



Planning, Industry & Environment

**Energy & Resources
Planning & Assessment**

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Dear Ms Annadale

**Mount Pleasant Operation (DA 92/97)
Approval of Noise, Biodiversity, Aboriginal Heritage, Visual Impact and Water
Management Plans**

I refer to your submission by emails, dated 12 and 25 September 2019, of revised versions of management plans (MPs) for the Mount Pleasant Operation coal mine. The Secretary has approved the following submitted plans:

- Noise MP (condition 9 of schedule 3);
- Biodiversity MP (condition 32 of Schedule 3);
- Aboriginal Heritage MP (condition 36 of Schedule 3);
- Visual Impact MP (condition 47 of Schedule 3); and
- Water MP (condition 28 of Schedule 3), including a:
 - Site Water Balance;
 - Erosion and Sediment Control Plan;
 - Surface Water MP;
 - Groundwater MP; and
 - Surface and Ground Water Response Plan.

If you require any further information, please contact Colin Phillips.

Yours sincerely


Steve O'Donoghue
Director Resource Assessments
as the Secretary's nominee



MOUNT PLEASANT OPERATION

VISUAL IMPACT MANAGEMENT PLAN

| | | | |
|------------------------|-------------------------------|-------------------------|----------------|
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1 INTRODUCTION

The Mount Pleasant Operation (MPO) is located in the Upper Hunter Valley of New South Wales (NSW), approximately 3 kilometres (km) north-west of Muswellbrook and approximately 50 km north-west of Singleton (Figure 1). The village of Aberdeen and locality of Kayuga are also located approximately 5 km north-northeast and 1 km north of the MPO boundary, respectively (Figure 1). The proponent of the MPO is MACH Energy Australia Pty Ltd (MACH Energy), which purchased the MPO from Coal & Allied Operations Pty Ltd (Coal & Allied) in 2016.

The initial development application for the MPO was made in 1997. This was supported by an Environmental Impact Statement (EIS) prepared by Environmental Resources Management (ERM) Mitchell McCotter (ERM Mitchell McCotter, 1997). On 22 December 1999, the then Minister for Urban Affairs and Planning granted Development Consent DA 92/97 to Coal & Allied. This allowed for the “Construction and operation of an open cut coal mine, coal preparation plant, transport and rail loading facilities and associated facilities” at the MPO. The consent allowed for operations 24 hours per day seven days per week and the extraction of 197 million tonnes (Mt) of run-of-mine (ROM) coal over a 21 year period, at a rate of up to 10.5 Mt of ROM coal per year.

The Mount Pleasant Project Modification (MOD 1) was submitted on 19 May 2010 with a supporting Environmental Assessment (EA) prepared by EMGA Mitchell McLennan (EMGA Mitchell McLennan, 2010). MOD 1 included the provision of an infrastructure envelope for siting the mine infrastructure, the provision of an optional conveyor/service corridor linking the MPO facilities with the Muswellbrook-Ulan Rail Line and modification of the existing Development Consent DA 92/97 boundaries to accommodate the optional conveyor/service corridor and minor administrative changes. MOD 1 was approved on 19 September 2011.

The MPO South Pit Haul Road Modification (MOD 2) was submitted on 30 January 2017 with a supporting EA prepared by MACH Energy (MACH Energy, 2017a). MOD 2 proposed to realign an internal haul road to enable more efficient access to the South Pit open cut, with no other material changes to the approved MPO. MOD 2 was approved on 29 March 2017.

The MPO Mine Optimisation Modification (MOD 3) was submitted on 31 May 2017 with a supporting EA prepared by MACH Energy (MACH Energy, 2017b). MOD 3 comprised an extension to the time limit on mining operations (to 22 December 2026) and extensions to the South Pit Eastern Out of Pit Emplacement to facilitate development of an improved final landform. MOD 3 was approved on 24 August 2018.

The MPO Rail Modification (MOD 4) was submitted on 18 December 2017 with a supporting EA prepared by MACH Energy (MACH Energy, 2017c). MOD 4 proposed the following changes:

- duplication of the approved rail spur, rail loop, conveyor and rail load-out facility and associated services;
- duplication of the Hunter River water supply pump station, water pipeline and associated electricity supply that followed the original rail spur alignment; and
- demolition and removal of the redundant approved infrastructure within the extent of the Bengalla Mine, once the new rail, product loading and water supply infrastructure has been commissioned and is fully operational.

MOD 4 was approved on 16 November 2018 by the Secretary of the Department of Planning and Environment (under Delegation). Appendix 2 of the modified Development Consent DA 92/97 illustrates the Conceptual Project Layout Plan of the approved MPO at 2021 and 2025, Approved Surface Disturbance Plan and Conceptual Final Landform (Attachment 1) incorporating the MOD 4 infrastructure relocations.



MMC-16-01-MP2019_Figure 1_Rev A



Source: © NSW Department of Finance, Services and Innovation (2018); Office of Environment and Heritage NSW (2018)

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MOUNT PLEASANT OPERATION
Project Location

Figure 1

1.1 PURPOSE AND SCOPE

This Visual Impact Management Plan (VIMP) has been prepared by MACH Energy to satisfy the requirements under Development Consent DA 92/97 and specifically Condition 47, Schedule 3.

The VIMP applies to all employees and contractors at the MPO and covers all areas within the MPO boundary. The VIMP applies to the life of the MPO, including (but not limited to) the period of mining operations specified in Development Consent DA 92/97 (as modified), which currently permits mining until 22 December 2026. As required by Condition 5, Schedule 2 of Development Consent DA 92/97, the VIMP will continue to apply (excluding mining operations) beyond 22 December 2026, as required, until the rehabilitation and any additional undertakings (required by the Secretary of the NSW Department of Planning, Industry and the Environment (DPIE), or the Division of Resources and Geoscience [DRG] within the DPIE) have been carried out satisfactorily.

This VIMP has been prepared to manage visual impacts associated with construction and operation of the MPO, including for example, initial establishment and development, open cut mining, operation of the coal handling and preparation plant (CHPP), construction and operation of the rail spur/loop, construction and operation of the Fines Emplacement Area and rehabilitation.

The provisional general arrangement of the MPO at 2021 and 2025 (as per the Development Consent DA 92/97 [Attachment 1]), showing the key mine components relevant to this VIMP, are shown on Figures 2 and 3 respectively. These plans have been used to guide the management measures in this VIMP.

1.1.1 Previous Versions

A previous version of the Landscape Management Plan (LMP) (Version 6) was prepared by Coal & Allied and was approved on 23 July 2012.

