



Biodiversity Management Plan

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Name	Position	Company/Site	Exp (yrs)	Revision
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Document Revisions


Revision	Description of Changes	Date
1.0	New document incorporating previous Attachments and new document number. Incorporates comments from regulatory agencies as provided. <u>Approved:</u> <ul style="list-style-type: none"> Department – 12/02/2021 DAWE – 16/02/2021 	January 2021
2.0	Updated following approval of MOD 3. <u>Approved:</u> <ul style="list-style-type: none"> Department – 20/01/2023 	December 2022
3.0	Administrative changes. Update references from South32 to GM ³ , update of links. Remove South32 logos. General update for currency. Removal of Section 11: Other Projects as no longer relevant. Inclusion of response to comments by regulatory agencies. <u>Approved:</u> <ul style="list-style-type: none"> Department – 23/05/2025 DCCEEW – 21/05/2025 (refer to Appendix 9) 	May 2025

Declaration

EPBC No.	2010/5350
Project Name:	Bulli Seam Operations Expansion (2010/5350)
Proponent:	Illawarra Coal Holdings Pty Ltd
ABN:	69 093 857 286
Approved action:	<u>Bulli Seam Operations Expansion</u> To expand underground mining operations at the existing Appin coal mine and West Cliff Colliery. The proposal is to develop several new underground longwall mining areas, and upgrade the existing West Cliff Washery, including the creation of a new coal wash emplacement (as described in the request to vary proposal to take an action received on 22 December 2011
Location of the Action:	Appin, NSW
Date of preparation of management plan:	May 2025

Declaration of accuracy

In making this declaration, I am aware that section 491 of the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (*EPBC Act*) makes it an offence in certain circumstances to knowingly provide false or misleading information or documents to specified persons who are known to be performing a duty or carrying out a function under the *EPBC Act* or the *Environment Protection and Biodiversity Conservation Regulations 2000* (Cth). The offence is punishable on conviction by imprisonment or a fine, or both. I am authorised to bind the approval holder to this declaration and that I have no knowledge of that authorisation being revoked at the time of making this declaration.

Signed: 

Full name: Chris Schultz

Organisation: Illawarra Coal Holdings Pty Ltd

Date: 2 May 2025

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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 Gear M Illawarra Met Coal Pty Ltd.

Appin Mine, Cordeaux Colliery and Dendrobium Mine (and associated facilities) are collectively operated by GM³.

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 (7) days per week.

The Environment Protection and Biodiversity Conservation (EPBC) Approval 2010/5722 (the EPBC Approval) 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 shaft⁵, 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 the EPBC Approval for a Vegetation Management Plan (VMP)⁶ for Ventilation Shaft 6.

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 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;

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 The Department.

³ As modified.

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

⁵ Ventilation Shaft 6, located to the east of the town of Douglas Park.

⁶ The requirements for the VMP as required by the EPBC Approval are covered in Section 7.

- 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).

ICHPL 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 the CWEA are covered in the Coal Wash Emplacement Area Management Plan.

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

ICHPL 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 3.0 review of the BMP with the Department, Biodiversity Conservation and Science Group of NSW Department of Climate Change, Energy, the Environment and Water (BCS) and the Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEE). The comments from the consultation process are incorporated into Version 3.0 of the BMP.

Appendix 9 outlines comments from the relevant government agencies following consultation and the ICHPL 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 the Department or DCCEE. Administrative 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 Principal Approvals	<ul style="list-style-type: none"> Implement and periodically review the BMP. Liaise with government regulators and ICHPL senior leadership team in relation to any non-compliances with the BMP.
Specialist Environment	<ul style="list-style-type: none"> Advise, coach and mentor ICHPL operations with respect to meeting the standards and requirements of the BMP. Monitor and review compliance against these requirements. Undertake monitoring as required. Coordinate contractors to undertake maintenance work and ecological assessments. Approve and verify compliance with Permits to Disturb.
Coordinator Land and Infrastructure	<ul style="list-style-type: none"> Review of grazing licensees Maintenance of fencing
Ecologist or wildlife specialist	<ul style="list-style-type: none"> Undertake ecological assessments as required.

Site personnel will undertake the following training in environmental management and responsibilities:

- All site personnel will undertake the general induction.
- Personnel working at Appin Mine will undertake a site familiarisation, including emergency response procedures.
- Surface personnel will undertake the on-line Environmental Awareness Training.

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*.

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 GM³ website: [link](#).

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 2016 (BC Act);*
- *EPBC Act 1999;*
- *EP&A Act 1979;*
- *Local Land Services Act, 2013;*
- *Mining Regulation 2016;*
- *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;
- GM³ Sustainability Policy.

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,</p>

	predation and competition by a variety of introduced plants and animals and the clearing of native vegetation.
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 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.

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 (7) flora species listed as threatened under the then *Threatened Species and Conservation Act (TSC Act)* (now *BC Act*), including five (5) 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*

⁷ As defined by the Scientific Committee, established by the *TSC Act*: [link](#)

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 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 (7) 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 (Resource Strategies, 2009) (available [here](#)) or Appendix E of the EA (Bower, C. 2009) (available [here](#)).

5.2 AMVA Project

Two (2) 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 under 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.

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 *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).

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 avoid exceedance of vegetation clearing limits.

⁸ The community has been listed as Critically Endangered since 2014 in the *TSC/BC 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.

Vegetation clearance will not take place in upland swamps, except for very minor disturbance associated with environmental monitoring or mitigation purposes.¹⁰

6.3 Management Actions

The following management measures will be undertaken where required prior to, during and following¹¹ 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 to 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.
- Demarcating areas, or utilising natural barriers (e.g. road ways, fence boundaries) to prevent vegetation disturbance outside of the approved disturbance area.
- Utilising existing fire trails or tracks where possible.
- Lopping of branches, rather than the removal of trees, where this will not cause tree instability.
- 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).
- Limiting the amount of soil disturbance to the minimum required for moving, placing and operating equipment, and for maintaining access to equipment. If soil disturbance occurs, an adequate sediment and erosion control plan will be utilised to minimise impact to nearby sensitive receptors.
- Implementing measures to encourage natural regeneration, for example, placing stockpiled seed-bearing vegetative material over cleared areas.
- Implementing rehabilitation measures including weed control, planting of tube stock or hand seeding 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.

¹⁰ Page 5-108 of EA.

¹¹ As applicable.

- Implementing buffer zones around any plants within an identified exclusion zone (e.g. two (2) 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 by a professional ecologist 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).

Fauna habitat has been installed in the Appin North rehabilitation areas, including bee habitat (encouraging pollinating species of *Persoonia hirsuta*), nest boxes (for birds and mammals) and artificial rock habitat (for the Broad-headed Snake). The use of these installations is monitored on an annual basis to assess the success of these programs. Mulched woody debris and logs are spread in the topsoil as the last process prior to seeding. While not an artificial habitat, it provides potential habitat for species such as the Cumberland Plain Woodland Snail.

