the vegetation in MZ5 is undertaken annually.

A total of five fixed photo point locations (coincident with the fixed BAM Plots) are sited within MZ5. An additional five photo point locations are located within 200 m of the external boundary of MZ5 to capture a visual assessment of the health of the vegetation within the area.

7.3.5.6 Vegetation Distribution Monitoring

Figure 2 and Figure 3 show that MZ5 contains areas of bare ground as well as tracks and other disturbed areas. The boundary of native vegetation within the offset site is mapped annually using hand held GPS. The mapped distribution of vegetation is compared each year as the extent of native vegetation within the offset area is expected to increase each year following the exclusion of grazing pressure and management of the site for improvement (weeding and bush regeneration if required).

7.4 VS6 Biodiversity Offset Strategy

The BOS was approved by DSEWPC on 12 July 2011. In December 2016 the BOS was revised to reflect securing the Offset Area in perpetuity and to reference the relevant DPE approval condition incorporated into the Project Approval Modification 2. Version P2 of the BOS was approved by DoEE on 8 June 2017. Version 2.0 of the BOS was approved by DPIE on 20 November 2020.

A Biodiversity Offset comprising 8.7 ha of Cumberland Plain Woodland on shale (HN529/PCT850) in moderate to good condition has been secured with a s88 instrument. The instrument is recorded in Schedule 2 of the Certificate of Title for Lot 1 DP121322 and Lot 2 DP576136.

Further detail is provided in the VS6 BOS, available on the IMC website at: <https://www.south32.net/our-business/australia/illawarra-metallurgical-coal/documents>.

<i>This document UNCONTROLLED once printed</i>				Page 24 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



8. APPIN EAST MINE SAFETY GAS MANAGEMENT PROJECT

8.1 Overview

This project included the construction and operation of a gas pipeline between Appin No. 3 Shaft and the Energy Development Limited (EDL) operated gas plant located adjacent to the Appin No. 2 Ventilation Shaft.

This pipeline required the direct disturbance of 0.45 ha of CPW within a nominally 2 m wide corridor.

During construction, processes to compensate for the loss of hollow bearing trees and translocation of the Cumberland Plain Snail were established. These processes are no longer relevant for inclusion in the BMP as construction of the gas pipeline is complete.

8.2 Rehabilitation

The pipeline trench was in-filled, topsoiled and spray grassed with a mix of native grass species suitable for CPW.

Areas within the road easement were shaped and stabilised with a material consistent with the existing road verge and in consultation with Wollondilly Shire Council, utility owners and private landholders (e.g. for re-establishment of driveways).

The pipeline is now operational and the roadside is subject to Local Council road verge management.

Over the long term the IMC owned project footprint will be subject to weed and feral pest management programs consistent with the broader property (predominantly grazing properties or operational land). Grazing will be managed by land use licence agreements to ensure appropriate activities are undertaken on the property.

8.3 Offset Provision

IMC had ongoing consultation with DPE and OEH during the assessment of the project. OEH was seeking a like-for-like offset for construction impacts consistent with the NSW Biodiversity Offsets Policy for Major Projects (OEH 2014).

Further consultation resulted in a negotiated outcome to retire four (4) equivalent biodiversity credits. IMC retired these credits from BioBanking Site 215 established adjacent to the Appin West Pit Top.

The Biodiversity Offset Area adjacent to Appin West is secured from unauthorised access at the property boundary. This site will be managed to ensure unauthorised access is prevented, as per the Biobanking requirements.

This outcome will contribute to the in-perpetuity management and improvement of a far better example of CPW than the 0.45 ha impacted by the project.

See Appendix 7 for the Credit Retirement Report.

Due to the nature of the project activities and the management of the biodiversity through retirement of Biobanking credits, the BMP prepared for the project has no further relevance as the pipeline construction footprint has been rehabilitated to the

<i>This document UNCONTROLLED once printed</i>				Page 25 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



operational footprint and the Biodiversity Credits have been retired to account for the impacts to 0.45 ha of CPW.

9. AMVA PROJECT

9.1 Overview

The AMVA Project disturbance footprint mostly consists of highly modified native grassland vegetation which has a high representation of introduced species, however the construction of the AMVA Project will result in the clearing of a small amount of PCT 849 Grey Box - Forest Red Gum grassy woodland on flats of the Cumberland Plain, Sydney Basin Bioregion.

Construction Environmental Management Plans (CEMPs) have been prepared for the early works and construction activities¹⁸ at the AMVA Project site. These CEMPs have been prepared specifically to meet the requirements of Schedule 4A of the Project Approval.

9.2 Vegetation and Biodiversity Management Protocols

To mitigate the biodiversity impacts from the construction the AMVA Project, the following measures have been implemented:

- A Permit to Disturb has been issued to outline the control measures that will be implemented during construction works to minimise environmental impacts.
- The project boundary and disturbance boundary have been demarcated.
- Fencing has been installed around woodland areas shown in Figure 5. Fencing will be maintained throughout the construction phase of the AMVA Project.
- Erosion and sediment controls have been implemented.
- Pest and weed management have been implemented.

During construction the following measures will be implemented in relation to vegetation management and biodiversity management:

- Regular inspections and maintenance of erosion and sediment controls will be undertaken during construction and until disturbed areas are vegetated/stabilised.
- The disturbance footprint will be reduced where possible during construction.
- Further pest and weed management will be undertaken.

The Appin Mine Rehabilitation Management Plan (RMP) has been developed to meet the requirements of Condition 33 of Schedule 4. The RMP provides details of programs to monitor the effectiveness of the management actions as outlined in

¹⁸ The CEMP for early works was approved by DPE on 17 June 2022. The CEMP for construction activities (as defined by the Project Approval) has been prepared and has been submitted to DPE for approval.

<i>This document UNCONTROLLED once printed</i>				Page 26 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



Section 6.3 for rehabilitated areas, including but not limited to progress against the performance and completion criteria. The RMP also provides a risk assessment that describes the potential risks to revegetation and the contingency measures to be implemented to mitigate these risks.

9.3 Biodiversity Conservation Fund Payment

A payment was made into the Biodiversity Conservation Fund to meet the requirement to retire two (2) ecosystem credits for the clearing of PCT 849 as required in Condition 35A of Schedule 4. Details are provided in Appendix 8. The statement was issued on 3 November 2022, which is within the six (6) month period since the commencement of Early Works¹⁹.

9.4 Tree Screening

During Early Works, initial vegetative screening was undertaken at the AMVA Project site and at neighbouring properties in accordance with Condition 27A of Schedule 4 of the Project Approval.

To provide further visual amenity to neighbours and the community, further tree screen plantings will occur along:

- The Site's boundary with Menangle Road.
- The external perimeter of the noise attenuation bund.
- The eastern edge of the site.

Tree screening on the AMVA Project site will consist of locally endemic native plant species. In planning for the tree screening, IMC will be mindful of the Wollondilly Development Control Plan, particularly Part 11.2, Recommended Species (for landscaping). IMC have engaged a bush regeneration expert to plan the screening program.

10. OTHER PROJECTS

The following projects were incorporated as attachments in the previous BMP (see Appendix 9):

- Appin West Surface Water Tanks Upgrade;
- Brennans Creek Dam Water Pipeline Upgrade; and
- Appin West Turning Circle.

These projects required the clearing of native vegetation that was not covered by an existing management plan. The processes as outlined in the BMP will be utilised for similar projects in the future and supporting assessments will not be appended to this BMP.

¹⁹ As defined in the Project Approval.

<i>This document UNCONTROLLED once printed</i>				Page 27 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



10.1 Appin West Surface Water Tanks Upgrade

The upgrade and relocation of the Appin West surface water tanks was endorsed by the then DPE on 1 March 2019 to be generally in accordance with the Project Approval. The surface water tanks are located approximately 40 m north of the current location and required native vegetation clearance.

The area cleared was 0.14 ha, comprised of native vegetation that aligns to the Sandstone Transition Forest in the Sydney Basin Bioregion.

This project was completed in FY21.

10.2 Brennans Creek Dam Water Pipeline Upgrade

The Brennans Creek Dam (BCD) water pipeline upgrade was endorsed by the then DPE to be generally in accordance with the Project Approval on 14 March 2019.

The BCD water pipeline upgrade runs adjacent to the existing BCD water pipeline, although moved slightly (approximately 1 m) to the west to avoid future damage due to road works.

Installation of the BCD water pipeline required clearing of regrowth native vegetation.

10.3 Appin West Turning Circle

The installation of a turning circle was required at the Appin West Pit Top to enable trucks to safely manoeuvre around the site. Up to six trees located to the west of the Water Treatment Plant were identified to be cleared in order to establish the turning circle.

In addition to clearing these trees, a vegetation inspection identified 32 others across the Appin West Pit Top which require removal due to safety concerns (up to 38 in total). The area to be cleared totals 0.11 ha, comprised of native vegetation that aligns to the Sandstone Transition Forest in the Sydney Basin Bioregion.

Fifty trees were planted in FY20 in the Cataract Biobanking Stewardship Site to offset the removal of these trees (as agreed with DPIE).

11. OFFSET AREAS

The following offset areas and biobanking sites are maintained by IMC:

- Nepean Biobanking Stewardship Site (Biobanking Agreement 382).
- Appin West Biobanking Stewardship Site (Biobanking Agreement 215 – required under Condition 2 of Schedule 3 of the Project Approval and Condition 5 and 5A of EPBC Approval 2010/5350).
- Cataract Biobanking Stewardship Site (Biobanking Agreement 345).
- *Persoonia hirsuta* Offset (*P. hirsuta* Offset Management Plan required under Condition 2 of EPBC Approval 2010/5350).

<i>This document UNCONTROLLED once printed</i>				Page 28 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



- VS6 Offset (VS6 BOS required under Condition 35 of Schedule 4 of the Project Approval and Condition 2 of EPBC Approval 2010/5722).

The locations of the offset areas are shown in Figure 4.

Future offset areas and mechanisms for securing these future areas (if required) will be determined through the Project Application process and in consultation with the relevant regulatory agencies.

Offset areas will be integrated into the rehabilitation of the respective site where possible i.e. in the vicinity of the disturbed areas being rehabilitated and consistent with the proposed final land use. Further details of closure objectives and criteria are provided in the Appin Mine Rehabilitation Management Plan.

12. COMPLAINTS AND NON-COMPLIANCE MANAGEMENT

12.1 Complaints and Dispute Resolution

IMC has a 24 hour, free community call line (1800 102 210) and email address (illawarracommunity@south32.net) which is displayed at IMC Projects and Mine Sites, and included in newsletters, letters and other correspondence. The call line and email address are for all complaints and general enquiries regarding environmental or community issues associated with IMC's operations.

Community complaints and enquiries may also be received in person by any employee of IMC, with details to be immediately shared with the Community Team for investigation. All biodiversity related complaints received in relation to Appin Mine will be managed in accordance with the Handling Community Complaints, Enquiries and Disputes Procedure.

Upon receipt of a community complaint, preliminary investigations will commence as soon as practicable to determine the likely cause of the complaint. An initial response will be provided to the complainant within 24 hours of the complaint being made, with a follow up response being provided as soon as practicable once a more detailed investigation is complete.

A summary of all complaints received during the reporting year is provided as part of the Annual Review. A log of complaints is also maintained on the IMC website at: <https://www.south32.net/our-business/australia/illawarra-metallurgical-coal/documents>.

