BENGALLA Mining Company

Bengalla Mine

March 2016

Visual Impact Mitigation Plan

Hansen Bailey
ENVIRONMENTAL CONSULTANTS

BENGALLA

Bengalla Mining Company Pty Limited

Visual Impact Mitigation Plan

Revision	Date	Description	Author	Reviewer	Approved
1	30/03/16	Original Document	J Martin Hansen Bailey & Van Pelt Allen (VPA) Landscape Architects	D Munro Hansen Bailey	C White Bengalla Mine

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1.0 INTRODUCTION

1.1 Background

Bengalla Mining Company (BMC) operates the Bengalla Mine (Bengalla) which is located approximately 4 km west of Muswellbrook in the Upper Hunter Valley, NSW. Bengalla is generally bound by Wybong Road to the north, Overton Road to the east and the Muswellbrook-Ulan Rail line to the south and Roxburgh Road to the west (see **Figure 1**).

BMC was granted Development Consent for State Significant Development (SSD) 5170 on 3 March 2015 by the Secretary of Department of Planning and the Environment (DP&E) for the Continuation of Bengalla Mine. SSD-5170 enables BMC to continue open cut coal mining up to 15 Million tonnes per annum (Mtpa) of run of mine (ROM) coal until 2039.

This Visual Impact Mitigation Plan (VIMP) has been developed in accordance with the requirements of Schedule 3, Conditions 37 to 39 of SSD-5170 (as Modified).

1.2 History of Operations

BMC was originally granted development consent Development Application (DA) 211/93 in 1996 to construct and operate an open cut coal mine and associated activities in accordance with the supporting document *Bengalla Mine Environmental Impact Statement* (HLA Envirosciences, 1993). Mining operations at Bengalla commenced in 1998 and have progressed according to DA 211/93 which is valid to 2017.

In September 2013, the *Continuation of Bengalla Mine Environmental Impact Statement* (Bengalla EIS) (BMC, 2013) and *Continuation of Bengalla Mine Response to Submissions* (Hansen Bailey, 2014) was prepared to support an Application for Development Consent to enable continued mining operations at Bengalla.

On 3 March 2015, the Secretary of DP&E as delegate for the Minister for Planning granted SSD-5170 which permits the following activities at Bengalla:

- Open cut mining towards the west at a rate of up to 15 Mtpa ROM coal until 2039;
- Continued use of the existing dragline, truck fleet and excavator;
- An out of pit Overburden Emplacement Area (OEA) to the west of Dry Creek which may be utilised for excess spoil material until it is intercepted by mining;
- Various upgrades, relocations or additional new infrastructure to support the Project;
- Processing, handling and transportation of coal via the (upgraded) Coal Handling and Preparation Plant (CHPP) and rail loop for export and domestic sale;
- Continued rejects and tailings co-disposal in the Main OEA and temporary in pit reject emplacement;

HB BENGALLA Visual Mitigation 1612 F1 Regional Context 11 03 2016

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Regional Locality

FIGURE 1

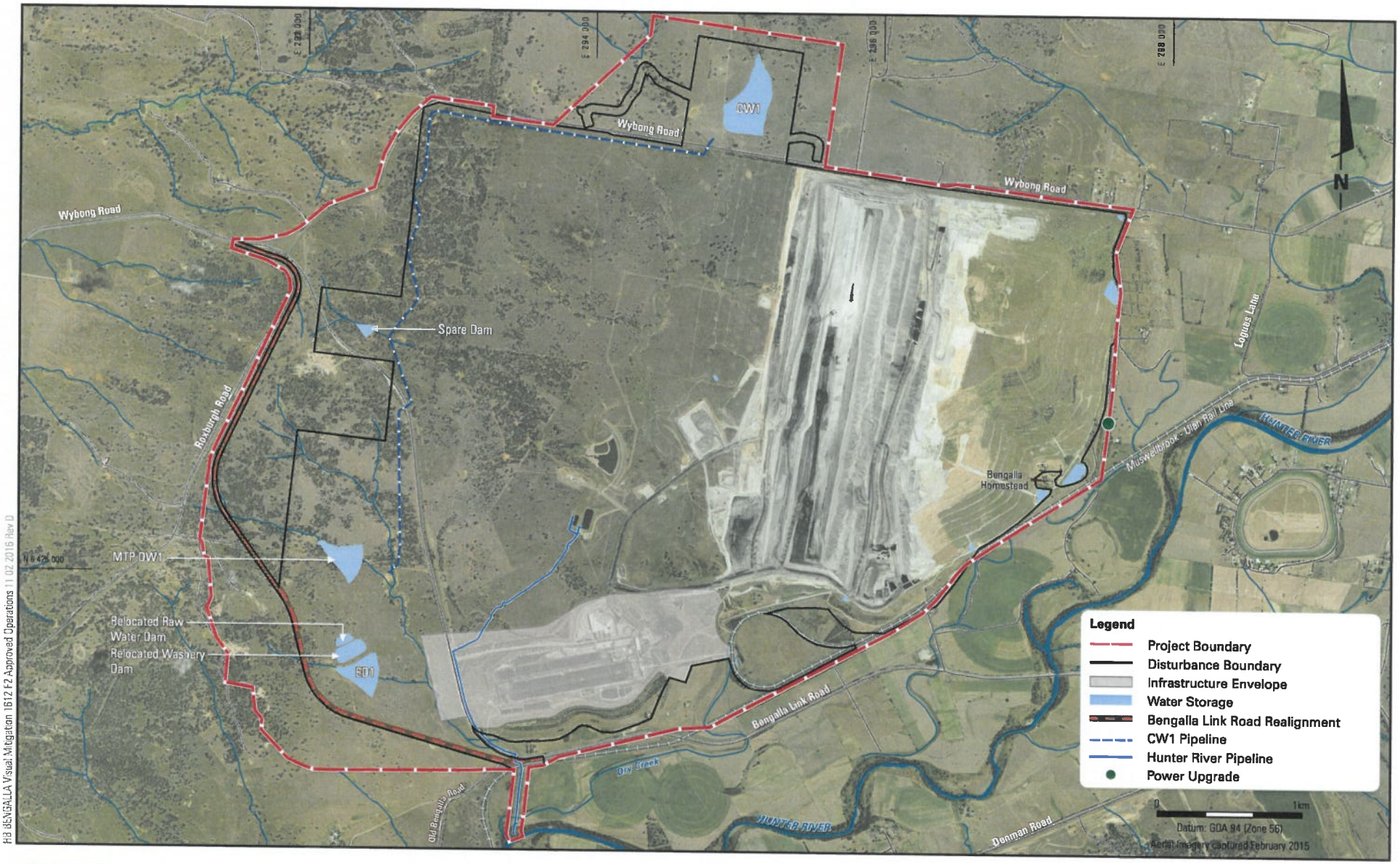
- Relocation of a 6 km section of Bengalla Link Road at approximately Year 15 near the existing mine access road to facilitate coal extraction;
- The diversion of Dry Creek via dams and pipe work with a later permanent alignment of Dry Creek through rehabilitation areas when emplacement areas are suitably advanced;
- Relocation of water storage infrastructure as mining progresses through existing dams (including the Staged Discharge Dam and raw water dam); and
- A workforce of approximately 900 full time equivalent personnel (plus contractors) at peak production.

BMC formally commenced operating in accordance with SSD-5170 on 1 October 2015.

On 16 December 2015, the Executive Director as delegate for the Minister for Planning granted approval for a modification to SSD-5170. This modification to SSD-5170 provided approval for:

- Alterations to various water management infrastructure components;
- Additional locations for the siting of the Explosives Storage Facility; and
- The placement of fill from the excavation of Clean Water Dam 1 (CW1) adjacent to it.

The Modification to SSD-5170 was supported by the Hansen Bailey (2015) *Bengalla Mine Development Consent Modification Statement of Environmental Effects* (Bengalla SEE). The layout of operations approved under SSD-5170 (as modified) is presented in **Figure 2**.



H3 BENGALLA Visual Mitigation 1612 F2 Approved Operations 11 02 2016 Rev D

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Approved Operations

FIGURE 2

1.3 Objectives

This VIMP has been developed in accordance with the requirements of Schedule 3, Conditions 37 to 39 of SSD-5170 (as modified) in relation to the mitigation of visual impacts at affected residences listed in the development consent.

Specifically the objectives of this VIMP are to:

- Describe the background information used to establish the potentially affected landowners;
- Describe the assessment methodology used in completing the site specific visual impact assessments;
- Described the various appropriate site specific visual mitigation measures recommended to reduce the visual impact of Bengalla's operations at these affected landowners;
- Describe the stakeholder consultation undertaken during the preparation of the VIMP; and
- Identify the actions that will be taken to ensure affected landowners are aware of their entitlements as applicable while maintaining compliance with conditions of SSD-5170.

This VIMP has been prepared by Hansen Bailey Environmental Consultants (Hansen Bailey) with technical input provided by Van Pelt Allen (VPA), specialist landscape architects, on behalf of BMC. **Table 1** outlines the relevant requirements of SSD-5170 and identifies where each have been addressed within this VIMP.

This VIMP has been developed to ensure visual impacts are minimised (where appropriate) from activities described within Bengalla EIS. This document includes assessment methodology used in developing the site specific visual impact assessments conducted at private receivers as listed in SSD-5170 Table 14 (see **Section 3.0**).

To ensure landowner confidentiality, site specific visual impact assessments are not presented in this VIMP. Each landowner will be provided with a copy of this VIMP along with their individual site specific visual impact assessments following approval by DP&E (see **Section 2.1**).