Any regeneration/planting of species native to Cumberland Plain Woodland should support enough genetic diversity to promote breeding and recruitment of new individuals.

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:

- installation of fencing to isolate vegetation from cattle grazing and security breaches;
- engagement of a bushland restoration consultant to implement a regular weed management program and monitoring of security, livestock incursions and general condition;
- detailed annual vegetation monitoring and five (5) yearly population monitoring of *Pimelea spicata* 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. 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) ¹²	Study Area (ha)	Impact (ha)	TEC	TEC in Study Area	% of TEC impacted
Shale Plains Woodland	12.15	3.1	CPW (critically endangered in both <i>BC Act</i> and <i>EPBC Act</i>)	41.18	8.6%
Shale Hills Woodland	29.03	0.4			
Alluvial Woodland	6.95	0	River Flat Eucalypt Forest on coastal floodplains (<i>BC Act</i> and <i>EPBC Act</i> ¹³)	6.95	0
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
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 (5) 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 2017.¹⁴

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 under 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 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.

¹² Mapping utilised at time of initial assessment in 2010.

¹³ 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*.

¹⁴ A new industry standard was developed in association with the *BC Act* in 2017.

Fifteen (15) 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 area¹⁵ 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 (9) have equivalent listings on the *EPBC Act*.

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.

¹⁵ One (1) 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.

Fire intervals that are too short are likely to threaten the population of *P. spicata*, and therefore fire intervals of less than ten (10) years will be avoided where possible for the management of *P. spicata* areas.¹⁶

These threats are addressed in the risk assessment in Table 3.

¹⁶ Fire intervals will be periodically reviewed based on monitoring results and review of available research.

Table 3: Risk Assessment

Risk Description	Likelihood	Consequence	Risk	Measures and commitments to minimise risk	Performance objectives and monitoring programs	Trigger values for additional action, review and reporting
Unauthorised clearing/disturbance of <i>P. spicata</i>	Unlikely	Major	Medium	Offset areas are fenced. Fencing is maintained. Permit to Disturb process in place. Regular site visits undertaken.	<u>Performance objective</u> No unauthorised clearing of <i>P. spicata</i> to occur. <u>Monitoring Program</u> Monitoring will be undertaken as described in Section 7.3.5.	Observation of unauthorised clearing of <i>P. spicata</i> in MZ5 and MZ6. Damage to fences around MZ5 and MZ6.
Grazing of <i>P. spicata</i> by domestic animals.	Possible	Moderate	Medium	Offset areas are fenced. Fencing maintained. Regular site visits/inspections undertaken.	<u>Performance objective</u> No grazing of <i>P. spicata</i> to occur. <u>Monitoring Program</u> Monitoring will be undertaken as described in Section 7.3.5.	Observation of grazing impacts to <i>P. spicata</i> in MZ5 and MZ6. Damage to fences around MZ5 and MZ6.
Invasion of weeds into MZ5 and MZ6.	Likely	Moderate	High	Weed management program in place. Weed management works to be supervised by suitably qualified bush regenerator. Regular site visits undertaken.	<u>Performance objective</u> Exotic weeds cover to be less than 20%. <u>Monitoring Program</u> Monitoring will be undertaken as described in Section 7.3.5.	Exotic weed cover greater than 15% in MZ5 and MZ6.
Fire intervals too short or too long/wildfire.	Unlikely	Major	High	Fire intervals will be periodically reviewed based on monitoring results and review of available research.	<u>Performance objective</u> Fire interval to be optimised to promote population health. <u>Monitoring Program</u> Monitoring will be undertaken as described in Section 7.3.5.	Refer to Table 43: <i>Pimelea spicata</i> Trigger Action Response Table.

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 (3) 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 (2) 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 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 ten (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, fans and associated infrastructure, including but not limited to methane abatement), 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 (5) 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;¹⁷
 - 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 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, ICHPL 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 (2) 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.

¹⁷ Area may be used for future gas abatement projects.

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

Historically, the fixed plot vegetation monitoring has used the BioBanking plot methodology. However, in 2017 the Biodiversity Assessment Method (BAM) plots replaced BioBanking plots as the standard method of collecting attribute data. As such, BAM plots have been utilised since 2017 instead of BioBanking plots to determine an appropriate offset ratio for the vegetation within MZ5 and MZ6.

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 recording of hollow bearing trees/limbs and ground fauna habitat such as logs. The previous application of BioBanking plot methodology at fixed locations within 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 (5) fixed BAM Plots within MZ5 and five (5) fixed BAM plots within MZ6 are monitored annually.

7.3.5.2 *Pimelea spicata* Population Monitoring

Based on the population dynamics described in Section 1.1.1 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.

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 ten (10) year intervals will not be implemented.

The population of *P. spicata* within MZ5 is monitored in two (2) 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 (5) years. The last census was conducted in 2021¹⁸ and the next census is due in 2026.

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 (1) 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.

¹⁸ Census also undertaken in 2017.

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 (1) or more of the fixed plots. Where practical, each recorded plant within the plots is flagged using a fireproof metal tag and its location within the plot recorded using accurate GPS equipment. Any new *P. spicata* seedling will be flagged and counted. The presence of flowers and/or fruits will be recorded.

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 43 summarises the proposed monitoring, triggers and response actions.

Table 4: *Pimelea spicata* Trigger Action Response Table

Aspect	Trigger	Response
Annual count	<ul style="list-style-type: none"> • >20% decline from one year to the next in population across BAM plots 	<ul style="list-style-type: none"> • Undertake full scale census.
Five (5) yearly population census (or census triggered following an annual count with >20% decline)	<ul style="list-style-type: none"> • >35% decline in population from preceding census; or • Two (2) consecutive (over two census’) declines of >20%; or • Area of occupancy is mapped to decrease to 50% or lower than originally mapped. 	<ul style="list-style-type: none"> • Stop regeneration works. • Consult with experts (e.g. Mt Annan Botanic Gardens). • Implement actions as recommended by experts. • Additional actions may include: <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	<ul style="list-style-type: none"> • Wildfire or other environmental disturbance 	<ul style="list-style-type: none"> • Undertake a population census immediately after the event, and again at 12 and 24 months post disturbance¹⁹.

¹⁹ 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 (5) yearly monitoring programs shall commence again from that point.

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 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 and MZ6 is undertaken annually.

A total of five (5) fixed photo point locations (coinciding with the fixed BAM plot locations) are sited within each zone (MZ5 and MZ6). An additional five (5) 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 MZ5 and MZ6 is mapped annually using handheld GPS and aerial imagery interpretation. 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 as required).

7.4 VS6 Biodiversity Offset Strategy

The BOS was approved by DSEWPaC on 12 July 2011. In December 2016 the BOS was revised to reflect securing the Offset Area in perpetuity and to reference the relevant Department 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 the Department on 20 November 2020.²⁰

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 GM³ website at: [link](#).