12.2 Events, Non-Compliance, Corrective Action, and Preventative Action

Events, non-compliances, corrective actions and preventative actions are managed in accordance with the Reporting and Investigation Standard and Environmental Compliance/Conformance Assessment and Reporting Procedure. These procedures, which relate to all IMC operations, detail the processes to be utilised with respect to event and hazard reporting, investigation and corrective action identification. The key elements of the process include:

- identification of events, non-conformances and/or non-compliances:

<i>This document UNCONTROLLED once printed</i>				Page 29 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



- recording of the event, non-conformance and/or non-compliance in the event management system (G360);
- investigation/evaluation of the event, non-conformance and/or non-compliance to determine specific corrective and preventative actions;
- assigning corrective and preventative actions to responsible persons in G360; and
- review of corrective actions to ensure the status and effectiveness of the actions.

Incidents and non-compliances as defined under the Project Approval relating to biodiversity will be reported to all relevant stakeholders as detailed in Section 12.3.

12.3 Adaptive Management/Contingency Planning

In accordance with Condition 3 of Schedule 6 of the Project Approval, where any exceedance of the performance measures in Schedule 4 has occurred, IMC is required to:

- a) take all reasonable and feasible steps to ensure the exceedance ceases and does not recur;
- b) consider all reasonable and feasible options for remediation and submit a report to DPE describing these options and any preferred remediation measures or other course of action; and
- c) implement remediation measures as directed by the Secretary.

13. REPORTING AND REVIEW

13.1 Annual Review

Operational and environmental performance of Appin Mine is reported through the Annual Review.

The Annual Review is prepared in accordance with Condition 4 of Schedule 6 of the Project Approval and is submitted to relevant agencies in September each year. Annual Reviews are made available to the general public via the South32 website.

The Annual Review will include:

- works undertaken as required under this BMP and evaluation against key performance criteria;
- a review of the effectiveness of identified and required management measures;
- the results of monitoring required under this BMP;
- details of non-compliances and how these were managed; and
- required alteration or additions to BMP actions.

<i>This document UNCONTROLLED once printed</i>				Page 30 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



Annual reports for each Biobanking Stewardship site will be appended to the Annual Review.

13.2 Incident and Non-compliance Notifications

13.2.1 Notification of Incidents – Government Agencies

In accordance with Condition 7 of Schedule 6 of the Project Approval, the Planning Secretary is to be notified in writing via the Major Projects website immediately after becoming aware of an incident²⁰. Reports are to be provided in accordance with the requirements set out in Appendix 7.

13.2.2 Notification of Non-compliances – Government Agencies

In accordance with Condition 7A of Schedule 6 of the Project Approval, the Planning Secretary must be notified in writing via the Major Projects website within seven (7) days after becoming aware of a non-compliance²¹.

13.3 Review of BMP

In accordance with Condition 5 of Schedule 6 of the Project Approval, the BMP will be reviewed, and if necessary revised, within three months, of:

- the submission of an annual review;
- the submission of an incident report;
- the submission of an Independent Environmental Audit report; and
- any modification to the conditions of the Project Approval (unless the conditions require otherwise); or
- a direction of the Planning Secretary under Condition 4 of Schedule 2.

Outcomes from each review will be documented in the Management Plan Review Log (unless the BMP is being updated as part of the review). The BMP will only be revised where a material change to site operations or environmental management has occurred, or in accordance with the review period on the BMP. Administrative or descriptive changes do not constitute a material change.

Where a review triggers a revision of the BMP, the BMP will be revised and submitted to DPE for approval by the Planning Secretary and/or DCCEEW for approval by the Minister. Once approved, the BMP will be uploaded to the IMC website.

The approved BMP will be implemented.

²⁰ The definition of an incident in the Project Approval is “A set of circumstances that causes or threatens to cause material harm to the environment; and/or breaches or exceeds the limits or performance measures/criteria in this approval”

²¹ A non-compliance that has been notified as an incident does not need to also be notified as a non-compliance.

<i>This document UNCONTROLLED once printed</i>				Page 31 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



13.4 Audits

13.4.1 Independent Environmental Audit

In accordance with Condition 9 of Schedule 6 of the Project Approval, an Independent Environmental Audit (IEA) shall be commissioned every three years, that will include a review of the BMP. The report, together with the response to any recommendations contained in the audit report, and a timetable for the implementation of the recommendations, is required to be submitted to the Secretary within six weeks of completion of the audit, in accordance with Condition 10 of Schedule 6 of the Project Approval.

The IEA is also undertaken to comply with Condition 18 of EPBC Approval 2010/5350. A copy of the report is also submitted to DCCEEW to satisfy Condition 18 (g).

IEAs have been conducted in 2013, 2016/17, 2019 and 2022, with the next IEA to be conducted in 2025. Recommendations from the IEA will be incorporated into the BMP where appropriate.

13.4.2 ISO 14001

As part of the ISO 14001 certification, IMC maintains an environmental auditing and governance program across all of its operational sites. The program, which includes the use of competent internal and accredited external auditors, is an integral part of maintaining certification under the ISO 14001 standard.

External surveillance audits are undertaken on an annual basis, with recertification audits undertaken every three years.

Internal Governance Reviews of the BMP are nominally undertaken on a two-yearly basis.

14. ACRONYMS

Term	Definition
BAM	Biodiversity Assessment Method
<i>BC Act</i>	<i>Biodiversity Conservation Act</i>
BCD	Biodiversity and Conservation Division - DPE
BCD	Brennans Creek Dam
BMP	Biodiversity Management Plan
BOS	Biodiversity Offset Strategy
BSO	Bulli Seam Operations

<i>This document UNCONTROLLED once printed</i>				Page 32 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



CEMP	Construction Environmental Management Plan
CMA	Catchment Management Authority
CPW	Cumberland Plain Woodland
CWEA	Coal Wash Emplacement Area
CWEAMP	Coal Wash Emplacement Area Management Plan
DAWE	Department of Agriculture, Water and Environment
DCCEEW	Department of Climate Change, Energy, Environment and Water
DEC	Department of Environment and Conservation
DoP	Department of Planning (now DPE)
DPE	Department of Planning and Environment (previously DPE)
DPIE	Department of Planning, Industry and Environment (now DPE)
DSEWPaC	Department of Sustainability, Environment, Water, Population and Communities
EA	Environmental Assessment
EDL	Energy Developments Limited
EEC	Endangered Ecological Community
EMS	Environmental Management System
<i>EP&A Act</i>	<i>Environmental Planning and Assessment Act</i>
<i>EPBC Act</i>	<i>Environment Protection and Biodiversity Conservation Act</i>
FY	Financial Year
G360	IMC event reporting system
GPS	Global Positioning System
ICHPL	Illawarra Coal Holdings Pty Ltd
IEA	Independent Environmental Audit
IMC	Illawarra Metallurgical Coal
KTP	Key Threatening Process

<i>This document UNCONTROLLED once printed</i>				Page 33 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



MZ	Management Zone
OEH	Office of Environment and Heritage (now BCD)
NPWS	National Parks and Wildlife Service
PCT	Plant Community Type
RFEF	River Flat Eucalypt Forest
RMP	Rehabilitation Management Plan
RoM	Run of Mine
SEPP	State Environmental Protection Policy
TEC	Threatened Ecological Community
<i>TSC Act</i>	<i>Threatened Species Conservation Act</i>
VMP	Vegetation Management Plan
VS6	Ventilation Shaft 6
WCCPP	West Cliff Coal Preparation Plant

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<i>This document UNCONTROLLED once printed</i>				Page 34 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



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<i>This document UNCONTROLLED once printed</i>				Page 35 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	

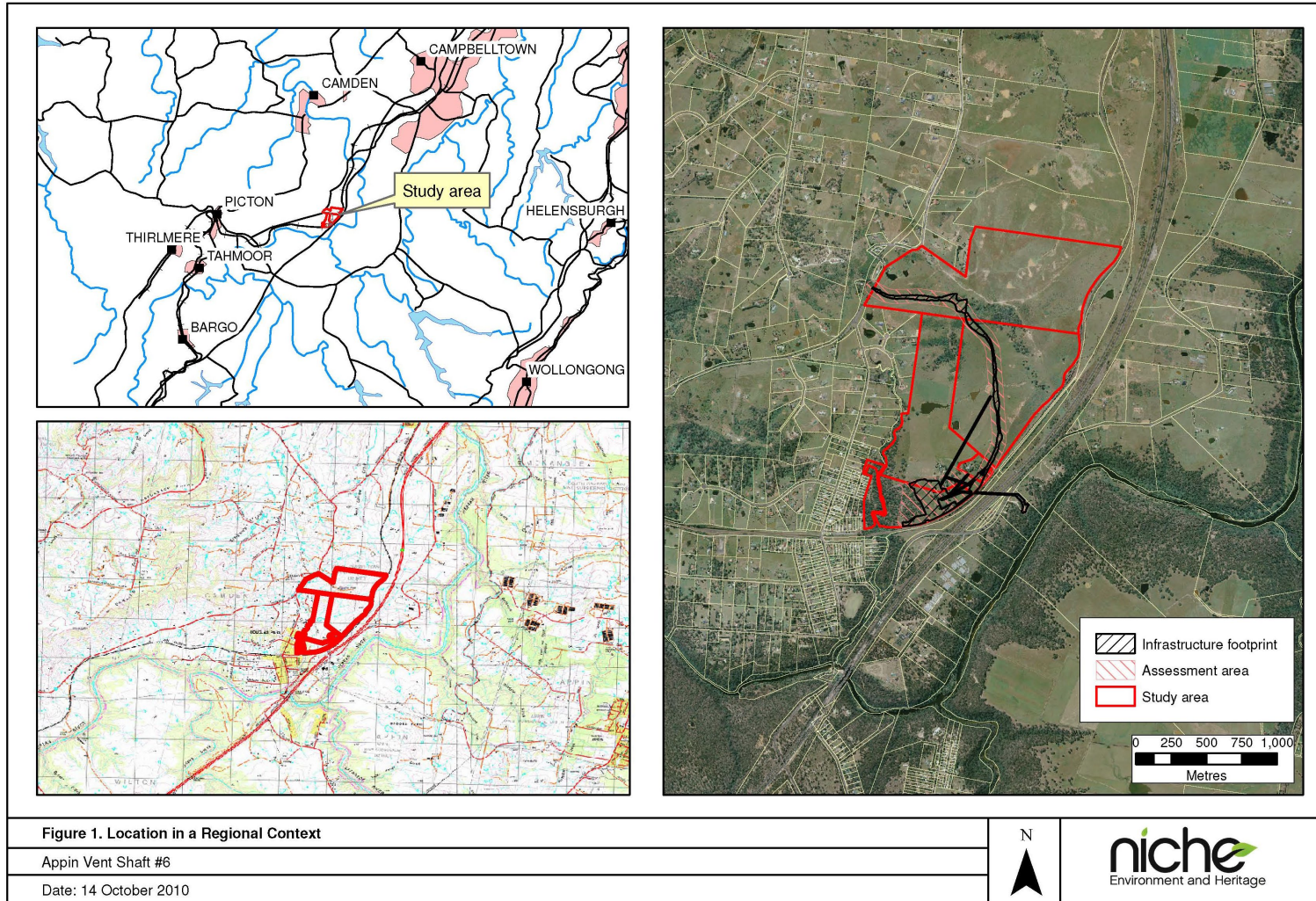


16. FIGURES

<i>This document UNCONTROLLED once printed</i>				Page 36 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