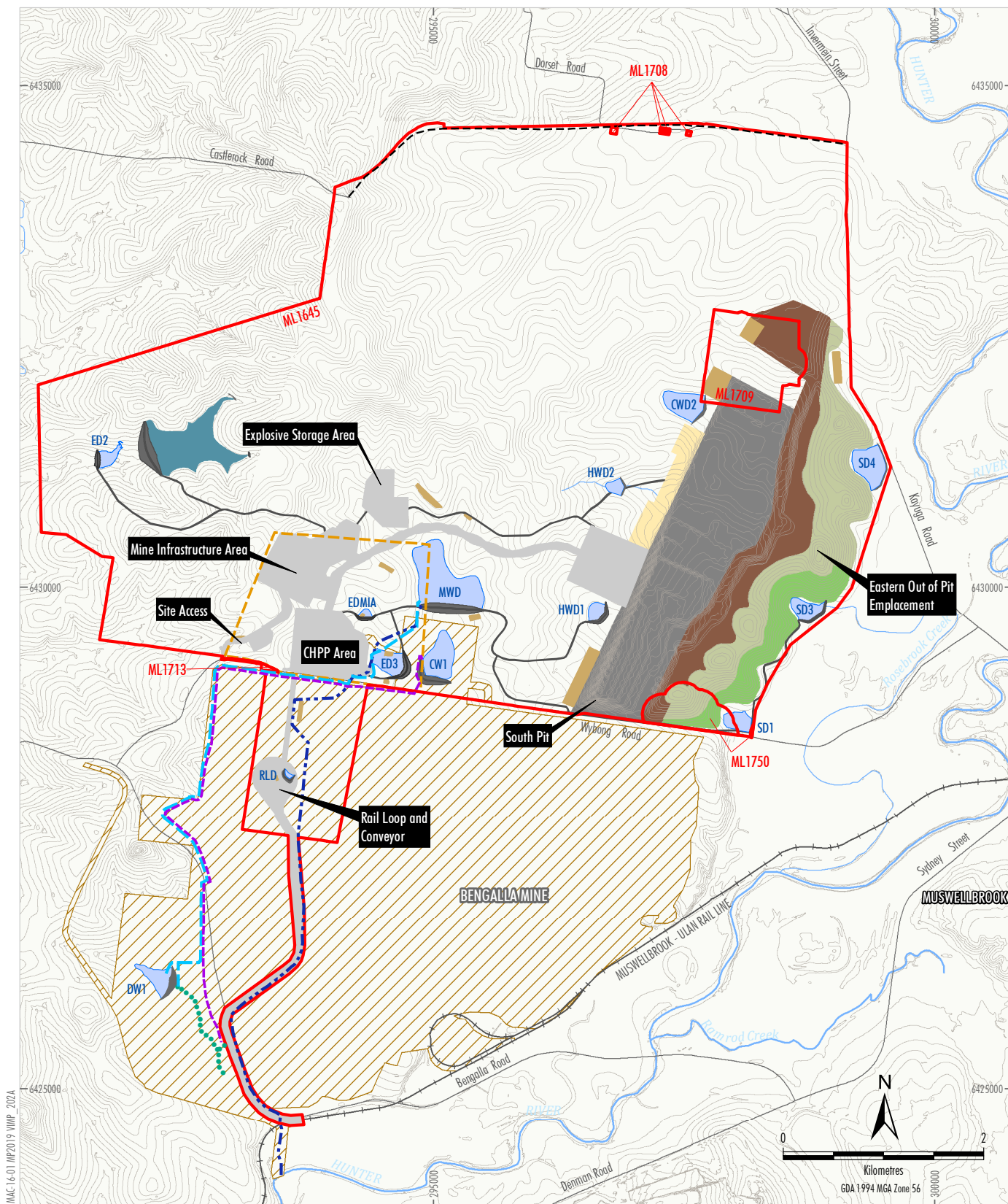
The previously approved version of the LMP was prepared by MACH Energy to provide a contemporary outline of MACH Energy's proposed visual treatment of the MPO, following the approval of MOD 3.

1.1.2 Current Version

This VIMP has been prepared to replace the previously approved version of the LMP described in Section 1.1.1 following the approval of MOD 4. This VIMP describes additional visual impact management measures proposed for the MOD 4 rail infrastructure.

As required by Condition 47, Schedule 3 of Development Consent DA 92/97, a draft version of this VIMP was submitted to the Muswellbrook Shire Council (MSC) for the purpose of consultation. MSC provided comments on the draft VIMP on 12 July 2019, regarding visual screen monitoring, in-text references of the relevant sections/figures as well as the addition of indicative location of the train light screens in Figure 5 (refer to Appendix A). MSC's suggested text and figure edits were made. No material changes were made in relation to visual screen monitoring as the monitoring proposed is consistent with contemporary examples for other visual screens across the Hunter Valley.

As described in Section 8.2, this VIMP will be updated to include additional details regarding visual impact management measures relevant to MOD 4 rail infrastructure following completion of detailed design and approval of the Construction Environmental Management Plan.



LEGEND

- Mining Lease Boundary
- Bengalla Mine Approved Disturbance Boundary (SSD-5170)
- Infrastructure Area Envelope
- Active Stripping Area
- Active Mining Area
- Active Overburden Emplacement Area
- Topsoil Stockpile
- Initial Rehabilitation
- Established Rehabilitation
- Infrastructure and Borrow/Stockpile Area
- Access Road
- Northern Link Road

Indicative Water Pipeline Alignment

- MPO Hunter River Supply Pipeline
- MPO DW1 Pipeline (Bi-directional)
- Bengalla Mine CW1 Pipeline
- Approximate Extent of Scour Protection
- Water Dam
- Fines Emplacement Area