Table 1

SSD-5170 Visual Impact Mitigation Requirements

Condition	Requirement	Where Addressed
37	Within 6 months of the commencement of development under this consent, the Applicant shall prepare a Visual Impact Mitigation Plan for the development to the satisfaction of the Secretary. This plan must:	**This Document**
	a) Identify the visual receptors within the western and southern view sectors that are likely to have significant direct views of the development;	**Table 2**
	b) Include the site specific visual impact assessment of each of the visual receptors identified in Table 14 and any other receptors identified during the site verification process, to determine the severity of the visual impact; and	**Section 2.1.2, 3.2, 3.4** and **Appendix B**

Condition	Requirement	Where Addressed
	c) Describe the additional mitigation measures that could be implemented to reduce the visual impacts of the development to these visual receptors.	**Section 3.4.2** and **Appendix B**
	Table 14: Visual receptors ***Receivers*** *106, 105, 109, 112S, 113, 114, 117, 118, 119, 120, 108, 152, 153, 154, 155, 156E, 156S, 168* *Note – to interpret the Land referred to in Table 14, see the Applicable figure in Appendix 4.*	N/A
38	Within 1 month of the approval of the Visual Impact Mitigation Plan, the applicant shall advise the owners of the visual receptors identified in the plan that they are entitled to additional mitigation measures to reduce the visibility of the development from these visual receptors.	**Section 2.1.3**
39	Upon receiving a written request from the owner of a visual receptor identified in this plan, the Applicant shall implement additional visual impact mitigation measures (such as landscaping treatments or vegetation screens) at the visual receptor in consultation with the landowner, and to the satisfaction of the Secretary. These mitigation measures should be reasonable and feasible. If within 3 months of receiving this request from the owner, the Applicant and the owner cannot agree on the measures to be implemented, or there is a dispute about the implementation of these measures, then either party may refer the matter to the Secretary for resolution. *Note: The additional visual impact mitigation measures must be aimed at reducing the visibility of the development from the identified affected receptors and do not necessarily require measures to reduce visibility of the development from other locations on the affected properties. The additional visual impact mitigation measures do not necessarily have to include measures on the affected property itself (i.e. the additional measures may consist of measures outside the affected property boundary that provide an effective reduction in visual impacts).*	**Section 2.1.3**

1.4 Environmental Management

Operations at Bengalla are conducted in accordance with Bengalla SSD 5170 (as modified), Environment Protection Licence (EPL) 6538 and environmental management plans to ensure BMC effectively manages its environmental issues and ensure compliance with regulatory requirements.

This VIMP will form part of this management regime until such time as all obligations required by SSD-5170 Condition 37 to 39 have been met.

1.5 Document Structure

This VIMP is structured as follows:

- **Section 1.0** provides background information on Bengalla, describes Bengalla and its history, outlines the objectives of this VIMP and describes the environmental management regime for Bengalla;
- **Section 2.0** summarises the stakeholder engagement undertaken in the development of this VIMP;
- **Section 3.0** describes the assessment methodology, landscape treatments and maintenance regime used in developing the site specific visual impact assessments;
- **Section 4.0** confirms the responsibilities of key site personnel as identified in this VIMP; and
- **Sections 5.0** and **6.0** lists the terms and abbreviations and references relevant to this VIMP.

Appendix A includes the relevant landowner and regulator correspondence as applicable to this VIMP.

Appendix B includes the detailed assessment methodology completed by VPA Landscape Architects used to identify appropriate visual mitigation measures that receivers in SSD-5170 (Table 14) might adopt.

2.0 STAKEHOLDER ENGAGEMENT

This section provides a summary of stakeholder engagement with potentially affected landowners and Department of Planning and Environment (DP&E) undertaken as part of the development of this VIMP.

2.1 Landowners

2.1.1 Letter of Offer

On 16 January 2016, BMC provided a letter to individual landowners listed in SSD-5170 Table 14. The purpose of the correspondence was to provide background information associated with the requirement to complete a site specific visual assessment at their residence. Details regarding the proposed assessment methodology, possible visual mitigation measures and indicative timing was also provided. Each affected landowner was offered the opportunity to enact their entitlement should they desire, however it was noted that they were not obliged to do so.

2.1.2 Site Specific Visual Impact Assessment

Of the 18 listed residences a total of 13 accepted the offer to complete the site specific visual impact assessment as identified in **Table 2**. Should any of the remaining residences wish to complete the visual assessment in the future, BMC will arrange for this to occur consistent with the methodology described in this VIMP at a mutually agreeable time.

Individual site assessments were conducted on 23, 24 and 25 February 2016.

To ensure landowner confidentiality, site specific visual impact assessments are not presented in this VIMP. Each landowner will be provided with a copy of this VIMP along with their individual site specific mitigation plan following approval by DP&E (see **Section 2.1**).

No additional landowners other than those listed in **Table 2** were identified during the development of the visual specific impact assessments.

2.1.3 Confirmation of Entitlement

In accordance with SSD-5170 Schedule 3, Condition 38 within 1 month of the approval of this VIMP, BMC will advise the neighbours listed in **Table 2** that they are entitled to additional mitigation measures consistent with the recommendations in the site specific visual impact assessment to reduce the visibility of the development.

Upon receiving a written request from the owner of a visual receptor identified in this VIMP, BMC will implement additional visual impact mitigation measures proposed in the site specific visual impact assessments at the visual receptor in consultation with the landowner to the satisfaction of the Secretary.

If within 3 months of receiving this request from the owner, BMC and the owner cannot agree on the measures to be implemented, or there is a dispute about the implementation of these measures, then either party may refer the matter to the Secretary for resolution.

2.2 Department of Planning and Environment

As stated in **Section 1.2**, BMC formally commenced operating in accordance with SSD-5170 on 1 October 2015. In accordance with Schedule 3 Condition 37 this document is required to be prepared and submitted to the Secretary (or delegate) for approval within 6 months of commencement of the development under SSD-5170.

This version of the VIMP was provided to DP&E on 30 March 2016 for approval.

All regulatory correspondence is included in **Appendix A.**

Table 2

Visual Impact Assessment

Receptor ID	Receptor Name	VIMP Offer Accepted
Southern View Sector		
117*	E Rankin	Yes
118*	E&WJ Rankin	Yes
119*	E&WJ Rankin	Yes
Western View Sector		
105	RW Turner	Yes
106	MJ & MJ Duncan	Yes
108	MJ & MJ Duncan	Yes
109	EJ & CA Denton	Yes
112S*	MG & LI Latham	Yes
113*	MG & LI Latham	Yes
114*	JM Wild	Yes
120*	TW Roots	Yes
152	MR Peel	No
153	PR Ellis	Yes
154	PSJ Murray	No
155*	PG & CM Lane	No
156E	NJ & RY Ellis	No
156S	NJ & RY Ellis	No
168	JB Moore	Yes

**Located in a zone of acquisition from another mining company*

3.0 ASSESSMENT METHODOLOGY

This section provides a review of the previous visual assessment completed for the Project and discusses how this was applied to this VIMP.

3.1 Secretary's SSD-5170 Addendum Report

In February 2015 the DP&E released the *Addendum Report: State Significant Development Assessment Bengalla Continuation project (SSD-5170)* (Addendum Report) (DP&E 2015). In its Addendum Report, DP&E acknowledged the provision of *Visual Impact Identification Plan* (Hansen Bailey, 2015) which was developed to identify the visual receptors in the west and south that are likely to have significant views of the Project and may warrant additional mitigation of visual impacts.

The findings from the *Visual Impact Identification Plan* (Hansen Bailey, 2015) assisted in developing the final SSD-5170 Schedule 3, Condition 37 as identified in **Table 1**. The *Visual Impact Identification Plan* (Hansen Bailey, 2015) also provided useful background information to enable this VIMP to be developed.

3.2 Bengalla EIS Visual Impact Assessment

The Primary Visual Catchment (PVC) identified in the EIS Visual Impact Assessment (JVP Visual Planning and Design, 2013) represents the area where the majority of critical views of the Project may be experienced. This PVC is divided into four distinct viewing sectors as presented on **Figure 3**. The visual settings surrounding the Project are created by a range of different landscapes which vary as a result of the topography, vegetation cover and land use types. This can create screening or visual buffers, or alternatively can provide a viewing corridor to specific areas within the Project Boundary.

The Project PVC is encapsulated by ranges to the west and north of the Project Boundary, Aberdeen 10 km to the north-east, Muswellbrook 4 km to the east and the hills behind town and by the existing Mt Arthur Coal Mine to the south. In the broader sense, the PVC is strongly defined by the Hunter River Floodplain, which extents in a general north-south alignment. A further critical element is the existing mining operations in the area.

Visual Character Units (VCU) group areas with similar visual features in a landscape. The VCUs identified within the PVC:

- Hunter River Floodplain;
- Foothills VCU which consists of varying elevations and clearings that generally support grasslands, scattered trees, woodlands and open forest;
- Mine and Industrial Uses VCU;

- Town Areas (Muswellbrook and Aberdeen) VCU supporting a variety of functions and residential development; and
- Surrounding ranges VCU with significant elevations that are at a great distance from the Project.

All of the five VCUs interact to create various landscape settings in the context of the approved operations.

3.3 Visual Impact Identification Plan

A review of the *Visual Impact Identification Plan* (Hansen Bailey, 2015) recognised that no significant views requiring additional site specific visual mitigation measures were identified from private receptors in the Northern or Eastern View Sectors.

It was acknowledged that areas within Southern and Western View Sectors may contain receptors likely to experience prolonged high levels of visual impact further assessment was necessary to identify individual rural dwellings that are likely to have direct views of the Project. These identified dwellings were subsequently included in SSD-5170 (Table 14) and are reproduced in **Table 1.**

A discussion in relation to the impacted residences located within the Southern and Western View Sectors is provided below.