²⁰ The BOS was updated in February 2025 to reflect administrative changes. Reapproval of the document was not sought at this time as noted in Section 2.3 of the BOS.

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 two (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 ICHPL 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

ICHPL had ongoing consultation with the Department and the then OEH (now BCS) 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. ICHPL 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 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 has resulted 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.

A Construction Environmental Management Plan (CEMP) has been prepared for construction at the AMVA Project site 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 of the Project Approval and Clause 10 of Schedule 8a of the *Mining Regulation 2016*. The RMP provides details of programs to monitor the effectiveness of the management actions as outlined in 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. The RMP is available on the GM³ website [here](#).

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 of the Project Approval. Details are provided in Appendix 8. The statement

was issued on 3 November 2022, which was within the six (6) month period since the commencement of Early Works²¹.

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;
- external perimeter of the noise attenuation bund; and
- 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, ICHPL will consider the Wollondilly Development Control Plan, particularly Part 11.2, Recommended Species (for landscaping). ICHPL have engaged a bush regeneration expert to plan the screening program.

10 Offset Areas

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

- 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).
- 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 RMP.

²¹ As defined in the Project Approval.

11 Complaints and Non-compliance Management

11.1 Complaints and Dispute Resolution

ICHPL has a 24 hour, free community call line (1800 102 210) and email address (community@gm3.au) which is displayed at ICHPL 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 ICHPL's operations.

Community complaints and enquiries may also be received in person by any employee of GM³, with details to be immediately shared with the relevant operations personnel for investigation. All biodiversity related complaints received in relation to Appin Mine will be managed in accordance with the Community Complaints Procedure.

Upon receipt of a community complaint, preliminary investigations will commence as soon as practicable to determine the likely cause of the complaint. The complainant will receive an acknowledgement of their complaint within 24-hours of its submission. A follow up response will be provided as soon as practicable after a detailed investigation has been completed.

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 GM³ website at: [link](#).

11.2 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 ICHPL 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;
- recording of the event, non-conformance and/or non-compliance in the event management system;
- 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; 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 12.2.

The Emergency Response Control Plan (APNMP0005) will be activated in an emergency. The plan includes contact details and duty cards for site personnel.

The Pollution Incident Response Management Plan (PIRMP), available on the GM³ website [here](#), will be activated where a pollution incident occurs that causes or threatens material harm to the environment. The PIRMP includes internal and external contact details.

Any environmental incidents are required to be notified to the site Specialist Environment.

11.3 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, ICHPL 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 the Department describing these options and any preferred remediation measures or other course of action; and
- c) implement remediation measures as directed by the Planning Secretary.

12 Reporting and Review

12.1 Reporting

12.1.1 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 GM³ 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.

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

12.1.2 Annual Rehabilitation Report

ICHPL submits an Annual Rehabilitation Report to the Resources Regulator in accordance with Condition 13(2) of Schedule 8a of the *Mining Regulation 2016*.

The Annual Rehabilitation Report includes:

- a listing of complaints relating to rehabilitation over the reporting period;
- details of stakeholder consultation;
- surface disturbance and rehabilitation activities undertaken during the reporting period;
- disturbance and rehabilitation statistics; and
- rehabilitation monitoring and research findings.

ICHPL publishes the Annual Rehabilitation Report on the GM³ website.

12.2 Incident and Non-compliance Notifications

12.2.1 Notification of Incidents – Government Agencies

In accordance with Condition 7 of Schedule 6 of the Project Approval, the Planning Secretary is to be notified via the Major Projects portal within 24 hours after becoming aware of an biodiversity related incident²². In accordance with Condition 7AA of Schedule 6, a subsequent incident report is to be provided in accordance with the requirements set out in Appendix 7 of the Project Approval within seven (7) days of the initial notification.

Incidents or non-compliances relevant to the EPBC Approval will be reported to DCCEEW.

12.2.2 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-compliance²³.

12.3 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 (3) 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 changes do not constitute a material change.

Where a review triggers a revision of the BMP, the BMP will be revised and submitted to the Department for approval by the Planning Secretary and/or DCCEEW for approval by the Minister. Once approved, the BMP will be uploaded to the GM³ website.

The approved BMP will be implemented.

²² The definition of an incident in the Project Approval is “An occurrence or set of circumstances that causes or threatens to cause material harm to the environment, and as a consequence of that environmental harm, may cause harm to the health and safety of human beings, and which may or may not be or cause a non-compliance”.

²³ A non-compliance that has been notified as an incident does not need to also be notified as a non-compliance.

12.4 Audits

12.4.1 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 (3) 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 Planning Secretary within six (6) 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 DCCEE to satisfy Condition 18 (g).

IEAs have been conducted every three (3) years since 2013, with the last IEA being conducted in 2022, with the next IEA to be conducted in 2025. Recommendations from the IEA will be incorporated into the BMP where appropriate.

The IEA is to be conducted and carried out in accordance with the Department's Independent Audit Post Approval Requirements.

12.4.2 ISO 14001

As part of the ISO 14001 certification, ICHPL 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 (3) years.

Internal Governance Reviews of the BMP are nominally undertaken on a two (2) yearly basis.

13 Acronyms

Term	Definition
BAM	Biodiversity Assessment Method
<i>BC Act</i>	<i>Biodiversity Conservation Act</i>
BCS	Biodiversity Conservation and Science Group of NSW Department of Climate Change, Energy, the Environment and Water
BCD	Brennans Creek Dam
BMP	Biodiversity Management Plan
BOS	Biodiversity Offset Strategy
BSO	Bulli Seam Operations
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
DCCEEW	Commonwealth Department of Climate Change, Energy, Environment and Water, previously: <ul style="list-style-type: none"> • Department of Agriculture, Water and the Environment • Department of the Environment (and Energy) – DotE(E) • Department of Sustainability, Environment, Water, Population and Communities (DSEWPaC)
DEC	Department of Environment and Conservation
Department	Department of Planning, Housing and Infrastructure, previously <ul style="list-style-type: none"> • Department of Planning and Environment (DPE) • Department of Planning, Industry and Environment (DPIE) • Department of Planning (DoP)
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
GM360	Event reporting system
GPS	Global Positioning System
ICHPL	Illawarra Coal Holdings Pty Ltd
IEA	Independent Environmental Audit
KTP	Key Threatening Process
MZ	Management Zone
OEH	Office of Environment and Heritage (now BCS)
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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15 Figures

