

Muswellbrook Coal Company Limited



Established 1907

VISUAL AMENITY LIGHTING AND LANDSCAPE MANAGEMENT PLAN (VALLMP)

THREE YEARLY REVIEW – APPROVED

DATE: OCTOBER 2020

Version	Date	Section Modified	Reason for Modification	Review Team
1	February 2005	All	Original Management Plan	MCC Technical Services Department Carbon Based Environmental
2	December 2010	All	5 Yearly Review	MCC Technical Services Department Carbon Based Environmental
3	December 2015	All	5 Yearly Review	MCC Environmental, Technical Services and Production Departments
4	April 2017	All	Update following modification for Continuation Project	MCC Environmental, Technical Services and Production Departments
5	October 2020	Administrative changes throughout	3 Yearly Review	MCC Environmental Department

Approved by General Manager: Signature on File

Effective Date: 7 October 2020

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1.0 INTRODUCTION

Muswellbrook Coal Company Limited (MCC) operates the Muswellbrook Open Cut Coal Mine, located approximately 3 kilometres (km) to the north east of Muswellbrook in the Hunter Valley of New South Wales (Plan 1A). MCC is a wholly owned subsidiary of Idemitsu Australia Resources Pty Limited (IAR). IAR has been operating in Australia since 1978 and is an Australian subsidiary of Japanese company Idemitsu Kosan Company Limited.

On September 1, 2003, Development Consent for DA 205/2002 was granted by Muswellbrook Shire Council (MSC) to extend the former MCC No.1 Open Cut. The No.1 Open Cut Extension commenced operations in March 2005 and has a capacity to produce up to 2,000,000 tonnes coal per annum. This approval has subsequently been modified on several occasions with the latest modification granted in 2016 to allow mining in an area known as the “Continuation Project” and to extend the life of the mining operations to 2022. Rehabilitation activities will continue past this date.

1.1 SCOPE

The Development Consent requires the preparation, approval and implementation of an Environmental Management Strategy (EMS) and subordinate Environmental Management Plans (EMP). One of these EMPs is the Visual Amenity Lighting and Landscaping Management Plan (VALLMP). Whilst this plan specifically addresses issues related to visual amenity lighting and landscaping, it should be read in conjunction with other EMP’s.

This VALLMP has been prepared to the satisfaction of MSC (see **Appendix 1** for copies of correspondence).

1.2 OBJECTIVES

The primary objectives of the VALLMP are to implement visual reduction strategies in order to minimise the visual, lighting and landscape impact on the community and meet the development consent requirements.

2.0 STATUTORY REQUIREMENTS

The VALLMP has been prepared to fulfil the requirements of the Project Approval conditions listed in **Table 1**.

Table 1: Statutory Requirements

Approval/ Licence Condition No.	Condition	Section
Development Consent Requirement		
22	The Applicant must prepare a Visual Amenity, Lighting and Landscaping Management Plan for the development to the satisfaction of Council, and carry out the development in accordance with this plan. The Plan must:	This plan
22	Identify the privately - owned residences that are likely to experience significant visual impact during the remainder of the project, and	5.0
22	Describe (in general terms) any additional mitigation measures that are planned to be implemented to reduce the visibility of the mine from these properties.	4.0
22	Describe (in general terms) the mitigation measures that are planned to minimise the visibility of fixed lighting and mobile lighting where possible from the mine on these properties.	4.0

3.0 EXISTING ENVIRONMENT

MCC is located 3km north-east of the township of Muswellbrook, with access via Muscle Creek Road off the New England Highway. The development consent boundary associated with MCC covers around 680ha, and comprises current open cut mining operations and associated infrastructure, as well as previously rehabilitated areas from historical mining operations.

Land use zoning around MCC under the provisions of the Muswellbrook Local Environmental Plan (LEP) is a combination of RU1 Primary Production, E3 Environmental Management and SP2 Infrastructure. Surrounding land uses include agricultural activities, light industrial and special land uses, and residential areas as shown in **Figure 1**.