3.3.1 Southern View Sector

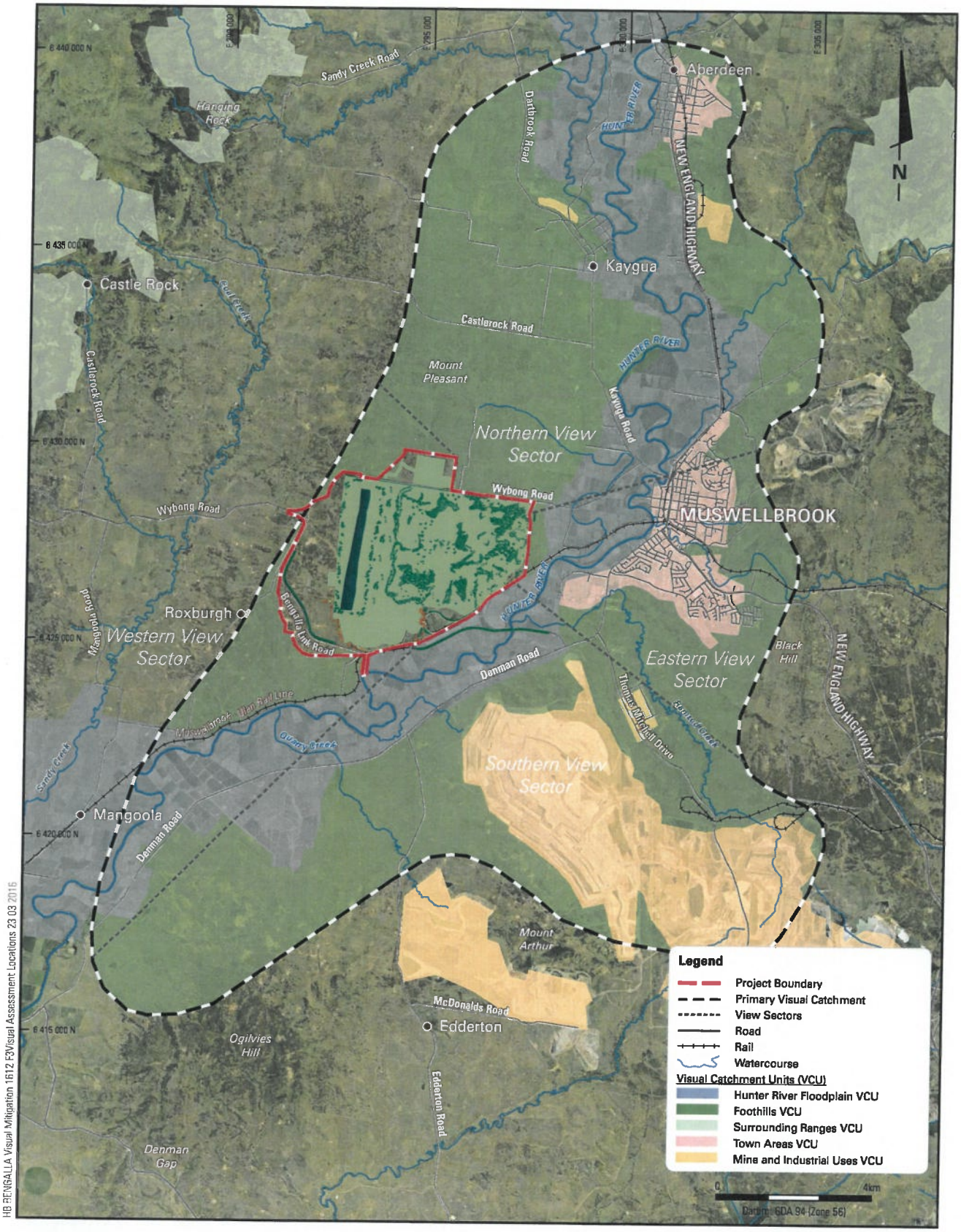
The most sensitive view locations in the Southern View Sector include three privately owned residences see **Table 2**) approximately 6 km away from the Project, on the western edge of the PVC (see **Figure 4**).

View locations primarily consist of those from Denman Road.

3.3.2 Western View Sector

The most sensitive view locations in the Western View Sector include up to 15 privately owned receptors (see **Table 2**) located up to approximately 6 km away from the Project (see **Figure 4**).

View locations include Denman Road, and elevated sections of Roxburgh and Wybong Roads.



HB BENGALLA Visual Mitigation 1612 F3Visual Assessment Locations 23 03 2016

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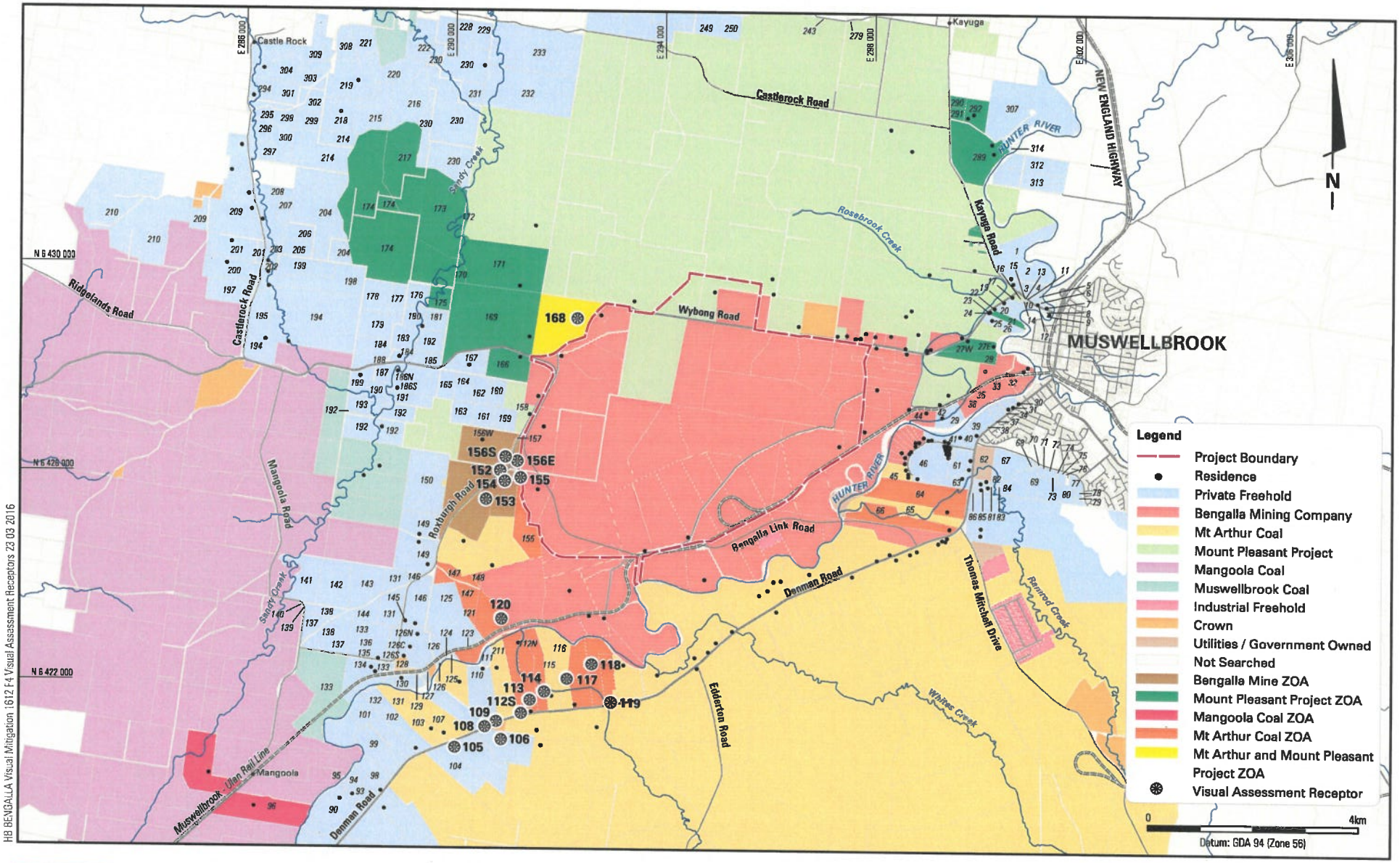
Primary Visual Catchment

FIGURE 3



HB BENGALLA Visual Mitigation 1612 F4 Visual Assessment Receptors 23 03 2016

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Visual Assessment Receptors

FIGURE 4

3.4 Site Specific Visual Impact Assessments

3.4.1 Assessment

Site specific visual impact assessments were conducted at 13 of the 18 residents as listed in **Table 2**. The key component of the site specific visual impact assessments included consideration of the potential visibility and orientation of the residence in light of Bengalla's existing or future approved mining area as described in the Bengalla EIS.

Site specific visual impact assessments included:

- Photography of key view-points were recorded to document the following:
  - Context, character and condition of residence;
  - Primary view zones and related views;
  - Driveways (secondary view zones) and related views, and
  - Views impacted by Bengalla's operations.
- Consideration of the view zones:
  - Primary View Zones - Usually the best views and most utilised for entertainment and relaxation;
  - Secondary View Zones – Generally those areas less frequented however where views are important from driveways, bedrooms, etc.; and
  - Tertiary View Zones – Those areas that visually relate to service areas and internal bathrooms, laundries, back doors, minor rooms etc.
- Desktop analysis:
  - Field data was collated and verified against topographic maps and aerial photography to confirm distances from visible existing or future approved mine operations; and
  - Determination of visual impact based on combination of visual effect and visual sensitivity.
- Recommendation of appropriate mitigation treatments.

Detailed discussion in relation to the assessment methodology used in the site specific visual impact assessments is provided in **Appendix B**.

3.4.2 Mitigation and Visual Treatment Recommendations

Each site specific visual impact assessment was subject of consideration as to whether landscape treatments may assist in reducing the visual impact of Bengalla's existing or future approved mining area.

Landscape treatments are utilised to achieve the following primary objectives:

- Improved visual relationships between the mining operations and the landscape;
- A reduction in viewing sensitivity to the mining operations; and
- Reorientation of viewing focus.

Landscape treatments will increase the visual integration of the mine operations and OEAs and reduce the sensitivity of property residents. The treatments are designed to achieve better visual outcomes in relation to existing conditions as well as improving the visual amenity of the property. Landscape treatments utilised in the site specific visual impact assessments include:

- Cluster screen tree plantings;
- Screen tree plantings;
- Canopy plantings treatments – either complete or partial;
- Wall plantings treatments – either complete or partial; and
- Offset landscape treatments – including structural objects designed to refocus views.

Detailed discussion in relation to the landscape treatments is provided in **Appendix B**.

3.4.3 Maintenance

Should any mitigation measures be implemented, BMC will ensure that any visual mitigation works will be maintained by BMC for 12 months. To effectively achieve this BMC requires access to properties. The protocol for this access is to notify the landowners by phone or letter when work is needed or scheduled. Disruptions to landowners will be minimised as much as possible.

Visual mitigation landscape and offset landscape works will be maintained by BMC under the following regime pending approval from the residence:

1. Installation and completion of works:

- Month 1: Maintenance visit 1;
- Month 3: Maintenance visit 2;
- Month 6: Maintenance visit 3; and
- Month 9: Maintenance visit 4.

2. Maintenance activities may include the following:

- Weed control;

- Slashing or mowing;
- Mulch top up;
- Plant replacement;
- Staking of trees;
- Pruning; and
- Fertilising.

Following the completion of the initial 12 month maintenance regime, a further 2 year monitoring period (with annual inspections) will occur to assist in the long term success of the visual mitigation measures.