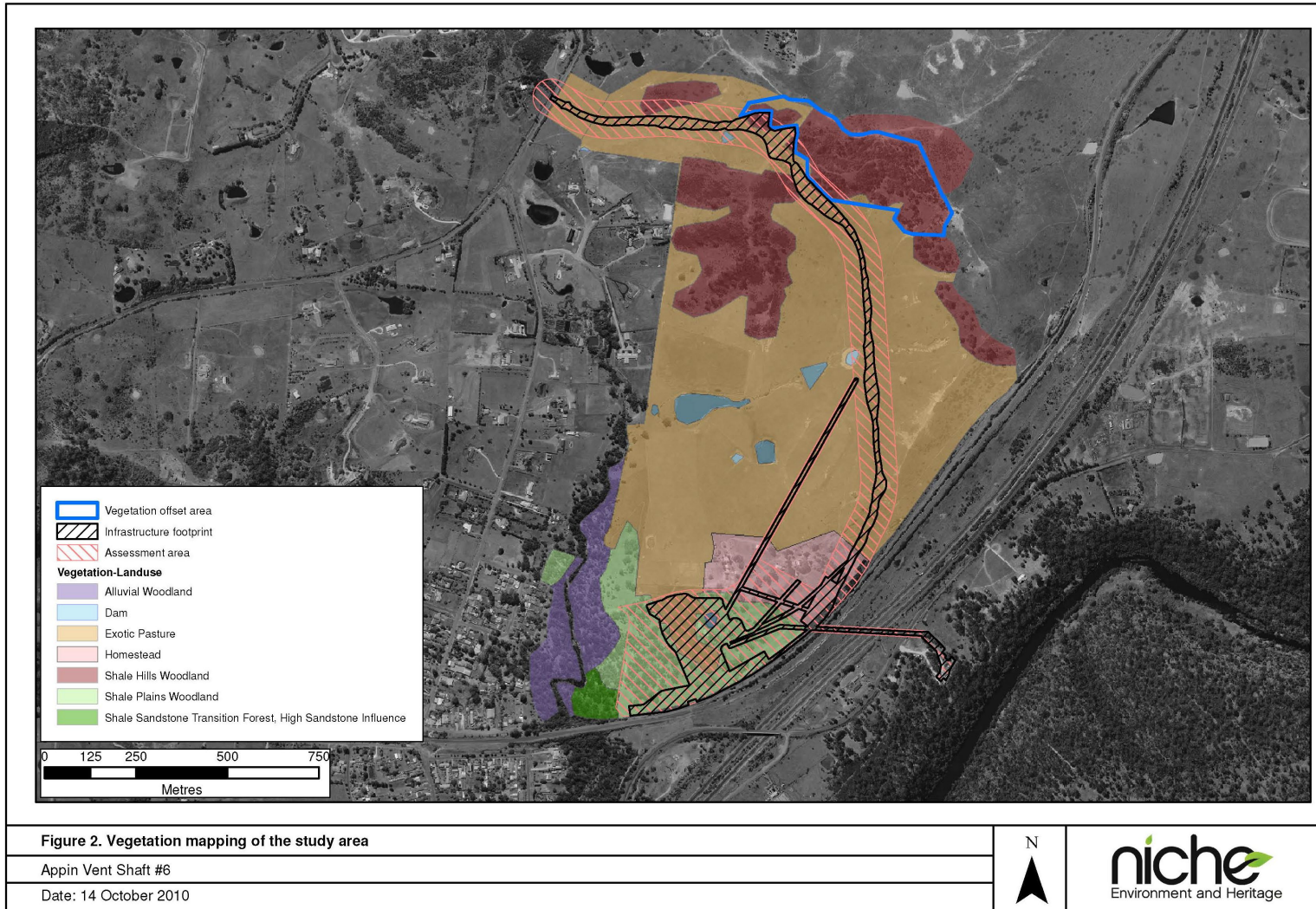
Figure 1: Location of VS6



<i>This document UNCONTROLLED once printed</i>				Page 37 of 77
Document ID	APNMP0115	Version	1.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



Figure 2: Vegetation Mapping of VS6 Study Area



<i>This document UNCONTROLLED once printed</i>				Page 38 of 77
Document ID	APNMP0115	Version	1.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



Figure 3: Vegetation Management Zones in the VS6 Study Area

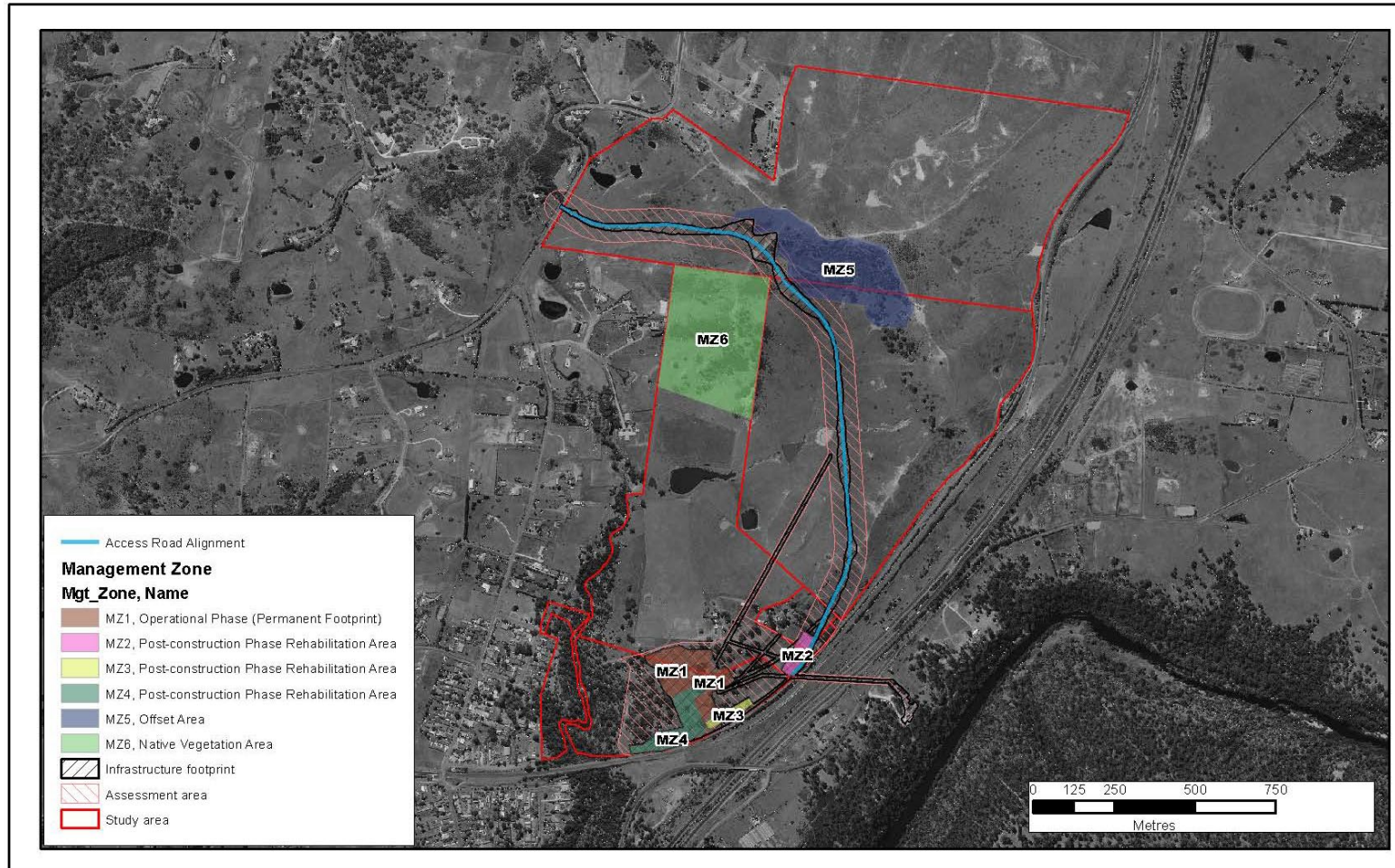


Figure 3. Vegetation Management Zones of the Study Area

Appin Vent Shaft #6

Date: 14 October 2010

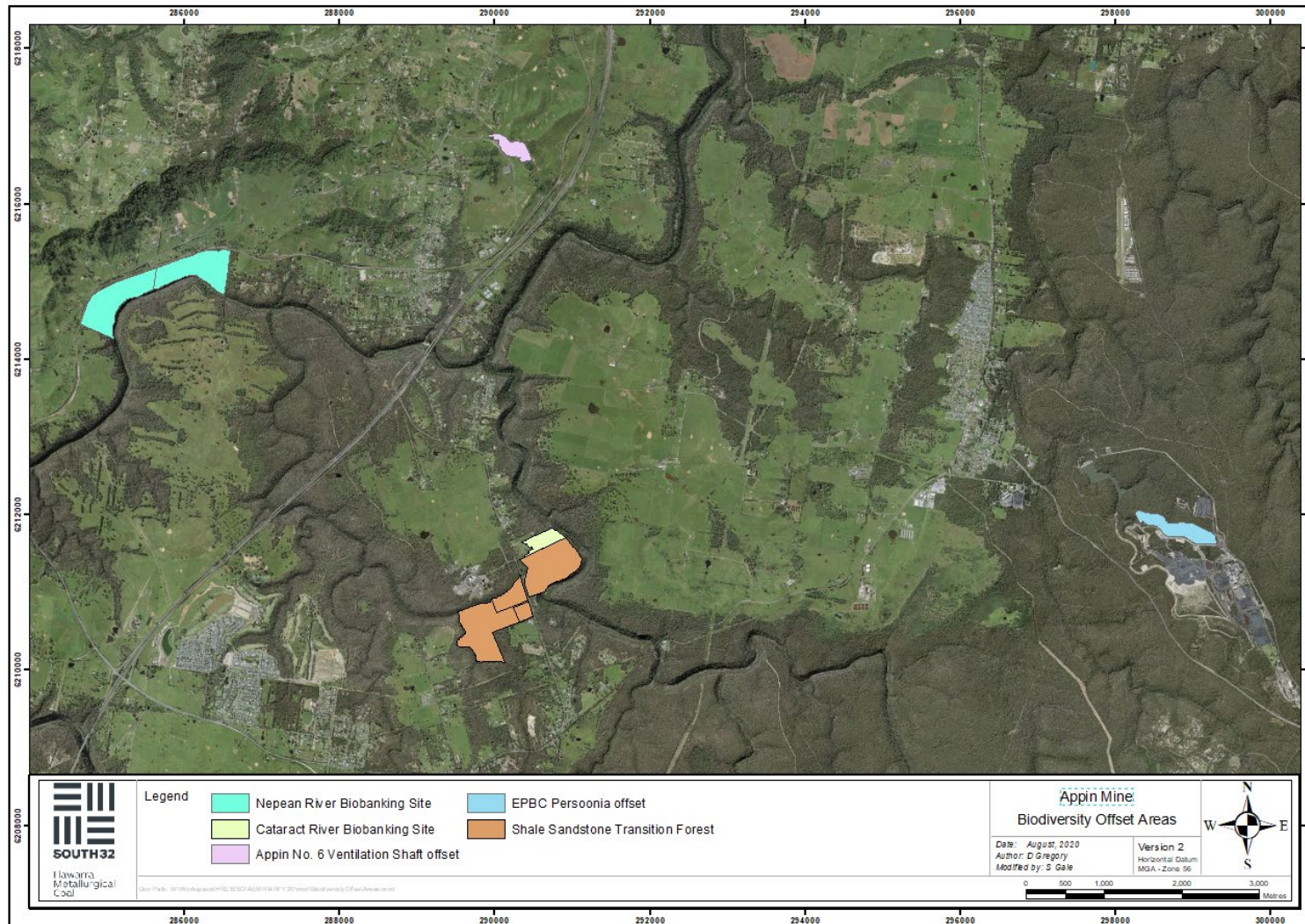


This document UNCONTROLLED once printed

Document ID	APNMP0115	Version	2.0	Page 39 of 77
Last Date Updated	December 2022	Next Review Date	December 2025	