The land immediately surrounding the mine is predominately agricultural land which is primarily used for grazing of beef cattle. Light industrial and special land uses include Muswellbrook Quarry to the north-west, St Heliers correctional centre also to the north-west and Muswellbrook waste management facility adjacent to the south-west section of the MCC development consent boundary. Muswellbrook township is to the south-west, with other notable rural-residential areas along Sandy Creek Road to the north, Woodland Ridge Estate approximately 3.5km to the south, and along Muscle Creek Road around 4km to the south-east.

Other significant features surrounding MCC include the Main Northern Rail Line and the New England Highway, which both run to the west of MCC through Muswellbrook township and to the south towards Singleton. Numerous other mining operations and power-generating facilities exist in the Muswellbrook LGA, notably Bengalla mine to the west of Muswellbrook and Mt Arthur Coal and Drayton Coal to the south (**Figure 1**).

The natural topography shields the majority of views to MCC. However, the mine can be seen from a number of locations:

- Woodland Ridge Estate, to the south;
- the corner of Castlerock Road and Kayuga Road, to the west of Muswellbrook; and
- the New England Highway on approach to Muswellbrook, approximately 4km north of the centre of Muswellbrook.

MCC can also be seen in the distant background from Woodland Ridge Estate and from the Castlerock Road/Kayuga Road/Wybung Road area west of Muswellbrook. Open Cut 1 and the eastern emplacement are distantly visible from all of these locations.

MCC can also be seen in the distant background from the New England Highway, travelling south towards Muswellbrook. However, when travelling at speed on the highway the landform associated with MCC can be difficult to distinguish from the surrounding landscape.