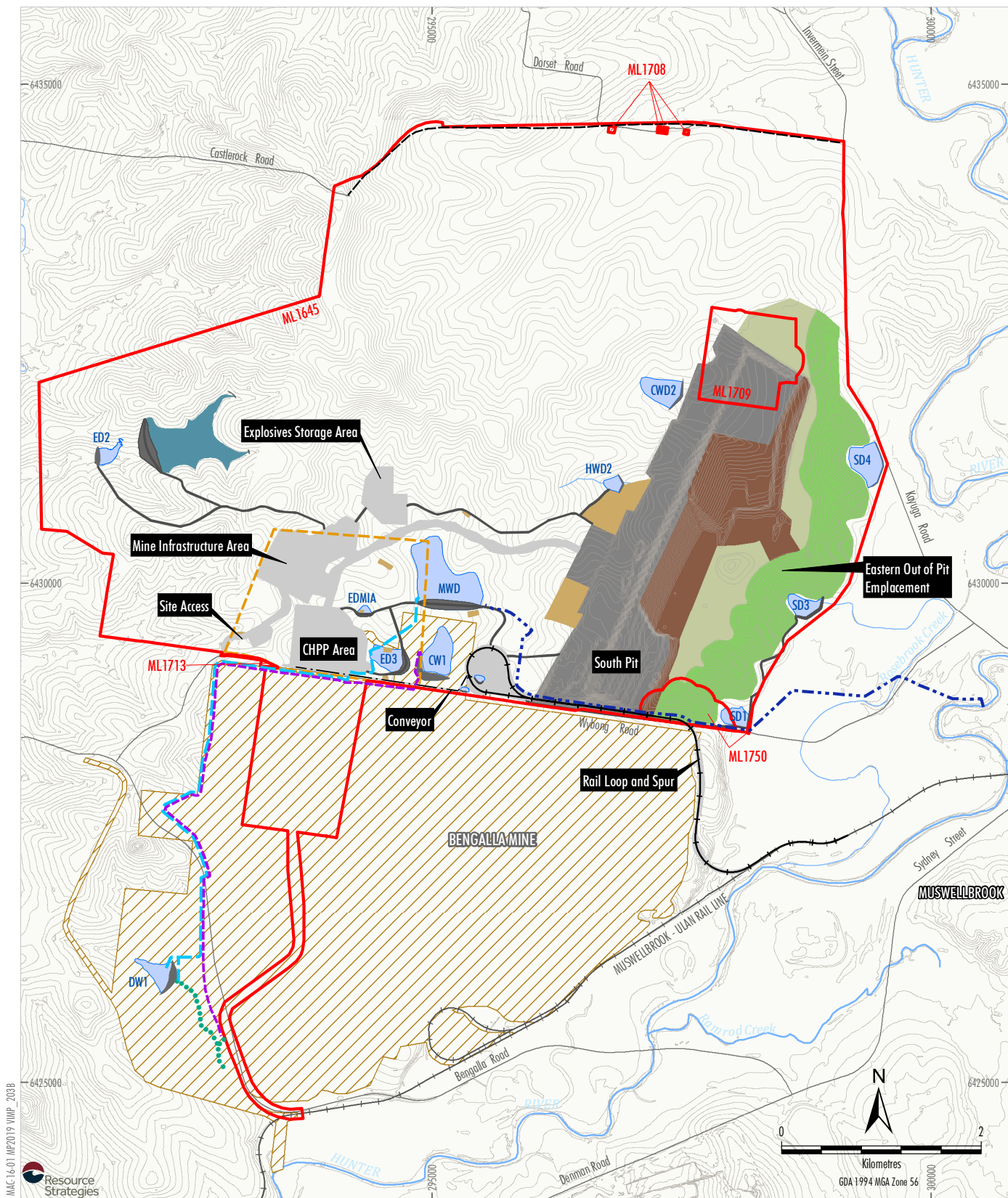
Source: NSW Land & Property Information (2017); NSW Division of Resources & Energy (2017); MACH Energy (2017)

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MOUNT PLEASANT OPERATION

Provisional General Arrangement 2021

Figure 2



LEGEND

- Mining Lease Boundary
- Bengalla Mine Approved Disturbance Boundary (SSD-5170)
- Infrastructure Area Envelope
- Active Mining Area
- Active Overburden Emplacement Area
- Topsoil Stockpile
- Initial Rehabilitation
- Established Rehabilitation
- Infrastructure and Borrow/Stockpile Area
- Access Road
- Northern Link Road

Indicative Water Pipeline Alignment

- MPO Hunter River Supply Pipeline
- MPO DW1 Pipeline (Bi-directional)
- Bengalla Mine CW1 Pipeline
- Approximate Extent of Scour Protection
- Water Dam
- Fines Emplacement Area

Source: NSW Land & Property Information (2017); NSW Division of Resources & Energy (2017); MACH Energy (2018)

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MOUNT PLEASANT OPERATION

Provisional General Arrangement 2025

Figure 3

1.2 STRUCTURE OF THE VIMP

The remainder of the VIMP is structured as follows:

- Section 2: Outlines the statutory obligations relevant to this VIMP.
- Section 3: Summarises the existing visual environment of the MPO and the predicted visual impacts of mine operations.
- Section 4: Outlines the objectives and performance indicators relevant to this VIMP.
- Section 5: Describes the visual management measures proposed for the MPO.
- Section 6: Outlines the proposed landscape monitoring program.
- Section 7: Outlines the contingency plan for key risks to the visual amenity of the MPO.
- Section 8: Outlines the reviewing procedure for MPO documentation, including in particular for this VIMP.
- Section 9: Describes the reporting procedures proposed for the MPO.
- Section 10: Lists the references cited in this report.
- Appendix A: Lists comments received from the relevant consultees during the consultation period.

2 STATUTORY OBLIGATIONS

MACH Energy's statutory obligations relevant to landscape management are contained in the conditions of Development Consent DA 92/97 (as modified), as outlined in Section 2.1.

2.1 DEVELOPMENT CONSENT DA 92/97

The conditions of Development Consent DA 92/97 relevant to the content and structure of this VIMP are described in Sections 2.1.1 and 2.1.2.

2.1.1 VIMP Requirements

Conditions 45 to 47, Schedule 3 of Development Consent DA 92/97 outline the visual management required at the MPO, including the preparation of a VIMP (Table 1). Additionally, conditions related to the visual amenity of the MPO are contained in Appendix 3 of Development Consent DA 92/97 (Table 1).