Figure 4: Biodiversity Offset Areas – Appin Mine

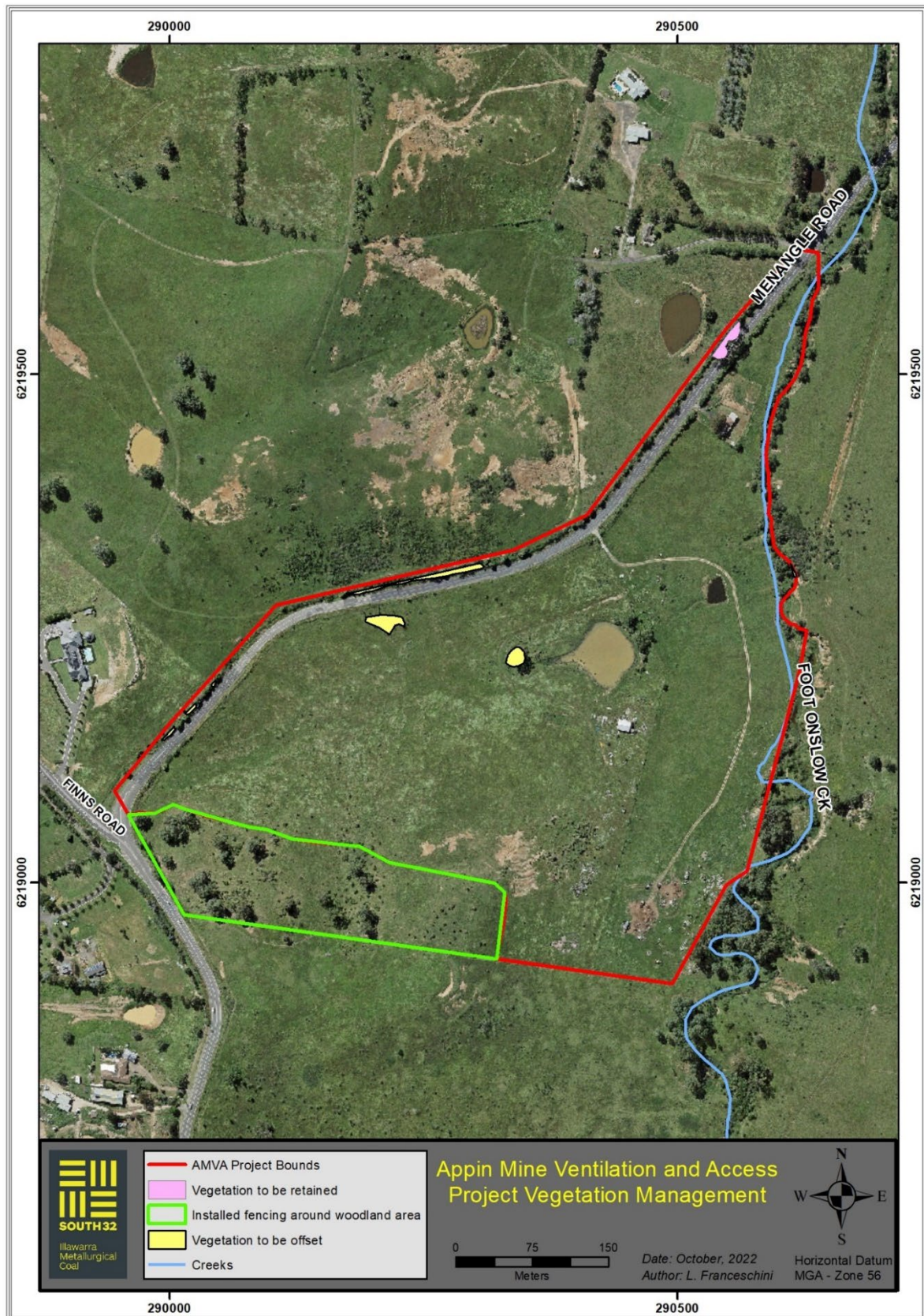


This document UNCONTROLLED once printed

Document ID	APNMP0115	Version	2.0	Page 40 of 77
Last Date Updated	December 2022	Next Review Date	December 2025	



Figure 5: AMVA Project Vegetation Management



<i>This document UNCONTROLLED once printed</i>				Page 41 of 77
Document ID	APNMP0115	Version	1.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



17. APPENDICES

Appendix 1: Project Approval Conditions: Biodiversity Management

Condition	Requirement	Section
Condition 1 of Schedule 2	<p>Obligation to minimise harm to the environment</p> <p>In addition to meeting the specific performance criteria established under this approval, the Proponent shall implement all reasonable and feasible measures to prevent and/or minimise any harm to the environment that may result from the construction, operation, or rehabilitation of the project.</p>	Section 1.1
Condition 2 of Schedule 2	<p>Terms of Approval</p> <p>The Proponent must carry out the project:</p> <p>(a) generally in accordance with the EA, Statement of Commitments and PPR;</p> <p>(b) in accordance with the conditions of this approval; and</p> <p>(c) in accordance with any written directions of the Planning Secretary.</p>	Section 3.1
Condition 4 of Schedule 2	<p>Consistent with the requirements of this approval, the Planning Secretary may make written directions to the Proponent in relation to:</p> <p>(a) the content of any strategy, study, system, plan, program, review, audit, notification, report or correspondence submitted under or otherwise made in relation to this approval, including those that are required to be, and have been, approved by the Planning Secretary; and</p> <p>(b) the implementation of any actions or measures contained in any such document referred to in condition 4(a).</p>	Section 3.1
Condition 14 of Schedule 2	<p>Strategic Biodiversity Offsets</p> <p>If the proponent is required to provide a biodiversity offset pursuant to this approval (including any biodiversity offset that is required under the conditions of a subordinate approval issued in accordance with this approval), the Planning Secretary may, in consultation with BCD, accept in satisfaction of the requirement for the biodiversity offset, the provision of land that has conservation values which exceed the conservation values required to meet the relevant offsetting requirement.</p>	Section 7.4, 8.3 and 11

<i>This document UNCONTROLLED once printed</i>				Page 42 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



	<p>If the Planning Secretary accepts such an offset under this condition, the Planning Secretary shall issue a written statement to the proponent advising:</p> <ul style="list-style-type: none"> (a) the details of the proposed offset land; (b) the offset requirements that are being met; (c) the conservation values that have been relied upon to meet the offsetting requirements; (d) that in the opinion of the Planning Secretary: <ul style="list-style-type: none"> (i) the land has conservation values in addition to those that have been relied upon to meet the offsetting requirement in condition 14(b); or (ii) if the land has been subject to a previous statement from the Planning Secretary under this condition, confirmation that the land continues to have conservation values in addition to those that have been relied upon to meet the previous offsetting requirement or that there are no further conservation values available in respect of the land. <p>If the Planning Secretary has issued a statement under this condition, the proponent can rely on that statement and the residual conservation values that the land subject to the statement may hold, to meet further offsetting requirement(s) that may be required under this approval or the development consent for the Dendrobium Coal Mine (60-3-2001).</p> <p>The Planning Secretary's statement under this condition can be relied on a number of times in respect of the same land until all of the conservation values of the land the subject of the Planning Secretary's statement have been relied upon to meet offsetting requirements under this approval or the development consent for the Dendrobium Coal Mine (60-3-2001).</p> <p>The proponent shall make suitable arrangements to provide appropriate long-term security for the biodiversity offset area(s) accepted under this condition, within 2 years of the date of the Planning Secretary's statement in respect of that land, unless otherwise agreed with the Planning Secretary.</p>	
<p>Condition 5 i) of Schedule 3</p>	<p>Extraction Plans</p> <p>The Proponent shall prepare and implement an Extraction Plan for first and second workings within each longwall mining domain to the satisfaction of the Secretary. Each extraction plan must:</p>	<p>Section 1.2</p>

<i>This document UNCONTROLLED once printed</i>				
Document ID	APNMP0115	Version	2.0	Page 43 of 77
Last Date Updated	December 2022	Next Review Date	December 2025	



	<p>i) include a Biodiversity Management Plan, which has been prepared in consultation with OEH and DPI (Fisheries), which provides for the management of the potential impacts and/or environmental consequences of the proposed second workings on aquatic and terrestrial flora and fauna, with a specific focus on threatened species, populations and their habitats; endangered ecological communities; and water dependent ecosystems, including (for Appin Areas 7, 8 and 9):</p> <ul style="list-style-type: none"> • additional targeted surveys for threatened species, sufficient to identify any actions required to protect significant populations from potential impacts; 	
Condition 34 of Schedule 4	<p>Appin East Mine Gas Safety Management Project</p> <p>By 31 January 2017, the Proponent shall enter into a suitable arrangement to offset the clearing of Cumberland Plain Woodland to develop the Appin East Mine Gas Drainage Project, to the satisfaction of the Secretary.</p>	Section 8.3
Condition 35 of Schedule 4	<p>Ventilation Shaft No. 6</p> <p>The Proponent shall prepare and implement a biodiversity offset strategy to compensate for the impact of Ventilation Shaft No. 6 on Cumberland Plain Woodland. The offset strategy must:</p> <ol style="list-style-type: none"> be prepared in consultation with OEH and to the satisfaction of the Secretary; incorporate at least 8.7 hectares of existing Cumberland Plain Woodland vegetation; and make suitable arrangements to protect and manage this offset area in perpetuity. <p>Note: The 8.7 hectare size for the Biodiversity Offset Area identified above is based on Cumberland Plain Woodland vegetation on shale (HN529) in good condition. An equivalent minimum offset for Cumberland Plain Woodland on flats vegetation (HN528) in good condition is 9.4 hectares.</p>	Section 7.4
Condition 35A of Schedule 4	<p>Appin Mine Ventilation and Access Site</p> <p>Within 6 months of the commencement of Appin Mine Ventilation and Access Site early works, unless otherwise agreed by the Planning Secretary, the Proponent must retire two (2) ecosystem credits for the clearing of Plant Community Type (PCT) 849 Grey Box - Forest Red Gum grassy woodland on flats of the Cumberland Plain, Sydney Basin Bioregion associated with the construction of the Appin Mine Ventilation and Access Site. The credits must be retired</p>	Section 9.3

<i>This document UNCONTROLLED once printed</i>				Page 44 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



	in accordance with the Biodiversity Offsets Scheme of the BC Act.	
Condition 36 of Schedule 4	<p>Biodiversity Management Plan</p> <p>The Proponent shall prepare and implement a Biodiversity Management Plan for the Appin East Mine Gas Safety Management Project, Ventilation Shaft No. 6 and Appin Mine Ventilation and Access Site, to the satisfaction of the Secretary. The plan must:</p> <p>(a) be prepared in consultation with BCD, and submitted to the Planning Secretary for approval by 31 January 2017;</p> <p>(b) describe how the implementation of offsets would be integrated with the overall rehabilitation of the site;</p> <p>(c) include:</p> <p>(i) a description of the short, medium and long term measures that would be implemented to:</p> <ul style="list-style-type: none"> • implement offset strategy; and • manage the remnant vegetation and habitat on the site and in the offset areas; <p>(ii) detailed performance and completion criteria for the implementation of the offset strategy;</p> <p>(iii) details of vegetation clearing protocols, including procedures to:</p> <ul style="list-style-type: none"> • minimise the amount of the clearing required; • compensate the loss of hollow-bearing trees for the Appin East Mine Gas Safety Management Project; and • translocate the Cumberland Plain Snail (<i>Meridolum corneovirens</i>) affected by the clearing of Cumberland Plain Woodland for the Appin East Mine Gas Safety Management Project; <p>(iv) details of location and timing of tree screenings to minimise visual impacts of the project;</p> <p>(v) a description of the measures that would be implemented in ongoing 5 year periods, including the procedures to be implemented to:</p> <ul style="list-style-type: none"> • implement revegetation and regeneration within disturbed areas; • minimise the clearing of native vegetation; • control weeds and feral pests; • manage grazing and agriculture on site; and • control unauthorised access; <p>(vi) a program to monitor the effectiveness of these measures, and progress against the performance and completion criteria;</p>	<p>Section 1.4 and Appendix 10</p> <p>Section 7.4, 8.3 and 11</p> <p>Section 7.4, 8.3, 9.2 and Appendix 3</p> <p>Section 7.4, 8.2, 8.3, 9.2 and Appendix 3</p> <p>Section 6.3</p> <p>Section 8.1</p> <p>Section 8.1</p> <p>Section 9.4 and Appendix 3</p> <p>Section 6.3, 8.2, 8.3, 9.2 and Appendix 3</p> <p>Section 7.3.5, 8.3 and 9.2</p>