Figure 1: Location of Ventilation Shaft 6

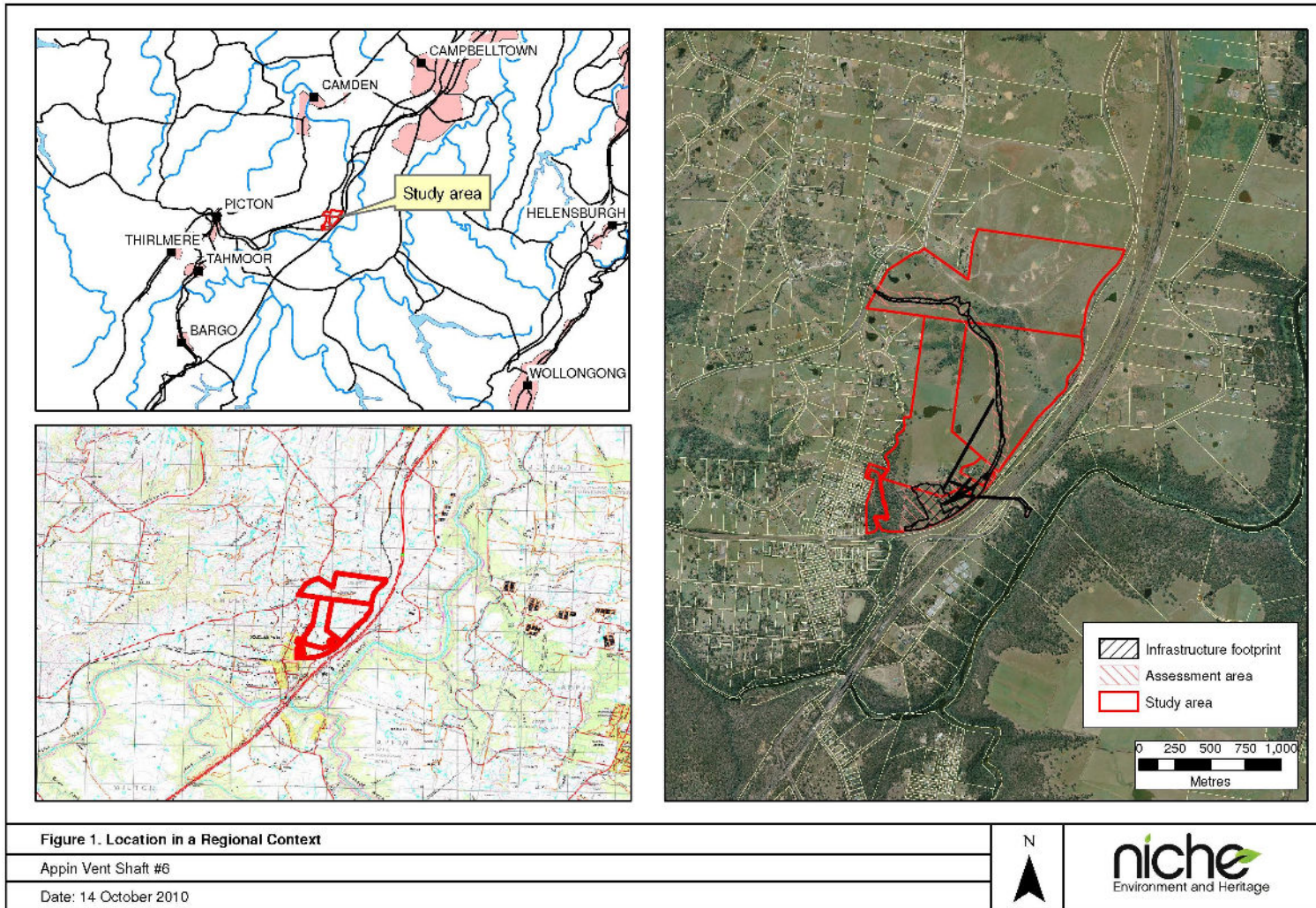


Figure 2: Vegetation Mapping of Ventilation Shaft 6 Study Area

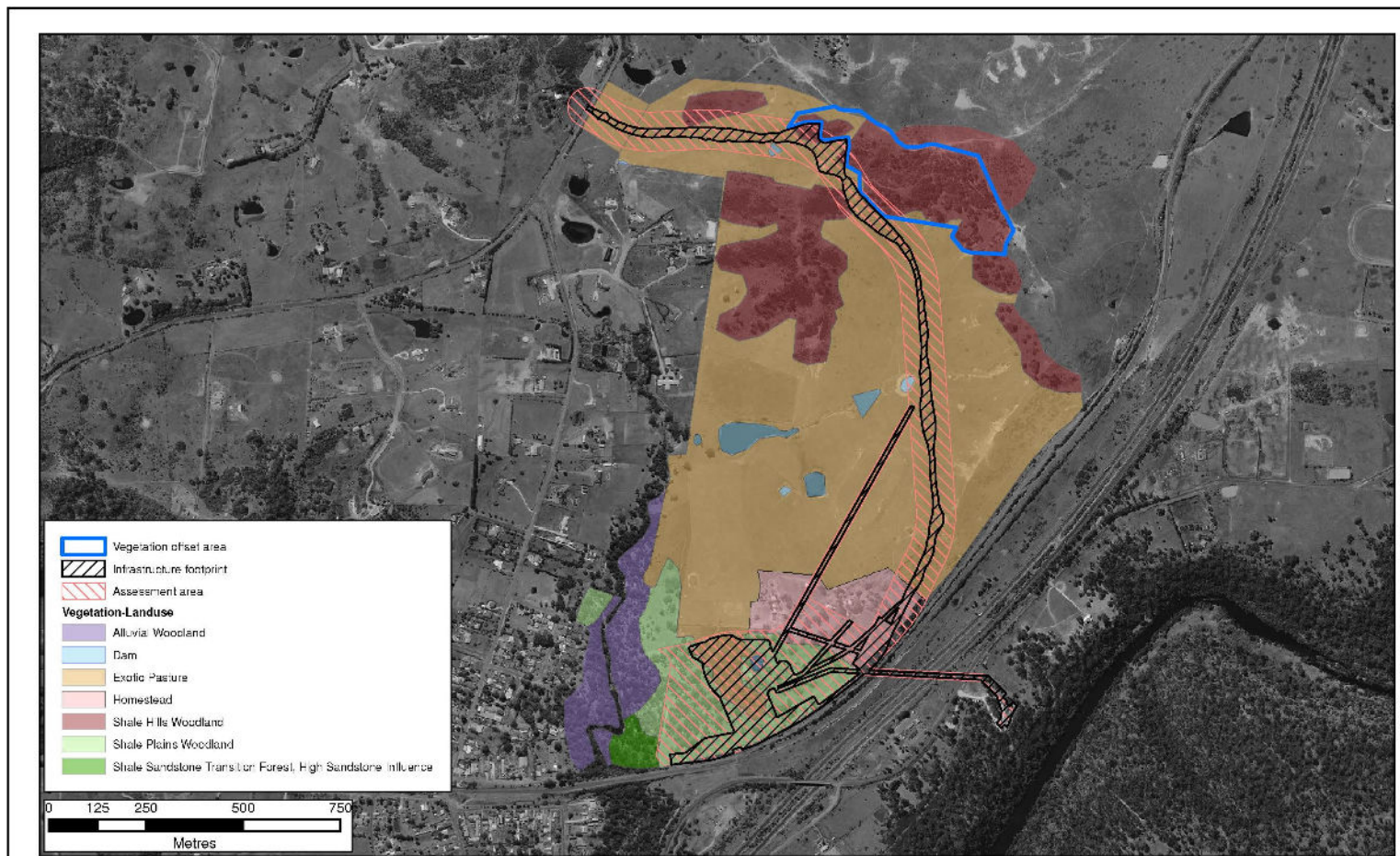


Figure 2. Vegetation mapping of the study area