BMC will not be responsible for any tree planting which is damaged or offset treatment replacement if not found to be a result of natural causes.

4.0 RESPONSIBILITIES

Table 3 provides a detailed summary of the actions and responsibilities as stipulated in this VIMP, and should be read in conjunction with this document. Responsibilities may be delegated as required.

Table 3
Responsibilities Summary

No	Task	Responsibility	Timing
1	Within 1 month of the approval of this VIMP, BMC will advise the receivers listed in **Table 2** that they are entitled to additional mitigation measures consistent with the recommendations in the site specific visual impact assessment to reduce the visibility of the development.	Environment and Approval Specialist	Within 1 month of the approval of this VIMP
2	Provide each landowner with a copy of this VIMP along with their individual site specific mitigation plan following approval by DP&E.	Environment and Approval Specialist	Within 1 month of the approval of this VIMP
3	Upon receiving a written request from the owner of a visual receptor identified in this plan, BMC shall implement additional visual impact mitigation measures proposed in the site specific visual impact assessments at the visual receptor in consultation with the landowner, and to the satisfaction of the Secretary.	Environment and Approval Specialist	Within 3 months of receiving the request
4	Should any of the remaining residences identified in **Table 2** wish to complete their visual assessment, BMC will arrange for this to occur consistent with the methodology described in **Section 3.0** of this VIMP.	Environmental Advisor	At a mutually agreeable time
5	Following completion of the visual mitigation, BMC will implement the scheduled maintenance program (as relevant to each residence) as outlined in **Section 3.4.3**.	Environmental Advisor	As per frequency identified in **Section 3.4.3.**

5.0 ABBREVIATIONS

Abbreviation	Meaning
BMC	Bengalla Mining Company Pty Limited
Bengalla	Actions as approved in the Bengalla Mine as approved in SSD 5170 (as modified)
CHPP	Coal Handling and Preparation Plant
CW1	Clean Water Dam 1
DA	Development Approval
DP&E	Department of Planning and Environment
EIS	Environmental Impact Statement
EPL	Environment Protection Licence
Mtpa	Million tonnes per annum
OEA	Overburden Emplacement Area
PVC	Primary Visual Catchment
ROM	Run of Mine
SSD	State Significant Development
VCU	Visual Character Units
VIMP	Visual Impact Mitigation Plan
VPA	Van Pelt Allen

6.0 REFERENCES

- Bengalla Mining Company Pty Limited (2013), *Continuation of Bengalla Mine Environmental Impact Statement September 2013.* Prepared by Hansen Bailey, Singleton NSW, September 2013.
- Department of Planning (1995) *Development Consent - Bengalla Coal Mine (DA 211/93).*
- Department of Planning (2015), *Addendum Report: State Significant Development Assessment Bengalla Continuation project (SSD-5170).*
- Environmental Protection Authority (2006) *Bengalla Environmental Protection Licence (No. 6538).*
- Hansen Bailey Pty Ltd (2014), *Continuation of Bengalla Mine Response to Submissions March 2014 Volume 1 Main Report.* Hansen Bailey, Singleton NSW, March 2014.
- Hansen Bailey Pty Ltd (2015), *Bengalla Mine Development Consent Modification Statement of Environmental Effects.* Hansen Bailey, Singleton NSW, March 2014.
- Hansen Bailey Pty Ltd (2015), *Visual Impact Identification Plan.*
- JVP Visual Planning and Design (2013), *Visual Impact Assessment* prepared for the *Continuation of Bengalla Mine Environmental Impact Statement* 2013.

APPENDIX A

REGULATORY CORRESPONDENCE

NSW GOVERNMENT | Planning & Environment

Contact: Wayne Jones
Phone: (02) 6575 3406
Fax:(02) 6575 3415
Email:wayne.jones@planning.nsw.gov.au
Our ref: SSD-5170

Craig White
Environmental and Approvals Specialist
Bengalla Mining Company
Locked Bag 5
MUSWELLBROOK NSW 2333

Dear Craig

Bengalla Mining Company – Approval of Visual Impact Mitigation Plan

Thank you for forwarding the Visual Impact Mitigation Plan (VIMP), as required by Schedule 3, Conditions 37 to 39 of SSD 5170.

The Department has conducted a review and wishes to advise that the Secretary has approved the VIMP. The VIMP comes into force on the 21st June 2016 and remains in force until replaced by any future updated approved Plan.

As per Schedule 3, Condition 38 of SSD 5170, within 1 month of the approval of the VIMP, Bengalla is required to advise the owners of the visual receptors identified in the VIMP that they are entitled to additional mitigation measures to reduce the visibility of the development from these visual receptors.

The Department requests that you place the approved VIMP, along with a copy of this letter, on your website in accordance with Schedule 5, Condition 11 of SSD 5170, and a copy provided to this office for our records by the end of June 2016.

Should you have any queries on this matter, please do not hesitate to contact the Department's Compliance team on (02) 6575 3405.

Yours sincerely,

W Jones 14/6/16

Wayne Jones
A/Investigations (lead) Compliance Northern Region
as the Secretary's Nominee

Hansen Bailey
ENVIRONMENTAL CONSULTANTS

30 March 2016

Senior Compliance Officer
Department of Planning and Environment
Singleton Office – Compliance
Suite 14, Level 1, 1 Civic Ave
SINGLETON NSW 2330

Attention: Chris Knight

Dear Chris,

BENGALLA MINE – VISUAL IMPACT MITIGATION PLAN

Bengalla Mining Company (BMC) was granted Development Consent for State Significant Development (SSD) 5170 on 3 March 2015 by the Secretary of Department of Planning and Environment (DP&E) for the Continuation of Bengalla Mine. BMC formally commenced operating in accordance with SSD-5170 on 1 October 2015.

A Visual Impact Mitigation Plan (VIMP) has been developed in accordance with the requirements of Schedule 3, Conditions 37 to 39 of SSD-5170 (as modified) in relation to the mitigation of visual impacts at affected residences listed in the development consent. Schedule 3, Conditions 37 (part) states:

> *37. 'Within 6 months of the commencement of development under this consent, the Applicant shall prepare a Visual Impact Mitigation Plan for the development to the satisfaction of the Secretary'…..*

Enclosed within is a copy of the VIMP for your approval. As stated in the VIMP, to ensure landowner confidentiality, site specific visual impact assessments are not presented in this VIMP and will be provided separately. Each landowner will be provided with a copy of the VIMP along with their individual site specific impact assessments following approval by DP&E.

We look forward to receiving your approval of the VIMP at your earliest convenience.

Should you have any queries in relation to this letter, please contact myself on 02 6575 2010.

Yours faithfully
HANSEN BAILEY

Jason Martin
Senior Environmental Scientist
cc Craig White, BMC

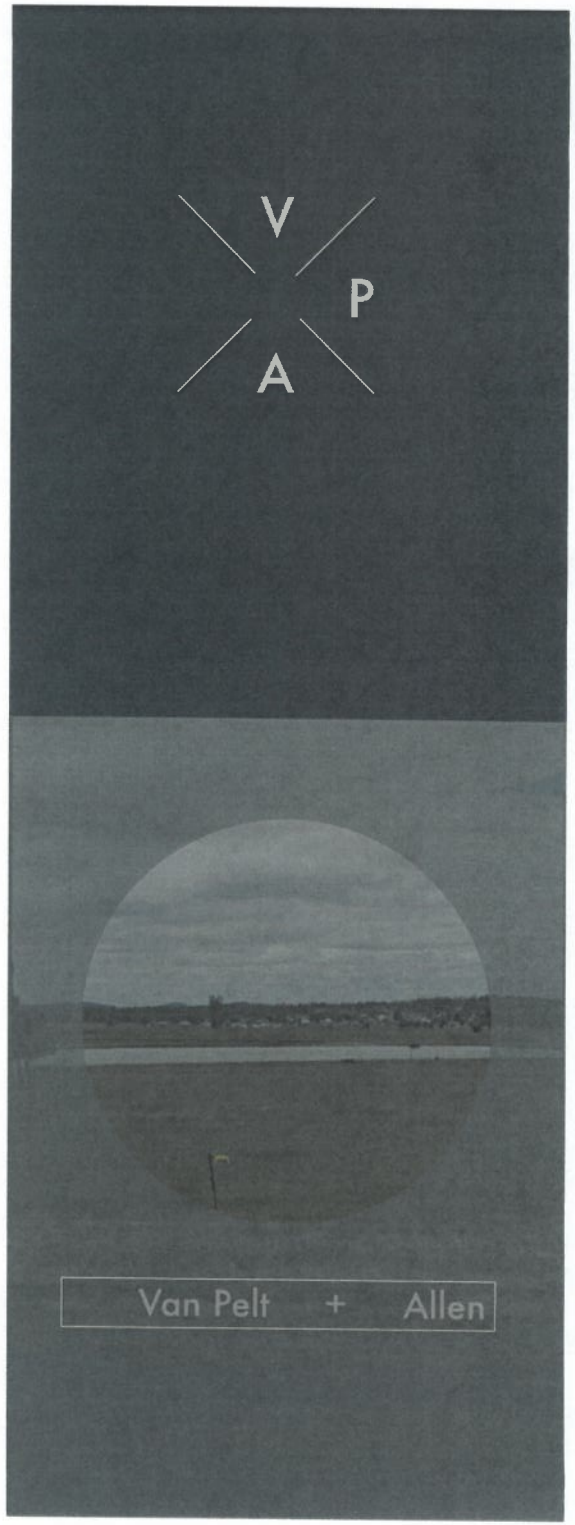
APPENDIX B

RESIDENTIAL VISUAL ASSESSMENT

BENGALLA- Residential Visual Mitigation

Document: 1602_VIMP
Status:
Version: 5.0
Date of Issue: 30th March 2016
Author: Annette Allen

Prepared for HANSEN BAILEY
Document No.1602_VIMP | FINAL | March 2016



CONTENTS

FIGURES

TABLES

ABBREVIATIONS

BMC	Bengalla Mining Company
CHPP	Coal handling and processing plant
Contrast	The degree to which a development element differs visually from its landscape setting.
EIS	Environmental impact statement
Field of View	This area includes the total view, consisting of the primary view zones above and the secondary or peripheral view zones around the primary view zone, out to about 70° either side of the central view line in both vertical and horizontal plain.
Integration	The degree to which a development element can be blended into the existing landscape without necessarily being screened from view.
Mtpa	Megatonnes per annum
Overburden Emplacement Area (OEA)	Refers to the placement of waste material (mostly interburden) excavated as part of the coal mining process into a predefined area.
Primary View Zone (PVZ)	This zone is the central most critical part of a view that is seen with the greatest clarity. It is that part of a view that is within a horizontal arc of 30° either side of the centre line of a view and a vertical arc of 30° m above the horizontal.
Run of Mine (ROM)	Run of mine
Scenic amenity	This term encapsulates people's aesthetic experience of the environment; their appreciation and value of a physical environment whether it be an urban, coastal, bushland, rural or industrial setting. Aesthetic appeal is often associated with the reinforcement of cultural or social values and identity.
Screen	The degree to which a development element is unseen due to intervening landscape elements such as topography or vegetation.
The Project	Continuation of Bengalla Mine Project.
Visual Effect	A measure of the visual interaction between the Project and the landscape setting within which it is located.
Visual Impact	A measure of a joint consideration of both visual sensitivity and visual effect that considered together determine the visual impact of a development
Visual Sensitivity	The degree to which a change to the landscape will be perceived in an adverse way.
View Shed	A view shed is an area of land, water, or other environmental element that is visible to the human eye from a fixed vantage point.