<i>This document UNCONTROLLED once printed</i>				Page 45 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



	<p>(vii) a description of the potential risks to successful revegetation, and a description of the contingency measures that would be implemented to mitigate these risks; and</p> <p>(viii) details of who would be responsible for monitoring, reviewing, and implementing the plan.</p>	<p>Section 7.2.4, 7.2.5, 8.3, 9.2 and Appendix 3</p> <p>Section 2</p>
Condition 36A of Schedule 4	The Proponent must implement the Biodiversity Management Plan approved by the Planning Secretary.	Section 13.3
Condition 11 of Schedule 4A	<p>Construction Environmental Management Plan</p> <p>Prior to the commencement of Appin Mine Ventilation and Access Site early works, the Proponent must prepare a Construction Environmental Management Plan for the construction phase of the Appin Mine Ventilation and Access Site to the satisfaction of the Planning Secretary. This plan must:</p> <p>(a) be prepared in consultation with the EPA;</p> <p>(b) provide specific environmental management and monitoring measures for construction works, including for:</p> <p>i. minimising construction-related noise, dust, visual impacts, and surface disturbance;</p> <p>...</p> <p>(c) include details of vegetation clearing protocols, including procedures to minimise the amount of clearing required on the Appin Mine Ventilation and Access Site</p>	Section 9.1
Condition 2 of Schedule 6	<p>Management Plan Requirements</p> <p>The Proponent shall ensure that the management plans required under this approval are prepared in accordance with any relevant guidelines, and include:</p> <p>(a) detailed baseline data;</p> <p>(b) a description of:</p> <ul style="list-style-type: none"> • the relevant statutory requirements (including any relevant approval, licence or lease conditions); • any relevant limits or performance measures/criteria; • the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the project or any management measures; <p>(c) a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria;</p> <p>(d) a program to monitor and report on the:</p>	<p>Section 5</p> <p>Section 3</p> <p>Section 7.3.5, 8.3, 9.2 and Appendix 3</p> <p>Section 6.3</p>

<i>This document UNCONTROLLED once printed</i>				Page 46 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



	<ul style="list-style-type: none"> • impacts and environmental performance of the project; • effectiveness of any management measures (see c above); <p>(e) a contingency plan to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible;</p> <p>(f) a program to investigate and implement ways to improve the environmental performance of the project over time;</p> <p>(g) a protocol for managing and reporting any:</p> <ul style="list-style-type: none"> • incident; • complaints; • non-compliances with statutory requirements; and • exceedances of the impact assessment criteria and/or performance criteria; and • a protocol for periodic review of the plan. <p><i>Note: The Planning Secretary may waive some of these requirements if they are unnecessary or unwarranted for particular management plans.</i></p>	<p>Section 13</p> <p>Section 12.3</p> <p>Section 12.3</p> <p>Section 12</p> <p>Section 13.3</p>
<p>Condition 4 of Schedule 6</p>	<p>Annual Review</p> <p>By 30 September 2012, and annually thereafter, the Proponent shall review the environmental performance of the project to the satisfaction of the Planning Secretary. This review must:</p> <p>(a) describe the development (including any rehabilitation) that was carried out in the past financial year, and the development that is proposed to be carried out over the next year;</p> <p>(b) include a comprehensive review of the monitoring results and complaints records of the project over the past financial year, which includes a comparison of these results against the:</p> <ul style="list-style-type: none"> • relevant statutory requirements, limits or performance measures/criteria; • requirements of any plan or program required under this approval; • monitoring results of previous years; and • relevant predictions in the EA; <p>(c) identify any non-compliance over the past financial year, and describe what actions were (or are being) taken to ensure compliance;</p>	<p>Section 13.1</p>

<i>This document UNCONTROLLED once printed</i>				Page 47 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



	<p>(d) identify any trends in the monitoring data over the life of the project;</p> <p>(e) identify any discrepancies between the predicted and actual impacts of the project, and analyse the potential cause of any significant discrepancies; and</p> <p>(f) describe what measures will be implemented over the current financial year to improve the environmental performance of the project.</p>	
Condition 5 of Schedule 6	<p>Revision of Strategies, Plans and Programs</p> <p>Within 3 months of:</p> <p>(a) the submission of an annual review under Condition 4 above;</p> <p>(b) the submission of an incident report under Condition 7 below;</p> <p>(c) the submission of an audit report under Condition 9 below; and</p> <p>(d) any modification to the conditions of this approval, (unless the conditions require otherwise); or</p> <p>(e) a direction of the Planning Secretary under Condition 4 of Schedule 2; the Proponent shall review, and if necessary revise, the strategies, plans, and programs required under this approval to the satisfaction of the Planning Secretary.</p>	Section 13.3
Condition 7 of Schedule 6	<p>Incident Notification, Reporting and Response</p> <p>The Planning Secretary must be notified in writing via the Major Projects website immediately after the Proponent becomes aware of an incident. The notification must identify the project (including the development application number and the name of the development if it has one) and set out the location and nature of the incident. Subsequent notification requirements must be given, and reports submitted in accordance with the requirements set out in Appendix 7.</p>	Section 13.2.1
Condition 7A of Schedule 6	<p>Non-compliance Notification</p> <p>The Secretary must be notified in writing via the Major Projects website within seven days after the Proponent becomes aware of any non-compliance. A non-compliance notification must identify the project and the application number for it, set out the condition of approval that the project is non-compliant with, the way in which it does not comply and the reasons for the non-compliance (if known)</p>	Section 13.2.2

<i>This document UNCONTROLLED once printed</i>				Page 48 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



	<p>and what actions have been, or will be, undertaken to address the non-compliance.</p> <p><i>Note: A non-compliance which has been notified as an incident does not need to also be notified as a noncompliance.</i></p>	
Condition 8 of Schedule 6	<p>Regular Reporting</p> <p>The Proponent shall provide regular reporting on the environmental performance of the project on its website, in accordance with the reporting arrangements in any plans or programs approved under the conditions of this approval.</p>	Section 13.1
Condition 9 of Schedule 6	<p>Independent Environmental Audit</p> <p>By the end of December 2013, and every 3 years thereafter, unless the Planning Secretary directs otherwise, the Proponent shall commission and pay the full cost of an Independent Environmental Audit of the project. This audit must:</p> <p>(a) be conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Planning Secretary;</p> <p>(b) include consultation with the relevant agencies;</p> <p>(c) assess the environmental performance of the project and assess whether it is complying with the requirements in this approval and any relevant EPL or Mining Lease (including any assessment, plan or program required under these approvals);</p> <p>(d) review the adequacy of strategies, plans or programs required under the abovementioned approvals; and</p> <p>(e) recommend appropriate measures or actions to improve the environmental performance of the project, and/or any assessment, plan or program required under the abovementioned approvals.</p> <p><i>Note: This audit team must be led by a suitably qualified auditor and include experts in any field specified by the Planning Secretary</i></p>	Section 13.4.1
Condition 10 of Schedule 6	<p>Within 6 weeks of the completion of this audit, or as otherwise agreed by the Planning Secretary, the Proponent shall submit a copy of the audit report to the Planning Secretary, together with its response to any recommendations contained in the audit report.</p>	Section 13.4.1

<i>This document UNCONTROLLED once printed</i>				Page 49 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



<p>Condition 11 of Schedule 6</p>	<p>Access to Information</p> <p>From 30 June 2012, the Proponent shall:</p> <p>(a) make copies of the following publicly available on its website:</p> <ul style="list-style-type: none"> • the documents referred to in Condition 2 of Schedule 2; • all current statutory approvals for the project; • all approved strategies, plans and programs required under the conditions of this approval; • a comprehensive summary of the monitoring results of the project, reported in accordance with the specifications in any conditions of this approval, or any approved plans and programs; • a complaints register, updated on a monthly basis; • minutes of CCC meetings; • the annual reviews of the project; • any independent environmental audit of the project, and the Proponent’s response to the recommendations in any audit; • any other matter required by the Planning Secretary; and <p>(b) keep this information up-to-date, to the satisfaction of the Planning Secretary</p>	<p>Section 3.1, 12.1 and 13.1</p>
<p>Table SOC-3</p>	<p>Biodiversity</p> <ul style="list-style-type: none"> • Biodiversity will be managed as per the relevant project assessment and/or management plans. • Projects will be designed and constructed to minimise the amount of clearing of native vegetation and mature trees where practicable. • A two-stage clearing process will be undertaken for the felling of any hollow bearing trees. • Where native vegetation has been cleared, rehabilitation activities will include representative native seed where at all practicable 	<p>Section 6.3</p> <p>Section 6</p> <p>Section 6.3</p> <p>Section 6.3</p>



Appendix 2: EPBC Approval Conditions: Biodiversity Management

Condition	Requirement	Section
Condition 2	<p>The person taking the action must submit a Biodiversity Offset Strategy to the Minister for approval. The strategy must address the following requirements:</p> <ul style="list-style-type: none"> (a) the conservation of at least 8.7 hectares of land containing medium to high quality CPW (Annexure A); (b) in addition to land pertaining to 2 (a), that land will be managed and revegetated to greater quality than that removed; and (c) the land referred to in 2 (a) must be protected by a legal instrument under relevant nature conservation legislation, that ensures the land is conserved in perpetuity. <p>The approved strategy must be implemented.</p> <p>The person taking the action must not clear any CPW until the Minister approves the strategy.</p>	Section 7.4
Condition 3	<p>The person taking the action must submit a Vegetation Management Plan to the Minister for approval. The plan must address the following requirements:</p> <ul style="list-style-type: none"> (a) make reference to the Biodiversity Offsets Strategy as outlined in condition 2; (b) measures to protect the population of <i>Pimelea spicata</i> found in the area proposed for protection through condition 2. These must; <ul style="list-style-type: none"> (i) monitor the <i>P. spicata</i> population to determine the success of management or the need for intervention, (ii) include the establishment of thresholds that if reached would require intervention measures, and (iii) identify what further management measures must be implemented if a threshold is reached. (c) rehabilitate MZ2, MZ3 and MZ4 using appropriate native species with input from a suitably qualified CPW expert; and (d) The plan must include key milestones, performance indicators, corrective actions and timeframes for the completion of all actions outlined in the plan for the life of the project. <p>The approved plan must be implemented.</p> <p>The person taking the action must not clear any CPW until the Minister approves the plan.</p>	<p>Section 7.4</p> <p>Section 7.3.5</p> <p>Section 7.3.5.3</p> <p>Section 7.3.3</p> <p>Section 7.3.5.4</p> <p>Appendix 3</p> <p>Section 7.3.5</p>

<i>This document UNCONTROLLED once printed</i>				Page 51 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



Appendix 3: Management Actions, Performance Criteria, Corrective Actions and Timeframes – VS6

<i>This document UNCONTROLLED once printed</i>				Page 52 of 77
Document ID	APNMP0115	Version	1.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