Appin Vent Shaft #6

Date: 14 October 2010



Figure 3: Vegetation Management Zones in the VS6 Study Area

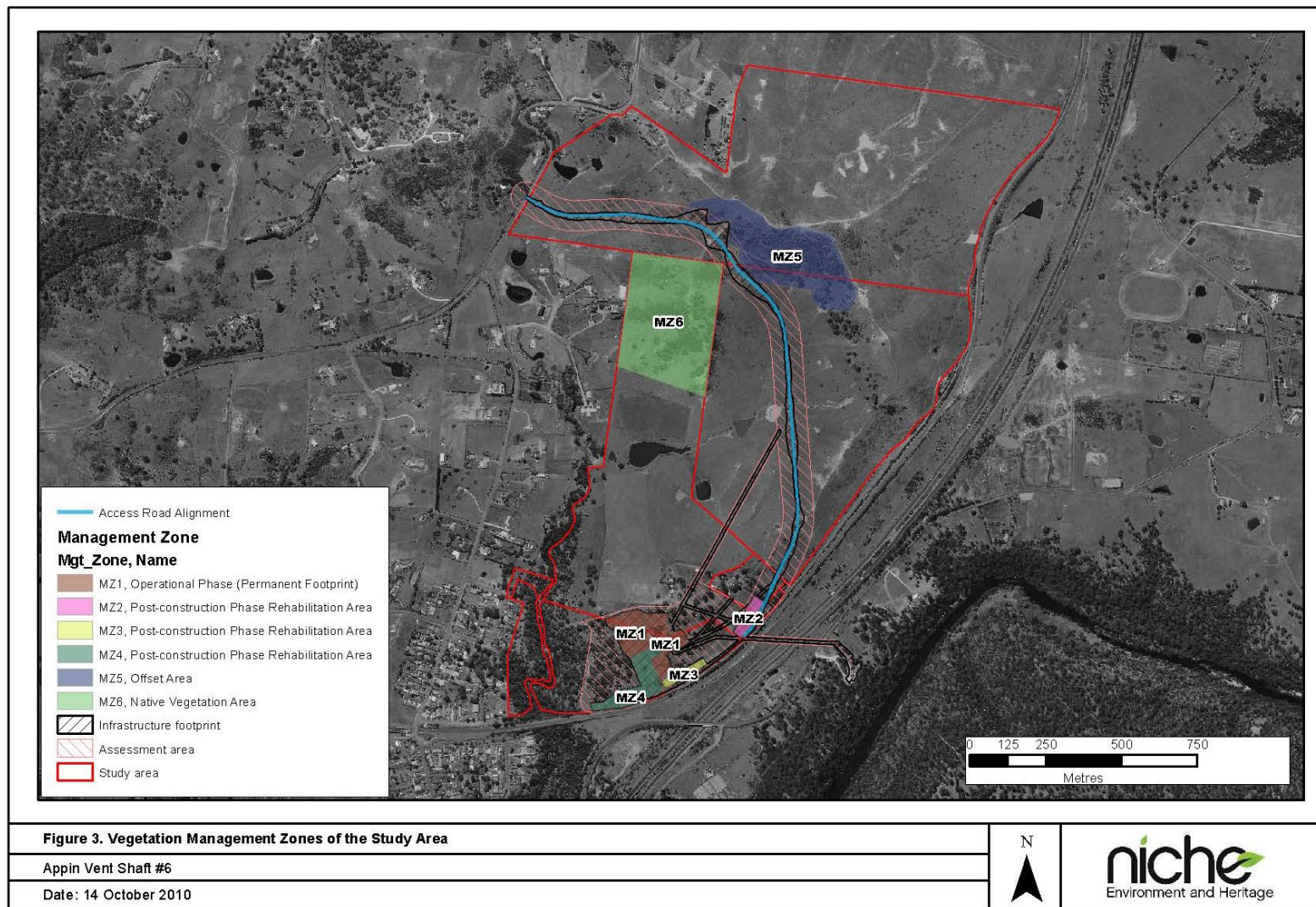


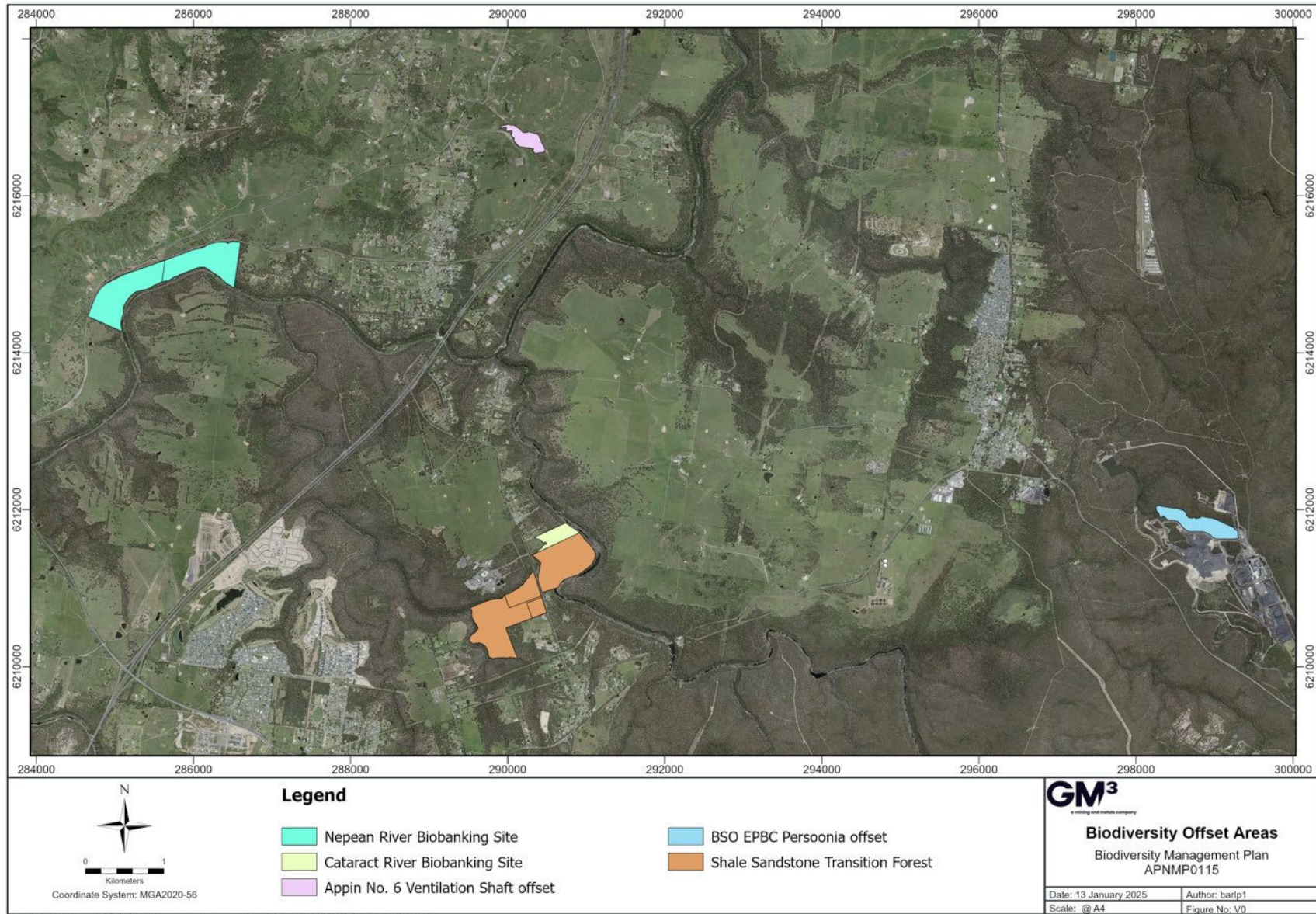
Figure 3. Vegetation Management Zones of the Study Area