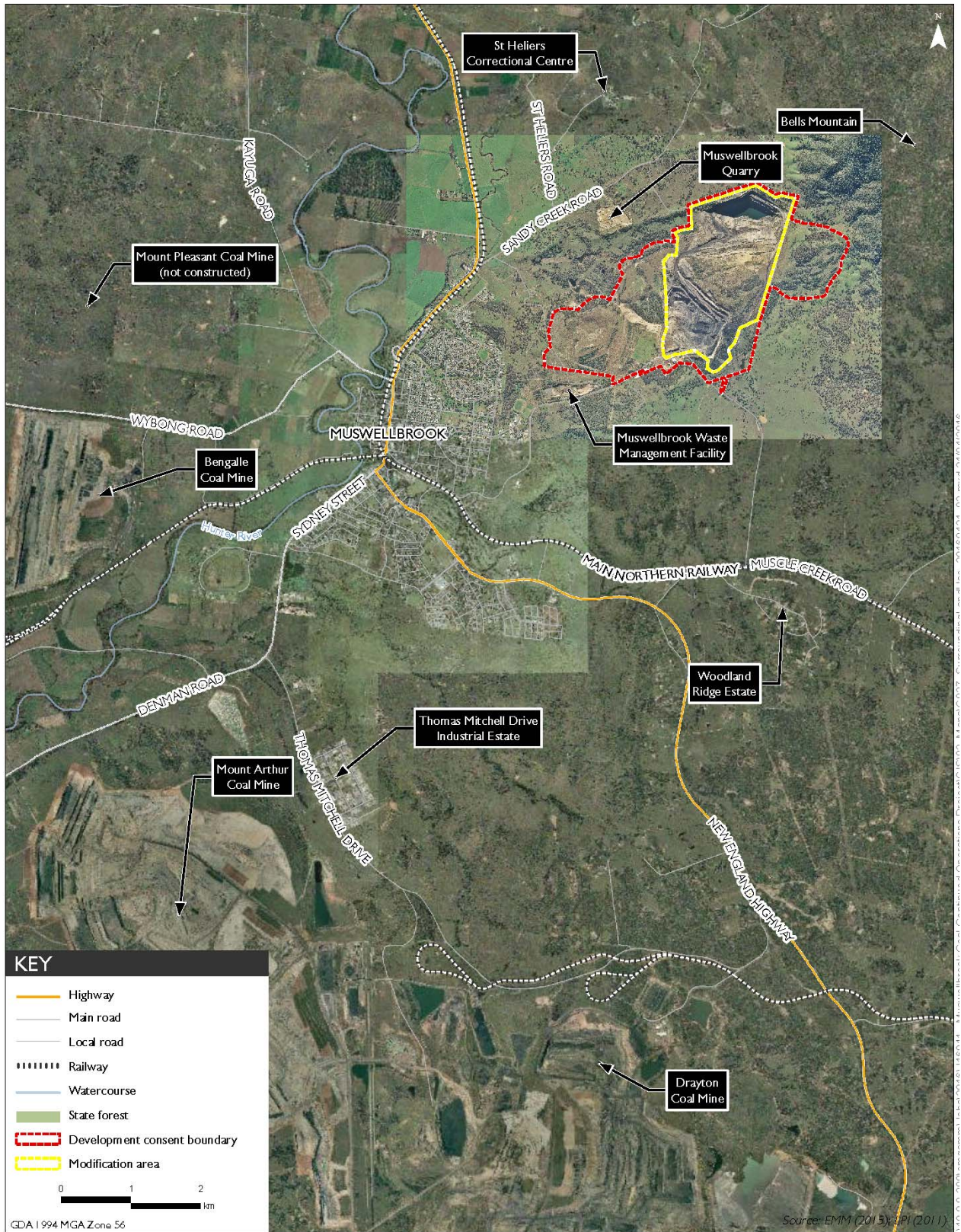


Figure 1: Surrounding Land Use (2016)

4.0 VISUAL AMENITY LIGHTING AND LANDSCAPING STRATEGIES

MCC will continue to employ measures to minimise the potential for visual related impacts on the nearest receptors by:

- undertaking rehabilitation progressively where possible; and
- orientating lights away from sensitive receptors where practical.

With regards to progressive rehabilitation, opportunities will be limited during the rest of the mining life. As mining operations progress in Open Cut 1, some of the overburden will be hauled to Open Cut 2 for emplacement, and the remainder to Open Cut 1. As mining operations move north in Open Cut 1, small areas would become available for rehabilitation on the southern end of the overburden dump. However, the available areas would be limited due to the inert material having to be stockpiled at the top of the dumps to be bulk pushed over the carbonaceous material that would be emplaced in the pit at the end of active mining. The remaining overburden material to be disposed of would be hauled to Open Cut 2, with the last of the required material dumped into the Open Cut 2 towards the end of the mining life after which bulk pushing for rehabilitation can commence.

Any new external lighting will be installed in accordance with the requirements of *AS 4282 – Control of the Obtrusive Effects of Outdoor Lighting*. Care will be exercised in the location of lighting plant, especially if located on the edge of highwalls, so that direction of illumination is away from residences and public roads. Any mobile lighting towers positioned on or near the skyline will be fitted with shields to minimise the potential for accidental spillage of light.

5.0 POTENTIAL SIGNIFICANT IMPACTS ON PRIVATELY OWNED PROPERTY

A review of any potential significant impacts on privately owned property has been undertaken. Three properties to the north of MCC (R40, R41 and R42) were identified as potentially having significant visual impacts from the operation so a detailed review of the changes in visual impacts has been undertaken. This review identified that there will be no significant changes in the visual impacts on these properties.

5.1 R40 VISUAL IMPACTS

A surface profile cross sections has been prepared as shown in **Figure 2**, which is representative of the surface profiles in years 2017, 2019 and 2020 as viewed from receptor R40 and looking towards the mining infrastructure area (MIA). A portion of the Open Cut 2 rehabilitation area, which provides a visual barrier between the residence (R40) and the active mining area in Open Cut 1, would be mined through as a result of the modification. This would result in some temporary increases to visibility of the mining infrastructure area at times during the extended mining operations. However, the emplacement of overburden behind the advancing mining area is likely to provide some shielding of views from R40 to the mining infrastructure area.