Table 1
Visual Management Development Consent DA 92/97 Conditions

| MPO Development Consent DA 92/97 | Section where addressed in this VIMP document |
|---|---|
| <p>Schedule 3 – Environmental Performance Conditions</p> <p>VISUAL</p> <p>45. The Applicant must:</p> <ul style="list-style-type: none"> (a) implement all reasonable and feasible measures to minimise the visual and off-site lighting impacts of the development; (b) ensure no outdoor lights shine above the horizontal; and (c) ensure that all external lighting associated with the development complies with Australian Standard AS4282 (INT) 1997 – Control of Obtrusive Effects of Outdoor Lighting or its latest version, <p>to the satisfaction of the Secretary.</p> | Section 5.3 |
| <p>46. Upon receiving a written request from the owner of any residence on privately-owned land which has, or would have, significant direct view of the mining operations on site, the Applicant must implement visual mitigation measures (such as landscaping treatments or vegetation screens) on the land in consultation with the landowner. These measures must be reasonable and feasible, and directed toward minimising the visibility of the mining operations from the residence.</p> <p>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.</p> <p><u>Note: Except in exceptional circumstances, the Secretary will not require additional visual impact mitigation to be undertaken for residences that are more than 3 kilometres from the mining operations.</u></p> | Section 5.6 |
| <p>47. The Applicant must prepare a Visual Impact Management Plan to mitigate the visual impacts of the development to the satisfaction of the Secretary. This plan must:</p> <ul style="list-style-type: none"> (a) be prepared in consultation with Council, and submitted to the Secretary for approval by 30 June 2019, unless otherwise agreed by the Secretary; | Section 1.1.2 |

Table 1 (Continued)
Visual Management Development Consent DA 92/97 Conditions

| MPO Development Consent DA 92/97 Schedule 3 | Section where addressed in this VIMP document |
|--|--|
| <p><i>(b) provide for the establishment of trees and shrubs and/or the construction of mounding or bunding:</i></p> <ul style="list-style-type: none"> <i>• along the access road to the mine site;</i> <i>• around the water storage dams and coal preparation plant;</i> <i>• at other areas identified as necessary for the maintenance of satisfactory visual amenity;</i> <p><i>(c) include details of the visual appearance of all buildings, structures, facilities or works (including paint colours and specifications), aimed at blending as far as possible with the surrounding landscape; and</i></p> <p><i>(d) include detailed measures to minimise the visual impacts of the MOD 4 rail infrastructure, including:</i></p> <ul style="list-style-type: none"> <i>• details regarding any proposed light screens, earth bunds and screen planting; and</i> <i>• procedures to monitor and maintain the effectiveness of visual impact mitigation measures for the life of the development.</i> | <p align="center">Section 5.5.5</p> <p align="center">Sections 5.5.4 and 5.5.2</p> <p align="center">Section 5.5</p> <p align="center">Section 5.4</p> <p align="center">Sections 5.5.6, 6 and 8.2</p> |
| <p>Appendix 3 - Statement of Commitments</p> <ul style="list-style-type: none"> <i>• Visual amenity management will be undertaken in accordance with the development consent, which requires the preparation of a Visual Impact Management Plan.</i> <i>• Lighting management will be undertaken in accordance with the development consent, including preparation of an engineering report regarding light emissions.</i> <i>• MACH Energy will inspect the condition of the vegetation visual screens described in the Visual Impact Management Plan on a quarterly basis, and maintain these vegetation visual screens to the satisfaction of the Secretary.</i> | <p align="center">This VIMP</p> <p align="center">Section 5.3</p> <p align="center">Section 6</p> |

2.1.2 Management Plan (General) Requirements

Condition 2, Schedule 5 of Development Consent DA 92/97 outlines general management plan requirements. Table 2 presents these requirements and indicates where each is addressed within this VIMP.

Table 2
General Development Consent DA 92/97 Conditions

| MPO Development Consent DA 92/97 Schedule 5 | Section where addressed in this VIMP document |
|---|--|
| <p>2. <i>The Applicant must ensure that the management plans required under this consent are prepared in accordance with any relevant guidelines, and include:</i></p> <p>(a) <i>detailed baseline data;</i></p> <p>(b) <i>a description of:</i></p> <ul style="list-style-type: none"> <i>the relevant statutory requirements (including any relevant consent, licence or lease conditions);</i> <i>any relevant limits or performance measures/criteria;</i> <i>the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the development or any management measures;</i> <p>(c) <i>a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria;</i></p> <p>(d) <i>a program to monitor and report on the:</i></p> <ul style="list-style-type: none"> <i>impacts and environmental performance of the development;</i> <i>effectiveness of any management measures (see c above);</i> <p>(e) <i>a contingency plan to manage any unpredicted impacts and their consequences;</i></p> <p>(f) <i>a program to investigate and implement ways to improve the environmental performance of the development over time;</i></p> <p>(g) <i>a protocol for managing and reporting any:</i></p> <ul style="list-style-type: none"> <i>incidents;</i> <i>complaints;</i> <i>non-compliances with statutory requirements; and</i> <i>exceedances of the impact assessment criteria and/or performance criteria; and</i> <p>(h) <i>a protocol for periodic review of the plan.</i></p> <p><i>Note: The Secretary may waive some of these requirements if they are unnecessary or unwarranted for particular management plans.</i></p> | <p>Section 3</p> <p>Section 2</p> <p>Section 4</p> <p>Section 4</p> <p>Section 5</p> <p>Sections 6 and 8</p> <p>Section 7</p> <p>Section 8</p> <p>Section 9</p> <p>Section 8</p> |

3 VISUAL ENVIRONMENT

The visual environment of the MPO and surrounds was described in detail in the MPO EIS (ERM Mitchell McCotter, 1997), the MPO MOD 1 EA (EMGA Mitchell McLennan, 2010) and the MPO MOD 3 EA (MACH Energy, 2017b). The local regional environment surrounding the MPO is dominated by existing mining activities with agricultural and pastoral land uses, and areas of remnant woodland. The township of Muswellbrook is located to the south-east of the MPO site. The landscape within the MPO site is surmounted by the peak of Mount Pleasant at an elevation of approximately 360 metres (m) Australian Height Datum (AHD) and the radiating drainage lines from this peak have formed a series of well modulated ridges.