Action	Applicable Zones	Description	Performance Target (Milestones)	Corrective Actions	Party Responsible	Timeframes for Targets
SHAFT SITE MANAGEMENT						
*Note that shaft has now been constructed and the facility is in the operations phase.						
Pre-construction Phase (complete)						
1. Installation of shaft site perimeter fencing	MZ1, MZ2, MZ3, MZ4	<ul style="list-style-type: none"> Perimeter fencing will be installed such that all impacts as outlined in Niche (2010) are confined to the impact area. 2 metre high wire-mesh fencing will be used. 	<ul style="list-style-type: none"> 2 m high wire mesh fence installed. 	<ul style="list-style-type: none"> Maintenance of fencing – fencing to be inspected at regular intervals and repairs made as required. 	Construction Contractor	<p>Prior to construction for perimeter fencing installation.</p> <p>Weekly monitoring of fence integrity</p>
2. Installation of shaft site sediment and erosion control measures	MZ1, MZ2, MZ3, MZ4	<ul style="list-style-type: none"> Refer to Construction Environmental Management Plan (CEMP). 	<ul style="list-style-type: none"> Refer to CEMP. 	<ul style="list-style-type: none"> Maintenance of sediment and erosion control measures – measures to be inspected at regular intervals and repairs made as required. 	Construction Contractor	Weekly

<i>This document UNCONTROLLED once printed</i>				Page 53 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



Action	Applicable Zones	Description	Performance Target (Milestones)	Corrective Actions	Party Responsible	Timeframes for Targets
3. Commencement of Noxious Weed Management throughout entire site	All zones, areas and duration of project	<ul style="list-style-type: none"> Noxious weeds will be continuously targeted and treated throughout the entirety of the site. Species to be targeted will be all those found on the site that are listed as noxious weeds in the Wollondilly LGA. (http://www.dpi.nsw.gov.au/agriculture/pests-weeds/weeds/noxiousweed/) 	<ul style="list-style-type: none"> Annual vegetation condition assessment. Suppression of Noxious Weeds on an on-going basis. 	<ul style="list-style-type: none"> On-ground Noxious Weed management to be adaptable and able to respond to changing conditions and weed incursions. Noxious Weed management to be annually reviewed and altered actions documented and implemented. 	Land Owner/Manager IMC	Annually
Construction Phase (complete)						
4. Plant, machinery and people to be contained by shaft site perimeter fencing	MZ1, MZ2, MZ3, MZ4	<ul style="list-style-type: none"> All IMC staff, contractors and visitors will be made aware during the site induction of the ecological sensitivity associated with the site, and will be required to remain within the confines of the shaft site perimeter fencing. 	<ul style="list-style-type: none"> Artificial disturbance confined to shaft site. Impacts to adjacent native vegetation minimised. 	<ul style="list-style-type: none"> Where exclusion zones regularly inspected and adaptive management applied. Where breaches of exclusion zones occur disciplinary action to ensue and immediate rehabilitation to occur. 	Project Manager / E&C Coordinator	Weekly

<i>This document UNCONTROLLED once printed</i>				Page 54 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



Action	Applicable Zones	Description	Performance Target (Milestones)	Corrective Actions	Party Responsible	Timeframes for Targets
5. Ecologist present during tree removal and clearance	MZ1, MZ2, MZ3, MZ4	<ul style="list-style-type: none"> A suitably qualified ecologist will be on-site during tree removal in order to rescue and release (on-site) any native fauna that maybe affected by the clearing. 	<ul style="list-style-type: none"> Minimisation of disturbance to hollow-dependent native fauna. 	<ul style="list-style-type: none"> Where native fauna is clearly observed, work is stopped and not continued until the individuals have been identified and moved into adjacent (non-impacted) bushland by a suitably qualified ecologist. 	Project Manager / E&C Coordinator	Duration of tree removal

Post-construction Phase (Note: Screening trees are installed and construction areas outside of the operational footprint have been progressively rehabilitated)

<i>This document UNCONTROLLED once printed</i>				Page 55 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



Action	Applicable Zones	Description	Performance Target (Milestones)	Corrective Actions	Party Responsible	Timeframes for Targets
6. Screening Trees		<ul style="list-style-type: none"> Screening trees are required to ameliorate visual impacts Local provenance native CPW tree and shrub species will be planted at appropriate densities to create a suitable visual obstruction 	<ul style="list-style-type: none"> Installation of Screening Trees 	<ul style="list-style-type: none"> Where plant survival drops below 85 per cent of originally installed stock or where direct seeding fails to establish after 6 weeks, an investigation will be made by a suitably qualified person and corrective rehabilitation measures taken (such as supplementary planting). 	Specialist Environment	Installation immediately upon completion of construction

<i>This document UNCONTROLLED once printed</i>				Page 56 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



Action	Applicable Zones	Description	Performance Target (Milestones)	Corrective Actions	Party Responsible	Timeframes for Targets
7. Rehabilitation of temporarily disturbed areas	MZ2, MZ3, MZ4	<ul style="list-style-type: none"> MZ2, MZ3 and MZ4 will be fully rehabilitated upon the completion of construction of the shaft site. The landscapes of each of these zones will be reshaped to a natural state (with the exception of the noise mitigation bund/wall due to bushfire/asset protection considerations and the shaft spoil emplacement area) and revegetated with locally collected native grasses of local genetic stock as recommended by an appropriately qualified CPW expert. As these areas form a part of any likely APZ requirement for the development, trees and shrubs will not be utilised. Native grasses will be either directly sown or planted as tubestock, or both. Site preparation and revegetation is anticipated to take a suitably qualified team of four approximately one day. 	<ul style="list-style-type: none"> Establishment of native ground cover in these zones through direct seeding and/or tubestock. Stabilisation of disturbed areas. 85 per cent successful establishment rate. 	<ul style="list-style-type: none"> Where plant survival drops below 85 per cent of originally installed stock or where direct seeding fails to establish after 6 weeks, an investigation will be made by a suitably qualified person and corrective rehabilitation measures taken (such as supplementary planting). 	Specialist Environment	Life of shaft site operation
8. Maintenance weed management in rehabilitated areas	MZ2, MZ3, MZ4	<ul style="list-style-type: none"> Maintenance weed management will commence upon completion of direct seeding and/or planting of tubestock within MZ2, MZ3 and MZ4. It is expected that a team of two suitably qualified bush regenerators will be able to carry out this over one day every four months. 	<ul style="list-style-type: none"> Annual vegetation condition assessment. Weed levels in rehabilitated areas to be minimised. 	<ul style="list-style-type: none"> On-ground weed management regime to be adaptable and able to respond to changing conditions and weed problems. 	Specialist Environment	Life of shaft site operation

<i>This document UNCONTROLLED once printed</i>				Page 57 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



Action	Applicable Zones	Description	Performance Target (Milestones)	Corrective Actions	Party Responsible	Timeframes for Targets
9. Management of grazing and agriculture		<ul style="list-style-type: none"> Clear land on the property (not specified as a Management Zone) will be managed for grazing purposes; Grazing will be undertaken by 3rd parties operating under license 	<ul style="list-style-type: none"> Grazing activities are maintained on the site in a sustainable manner 	<ul style="list-style-type: none"> Review of grazing licensees 	Specialist Land Management	Life of Shaft site operation
10. Management of Access	All zones	<ul style="list-style-type: none"> The entire property on which the VS6 site is situated is private property which is fenced and gated. Unauthorised access to the property is not likely to be a concern for the site. Access to the site by Illawarra Coal personnel and contractors will be subject to a site induction. The site induction will include acknowledgment of the BMP and a discussion of the conservation value of aspects of the vegetation on the property. All works on site will be governed by the CEMP and the BMP. These documents outlined the conservation significance of the site and also dictate the location of conservation exclusion zones and will confine construction activities to the appropriate areas. 	<ul style="list-style-type: none"> Disturbance footprint confined to approved activity footprint. non-essential personnel and contractors to be excluded from the offset site. 	<ul style="list-style-type: none"> Maintenance of fencing – fencing to be inspected at regular intervals and repairs made as required. 	Appin Mine Surface Coordinator	Life of Shaft site operation

<i>This document UNCONTROLLED once printed</i>				Page 58 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



Action	Applicable Zones	Description	Performance Target (Milestones)	Corrective Actions	Party Responsible	Timeframes for Targets
Decommissioning of vent shaft site						
11. Removal of infrastructure and hard stand areas associated with VS#6 on decommissioning	MZ1	<ul style="list-style-type: none"> Reinstatement of original landscape formation. Revegetation with grasses and trees to augment existing CPW on site and mitigate erosion and sedimentation issues. 	<ul style="list-style-type: none"> Rehabilitation Management Plan to be approved and implemented upon decommissioning of Shaft Site. 	N/A	Principal Infrastructure Protection and Legacy Sites	Upon decommissioning of Shaft Site
FSSET MANAGEMENT (MZ5)						
12. MZ5 Fencing	MZ5	<ul style="list-style-type: none"> The first action within the offset area will be to exclude stock. Existing four-strand post-and-wire fence will be utilised and additional fencing installed where required. No barbed-wire will be used and the bottom strand will have a clearance of 400 mm above the ground to allow the movement of native fauna. Stock will be herded out of the area prior to fencing taking place. 	<ul style="list-style-type: none"> Four-strand post-and-wire fence installed, no strands barbed and 400 mm separation from ground to lowest strand. 	<ul style="list-style-type: none"> Maintenance of fencing – fencing to be inspected at regular intervals and repairs made as required. 	Specialist Environment / Specialist Land Management	Every 3 months

<i>This document UNCONTROLLED once printed</i>				Page 59 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



13. Bush Regeneration in MZ5	MZ5	<ul style="list-style-type: none"> Primary, secondary and maintenance weed management within MZ5 will target the treatment of Blackberry, African Olive, lantana, African Boxthorn, privet, Cape Ivy and a variety of exotic perennial grasses such as African Lovegrass, Rhodes Grass, Kikuyu and Couch. All weed management works will be supervised by a suitably qualified bush regenerator. A team of four bush regenerators will be engaged for five days for the primary weeding and then a team of two for one day every four months thereafter for secondary and maintenance weed management as required. 	<ul style="list-style-type: none"> Engagement of suitably qualified bush regeneration contractor to implement primary, secondary and maintenance weed management program. Annual vegetation condition assessment Improvement in condition of offset bushland to maintain original condition or be enhanced by management actions 	<ul style="list-style-type: none"> On-ground weed management regime to be adaptable and able to respond to changing conditions and weed problems. Given that the Offset Areas has an intact soil profile and moderate resilience, sound bush regeneration methods and observance of integrated pest management should minimise the need for corrective actions. Weed management program in Offset Area to be annually reviewed and altered actions documented and implemented. Revegetation with locally collected native vegetation of local genetic stock as recommended by an appropriately qualified expert. 	Specialist Environment / Specialist Land Management	Annually
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<i>This document UNCONTROLLED once printed</i>				Page 60 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



Action	Applicable Zones	Description	Performance Target (Milestones)	Corrective Actions	Party Responsible	Timeframes for Targets
14. <i>Pimelea spicata</i> Monitoring program	MZ5	<ul style="list-style-type: none"> Design a program to determine the success of management or the need for intervention. Annual population counts within biobank plots. 5 yearly population census Condition of individual plants from mixed cohorts. Condition of habitat. Annual inspections of fencing to ensure maintenance and up-keep. Regular site visits the potential presence of stock and/or feral herbivores that have breached fencing to ensure that such impact is eliminated by fencing and that trapped stock or feral herbivores are freed. Monitoring against stochastic events. 	<ul style="list-style-type: none"> Sustainable <i>Pimelea spicata</i> population with population numbers staying level with or exceeding current numbers. 	See Table 3	Environment Specialist / Specialist Land Management	Annual and 5 yearly

NATIVE VEGETATION AREA (MZ6)