5.2 R41 VISUAL IMPACTS

A surface profile cross sections has been prepared as shown in **Figure 3**, which is representative of the surface profiles in years 2017, 2019, 2020 and 2021 as viewed from receptor R41 and looking towards the MIA. The cross section demonstrates that the height of

OC2 rehabilitation area which is being mined through would reduce during the last year of mining sufficiently for there to be a direct view of the MIA. Even at this stage, the overburden emplacement closest to the MIA may still provide some shielding of infrastructure at the MIA, given the elevation of the residence is slightly lower than the MIA. Trucks and excavators would likely be visible from this receptor when working at the top of the dumps during the life of the mine.

5.3 R42 VISUAL IMPACTS

A surface profile cross sections has been prepared as shown in **Figure 4**, which is representative of the surface profiles in years 2017, 2019, 2020 and 2021 as viewed from receptor R42 and looking towards the MIA. The cross section demonstrates that the residence R42 is unlikely to have views of the MIA due to intervening topography between the residence and the northern development consent boundary. Trucks and excavators would potentially be visible from this receptor when working at the top of the OC2 rehabilitation area when they are at their highest during the remaining life of the mine. However, as the dump height reduces, views will be shielded by existing topography between the residence and the northern development consent boundary.

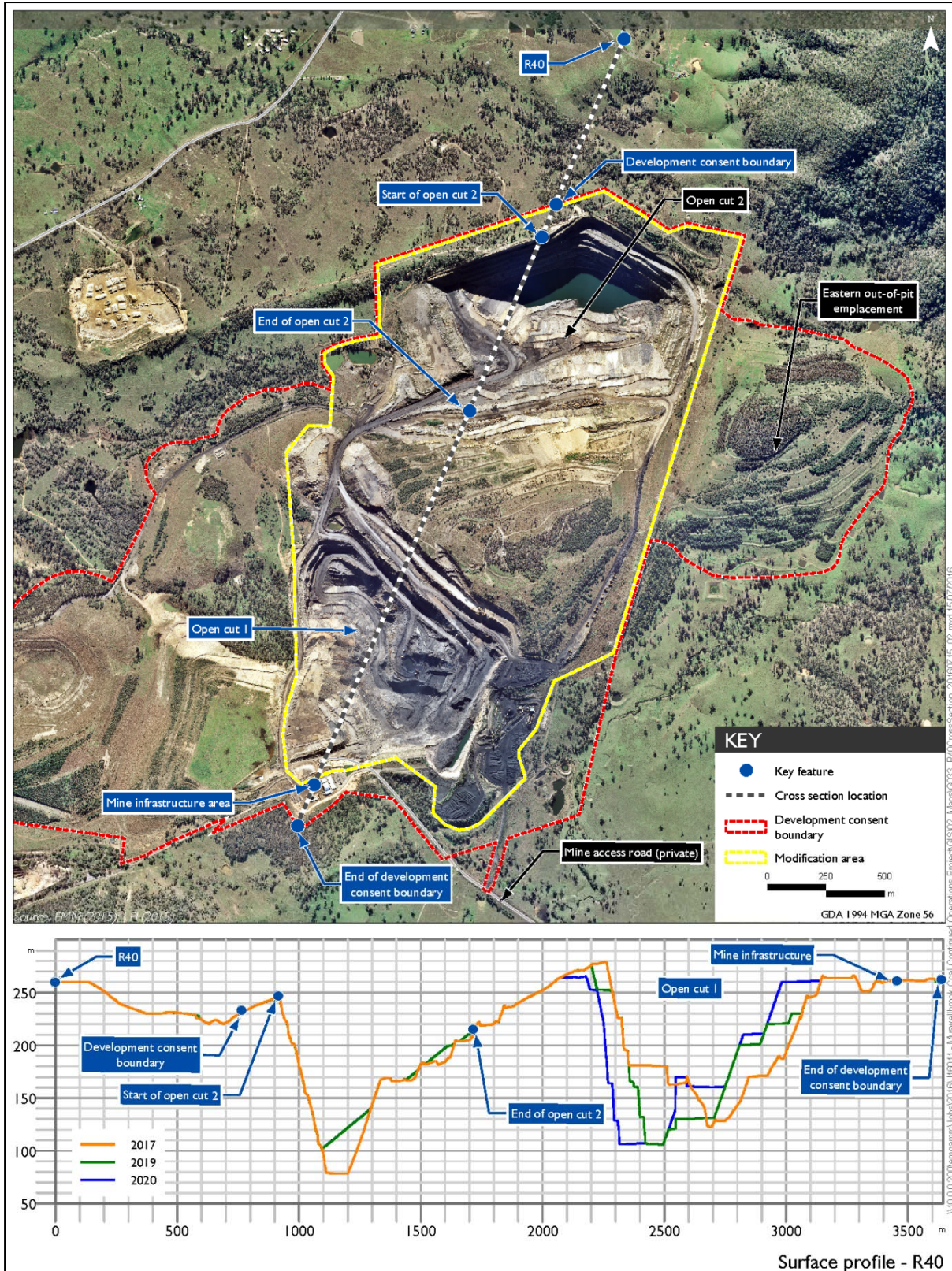


Figure 2: Surface Profile R40

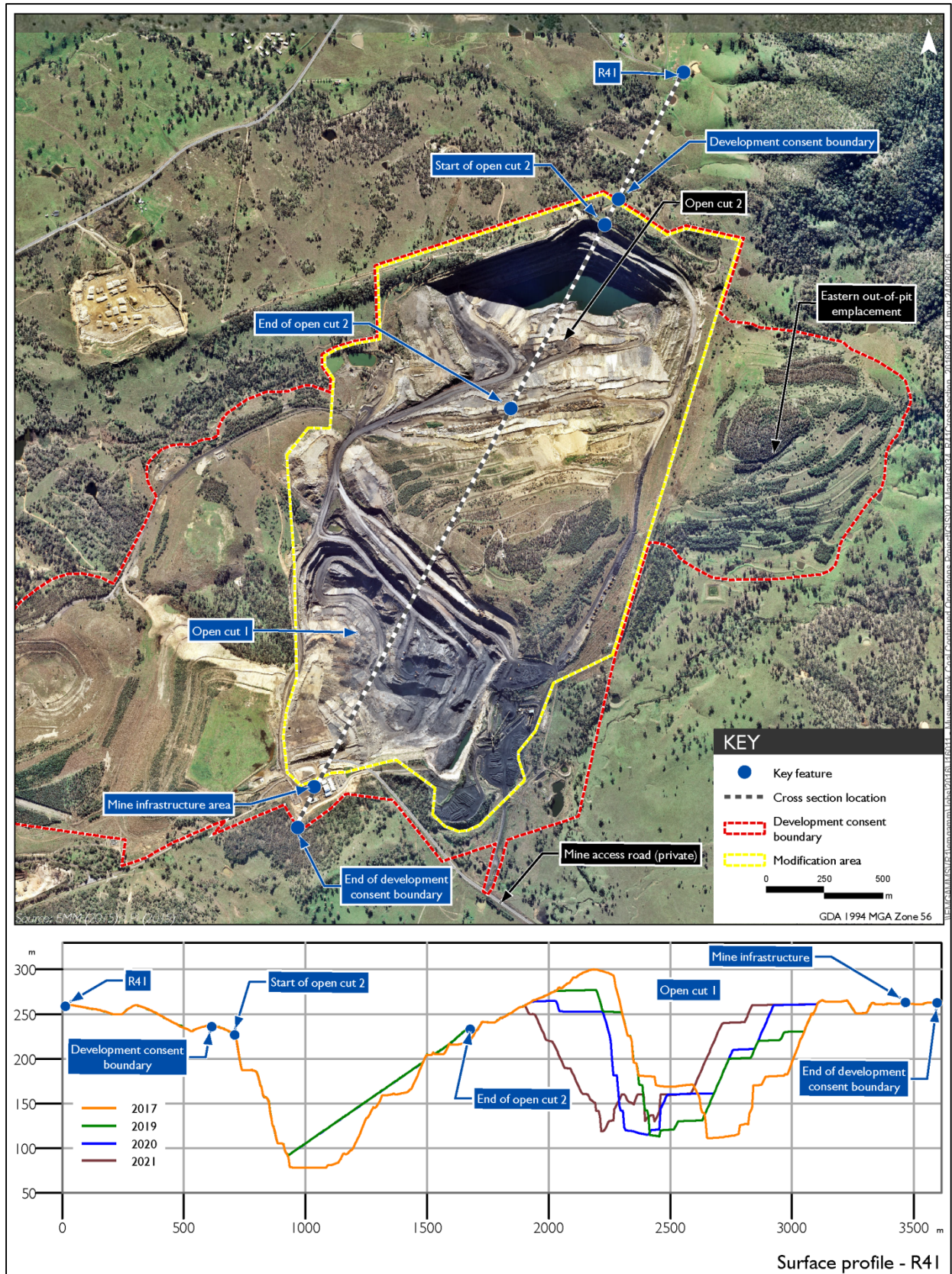


Figure 3: Surface Profile R41

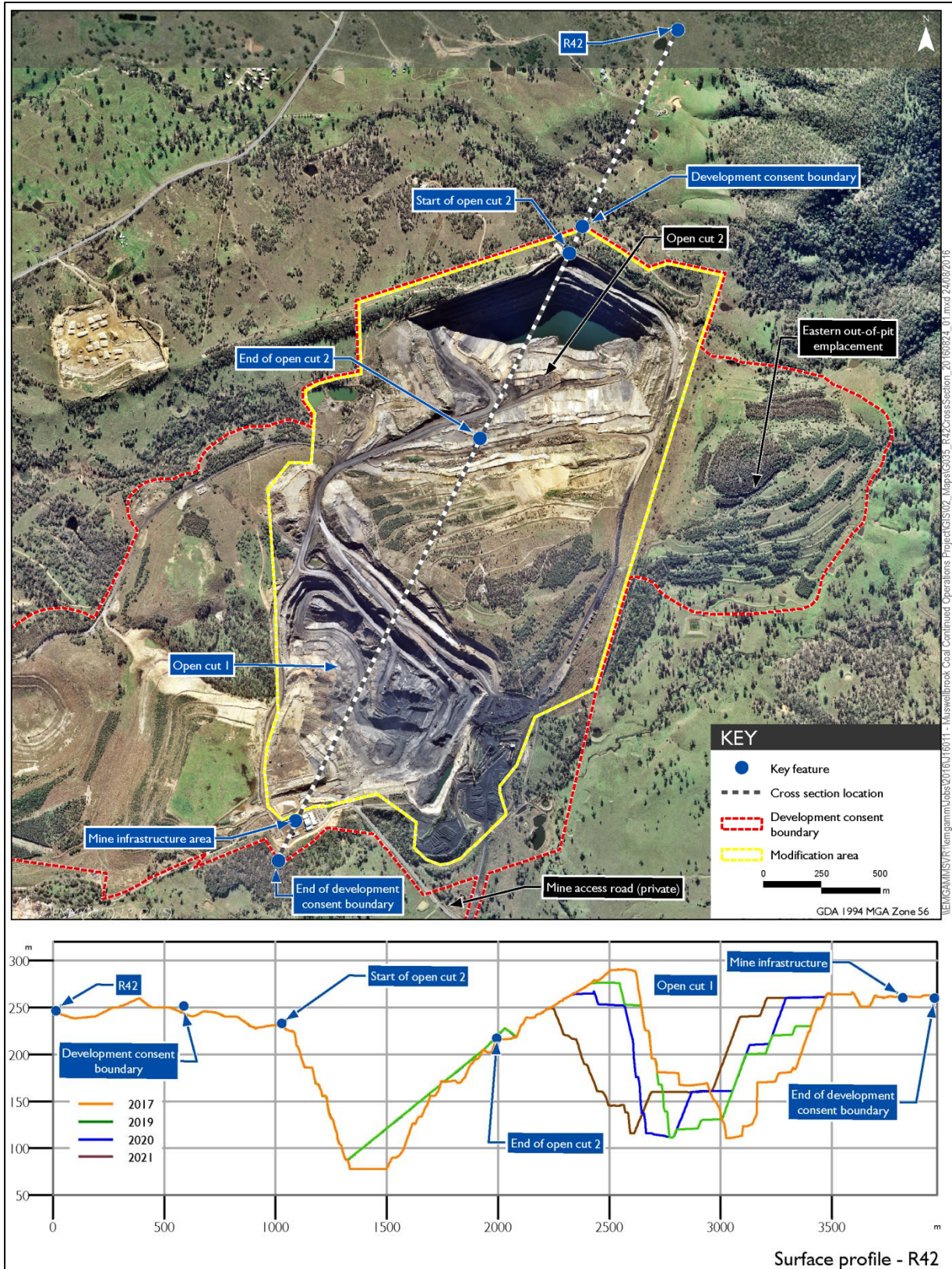


Figure 4: Surface Profile R42

6.0 COMPLAINT MANAGEMENT

Complaints by the community regarding visual amenity can be directed to the 24 hour toll free telephone Environmental Contact Line 1800 600 205. More details on the complaints management at MCC are found in the Environmental Management Strategy.

7.0 EXTERNAL REPORTING

Within 2 weeks of approval of this VALLMP, a copy will be made available for public viewing via the MCC website.

The performance of MCC's VALLMP will be reported through the Annual Environmental Management Report (AEMR).

8.0 REVIEW OF MANAGEMENT PLAN

The VALLMP will be reviewed;

- Within 3 months of changes to Development Consent conditions relating to visual amenity, lighting or landscaping;
- Following an independent environmental audit which recommends changes to the VALLMP; and