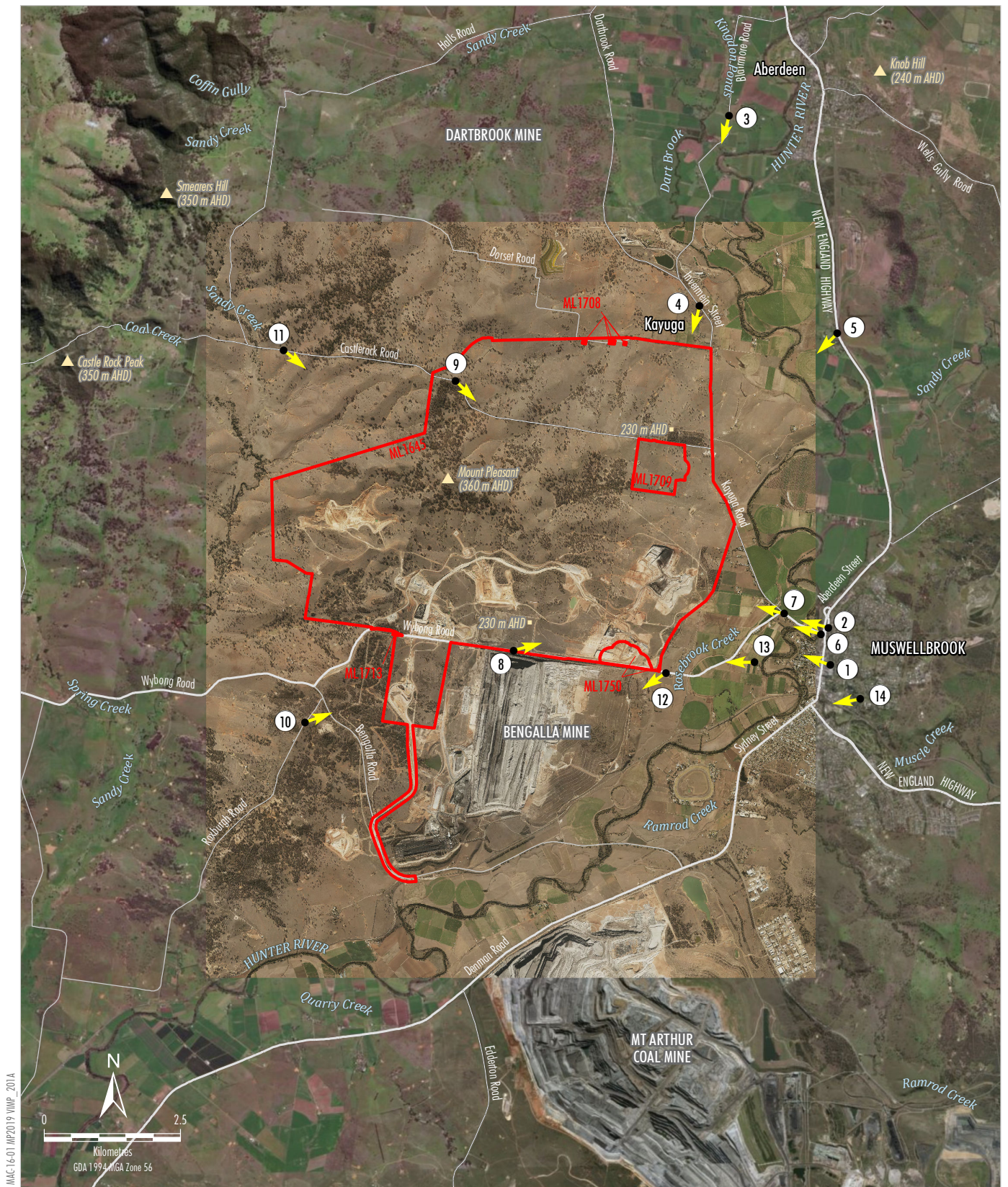
The predicted visual disturbance footprint associated with the MPO is described in Section 3.3.

Representative viewpoints identified in past visual assessments for the MPO have been considered in relation to the predicted visual disturbance of the MPO (Section 3.3). These representative viewpoints are shown on Figure 4 and include:

- Muswellbrook to the south-east (Viewpoints 1 and 2);
- Aberdeen to the north (Viewpoint 3);
- Dorset Road and the town of Kayuga to the north (Viewpoint 4);
- the New England Highway to the east (Viewpoint 5);
- the Main Northern Railway to the east (Viewpoint 6);
- Kayuga Road and the Hunter River Floodplain to the east (Viewpoint 7);
- Wybong Road to the south (Viewpoint 8);
- Castlerock Road to the north (Viewpoint 9);
- Roxburgh Road to the south (Viewpoint 10);
- properties located to the west of the MPO (Viewpoint 11);
- Wybong road to the south-east (Viewpoint 12);
- Hunter River floodplain to the east (Horne residence) (Viewpoint 13); and
- Muswellbrook to the east (Viewpoint 14).

Due to the neighbouring Bengalla Mine immediately to the south, the Mt Arthur Coal Mine approximately 6 km further to the south of the MPO, as well as other intervening topography, views of the MPO current and proposed disturbance footprint are obscured from southerly viewpoints. This is with the exception of Wybong Road which runs along the southern and south-eastern boundary of the MPO, permitting views of the southern extent of the South Pit open cut area and the Mine Infrastructure Area (MIA) (Figures 2 and 3).

The ridgeline associated with Mount Pleasant (the main ridgeline) located in the north-west of ML 1645 (Figure 4), which has a maximum elevation of approximately 360 m AHD, provides a screen for views of the proposed mine landforms from the western viewpoints. In addition, the MPO disturbance footprint would not be visible from the towns of Aberdeen and Kayuga due to an intervening vegetated ridgeline (230 m AHD) and the lower elevations of these respective towns (Figure 4).



LEGEND

- Mining Lease Boundary
- ➔ Viewpoint Location

Source: NSW Land & Property Information (2016); NSW Division of Resources & Energy (2017); NSW Department of Primary Industries - Water (2016); Bengalla Mining Company (2015); Mangoola Coal Operations Pty Ltd (2014)
 Orthophoto: MACH (Jul 2018); Esri, DigitalGlobe (2018)

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 MOUNT PLEASANT OPERATION
 Representative Viewpoints

Figure 4

3.1 SENSITIVE VIEWPOINTS

In consideration of the visual environment outlined above and for the purpose of this VIMP, the key sensitive viewpoints of MPO disturbance (Section 3.3) are:

- Muswellbrook to the south-east (Viewpoints 1 and 2);
- the New England Highway to the east (Viewpoint 5);
- the Main Northern Railway to the east (Viewpoint 6);
- Kayuga Road and the Hunter River Floodplain to the east (Viewpoint 7);
- Wybong Road to the south (Viewpoint 8);
- Wybong road to the south-east (Viewpoint 12);
- Hunter River floodplain to the east (Horne residence) (Viewpoint 13); and
- Muswellbrook to the east (Viewpoint 14).

3.2 EXISTING TREATMENT

Since the commencement of operations on-site in 2003, visual landscaping has progressively been undertaken. This landscaping was initiated by the previous owners of the MPO and has been subsequently continued by MACH Energy. The existing landscape treatment which has occurred to date is presented on Figure 5 and includes:

- tree screen planting along key roads with views of the MPO such as Kayuga and Dorset roads (Plates 1 - 4);
- screen planting along MPO controlled land east of the site and west of Kayuga Road;
- construction of buildings within the MIA which have been subject to visual treatment (Section 5.4) (Plates 5 and 6);
- implementation of visual bunding/screen planting along Wybong Road on the southern edge of the MPO (Plate 7); and
- targeted replanting of previously planted tree screening areas.