Part A : Methodology and Typical Visual Mitigation

Prepared for HANSEN BAILEY
Document No.1602_VIMP | FINAL | March 2016

Figure 1 | ***Regional Locality***

1. INTRODUCTION

Bengalla Mining Company (BMC) operates the Bengalla Mine (Bengalla) which is located approximately 4 km west of Muswellbrook in the Upper Hunter Valley, NSW (see Figure 1). Continuation of Bengalla received development consent SSD-5170 in March 2015 and has approval to operate until February 2039.

As part of that approval the Department of Planning and Environment (DP & E) has provided Schedule 3, Conditions 37 and 39 of the Development Consent which include individual receptor assessment and additional visual impact mitigation measures.

Van Pelt + Allen (VPA) has been requested to undertake this assessment and reporting in response to these conditions of development consent. VPA will provide individual property assessment to determine on site residential visual impacts, then determine appropriate property specific visual impact mitigation treatments where required.

1.1 Consent Conditions

The following consent conditions form the basis of this residential visual impact assessment.

CONSENT CONDITIONS 37 AND 39:

"Additional Visual Impact Mitigation

37. Within 6 months of the commencement of development under this consent, the Applicant shall prepare a Visual Impact Mitigation Plan for the development to the satisfaction of the Secretary. This plan must:

(a) identify the visual receptors within the western and southern view sectors that are likely to have significant direct views of the development;

(b) include a site specific visual impact assessment of each of the visual receptors identified in Table 14, and any other receptors identified during the site verification process, to determine the severity of the visual impact;

(c) describe the additional mitigation measures that could be implemented to reduce the visual impacts of the development on these visual receptors.

39. Upon receiving a written request from the owner of a visual receptor identified in this plan, the

Figure 2 | ***Approved Conceptual Final Landform***

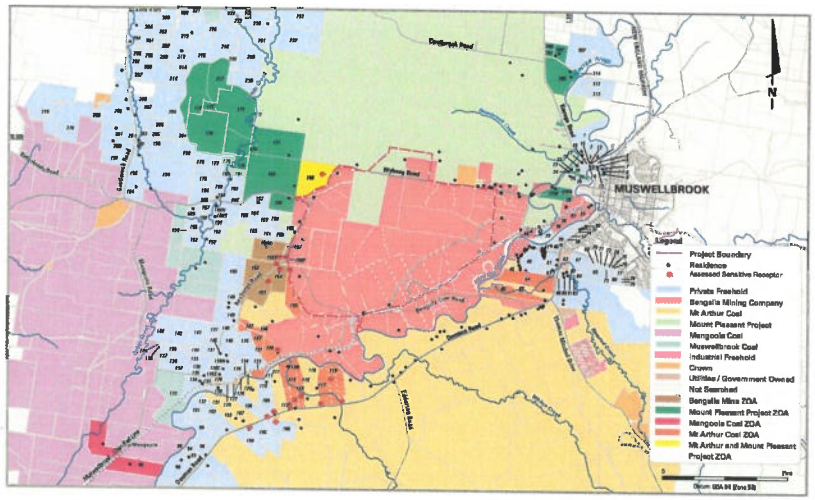


Figure 3 | ***Land Ownership***

Applicant shall implement additional visual impact mitigation measures (such as landscaping treatments or vegetation screens) at the visual receptor in consultation with the landowner, and to the satisfaction of the Secretary.

These mitigation measures must be reasonable and feasible.

If within 3 months of receiving this request from the owner, the Applicant and the owner cannot agree on the measures to be implemented, or there is a dispute about the implementation of these measures, then either party may refer the matter to the Secretary for resolution."

Table 14: Visual receptors

Receivers
105, 106, 109, 112S, 113, 114, 117, 118, 119, 120, 08, 152, 153, 154, 155, 156E, 156S, 168

PART A: Assessment and Visual Mitigation Treatments addresses Condition 37(a) as well as site assessment methodology and general mitigation treatment options.

PART B: Residential Assessment and Mitigation Plans addresses Condition 37(b) and (c); the contents of which can be used to satisfy Condition 39.

1.2 The Project

Bengalla is an open-cut strip mining operation where mining generally advances to the west based on dragline strips approximately 60 m in width. The Table 1 summarises the relevant key Project components as per section 4 of the Bengalla EIS (2013).

Table 1 | ***Approved Project components***

Component	Project
Life of Mine	February 2039.
Deposit	316 Mt ROM coal within mining areas
Mining Method	Open Cut- Dragline, truck and excavator
Production	Up to 15Mtpa ROM Coal
Operational Hours	Mining operations and coal processing 24 hours per day, seven days per week.
Workforce	Up to 900 full time equivalent personnel (plus contractors) at maximum production.

Component	Project
Blasting	Maximum of 4 blast events per day and 12 blast events per week, averaged over a calendar year, between 7:00am and 5:00pm Monday to Saturday
OEAs	Overburden emplacement areas to the east of active mine and extending to the west, rehabilitation of OEA areas from the east and the temporary OEA located to the west of mining.
Bengalla Road Relocation	Realignment of 6 km of existing road.
Coal Processing and Infrastructure	CHPP, coal stockpile, train load out, water infrastructure, radio tower, explosives storage area

The relevant mine stage plans as identified in the approved Continuation of Bengalla Mine EIS (2013) and the approved final landform (Refer Figure 2) have been considered in this assessment. These plans provide reference for extent and progress of the Project and the key visible components over the life of the mine.

Those visible components include:

- Active mine face
- Mine pits
- Overburden emplacement areas (OEAs)
- Rehabilitation

Table 2 | *Visual sensitivity*

Land Use (Sensitivity of Land Use)	Visibility to Project: High			Low
	Nearest visible mine elements less than 2.5km away	Nearest visible mine elements between 2.5 - 7.5 km away	Nearest visible mine elements between 7.5 - 12.5km away	Nearest visible mine elements more than 12.5km away
Urban and rural houses	High Sensitivity	High/Moderate Sensitivity	Moderate Sensitivity	Low Sensitivity
Tourist destination of visually sensitive land uses eg. horse studs, vineyards etc.	High Sensitivity	High/ Moderate Sensitivity	Moderate/Low Sensitivity	Low Sensitivity
Designated tourist & main roads - New England Highway, Denman Road	High Sensitivity	Moderate Sen-sitivity	Low Sensitivity	Low Sensitivity
Other roads - Roxburgh, Edderton, Wybong, Thomas Mitchell Drive	Moderate Sen-sitivity	Low Sensitivity	Low Sensitivity	Low Sensitivity
Minor local roads in rural zone	Moderate/Low Sensitivty	Low Sensitivity	Very Low Sensitivity	Very Low Sensitivity
Broad acre rural lands	Low Sensitivity	Low Sensitivity	Very Low Sensitivity	Very Low Sensitivity

2. METHODOLOGY

2.1 EIS Visual Impact Analysis

The analysis of the interaction between the existing visual environments, including existing and approved mining operations and the Project provides the basis for determining visual impacts and mitigation strategies. This is completed by defining the visual effect of the various elements of the Project and visual sensitivity of viewing locations, to determine impact.

2.1.1 Sensitivity

Visual sensitivity is a measure of how critically a change to the existing landscape is viewed by people from different land use areas in the vicinity of a development.

Table 2 indicates the levels of visual sensitivity associated with the Project.

However, the visual sensitivity of individual private residences may range from high to low, depending on the following additional factors:

- Screening effects of any intervening topography, buildings or vegetation. Residences with well screened views of the Project will have a lower visual sensitivity than those with open views;
- Viewing distance from the residence to visible areas of the Project. The longer the viewing distances, the lower the visual sensitivity; and
- General orientation of residences to landscape areas affected by the Project. Residences with strong visual orientation towards the Project (i.e. those with areas such as living rooms and/or verandahs orientated towards it) will have a higher visual sensitivity than those not orientated towards the Project, and which do not make use of the views towards the Project.

For any area to be given a sensitivity score, it must have visibility to the Project.

Table 3 | *Visual effect*

Visual Contrast	Visual Integration	Proportion of View Occupied by the Project		
High Development elements do not borrow, form, shape, line, colour or texture or scale from existing features of the visual setting and contrast levels are high with existing landscape and or.... eg. Active face of OEA	Low The development lacks integration with visual setting because of scale totally dominating the ability of site or surrounding features, vegetation and or topographic features to integrate the development.	It occupies more than 2.5% of the primary view shed	It occupies between 1 - 2.5% of the primary view shed	It occupies less than 1% of the primary view shed
Moderate Development elements borrow from some features of the visual setting in terms of form, shape, line pattern and or colour and scale, reducing visual contrast with existing setting and or..... eg. newly rehabilitated pit area	Moderate The development has some degree of visual integration with setting from other features, vegetation and or topography achieve some level of integration	It occupies more than 20% of the primary view shed, generally when in a foreground location	It occupies between 20-10% of the primary view shed	It occupies less than 10%
Low Development elements borrow extensively from features in visual setting in terms of form, shape, line, pattern colour and scale minimizing contrast with the existing setting and or..... eg. rehabilitated landscape pattern	High Visual integration is high due to other features, vegetation and or topography achieving dominance and screening or filtering	It occupies more than 40% of the primary view shed	It occupies 40-30% of the primary view shed	It occupies less than 30% of the primary view shed
The visual effect of the mine pits changes through time the process of rehabilitation. The more advanced the rehabilitation, the higher the visual integration, and higher the percentage of PVZ the project can occupy.				