<i>This document UNCONTROLLED once printed</i>				Page 61 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



Action	Applicable Zones	Description	Performance Target (Milestones)	Corrective Actions	Party Responsible	Timeframes for Targets
15. MZ6 Fencing	MZ6	<ul style="list-style-type: none"> The first action within the native vegetation area will be to exclude stock. Existing four-strand post-and-wire fence will be utilised and additional fencing installed where required. No barbed-wire will be used and the bottom strand will have a clearance of 400 mm above the ground to allow the movement of native fauna. Stock will be herded out of the area prior to fencing taking place. 	<ul style="list-style-type: none"> Four-strand post-and-wire fence installed, no strands barbed and 400 mm separation from ground to lowest strand. 	<ul style="list-style-type: none"> Maintenance of fencing – fencing to be inspected at regular intervals and repairs made as required. 	Environment Specialist / Specialist Land Management	Every 3 months

<i>This document UNCONTROLLED once printed</i>				Page 62 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



Action	Applicable Zones	Description	Performance Target (Milestones)	Corrective Actions	Party Responsible	Timeframes for Targets
16. Bush Regeneration in MZ6	MZ6	<ul style="list-style-type: none"> Weed management within MZ6 will target the treatment of Blackberry, African Olive, lantana, African Boxthorn, privet, Cape Ivy and a variety of exotic perennial grasses such as African Lovegrass, Rhodes Grass, Kikuyu and Couch. All weed management works will be supervised by a suitably qualified bush regenerator. 	<ul style="list-style-type: none"> Engagement of suitably qualified bush regeneration contractor to implement weed management program. Improvement in condition of offset bushland to within, or as near as possible to, benchmark condition levels. 	<ul style="list-style-type: none"> On-ground weed management regime to be adaptable and able to respond to changing conditions and weed problems. Given that the Native vegetation Areas has an intact soil profile and moderate resilience, sound bush regeneration methods and observance of integrated pest management should minimise the need for corrective actions. Weed management program in Native Vegetation Area to be annually reviewed and altered actions documented and implemented. 	Environment Specialist / Specialist Land Management	Annually

<i>This document UNCONTROLLED once printed</i>				Page 63 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



Appendix 4: Resilience Assessment – VS6

DESCRIPTION OF BUSHLAND CONDITION	MANAGEMENT ACTIONS	RESILIENCE RATING
RESILIENT AREAS – <i>Soil profile intact. Natural regeneration pathways facilitated.</i>		
<ul style="list-style-type: none"> <input type="checkbox"/> Virtually weed free. <input type="checkbox"/> All structural layers present unless structural alteration occurred from natural process, e.g., fire, storm, etc. <input type="checkbox"/> Area stable or stabilising after natural disturbance. 	<ul style="list-style-type: none"> • Minimal input regeneration with maintenance weed management required. • Prevention of future impacts and inappropriate disturbances. 	Very High
<ul style="list-style-type: none"> <input type="checkbox"/> Relatively minor infestations of weeds. <input type="checkbox"/> All structural layers present unless alteration occurred from natural process OR unnatural disturbance of structural layer is not major. <input type="checkbox"/> Area stable or stabilising after disturbance. 	<ul style="list-style-type: none"> • Low input regeneration with maintenance weed management required and smaller patches of primary and secondary management. • Prevention of future impacts and inappropriate disturbances. 	High
<ul style="list-style-type: none"> <input type="checkbox"/> Moderate-severe infestation of weeds. <input type="checkbox"/> Native area suffering and regeneration of native species being suppressed. <input type="checkbox"/> Structural absence or strong decline in condition of at least 1 vegetation layer (e.g. derived native pasture or grassland). <input type="checkbox"/> Loss of vegetation layer mainly attributed to weed invasion unless alteration occurred from natural disturbance OR a major unnatural disturbance event. 	<ul style="list-style-type: none"> • Medium input regeneration with strategic primary, secondary and maintenance weed management required for patches. • Prevention of future impacts or inappropriate disturbances. • Additional “kick-start” possibly required promoting regeneration. 	Moderate
<ul style="list-style-type: none"> <input type="checkbox"/> Bushland replaced by weed species. <input type="checkbox"/> Remaining native components under stress. <input type="checkbox"/> Structural absence or strong decline in at least 2 vegetation layers. 	<ul style="list-style-type: none"> • High input regeneration with strategic primary, secondary and maintenance weed management required for large areas. 	Low

<i>This document UNCONTROLLED once printed</i>				Page 64 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



<ul style="list-style-type: none"> <input type="checkbox"/> Loss of vegetation layer mainly attributed to weed invasion and major unnatural disturbance has occurred. <input type="checkbox"/> Original soil profile intact but regeneration suppressed by the high level of weed infestation. <input type="checkbox"/> Existing area approaching threshold levels of not returning to original state. 	<ul style="list-style-type: none"> • Consideration given to habitat value of retaining weed infestation and economic sustainability of implementing measures. • May require a “kick-start” or supplementary revegetation to approximate original system. • Prevention of future impacts or inappropriate disturbances. 	
<p>NON-RESILIENT AREAS – Soil profile permanently altered. Natural regeneration pathways unlikely.</p>		
<ul style="list-style-type: none"> <input type="checkbox"/> Reconstruction or type conversion area/zone requiring treatment. <input type="checkbox"/> Bushland replaced totally by weed species. <input type="checkbox"/> Soil profile disturbed and permanently altered resulting in loss of soil seed bank and plant propagules. <input type="checkbox"/> Area requiring treatment and importation of propagule material. <input type="checkbox"/> No regeneration capacity, natural regeneration pathways lost. 	<ul style="list-style-type: none"> • High initial input with regular maintenance. • Reconstruction or type conversion required. • Consideration given to habitat value of weed infestation and economic sustainability of implementing measures. 	<p>Very Low (un-managed/ degraded bushland)</p>
<ul style="list-style-type: none"> <input type="checkbox"/> Reconstruction or type conversion area/zone commenced treatment. <input type="checkbox"/> Previously a yellow area before commencement of treatment, e.g., planted, direct seeded, soil capped, translocation, etc. <input type="checkbox"/> No/or limited natural regeneration capacity after treatment. 	<ul style="list-style-type: none"> • On-going high input maintenance weed management. • Reconstruction or type conversion has occurred (previously YELLOW). 	<p>Low (maintained restoration area)</p>
<ul style="list-style-type: none"> <input type="checkbox"/> Potential regeneration suppressed by management practices (e.g., parkland, cropping or exotic pasture). 	<ul style="list-style-type: none"> • Programmed maintenance, cropping or grazing. 	<p>Not bushland</p>

<i>This document UNCONTROLLED once printed</i>				Page 65 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



Appendix 5: Flora Recorded in VS6 Study Area

Species	Introduced	BC Act	EPBC Act	ROTAP
<i>Acacia ulicifolia</i>				
<i>Adiantum aethiopicum</i>				
<i>Allocasuarina littoralis</i>				
<i>Angophora floribunda</i>				
<i>Angophora subvelutina</i>				
<i>Araujia sericifera</i>	*			
<i>Aristida ramosissima</i>				
<i>Aristida vagans</i>				
<i>Asparagus asparagoides</i>	*			
<i>Austrodanthonia tenuior</i>				
<i>Austrostipa pubescens</i>				
<i>Axonopus affinis</i>	*			
<i>Bidens pilosa</i>	*			
<i>Bothriochloa decipiens</i>				
<i>Brunoniella australis</i>				
<i>Bursaria spinosa</i>				
<i>Calotis dentex</i>				
<i>Carex inversa</i>				
<i>Cheilanthes sieberi</i>				
<i>Chenopodium album</i>	*			
<i>Chloris ventricosa</i>				
<i>Cirsium vulgare</i>	*			
<i>Crassula sieberiana</i>				
<i>Cymbonotus lawsonianus</i>				
<i>Cymbopogon refractus</i>				
<i>Cynodon dactylon</i>	*			
<i>Cyperus gracilis</i>				
<i>Dichondra repens</i>				
<i>Digitaria parviflora</i>				
<i>Ehrharta erecta</i>	*			

<i>This document UNCONTROLLED once printed</i>				Page 66 of 77
Document ID	APNMP0115	Version	1.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



Species	Introduced	BC Act	EPBC Act	ROTAP
<i>Einadia hastata</i>				
<i>Einadia polygonoides</i>				
<i>Eragrostis brownii</i>				
<i>Eragrostis curvula</i>	*			
<i>Eragrostis leptostachys</i>				
<i>Eucalyptus crebra</i>				
<i>Eucalyptus eugenioides</i>				
<i>Eucalyptus moluccana</i>				
<i>Eucalyptus punctata</i>				
<i>Eucalyptus tereticornis</i>				
<i>Exocarpus cupressiformis</i>				
<i>Gahnia radula</i>				
<i>Glycine clandestina</i>				
<i>Glycine tabacina</i>				
<i>Gnaphalium</i> sp ²² .	*			
<i>Hybanthus monopetalus</i>				
<i>Hypochaeris radicata</i>	*			
<i>Juncus continuus</i>				
<i>Juncus usitatus</i>				
<i>Lepidium bonariense</i>	*			
<i>Lissanthe strigosa</i> ssp. <i>strigosa</i>				
<i>Lomandra filiformis</i> ssp. <i>filiformis</i>				
<i>Lomandra multiflora</i>				
<i>Lycium ferrocissimum</i>	*			
<i>Malva parviflora</i>	*			
<i>Microlaena stipoides</i>				
<i>Modiola caroliniana</i>	*			
<i>Myrsiphyllum asparagoides</i>	*			

²² As referenced in Niche (2010). Noted that it may have been *Euchiton sphaericus*, which is native and appears very similar to non-flowering *Gnaphalium* species

<i>This document UNCONTROLLED once printed</i>				Page 67 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



Species	Introduced	BC Act	EPBC Act	ROTAP
<i>Nyssanthes diffusa</i>				
<i>Olea europaea ssp. africanus</i>	*			
<i>Olearia viscidula</i>				
<i>Opuntia sp.</i>				
<i>Oxalis perennans</i>				
<i>Ozothamnus diosmifolium</i>				
<i>Paronychia brasiliensis</i>	*			
<i>Paspalum dilatatum</i>	*			
<i>Pennisetum clandestinum</i>	*			
<i>Persicaria decipiens</i>				
<i>Phytolacca octandra</i>	*			
<i>Plantago lanceolata</i>	*			
<i>Podolobium ilicifolium</i>				
<i>Pomax umbellata</i>				
<i>Romulea rosea var. australis</i>	*			
<i>Rumex crispus</i>				
<i>Senecio madagascariensis</i>	*			
<i>Setaria pumila</i>	*			
<i>Sida rhombifolia</i>	*			
<i>Solanum linnaeanum</i>	*			
<i>Solanum prinophyllum</i>				
<i>Solanum pseudocapsicum</i>	*			
<i>Sporobolus indicus</i>	*			
<i>Sporobolus virginicus</i>				
<i>Themeda australis</i>				
<i>Trifolium repens</i>	*			
<i>Verbena bonariensis</i>	*			
<i>Verbena officinalis</i>	*			
<i>Veronica plebeia</i>				
<i>Vittadinia cuneata</i>				
<i>Wahlenbergia communis</i>				

<i>This document UNCONTROLLED once printed</i>				Page 68 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