Plate 1: Dorset Road (near intersection with Kayuga Road) looking west.



Plate 2: Kayuga Road (near intersection with Castlerock Road) looking north.



Plate 3: Kayuga Road (near Collins Lane) looking north.



Plate 4: Kayuga Road (between Collins Lane and Castlerock Road) looking south.



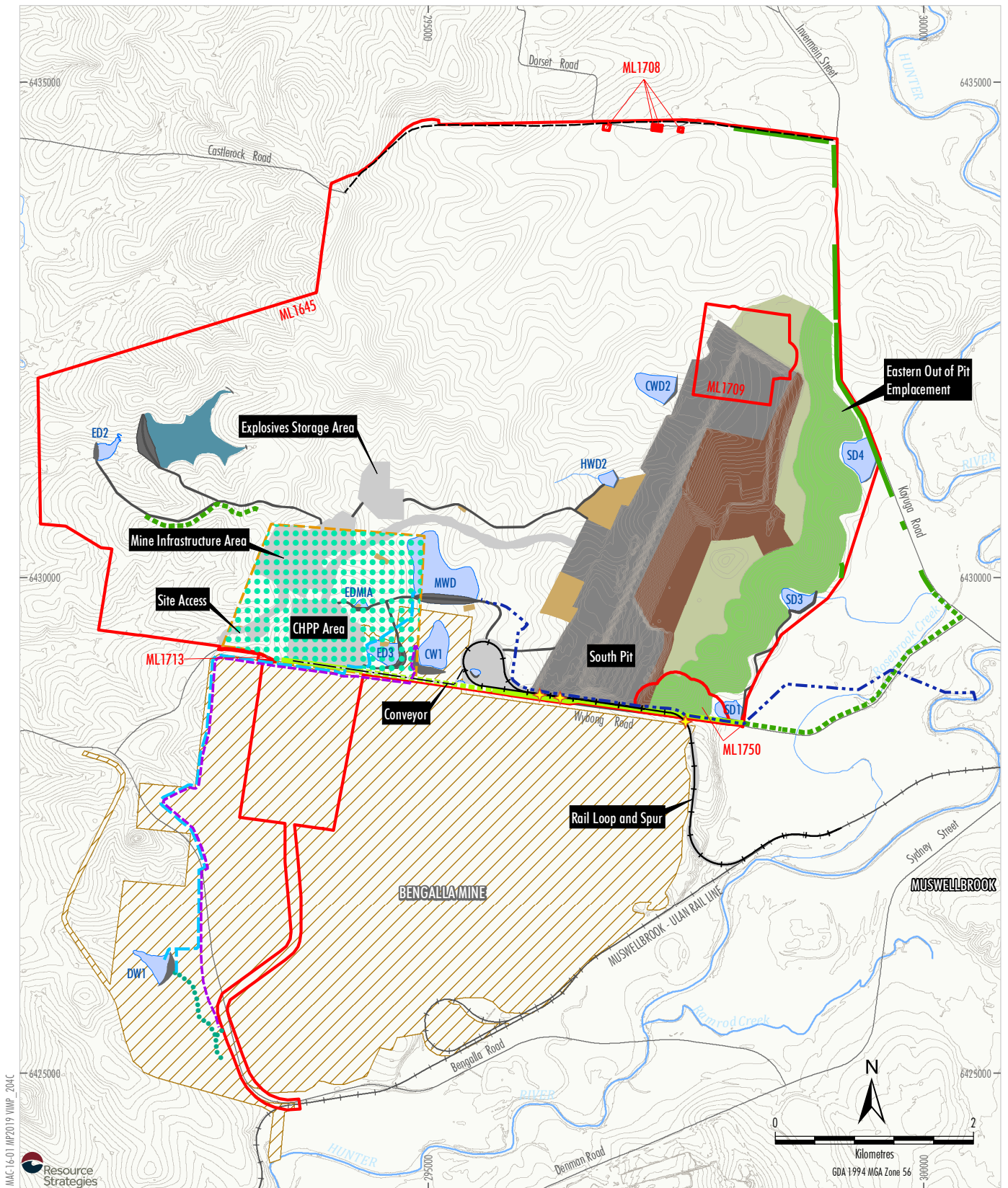
Plate 5: Workshop within the Mine Infrastructure Area.



Plate 6: Workshop and associated buildings within the Mine Infrastructure Area.



Plate 7: Visual bunding/screen planting along Wybong Road.



LEGEND

- Mining Lease Boundary
- Bengalla Mine Approved Disturbance Boundary (SSD-5170)
- Infrastructure Area Envelope
- Active Mining Area
- Active Overburden Emplacement Area
- Topsoil Stockpile
- Initial Rehabilitation
- Established Rehabilitation
- Infrastructure and Borrow/Stockpile Area
- Access Road
- Northern Link Road

Indicative Water Pipeline Alignment

- MPO Hunter River Supply Pipeline
- MPO DW1 Pipeline (Bi-directional)
- Bengalla Mine CW1 Pipeline
- Approximate Extent of Scour Protection
- Water Dam
- Fines Emplacement Area
- Landscape Plan
- Interspersed Screen *
- Existing Screen Planting
- Proposed Screen Planting
- Existing Bund/Screen Planting
- Proposed Bund/Screen Planting
- Indicative Light Screen Location **

Source: NSW Land & Property Information (2017); NSW Division of Resources & Energy (2017); MACH Energy (2018)

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MOUNT PLEASANT OPERATION

Landscape Plan

* The Mine Infrastructure Area will be interspersed with additional tree plantings and will be constructed with a view to retain existing stands of trees for shielding purposes.
 ** Location of the light screening is subject to detailed design of the rail infrastructure.

Figure 5

3.3 VISUAL IMPACTS

The potential visual impacts from the proposed operations of the MPO are detailed in the EIS (ERM Mitchell McCotter, 1997), MOD 1 EA (EMGA Mitchell McLennan, 2010), MOD 3 EA (MACH Energy, 2017b) and MOD 4 EA (MACH Energy, 2017c). The MPO will result in a number of changes to the existing landscape (Figures 2 and 3), including:

- progressive excavation of open cut pits;
- establishment of a MIA, including CHPP, workshop and administration buildings;
- implementation of a rail loop and train load out facilities in the southern extent of the MPO area;
- construction of a Fines Emplacement Area;
- establishment of an overburden emplacement/visual bund on the eastern extent of the mining area using overburden from the open cut pits;
- construction of a number of mine water dams and sedimentation dams;
- establishment of a mine access road and various mine haul roads; and
- relocation and operation of the rail spur and rail loop.