2.1.2 Visual effect

Visual effect is a measure of the level of visual contrast and integration of the Project with the existing landscape. In this instance the existing landscape includes the existing mining operations.

The visual effect of a development is determined by factors as illustrated in Table 4. These factors also determine the magnitude of the development on the visual effect and are determined by consideration of the following:

Contrast and Integration

The degree to which the visual characteristics of the Project contrast with the existing landscape will determine the level of visual effect.

The Proportion of a View that includes the Project

For any given level of contrast and integration there is a Type 1, 2 or 3 visual effect. For any type of visual effect i.e. Type 1, 2 or 3, the lower the proportion of the view that is occupied by a development, the lower will be the level of visual effect.

For lower visual contrast and high integration type development it will require a higher proportion of a view to be occupied to create a high visual effect, e.g. a rehabilitated OEA. Conversely a high contrast and low visual integration development type, e.g. a pre-rehabilitated OEA will only require a small area of a total view to create a high visual effect.

2.1.3 Visual impact

The visual impact of the Project has been determined by considering both visual effect and visual sensitivity, which when considered together determine impact levels. The way in which the visual parameters of visual sensitivity and visual effect are cross referenced and the outcomes are illustrated in Table 5.

Table 4 | *Visual impact*

		Visual Sensitivity		
		High	Moderate	Low
Visual Effect	High	High Visual Impact	High/Moderate Visual Impact	Moderate/Low Visual Impact
	Moderate	High /Moderate Visual Impact	Moderate Visual Impact	Moderate/Low Visual Impact
	Low	Moderate/Low Visual Impact	Moderate/Low Visual Impact	Low Visual Impact
	Very Low	Low Visual Impact	Very Low Visual Impact	Very Low Visual Impact

2.2 Onsite Assessment

Based on the Department of Planning and Environment (DP & E) assessment report, visual impact assessment criteria was refined to determine which individual receptors may require additional visual mitigation measures. This is described in Section 2.

The verification process identified no additional receptors requiring mitigation. Those sensitive receptors that were identified in Table 14 from Consent Conditions were included in this assessment.

2.2.1 Site visits

Individual site assessments were conducted on 23rd, 24th and 25th February 2016. Table 2 summarises the general results including those receptors where no access was available.

Assessment included background desk top studies of aerial photography, digital land form modelling and topographic maps to determine location and relative elevation of local topographic features such as ridge lines and valleys. Such features give an early indication of potential view lines to the mine operations.

2.2.2 Interview

Where available, owner interviews were conducted to determine the location of valued views and significant locations around the property and house where available. (Note: this entry inside homes was not available in all cases). The interview included some general background (number of residents in home, length of occupancy, longer term intentions for property), their response to the existing views, how they use the gardens or outdoor areas and personal preferences for landscape mitigation treatment options.

2.2.3 Photography- Existing conditions

Key view points were recorded to document the following:

- Context, character and condition of residence
- Primary view zones and related views
- Driveways (secondary view zones) and related views, and
- Views impacted by Bengalla Mine

Before discussing treatments it is important to be aware of the relative importance of viewing area around a residence.

View zones around a residence have varying degrees of visual significance.

primary view → **Primary View Zone**

Primary View Zone is that area to which indoor and outdoor 'living' areas are visually orientated - usually the best views and most utilised for entertainment and relaxation.

secondary view → **Secondary View Zone**

Secondary View Zones are those areas where secondary views are important views from driveways, bedrooms, etc.

tertiary view → **Tertiary View Zone**

Tertiary View Zones are those areas that visually relate to service areas and internal bathrooms, laundries, back doors, minor rooms etc.

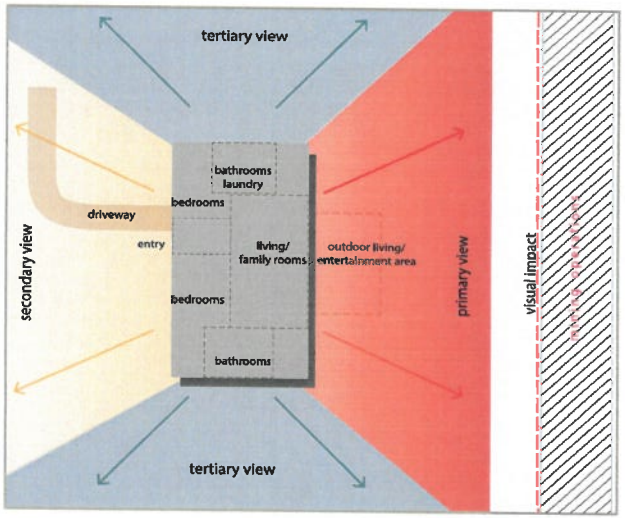


Figure 4 | *Primary view zones*

View point locations recorded GPS and view direction. Those views used in reports were documented on individual assessment plans.

2.2.4 View Zones

View zones were determined based on use of property and significant views as reported by the residents or owners. Refer to Figure 4.

2.3 Desktop Analysis

Field data was collated and verified against topographic maps and aerial photography to confirm distances from visible mine operations. As Bengalla is an operational mine with the main OEA at the approved maximum height, visibility to this key visual element was able to be determined at each receptor and more generally around the locality.

Figure 5 illustrates a detailed area relevant for Bengalla Mine, extracted from the *1:25,000 9033-2N Muswellbrook Topographic and Orthophotomap*. Local ridge lines adjacent receptor locations have been highlighted to identify key topographic features that may influence visibility to Bengalla Mine.

In some instances where access to properties was not available, an additional level of assessment was employed to verify potential for lines of sight to Bengalla Mine activities. Digital elevational profile can be generated for a line of sight from a receptor to a second location within the active overburden emplacement areas for example.

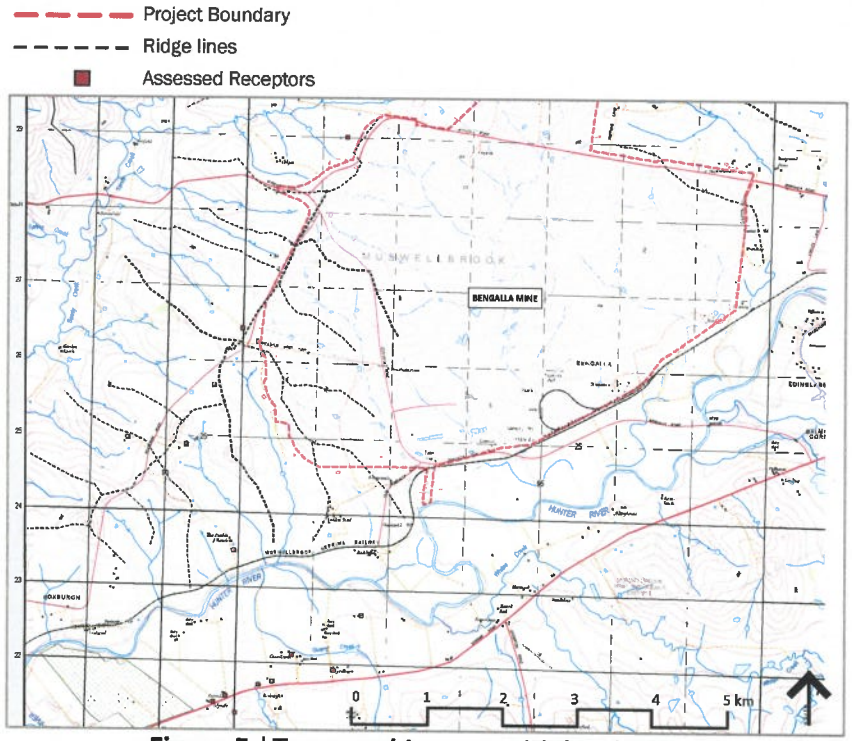


Figure 5 | *Topographic map with local ridge line overlay.*

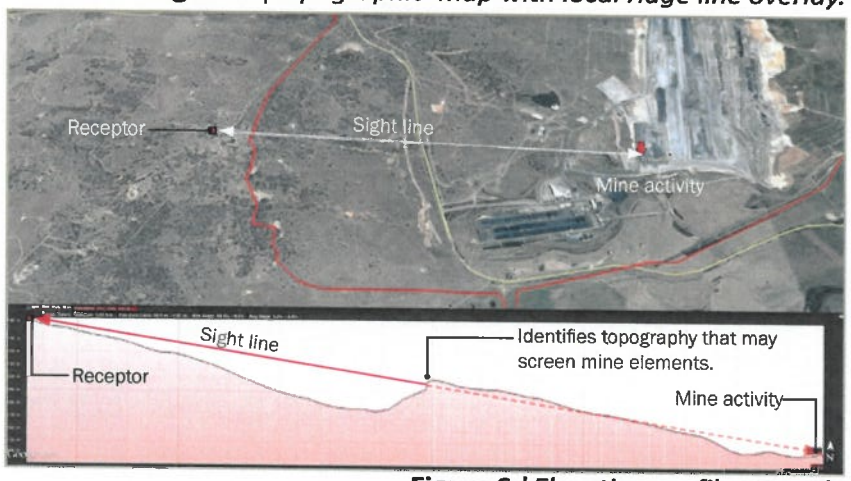


Figure 6 | *Elevation profile example*

Figure 6 illustrates how this additional assessment can confirm potential for views based on topographic features.

Typically, aerial photography will then be considered to determine what intervening vegetation will screen or filter those potential views.

Visual impacts for each receptor location were determined based on the combination of visual effects (See Section 2.1.2) and Visual Sensitivity based on affected view zone. (See Section 2.2.4) and recorded for accessed receptors (Table 5).

Extent of localised visual impact for each receptor was identified and documented.

2.4 Recommendations

Based on assessment, where moderate to high visual impacts were identified, appropriate visual mitigation treatments were documented on individual plans in accordance with owner's feedback where possible.

In some instances, it is unlikely that the plans will be implemented as owners were unwilling to engage in additional maintenance work in relation to new landscape trees.

An overview of residential assessments is summarised in Table 6. For confidentiality purposes, no names or specific details have been included in Part A.