- Every three years, or as directed by MSC, in accordance with Condition 14 (e) of the Development Consent Conditions.

9.0 RESPONSIBILITIES

Table 2 outlines the responsibilities relating to the VALLMP.

Table 2: Management Plan Responsibilities

Position	Task	Timing
General Manager	Provide adequate resources to implement the requirements of the VALLMP	Annual review
Maintenance Manager	Install new lighting in accordance with AS4282	As required
Environmental Superintendent	Coordinate response to all visual amenity or lighting related complaints	Following a visual amenity complaint
	Coordinate reviews of the VALLMP	As outlined in VALLMP
	Coordinate reporting as required in VALLMP	Annually

Appendix 1: Correspondence Regarding Visual Amenity Lighting and Landscape Management Plan

Julie Thomas

From: Sharon Pope <Sharon.Pope@muswellbrook.nsw.gov.au>
Sent: Friday, 2 October 2020 2:48 PM
To: Julie Thomas
Cc: Hamish McTaggart
Subject: FW: Management Plans for Review
Attachments: Visual Amenity Lighting and Landscape Management Plan 2020 Final.pdf

[WARNING: This email originated outside of Our Company. DO NOT CLICK links or attachments unless you recognize the sender and know the content is safe.]

Hello Julie

I advise that I have reviewed the Visual Amenity, Lighting and Landscaping Management Plan and there are no changes requested. As a result it is accepted by MSC and can be finalised.

Regards

Sharon Pope | Executive Manager Environmental and Planning Services



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www.muswellbrook.nsw.gov.au

From: Julie Thomas <Julie.Thomas@muscoal.com.au>
Sent: Friday, 5 June 2020 10:58 AM
To: Muswellbrook Shire Council <council@muswellbrook.nsw.gov.au>
Cc: Hamish McTaggart <Hamish.McTaggart@muswellbrook.nsw.gov.au>
Subject: Management Plans for Review

Hi Hamish

MCC are currently completing the three yearly review of Environmental Management Plans and the Environmental Management Strategy, Spontaneous Combustion Management Plan, and Visual Amenity, Lighting and Landscaping Plan have recently been reviewed. The updated versions are attached for MSC's review and approval.

No consultation was required for the Spontaneous Combustion Management Plan, and Visual Amenity, Lighting and Landscaping Plan.

Consultation has been undertaken for the Environmental Management Strategy with no comments received.

The only changes made to these documents are administrative.

Please let me know if you have any comments on these documents.

Thanks