The proposed management measures to mitigate the visual impact of the above mine areas are detailed in Section 5.5.

4 OBJECTIVES AND PERFORMANCE CRITERIA

The objectives of this VIMP are to:

- comply with the conditions of Development Consent DA 92/97 which relate to visual management (Table 1);
- manage the visual impacts of the MPO to comply with performance criteria (Table 3);
- ensure that MPO's management measures undertaken (Section 5) are consistent with the works outlined in the Rehabilitation Strategy; and
- modify management actions (if required) following the review of monitoring results against performance criteria, to ensure the objectives continue to be met over the life of the MPO.

The performance criteria for visual management of the MPO are presented in Table 3 below.

Table 3
Performance Criteria

| Parameter | Target | Key Performance Indicator |
|---------------------|--|--|
| Visual Bunding | Bunding provides sufficient visual screening from sensitive viewpoints. | Visual bunding installed (Figure 5) to assist screening of mine components from sensitive viewpoints (Figure 4). |
| Screen Planting | Plantings provide sufficient visual screening from sensitive viewpoints. | Screen plantings installed at sufficient density (Section 5.1) to assist screening of mine components from sensitive viewpoints (Figure 4). |
| Lighting Screens | Screens provide sufficient light screening from sensitive viewpoints. | Lighting screens installed (Figure 5) to minimise direct train lighting impacts from sensitive viewpoints (Figure 4). |
| Building Treatments | Key infrastructure would blend as far as practicable with the surrounding landscape. | Mine infrastructure is built as per designs which prioritise minimising visual impacts. |
| Lighting | Minimise lighting emissions as far as practicable from the MPO. | Designing and constructing lighting to minimise off-site impacts (Section 5.3) and in compliance with Australian Standard (AS) 4282 (INT) 1997 – <i>Control of Obtrusive Effects of Outdoor Lighting</i> . |

A monitoring program to comply with the objectives and performance indicators proposed above is outlined in Section 6.

5 MANAGEMENT MEASURES

The visual impacts of the construction works, infrastructure and mining operations described in Section 3.3, will be mitigated through visual and landscape treatments in the form of screen planting, bunding, fencing, and light screens at strategic locations within and surrounding the MPO area. These landscape treatments will be designed to integrate with MPO's Rehabilitation Strategy to provide additional ecological benefits where possible and assist to minimise wind, dust, and noise emissions from the MPO.

Existing and proposed landscape treatments, in the form of screen planting and visual bunding, are presented on Figure 5, in conjunction with the provisional general arrangement of the MPO at 2025.

The implementation of the remaining proposed landscape treatments will occur progressively prior to mining operations ceasing at the end of the mine life. Landscape treatments and associated activities which have occurred during each calendar year will be summarised in the Annual Review (Section 8).

5.1 SCREEN PLANTING

Screen planting will include a mix of trees and shrubs of varying heights and widths to provide adequate visual shielding. Native trees and shrubs will be primarily selected for planting, with an aim to ensure that the screening species are consistent with endemic species in the surrounding area. Suitable non-endemic species will also be utilised where appropriate. New screen planting areas will be planted at a minimum density (to provide adequate visual screening) based on the species used. A planting protocol for screened areas is provided in Section 5.1.2.

Based on native seed availability, supply, cost and suitability, flora species to be used in screening will also include those typical of the NSW listed *White Box Yellow Box Blakely's Red Gum Woodland* endangered ecological community. An indicative tree and shrub species list is provided in Table 4.

Areas of existing screen plantings are shown in Plates 1 - 4 and Plate 7.

Quarterly routine inspections and appropriate maintenance will be undertaken on vegetation screens in accordance with Section 6.

5.1.1 Weed Control

General weed control measures will be undertaken on screen planting areas and include:

- ensuring machinery hygiene protocols are implemented for all machinery working on/around the screening areas to control the spread of weeds;
- undertaking routine inspections of screen planting areas;
- ensuring maintenance staff (i.e. weed and land management contractors) are knowledgeable in the identification of weed species prevalent in the Upper Hunter area, especially for weed species identified as priority under the *Biosecurity Act, 2015* and for weeds of national significance under the *Australian Weeds Strategy 2017-2027* (Commonwealth of Australia, 2017);
- where monitoring identifies a potential invasive and priority weed species in screening areas, weed removal will be undertaken as soon as practicable by:
 - physical removal (i.e. cultivation, slashing or mulching); and/or
 - targeted chemical spraying using herbicides;

- where chemical spraying is utilised, consideration of appropriate measures to ensure the safety and effectiveness of spraying will be undertaken (i.e. approval of an appropriate contractor and chemicals, timing of application during active growth, as well as consideration of surrounding land uses and prevailing weather conditions to reduce spread).

Where weed removal has been undertaken, success will be assessed via visual inspections and follow up weed removal where necessary.

Table 4
Indicative Species List

| Scientific Name | Common Name |
|---|-------------------------|
| Trees | |
| <i>Allocasuarina luehmannii</i> | Bulloak |
| <i>Angophora floribunda</i> | Rough-barked Apple |
| <i>Brachychiton populneus ssp populneus</i> | Kurrajong |
| <i>Callistemon salignus</i> | Willow Bottlebrush |
| <i>Casuarina cunninghamiana</i> | River Sheoak |
| <i>Corymbia maculata</i> | Spotted Gum |
| <i>Eucalyptus albens</i> | White Box |
| <i>Eucalyptus blakelyi</i> | Blakely's Red Gum |
| <i>Eucalyptus camaldulensis</i> | River Red Gum |
| <i>Eucalyptus crebra</i> | Narrow-leaved Ironbark |
| <i>Eucalyptus dawsonii</i> | Slaty Gum |
| <i>Eucalyptus microcarpa</i> | Western Grey Box |
| <i>Eucalyptus moluccana</i> | Grey Box |
| <i>Eucalyptus melliodora</i> | Yellow Box |
| <i>Eucalyptus punctata</i> | Grey Gum |
| <i>Eucalyptus tereticornis</i> | Forest Red Gum |
| <i>Melaleuca bracteata</i> | Black Tea-tree |
| <i>Melaleuca linariifolia</i> | Flax-leaved Paperbark |
| <i>Melaleuca styphelioides</i> | Prickly-leaved Tea Tree |
| Shrubs | |
| <i>Acacia amblygona</i> | Fan-leaf Wattle |
| <i>Acacia decora</i> | Western Silver Wattle |
| <i>Acacia decurrens</i> | Green Wattle |
| <i>Acacia falcata</i> | Sickle Wattle |
| <i>Acacia filicifolia</i> | Fern-leaved Wattle |
| <i>Acacia implexa</i> | Hickory Wattle |
| <i>Acacia salicina</i> | Cooba |
| <i>Dodonaea viscosa</i> | Sticky Hop-bush |
| <i>Breynia oblongifolia</i> | Coffee Bush |
| <i>Lissanthe strigosa</i> | Peach Heath |
| <i>Exocarpos cupressiformis</i> | Native Cherry |
| <i>Bursaria spinosa</i> | Native Blackthorn |
| <i>Pultenaea cunninghamii</i> | Spiny Bush-pea |