Sensitivity \ Visual Effect	High	Moderate	Low	Nil
	VISUAL IMPACT			
Primary View Zone	X			
Secondary View Zone		X		
Tertiary View Zone				X
Drive way		X		

Table 5 | *Residential visual impact matrix*

Table 6 | *Sensitive Receptors and general site assessment*

Receptor	High Impacts	Mitigation	Low / No Impacts	No Access
105	■	■		
106	■	■		
108	■	■		
109	■	■		
112S			■	
113			■	
114	■	■		
117	■	■		
118	■	■		
119	■	■		
120			■	
152	■*			□
153			■	
154				□
155	■*			□
156S	■*			□
156E	■*			□
168			■	

* Note: These properties have potential views if woodland is compromised by fire event or tree clearing.

2.5 Typical Landscape Treatments

Each impacted receptor requiring visual mitigation will have a number of common on site conditions and a number of either site or owner directed requirements.

The common site conditions relate to:

- which view zone (or driveway) is impacted (Refer Section 2.2.4)
- existing views to be either screened or retained

The typical treatments respond to this in combination with Planting Groups.

Table 7 | *Typical treatment combinations*

House & Garden Areas

landscape treatment	primary view zone	secondary/ tertiary view zone	planting groups
cluster planting for filter/integration	T1	T2	Group 1, 2, 3 & 4
screen planting for screen & view re-orientation	T3	T4	Group 3 & 4
driveway canopy planting for filtering and refocusing views		T5 or T6	Groups 1,2 & 3
driveway wall planting for screening and refocussing views		T7 or T8	Group 3 & 4

Any Area

landscape treatment	primary view zone	secondary/ tertiary view zone	
offset	T5	T5	all groups or alternative proposals

Offset Treatments

A range of treatments that enhance the property without necessarily contributing directly to ameliorating the visual impact.

3. MITIGATION TREATMENTS

Landscape treatments aim at achieving the following objectives:

- improved visual relationships between the mining operations and the landscape
- a reduction in viewing sensitivity to the mining operations
- reorientation of viewing focus

Essentially the landscape treatments that are typically demonstrated in this section will increase the visual integration of the mine operations and OEAs and reduce the sensitivity of property residents. The treatments will achieve better visual outcomes in relation to existing conditions as well as improving the visual amenity of the property.

The treatment types aim to visually integrate the altered landscape profiles and surface textures and colours into the existing rural context. Various degrees of treatment are relevant and have been detailed in following sections. Planting strategies along with maintenance programmes may be necessary to achieve the desired rehabilitation, screening or integration effect.

Landscape treatments can mitigate the visual impacts of mine operations and OEA by filtering views whilst maintaining the broader desired view of the landscape.

3.1 Sensitivity Reduction

In the short term, reduction in viewing sensitivity is important and affective. It is achieved by illustrating there are solutions that often enhance existing landscape/garden as well as achieve a screening/integration of the visual effects of the mine.

3.2 Visual Relationships

More often than not, it is not necessary to screen out the view to the mine but rather to integrate it. However landscape treatments can remove the mine elements from view and such treatments when completed will enhance the landscape settings of the residence and provide permanent screening to mine operations from a view point. Treatments will focus on creating vegetation walls and ceilings to obstruct views.

Table 8 | *Mitigation Planting Groups*

Group 1: Canopy screening	
Native	Figs White Cedar Yellow Poinciana
Exotic	Poinciana Jacaranda

"ROOF"

Group 2: Tall Trunk Planting	
Native	Eucalyptus tessellaris Eucalyptus grandis Eucalyptus citiriodora
Exotic	Palms

"POLES"

Group 3: Visual Wall	
Native	Weeping Lillypilly Silky Oak Hoop Pine Casuarina Eleocarpus
Exotic	Poplar Cupressus

"TALL WALL"

3.3 Mitigation Planting Groups

There are broadly, five groups of plant species which offer a range of screening functions to ameliorate most landscape situations. Each situation will vary; screening is often the most effective when combinations of these planting groups are used.

Some examples both native and exotic are given. However there is very large geographic diversity across regions in New South Wales. Therefore these examples should be used only to understand plant form. Species determination should be done with a local aborculturist/horticulturist that has strong local species knowledge.

The use of native species is encouraged where appropriate. In a close and managed garden situation the use of some exotics may be justified in terms of plant form, winter sun access for example.

Mitigation plans will recommend which"Groups" are best suited to a specific receptor location and mitigation screening requirements. These Planting Groups are used in several "Typical Landscape Treatment Types" described in detail in Section 3.4.

Group 4: Small Visual Wall	
Native	Callistermons Some Melaleucas Acacias
Exotic	Camellia Photinia Murraya

"SMALL WALL"

Group 5: Visual Ceiling	
Native	Alamanda Pandorea
Exotic	Star Jasmine Grape Vine Wisteria

"STRUCTURAL ROOF"

T1 & T2 cluster screen planting

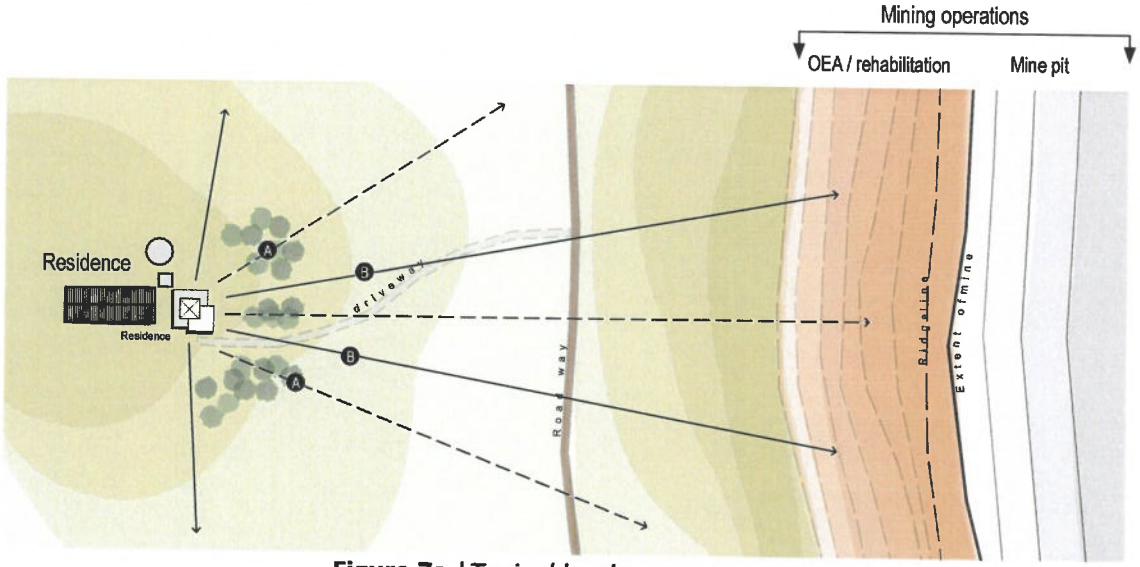


Figure 7a | *Typical landscape treatments T1 and T2 cluster - plan*

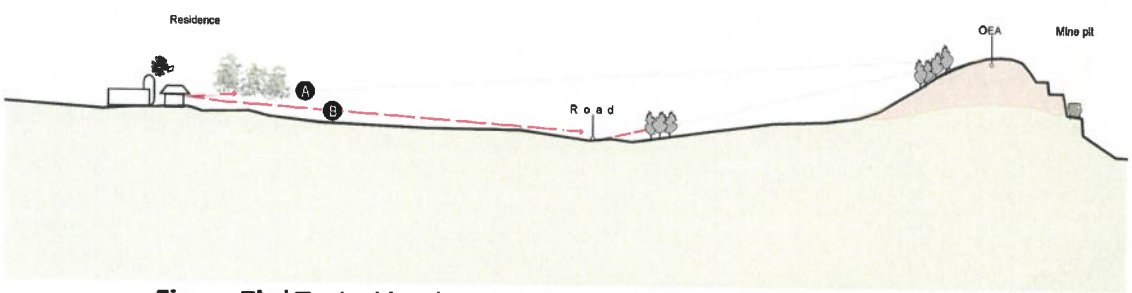


Figure 7b | *Typical landscape treatments T1 and T2 cluster planting - elevation*

3.4 Typical Landscape Treatment Types

3.4.1 TREATMENT T1 & T2 -CLUSTER PLANTING

Cluster planting aims to retain open views between and under planting canopies where there are existing desirable views in same lines of site as visible mine operations.

- A filtered views through and under planting canopies
- B framed views between planting clusters

Successful establishment and growth will improve integration of mine operations into landscape setting by strong foreground planting.

- use Group 1 and 2 plants (See Table 8)

Note:

T1: Treatment 1 occurs when mine operations are in the primary view zone

T2: Treatment 2 occurs when mine operations are in the secondary or tertiary view zones

T1 and T2 are the same treatment. However T1 would use strategies to accelerate plant growth due to higher sensitivity of primary view zone and responding requirement for mitigation.