Appendix 6: Fauna Recorded in VS6 Study Area

Scientific Name	Common Name	Observation Type
Native Birds		
<i>Egretta novaehollandiae</i>	White-faced Heron	O
<i>Anas superciliosa</i>	Black Duck	O
<i>Acridotheres tristis*</i>	Common Myna	O
<i>Platycercus eximius</i>	Eastern Rosella	O
<i>Trichoglossus haematodus</i>	Rainbow Lorikeet	O
<i>Pardalotus quadragintus</i>	Spotted Pardalote	O
<i>Cracticus torquatus</i>	Grey Butcherbird	H
<i>Strepera graculina</i>	Pied Currawong	H
<i>Cacatua galerita</i>	Sulphur-crested Cockatoo	H
<i>Grallina cyanoleuca</i>	Magpie-lark	H
<i>Rhipidura fuliginosa</i>	Grey Fantail	H
<i>Dacelo novaeguineae</i>	Laughing Kookaburra	H
<i>Manorina melanocephala</i>	Noisy Miner	OH
<i>Manorina melanophrys</i>	Bell Miner	H
Native Mammals		
<i>Phascolarctus cinereus</i>	Koala	I

<i>This document UNCONTROLLED once printed</i>				Page 69 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



Appendix 7: Credit Retirement Report – Appin East Mine Safety Gas Project

Credit(s) retirement report



Credit owner ID - 272

matched 8 records

Credit owner(s): Endeavour Coal Pty Ltd

Ecosystem credits

Agreement ID	Credit ID	Vegetation Code	CMA subregion	Surrounding vegetation	Patch size	Vegetation formation	Credit Status	Available Credits	Number to retire
215	2,260	HN528	Cumberland - Hawkesbury/Nepean	>70%	>100 ha	GRW	Issued	58	4
215	2,258	HN531	Cumberland - Hawkesbury/Nepean	>70%	>100 ha	DSG	Issued	177	
215	2,255	HN556	Cumberland - Hawkesbury/Nepean	>70%	>100 ha	DSG	Issued	741	
215	2,257	HN556	Cumberland - Hawkesbury/Nepean	>70%	>100 ha	DSG	Issued	5	
215	2,259	HN607	Cumberland - Hawkesbury/Nepean	>70%	>100 ha	FRW	Issued	12	

<i>This document UNCONTROLLED once printed</i>				Page 70 of 77
Document ID	APNMP0115	Version	1.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



Species credits

Agreement ID	Credit ID	Scientific name	Common name	Credit status	Available Credits	Number to retire
215	455	<i>Epacris purpurascens subsp. purpurascens</i>	Epacris purpurascens subsp. purpurascens	Issued	47,775	<input type="text"/>
215	457	<i>Grevillea parviflora subsp. parviflora</i>	Small-flower Grevillea	Issued	2,904	<input type="text"/>
215	459	<i>Phascolarctos ornatus</i>	Koala	Issued	317	<input type="text"/>

Note: Details on sensitive species covered by Department of Environment & Climate Change's (DECC) Threatened Species Information Disclosure Policy will not be included within the biobanking agreement available from the public register. Credit details relating to these species are provided without links to the biobanking agreement.

<i>This document UNCONTROLLED once printed</i>				Page 71 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



Appendix 8: Biodiversity Conservation Fund Payment – AMVA Project



Statement confirming payment into the Biodiversity Conservation Fund for an offset obligation

Pursuant to section 6.33 of the *Biodiversity Conservation Act 2016*, the NSW Biodiversity Conservation Trust confirms that the following payments have been made into the Biodiversity Conservation Fund under section 6.30(1) of the Act to satisfy an obligation to retire biodiversity credits.

Payment made by		Illawarra Coal Holdings Pty Ltd			
Date received		27 October 2022			
NSW statutory obligation reference ¹		08_0150			
Commonwealth EPBC Act controlled action reference (if applicable) ²		N/A			
BCT Reference		BCF450			
Biodiversity credit retirement obligations satisfied by payment to the Biodiversity Conservation Fund:					
Biodiversity credit type (Credit ID and name)	Offset trading group	EPBC Act Controlled Action offset obligation (Y / N)	Number of credits	Cost per credit (Exc. GST)	Total payment per credit type (Exc. GST)
849 - Cumberland shale plains woodland	Cumberland Plain Woodland in the Sydney Basin Bioregion	N	2	██████	██████
Total (Exc. GST)					██████
GST					██████
Total (Inc. GST)					██████

Emily McCosker 3/11/2022
Director Strategy & Finance

¹ This refers to either: a development application number for a development consent under Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act), a State significant infrastructure approval under the previous Part 5.1 (now Part 5, Division 5.2) of the EP&A Act, a decision of a determining authority to carry out or approve the carrying out of an activity under Part 5 of the EP&A Act, or a biobank statement number or biodiversity certification number.

² This refers to a controlled action under the Commonwealth *Environmental Protection and Biodiversity Conservation Act 1999* for which a biodiversity offset obligation has been met through payment into the BCF.

NSW Biodiversity Conservation Trust
Postal address: Locked Bag 5022, Parramatta NSW 2124 | ABN 37 151 321 702 | bct.nsw.gov.au

<i>This document UNCONTROLLED once printed</i>				Page 72 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



Appendix 9: Revision History

Biodiversity Management Plan Version History

Version	Description of Changes	Date
Draft	Draft document for internal review	December 2016
P0	Document for agency review	January 2017
P1	Addition of Attachment 3 and 4	March 2019
P2	Addition of Attachment 5	October 2019

Appin VS#6 Biodiversity Management Plan Version History

Version	Description of Changes	Date
P0	New Document	21 April 2011
P1	Issue for Comment	9 May 2011
P2	Issue for Approval	10 May 2011
P3	Final BMP	11 May 2011
P4	Final MBP – Additional Information on <i>Pimelea spicata</i>	27 July 2011
P5	Update to address BSO Mod 2 Condition and administrative changes	30 January 2017
P6	Review	March 2019

Appin East Mine Safety Gas Project Biodiversity Management Plan Version History

Version	Description of Changes	Date
P0	New Document for review	24 January 2017
P1	Addition of Table of responsibilities (Table 2)	6 December 2017
P2	Review	25 March 2019

Appin West Surface Water Tanks Biodiversity Management Plan Version History

Version	Description of Changes	Date
P0	New Document	March 2019

Brennans Creek Dam Water Pipeline Biodiversity Management Plan Version History

Version	Description of Changes	Date
P0	New Document	March 2019

Appin West Turning Circle Biodiversity Management Plan Version History

Version	Description of Changes	Date
P0	New Document	October 2019

<i>This document UNCONTROLLED once printed</i>				Page 73 of 77
Document ID	APNMP0115	Version	2.0	
Last Date Updated	December 2022	Next Review Date	December 2025	



Appendix 10: Agency Consultation

Agency Comments	IMC Response			
Biodiversity and Conservation Division				
<u>Response received 22 January 2021</u>				
<p>The BMP has been reviewed with reference to the Biodiversity Offset Strategy and the on-site offset at Ventilation Shaft 6 (VS6), Douglas Park. As noted in previous Departmental correspondence on the offset for the loss of 8.7 ha of Cumberland Plain Woodland for the construction of VS6, the preference was for an in-perpetuity mechanism (such as a Conservation Agreement or purchase of credits) rather than a s88B instrument. This was to ensure in-perpetuity funding for management to ensure the long-term viability of the offset site. The documentation provided does not demonstrate how the secured onsite offset via s88B instrument, will be managed and funded in-perpetuity. It is noted that the site will require ongoing weed control of primarily African Olive which is expensive and time consuming and without this work the area set into offset is unlikely to be viable long-term.</p>	<p>Noted.</p> <p>Weed control in the offset area is continuing. Monitoring undertaken in 2020 identified the requirement for African Olive woody weed control.</p>			
<p>For your information, the Division is undertaking fire management research in partnership with Hawkesbury Institute for the Environment (HIE) at Western Sydney University at Scheyville National Park. This work is investigating what is an appropriate fire management regime and is looking at more dynamic and responsive fire regime in which a minimum and maximum rotation (using environmental triggers) would be better and more likely to get the desired environmental outcomes. It is recommended that you liaise with Greg Steenbeeke in our team to develop a revised fire management strategy for the sites.</p>	<p>Noted. Contact will be made with Greg Steenbeeke.</p>			
<p>Please also find attached some more editorial comments on the BMP for consideration prior to finalisation of the BMP.</p>	<p>Editorial comments were addressed in the document.</p>			
Department of Agriculture, Water and Environment				
<u>Response received 25 November 2020</u>				
<p>The plan has been reviewed against the conditions attached to EPBC approval 2010/5722, there were no comments or concerns against this version of the plan.</p>	<p>Noted</p>			
<i>This document UNCONTROLLED once printed</i>				
Document ID	APNMP0115	Version	1.0	Page 74 of 77
Last Date Updated	December 2022	Next Review Date	December 2025	



Department of Planning, Industry and Environment

Response received 12 February 2021

The Department has carefully reviewed the document and is satisfied that it addresses the conditions of the approval.

Noted

This document UNCONTROLLED once printed

Document ID	APNMP0115	Version	2.0	Page 75 of 77
Last Date Updated	December 2022	Next Review Date	December 2025	



Appendix 11: Management Plan Approval - DPE

Department of Planning and Environment



Our ref: MP08_0150-PA-77

Chris Schultz
Superintendent Environment
Illawarra Coal Holdings Pty Ltd
Via: NSW Major Project Portal

20/01/2023

Subject: Appin Mine Biodiversity Management Plan

Dear Mr Schultz

I refer to the Appin Mine Biodiversity Management Plan which was submitted in accordance with Condition 36 of Schedule 4 of the consent for the Bulli Seam Operations (08_0150).

The Department has carefully reviewed the document and is satisfied that it addresses the conditions of the consent.

Accordingly, as nominee of the Planning Secretary, I approve the Biodiversity Management Plan (version 2.0 dated December 2022).

You are reminded that if there are any inconsistencies between the Biodiversity Management Plan and the conditions of consent, the conditions prevail.

Please ensure you make the document publicly available on the project website at the earliest convenience.

If you wish to discuss the matter further, please contact Gabrielle Allan on 02 9585 6078.

Yours sincerely

Jessie Evans
Director, Resource Assessments
Resource Assessments

As nominee of the Planning Secretary

<i>This document UNCONTROLLED once printed</i>			
Document ID	APNMP0115	Version	2.0
Last Date Updated	December 2022	Next Review Date	December 2025

Page 76 of 77



Appendix 12: Management Plan Approval - DAWE



Australian Government

Department of Agriculture, Water and the Environment

Mr Chris Shultz
Superintendent Environment
Illawarra Metallurgical Coal
Enterprise 1 Building, level 3 Squires Way
North Wollongong, NSW 2500

Appin Mine Ventilation Shaft No. 6 Project, Douglas Park, NSW (EPBC 2010/5722) – Revised Biodiversity Management Plan

Dear Mr Shultz,

Thank you for submitting the revised biodiversity management plan for approval in accordance with Condition 4 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) approval for EPBC 2010/5722.

Officers of the Department have advised me on the revised plan, including amendments to the approved plan, and on the requirements of the EPBC Act conditions of approval for the above project. On this basis, and as a delegate of the Minister for the Environment, I have decided to approve the *Appin Mine Biodiversity Management Plan*, Version 1.0, dated January 2021. The approved plan must now be implemented.

The Department has an active compliance monitoring program which includes monitoring inspections, desk top document reviews and audits. Please ensure that you maintain accurate records of all activities associated with, or relevant to, the conditions of approval including the implementation and revision of management plans, so that they may be made available to the Department on request.

Should you require any further information please contact Thomas Smith directly on 02 6274 2168 or by postapproval@awe.gov.au.

Yours sincerely

Vaughn Cox, Director (A/g), Post Approvals,
Assessments (Vic, Tas) and Post Approvals Branch,
Environment Approvals Division

16 February 2021

<i>This document UNCONTROLLED once printed</i>				
Document ID	APNMP0115	Version	2.0	Page 77 of 77
Last Date Updated	December 2022	Next Review Date	December 2025	