Appin Vent Shaft #6

Date: 14 October 2010



Figure 4: Biodiversity Offset Areas – Appin Mine



Path: P:\GIS\Workspace\HSE\BSONMap Documents\Management Plans\Biodiversity_MPP\Y25_Biodiversity_Offset_Areas.aprx

Figure 5: AMVA Project Vegetation Management



16 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 BCS, 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> <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> <p>(a) the details of the proposed offset land;</p> <p>(b) the offset requirements that are being met;</p> <p>(c) the conservation values that have been relied upon to meet the offsetting requirements;</p> <p>(d) that in the opinion of the Planning Secretary:</p>	Section 7.4, 8.3 and 10

	<p>(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</p> <p>(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> <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>(i) include a Biodiversity Management Plan, which has been prepared in consultation with BCS 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; 	<p>Section 1.2</p>
<p>Condition 34 of Schedule 4</p>	<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>	<p>Section 8.3</p>

<p>Condition 35 of Schedule 4</p>	<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> <ul style="list-style-type: none"> (a) be prepared in consultation with BCS and to the satisfaction of the Secretary; (b) incorporate at least 8.7 hectares of existing Cumberland Plain Woodland vegetation; and (c) 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>	<p>Section 7.4</p>
<p>Condition 35A of Schedule 4</p>	<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 in accordance with the Biodiversity Offsets Scheme of the BC Act.</p>	<p>Section 9.3</p>
<p>Condition 36 of Schedule 4</p>	<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> <ul style="list-style-type: none"> (a) be prepared in consultation with BCS, and submitted to the Planning Secretary for approval by 31 January 2017; (b) describe how the implementation of offsets would be integrated with the overall rehabilitation of the site; (c) include: <ul style="list-style-type: none"> (i) a description of the short, medium and long term measures that would be implemented to: <ul style="list-style-type: none"> • implement offset strategy; and • manage the remnant vegetation and habitat on the site and in the offset areas; (ii) detailed performance and completion criteria for the implementation of the offset strategy; (iii) details of vegetation clearing protocols, including procedures to: <ul style="list-style-type: none"> • minimise the amount of the clearing required; 	<p>Section 1.4 and Appendix 9</p> <p>Section 7.4, 8.3 and 10</p> <p>Section 7.4, 8.3, 9.2 and Appendix 3</p> <p>Section 7.4, 8.3, 9.2 and Appendix 3</p> <p>Section 6.3</p>

	<ul style="list-style-type: none"> • 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>(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 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> <p>Section 7.2.4, 7.2.5, 8.3, 9.2 and Appendix 3</p> <p>Section 2</p>
<p>Condition 36A of Schedule 4</p>	<p>The Proponent must implement the Biodiversity Management Plan approved by the Planning Secretary.</p>	<p>Section 12.3</p>
<p>Condition 11 of Schedule 4A</p>	<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>	<p>Section 9.1</p>
<p>Condition 2 of Schedule 6</p>	<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> <ul style="list-style-type: none"> (a) detailed baseline data; (b) a description of: <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; (c) a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria; (d) a program to monitor and report on the: <ul style="list-style-type: none"> • impacts and environmental performance of the project; • effectiveness of any management measures (see c above); (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; (f) a program to investigate and implement ways to improve the environmental performance of the project over time; (g) a protocol for managing and reporting any: <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 5</p> <p>Section 3</p> <p>Section 7.3.5, 8.3, 9.2 and Appendix 3</p> <p>Section 6.3</p> <p>Section 12</p> <p>Section 11.3</p> <p>Section 11.3</p> <p>Section 12.2</p> <p>Section 12.3</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> <ul style="list-style-type: none"> (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; (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: <ul style="list-style-type: none"> • relevant statutory requirements, limits or performance measures/criteria; 	<p>Section 12.1.1</p>

	<ul style="list-style-type: none"> • 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>(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>	
<p>Condition 5 of Schedule 6</p>	<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>	<p>Section 12.3</p>
<p>Condition 7 of Schedule 6</p>	<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>	<p>Section 12.2</p>
<p>Condition 7A of Schedule 6</p>	<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) and what actions have been, or will be, undertaken to address the non-compliance.</p>	<p>Section 12.2</p>

	<i>Note: A non-compliance which has been notified as an incident does not need to also be notified as a noncompliance.</i>	
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 12
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> <ul style="list-style-type: none"> (a) be conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Planning Secretary; (b) include consultation with the relevant agencies; (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); (d) review the adequacy of strategies, plans or programs required under the abovementioned approvals; and (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><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 12.4.1
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 12.4.1
Condition 11 of Schedule 6	<p>Access to Information</p> <p>From 30 June 2012, the Proponent shall:</p> <ul style="list-style-type: none"> (a) make copies of the following publicly available on its website: <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; 	Section 3.1, 11.1 and 12.1

	<ul style="list-style-type: none"> • 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>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>

Appendix 3: Management Actions, Performance Criteria, Corrective Actions and Timeframes – Ventilation Shaft 6

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	Prior to construction for perimeter fencing installation. Weekly monitoring of fence integrity
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
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/noxweed/) 	<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 ICHPL	Annually