Figure 7c | *Cluster planting example - in context of impacted view.*

T3 & T4 screen planting

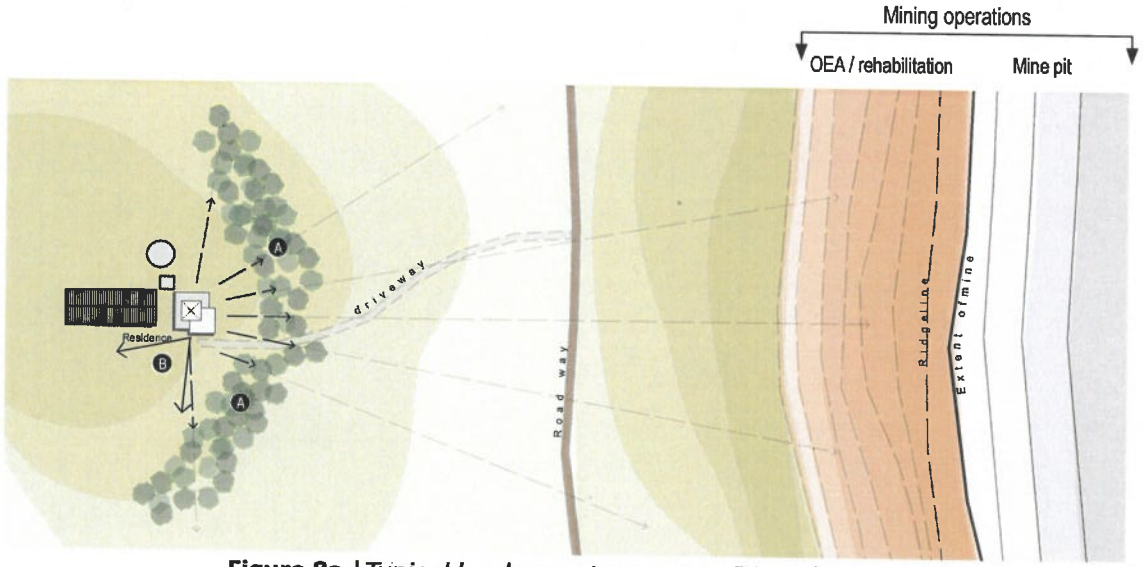


Figure 8a | *Typical landscape treatments T3 and T4 screen planting - plan*

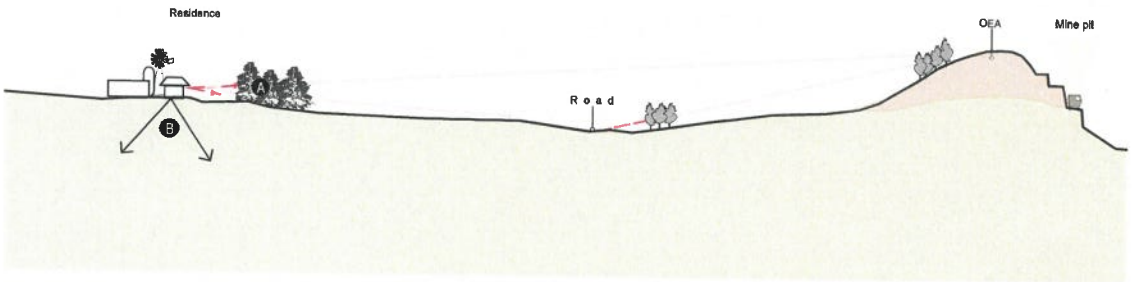


Figure 8b | *Typical landscape treatments T3 and T4 screen planting- elevation*

3.4.2 TREATMENTS 3 & 4 - SCREEN PLANTING

Complete screening is always possible and can be a good alternative if other good views are available.

- Ⓐ total screen to views of mine operations
- Ⓑ open view away from mine operations
- Ⓑ view re-orientated with open area enhancement
- • use Group 3 and 4 plants (see Table 8)

Note:

T3: Treatment 3 occurs when mine operations are in the primary view zone

T4: Treatment 4 occurs when mine operations are in the secondary or tertiary view zones

T3 and T4 are the same treatments. However T3 would use strategies to accelerate plant growth due to higher sensitivity of primary view zone and responding requirement for mitigation.

Figure 8c | *Screen planting example -Melaleuca species*

LANDSCAPE
driveway canopy treatments

T5 complete canopy

T6 partial canopy

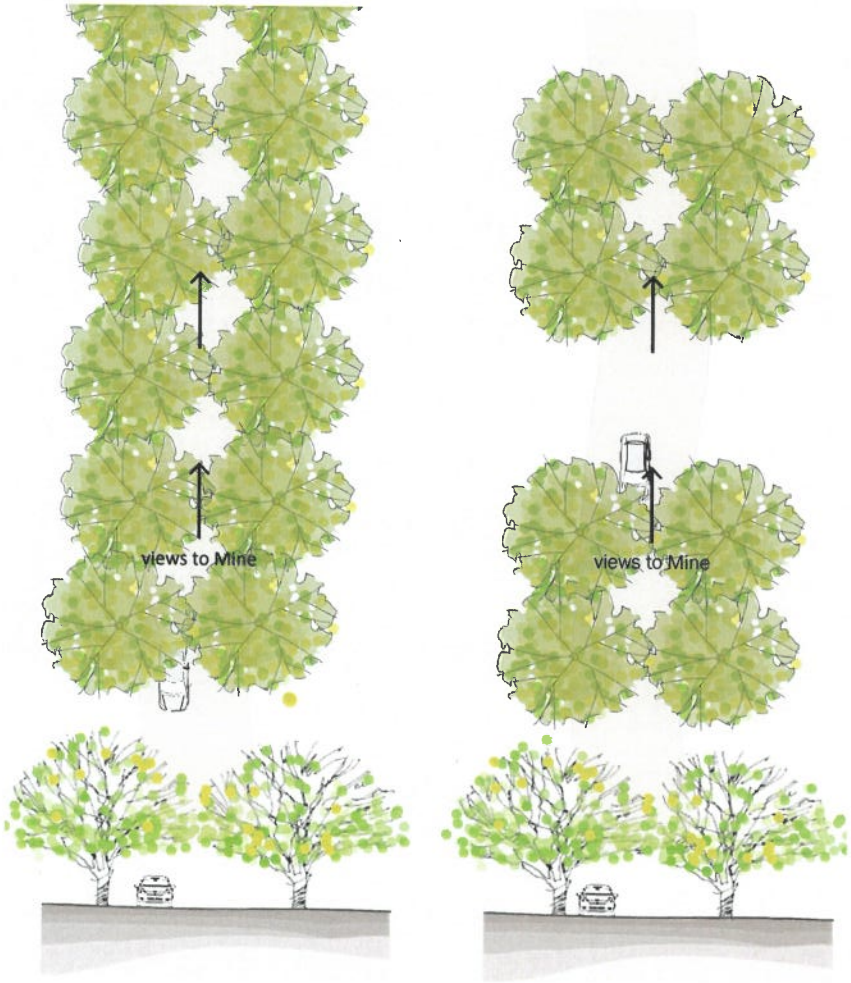


Figure 9 | *Landscape driveway treatment - T5 and T6*

3.4.3 TREATMENTS 5 & 6 - CANOPY PLANTING

This type of planting has to be used when view lines exist along the driveway.

- T5 - roof over driveway creating complete canopy preventing long views
- T6 - partial roof over driveway with intermittent long views
- Tree trunks break up long distant views to mining operations
- They also create strong foreground and spatial values
- Typical canopy trees are Group 1 type, jacarandas, poincianas, figs, paulownias (see Table 8)

Figure 10 | *Landscape driveway treatment example - Group 1 canopy species*

LANDSCAPE
driveway wall treatments

T7 complete canopy

T8 partial canopy

Figure 11 | *Landscape driveway treatment - T7 and T8*

3.4.4 TREATMENTS 7 & 8 - WALL PLANTING

Treatment can be used when views of mining operations are side views.

- Tree foliage creates a visual buffer to side view
- Planting on other side of driveway for visual balance
- T7 - complete wall: plant trees at regular spacing along both sides of driveway
- T8 - partial wall: some openings to create variety, view retention

Groups 3 and 4 (see Table 8)

Figure 12 | *Landscape driveway treatment example - Group 3 and 4 wall species*

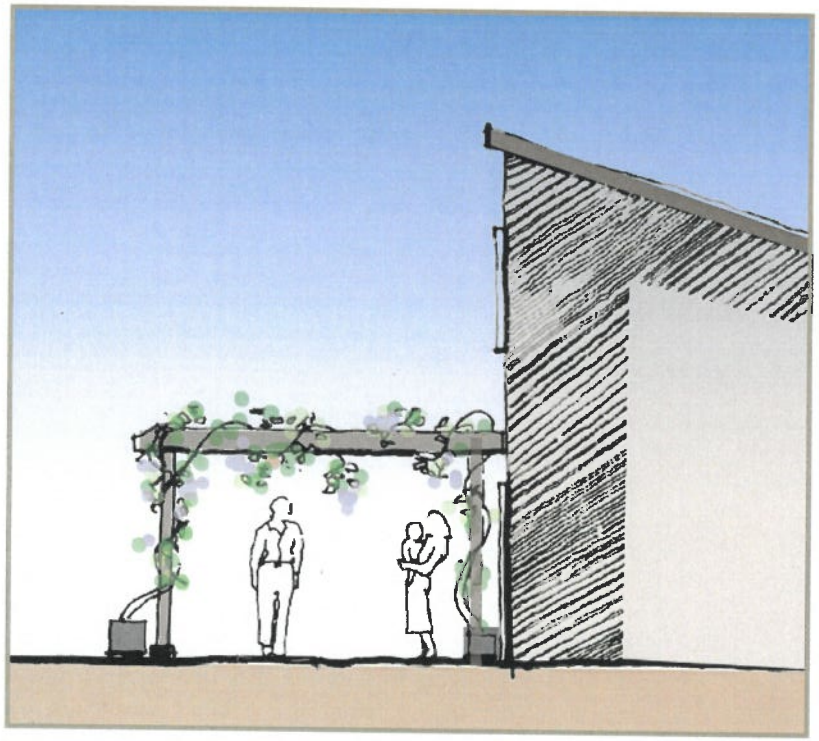


Figure 13 | *Offset landscape treatment - architectural element as visual ceiling*

3.4.5 TREATMENT 9 - OFFSET LANDSCAPE TREATMENTS

Offset landscape treatments help to mitigate initial sensitivities caused by the visual impact of mine operation elements. These landscape treatments offer the opportunity to offset the value of the localised visual amenity by creating very strong foreground treatments.

Offset landscape treatments achieve positive outcomes for affected residents. This is as much about restoring people's sense of ownership and enhancing their living environments as it is about landscape treatments.

Figure 14 | *Structural roof - refocuses views*

Successful social outcomes for landowners and communities.

4. MAINTENANCE

working with landowners

Should any mitigation measures be implemented, BMC will ensure that any visual mitigation works will be maintained by BMC for 12 months. To effectively achieve this BMC requires access to properties. The protocol for this access is to notify the landowners by phone or letter when work is needed or scheduled. Disruptions to landowners will be minimised as much as possible.

Visual mitigation landscape and offset landscape works will be maintained by BMC under the following regime pending approval from the residence:

1. Installation and completion of works:
   - Month 1: maintenance visit 1;
   - Month 3: maintenance visit 2;
   - Month 6: maintenance visit 3; and
   - Month 9: maintenance visit 4.
2. Maintenance activities may include:
   - Weed control;
   - Slashing or mowing;
   - Mulch top up;
   - Plant replacement;
   - Staking of trees;
   - Pruning; and
   - Fertilising.

Following this there may be a further 2 year monitoring period subject to the outcomes of the initial installation and maintenance programme.