Action	Applicable Zones	Description	Performance Target (Milestones)	Corrective Actions	Party Responsible	Timeframes for Targets
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 ICHPL 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
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)						
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

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 using best practice 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 tube stock, or both. Site preparation and revegetation is anticipated to take a suitably qualified team of four approximately one day. Care should be taken to ensure planted grasses support enough genetic diversity so that breeding and 	<ul style="list-style-type: none"> Establishment of native ground cover in these zones through direct seeding and/or tube stock. 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

Action	Applicable Zones	Description	Performance Target (Milestones)	Corrective Actions	Party Responsible	Timeframes for Targets
		recruitment of new individuals from subsequent generations can occur.				
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 tube stock 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
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 	Coordinator Land and Infrastructure	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 ICHPL personnel and contractors will be subject to a site induction. The site induction 	<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

Action	Applicable Zones	Description	Performance Target (Milestones)	Corrective Actions	Party Responsible	Timeframes for Targets
		<p>will include acknowledgment of the BMP and a discussion of the conservation value of aspects of the vegetation on the property.</p> <ul style="list-style-type: none"> 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. 				
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. 	<ul style="list-style-type: none"> N/A 	Superintendent Environment	Upon decommissioning of Shaft Site
Offset 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 	<ul style="list-style-type: none"> Four-strand post-and-wire fence installed, no strands barbed and 400 mm separation 	<ul style="list-style-type: none"> Maintenance of fencing – fencing to be inspected at regular intervals and repairs made as required. 	Specialist Environment / Coordinator Land and Infrastructure	Every 3 months

Action	Applicable Zones	Description	Performance Target (Milestones)	Corrective Actions	Party Responsible	Timeframes for Targets
		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.	from ground to lowest strand.			
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. 	<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 	Specialist Environment / Coordinator Land and Infrastructure	Annually

Action	Applicable Zones	Description	Performance Target (Milestones)	Corrective Actions	Party Responsible	Timeframes for Targets
				appropriately qualified expert.		
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. 	<ul style="list-style-type: none"> See Table 43 	Environment Specialist / Coordinator Land and Infrastructure	Annual and 5 yearly
Native Vegetation Area (MZ6)						
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 	<ul style="list-style-type: none"> Four-strand post-and-wire fence installed, no strands barbed and 400 mm separation 	<ul style="list-style-type: none"> Maintenance of fencing – fencing to be inspected at regular intervals and repairs made as required. 	Environment Specialist / Coordinator Land and Infrastructure	Every 3 months

Action	Applicable Zones	Description	Performance Target (Milestones)	Corrective Actions	Party Responsible	Timeframes for Targets
		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.	from ground to lowest strand.			
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 / Coordinator Land and Infrastructure	Annually

Appendix 4: Resilience Assessment - Ventilation Shaft 6

Description of Bushland Condition	Management Actions	Resilience Rating
Resilient Areas – Soil profile intact. Natural regeneration pathways facilitated.		
<ul style="list-style-type: none"> Virtually weed free. All structural layers present unless structural alteration occurred from natural process, e.g., fire, storm, etc. 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"> Relatively minor infestations of weeds. All structural layers present unless alteration occurred from natural process OR unnatural disturbance of structural layer is not major. 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"> Moderate-severe infestation of weeds. Native area suffering and regeneration of native species being suppressed. Structural absence or strong decline in condition of at least 1 vegetation layer (e.g. derived native pasture or grassland). 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"> Bushland replaced by weed species. Remaining native components under stress. Structural absence or strong decline in at least 2 vegetation layers. Loss of vegetation layer mainly attributed to weed invasion and major unnatural disturbance has occurred. Original soil profile intact but regeneration suppressed by the high level of weed infestation. Existing area approaching threshold levels of not returning to original state. 	<ul style="list-style-type: none"> High input regeneration with strategic primary, secondary and maintenance weed management required for large areas. 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. 	Low

Non-resilient Areas – Soil profile permanently altered. Natural regeneration pathways unlikely.		
<ul style="list-style-type: none"> • Reconstruction or type conversion area/zone requiring treatment. • Bushland replaced totally by weed species. • Soil profile disturbed and permanently altered resulting in loss of soil seed bank and plant propagules. • Area requiring treatment and importation of propagule material. • 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. 	Very Low (un-managed/ degraded bushland)
<ul style="list-style-type: none"> • Reconstruction or type conversion area/zone commenced treatment. • Previously a yellow area before commencement of treatment, e.g., planted, direct seeded, soil capped, translocation, etc. • 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). 	Low (maintained restoration area)
<ul style="list-style-type: none"> • Potential regeneration suppressed by management practices (e.g., parkland, cropping or exotic pasture). 	<ul style="list-style-type: none"> • Programmed maintenance, cropping or grazing. 	Not bushland

Appendix 5: Flora Recorded in Ventilation Shaft 6 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 ramossissima</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>Einadia hastata</i>				
<i>Einadia polygonoides</i>				

Species	Introduced	BC Act	EPBC Act	ROTAP
<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 ²⁴ .	*			
<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>	*			
<i>Nyssanthes diffusa</i>				
<i>Olea europaea</i> ssp. <i>africanus</i>	*			
<i>Olearia viscidula</i>				
<i>Opuntia</i> sp.				
<i>Oxalis perennans</i>				
<i>Ozothamnus diosmifolium</i>				

²⁴ 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

Species	Introduced	BC Act	EPBC Act	ROTAP
<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</i> var. <i>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>				

Appendix 6: Fauna Recorded in Ventilation Shaft 6 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

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	2,259	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	2,258	HN607	Cumberland - Hawkesbury/Nepean	>70%	>100 ha	FRW	Issued	12	

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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	
215	457	<i>Grevillea parviflora subsp. parviflora</i>	Small-flower Grevillea	Issued	2,904	
215	459	<i>Phascolarctos cinereus</i>	Koala	Issued	317	

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.

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Appendix 9: Agency Consultation

Agency Comments	ICHPL Response
Biodiversity and Conservation Division	
<p><u>Response received 22 January 2021</u></p> <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>
<p><u>Response received 24 March 2025</u></p> <p>Thank you for your e-mail received on 25 February 2025 requesting consultation with the</p>	<p>Noted.</p>

<p>Conservation Programs, Heritage and Regulation (CPHR) Group of the NSW Department of Climate Change, Energy, the Environment and Water (DCCEEW) on the Biodiversity Management Plan (BMP) (GM3, February 2025) for the above project. CPHR understands that the BMP is required to be prepared in consultation with CPHR and to the satisfaction of the Planning Secretary.</p>	
<p>CPHR has reviewed the BMP and recommends that the proponent:</p> <ul style="list-style-type: none"> - Amends the BMP to note the presence of flowers or fruits and the number of adult vs seedling plants during monitoring of <i>Pimelea Spicata</i>. This would give an indication of whether the plants are reproducing and have a varied age structure. If this was included, then triggers for this would need to be built into the BMP. <p>It is not clear if signs of reproduction are included already in <i>Pimelea spicata</i> monitoring.</p> <p>The BMP only says that the ‘condition of individual plants from mixed cohorts’ is to be recorded.</p>	<p>The text has been amended to include noting the presence of flowers or fruits during monitoring.</p> <p>Adult plants are difficult to differentiate from juvenile plants during monitoring. Adult plants may be inferred from flowering status (which may not be a reliable measure to use as flowering times can vary from year to year dependant on climatic conditions and they flower for only brief periods). Other measures, such as the presence of a substantial taproot and the ability to regenerate vegetatively, would not be able to be determined without disturbing the plants.</p> <p>Lack of flowering is not necessarily attributable to the health of the population.</p> <p>The inclusion of a trigger for the suggested parameters would not be useful indicators for the health of the population and therefore triggers have not been included.</p>
<ul style="list-style-type: none"> - Adds the log and woody debris habitat for the Cumberland Plain Woodland Snail, alongside the other suggested fauna habitat. 	<p>Mulched woody debris and logs are spread in the topsoil as the last process prior to seeding. While not an artificial habitat, it provides potential habitat for species such as the Cumberland Plain Woodland Snail. This text has been added.</p>
<ul style="list-style-type: none"> - Notes that any regeneration/planting of species native to Cumberland Plain Woodland should support enough genetic diversity to promote breeding and recruitment of new individuals. There is an industry-wide focus on planting from ‘local provenance’ which can lead to planting from only a few closely related genetic lineages. 	<p>The following text has been included in Section 6.3: Any regeneration/planting of species native to Cumberland Plain Woodland should support enough genetic diversity to promote breeding and recruitment of new individuals.</p>

<p>This can lead to regeneration efforts failing in the medium to long term.</p>	
<p>- Dedicates additional resources to primary weeding of woody weeds such as Africa Olive.</p>	<p>Focused weeding of woody weeds such as African Olive, African Boxthorn, and Blackberry are already being undertaken. In 2024 there was also focus on Lantana.</p>
<p>A tracked change version of the BMP is also attached which includes some additional comments.</p> <ul style="list-style-type: none"> Appendix 3 Point 6 – include text: <i>Care should be taken to ensure planted trees and shrubs support enough genetic diversity so that breeding and recruitment of new individuals from subsequent generations can occur. Planting genetically diverse and distinct individuals should take priority over planting from local provenance.</i> 	<p>This text was not included as the screening trees were already planted post construction. The screening trees will add little benefit in relation to site biodiversity. The site will be rehabilitated in accordance with the Rehabilitation Management Plan at mine closure.</p>
<ul style="list-style-type: none"> Appendix 3, Point 7 – include text: <i>Care should be taken to ensure planted grasses support enough genetic diversity so that breeding and recruitment of new individuals from subsequent generations can occur.</i> 	<p>Suggested text has been included.</p>
<ul style="list-style-type: none"> Appendix 3, Point 8 – Please add a specific goal e.g. weed coverage minimised and maintained at 0-5% across management site. 	<p>The areas covered by these management zones will be re-disturbed when the ventilation shaft infrastructure is decommissioned. Specific weed management success criteria will be included in the Rehabilitation Management Plan for the site as a whole.</p>
<ul style="list-style-type: none"> Appendix 3, Point 13 – How often will primary weeding occur? Just the once? If so will 5 days be enough? 	<p>The primary weeding has already occurred. This statement has been removed.</p>
<p>Department of Agriculture, Water and Environment</p>	
<p><u>Response received 25 November 2020</u></p> <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>
<p><u>Response received 21 May 2025</u></p> <p><u>The department has considered the changes to the Biodiversity Management Plan, as provided under the RAMP notification, and does not consider it likely there will be a new or increased impact as a result of the changes.</u></p>	<p>Noted.</p> <p>Approval on 16 February 2021 remains the most recent approval.</p>
<p>Department</p>	

Response received 12 February 2021	Noted
The Department has carefully reviewed the document and is satisfied that it addresses the conditions of the approval.	

Appendix 10: Assessment: Requirements of Environmental Management Plan Guidelines

Requirement	Page/Section
Cover page and declaration of accuracy	Page 3
Document version control	Page 2
Table of Contents	Page 4
Executive summary or introduction	Section 1
Conditions of approval reference table	Appendix 2
Project description	Section 1
Objectives	Section 1.1
Environmental management roles and responsibilities	Section 2
Reporting	Section 12.1
Environmental training	Section 2
Emergency contacts and procedures	Section 11.2
Potential environmental impacts and risks	-
<ul style="list-style-type: none"> Threats to matters protected under the <i>EPBC Act</i> 	Section 7.2.4
<ul style="list-style-type: none"> Potential Impacts 	Section 7.2.5
<ul style="list-style-type: none"> Risk assessment 	Section 7.2.5
Environmental management measures	-
<ul style="list-style-type: none"> Environmental management activities, controls and performance targets 	Sections 7.3
<ul style="list-style-type: none"> Environmental management maps and diagrams 	Section 15
<ul style="list-style-type: none"> Environmental monitoring 	Section 7.3.5
<ul style="list-style-type: none"> Corrective actions 	Section 11.2 and Appendix 3
Audit and review	-
<ul style="list-style-type: none"> Environmental auditing 	Section 12.4
<ul style="list-style-type: none"> Environmental management plan review 	Section 12.3
Glossary	Section 4 and 13

Appendix 11: Management Plan Approval - Department

Department of Planning, Housing and Infrastructure



Our ref: MP08_0150-PA-125

Chris Schultz
Superintendent Environment
Illawarra Coal Holdings Pty Ltd
Sent via Major Projects Portal
23/05/2025

Subject: Bulli Seam Operations – Biodiversity Management Plan (Rev 3, May 2025)

Dear Mr Schultz

I refer to the Biodiversity Management Plan (Rev 3, May 2025) submitted in accordance with Condition 36, Schedule 4 of the consent for the Bulli Seam Operations project (MP08_0150).

The Department has carefully reviewed the document and is satisfied that it meets the requirements of the relevant conditions of consent (MP08_0150). Accordingly, as nominee of the Planning Secretary, I approve the Biodiversity Management Plan (Rev 3, May 2025).

You are reminded that if there are any inconsistencies between the Plan and the conditions of approval, 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 [REDACTED] on [REDACTED].

Yours sincerely

A handwritten signature in black ink that reads "Jessie Evans".

Jessie Evans
Director, Resource Assessments
Resource Assessments

As nominee of the Planning Secretary

Appendix 12: Management Plan Approval - DCCEEW**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

A handwritten signature in black ink, appearing to read 'Vaughn Cox', written over a horizontal line.

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

16 February 2021