Table 4 (Continued)
Indicative Species List

| Scientific Name | Common Name |
|---|------------------------|
| Grasses | |
| <i>Aristida vagans</i> | Threeawn Speargrass |
| <i>Austrodanthonia fulva</i> | Wallaby Grass |
| <i>Cymbopogon refractus</i> | Barbed Wire Grass |
| <i>Dianella longifolia</i> var. <i>longifolia</i> | Pale Flax-lily |
| <i>Dichondra repens</i> | Kidney Weed |
| <i>Lomandra filiformis</i> | Wattle Mat Rush |
| <i>Lomandra multiflora</i> | Many-flowered Mat-rush |
| <i>Stipa</i> spp. | Spear Grass |
| <i>Themeda australis</i> | Kangaroo Grass |

5.1.2 Planting Protocol

General measures which will be undertaken during screen planting to improve planting survival rate and visual amenity include:

- Designing screen planting to include a mix of species at a range of mature heights in order to establish effective screening coverage (i.e. including a range of grasses, shrubs and tree species).
- Designing screen planting areas to incorporate multiple rows in succession (i.e. successive rows of grasses, shrubs and trees) to reduce noise, wind movement and visual impacts from the MPO.
- Implementing planting preparation where deemed appropriate (e.g. soil scarifying/ripping on areas of compacted soils).
- Preferentially undertaking screen plantings outside of winter months to improve survival rates.
- Limiting stock within screen planting areas to short term low impact grazing.
- Introducing nest boxes across areas of screen plantings to enhance the planting areas for use by endemic woodland birds.

The design/management of screen planting areas will also be informed by the [Hunter Bushland Resource Kit](#) (Hunter Catchment Management Trust, 2003) and *Where land meets water resource kit: a guide to riparian management in the Hunter Valley* (Hunter-Central Rivers Catchment Management Authority, 2007).

5.2 VISUAL BUNDS

Implementation of visual bunds was committed to in the EIS and is stipulated in conditions of Development Consent DA 92/97. Bunds have generally been proposed in more sensitive areas where close views require immediate screening, or where the additional height will be needed to lift the vegetative screens (i.e. along Wybong Road which lies directly adjacent to the southern extent of the MPO area [Figure 5]).

Where necessary, screen planting will be implemented on bund structures (Figure 5) to consolidate the visual effect of the bunds. Screen planting will be undertaken on bund structures with an aim to achieve a groundcover of 70% or more, in order to reduce the likelihood of weed infestations. When screen planting along a visual bund, a layer of topsoil will be introduced and keyed in prior to seed planting, to assist vegetation establishment. An appropriate topsoil depth will be implemented along the bund, with an aim for topsoil depths above 100 millimetres (considering subsoil quality, topsoil availability, shape and erosion protection). Where topsoil is not readily available for use, an organic growth material or equivalent will be utilised.

Bunds will be formed using material from a number of sources (e.g. surplus material stockpiled during road construction, excess material from pre-clearance activities etc.). Bunds will be constructed with an aim to achieve batter slopes that are no steeper than 2.5:1 horizontal to vertical, in order to more effectively establish groundcover vegetation (with consideration given to space, access, infrastructure, height and erosion).

5.2.1 Bund Stabilisation

Routine inspections will be undertaken on visual bunds in accordance with Section 6. Where inspections identify areas of slope failure or uncontrolled erosion, maintenance works will be undertaken as soon as practicable, including:

- the addition of further material and consolidation of the bund;
- if the failure is identified to be due to water erosion, implementation of further drainage structures within the bund;
- removal of vegetation adjacent to the bund which may be compromising bund stability; and
- where continuous failure of the bund occurs, consulting with an appropriate specialist (e.g. rehabilitation specialist, geotechnical specialist or agronomist) to consider measures to repair the bund (e.g. reconfiguring the bund design, altering the bund material etc.).

Follow up inspections of the bund will be undertaken to ensure the success of re-stabilisation works.

5.3 LIGHTING

In accordance with Condition 45, Schedule 3 of Development Consent DA 92/97, all external lighting will be designed and constructed using all feasible measures to minimise the off-site lighting impacts of the MPO. This will include:

- development and implementation of lighting plans by the mining contractor;
- no outdoor lights shine above the horizontal;
- flood lighting directed towards mine workings and to avoid direct lighting towards site boundaries;
- the use of timers and/or automatic sensors to switch off lighting when it is not needed;
- limiting the use of high beam lighting for vehicles travelling along haul roads, especially when travelling within close proximity to mine boundaries/adjacent roads;
- adjusting mine lighting to reduce visual impacts if site lighting is observed to be affecting off-site areas, or if lighting complaints are received; and
- establishment of train lighting screens, visual bunds and screen planting, in accordance with MOD 4 EA (Figure 4.6, Appendix C), to minimise direct lighting impacts on the Muswellbrook township and mitigate potential safety impacts along Wybong Road.

Lighting at the MPO will continue to be designed to comply with AS 4282 (INT) 1997 – *Control of Obtrusive Effects of Outdoor Lighting* or its latest version.

MACH Energy will prepare an engineering report regarding light emissions in conjunction with the construction of major infrastructure components in the CHPP. This lighting report will be used to further inform lighting management measures on-site, including those listed above.

Lighting impact mitigation measures relevant to MOD 4 rail infrastructure are further described in Section 5.5.6.

5.4 BUILDING TREATMENT

All key/visually obtrusive buildings within the MPO area will be designed to minimise their visual impacts on the surrounding environment through:

- the use of non-reflective and textured building materials to avoid glare;
- the use of colours that complement the surrounding landscape (i.e. primarily green and beige, unless high visibility colors have been deemed necessary for safety reasons); and
- maintaining all storage areas in an orderly condition and locating these areas as far as practicable from visually sensitive areas.

Construction of the workshop and associated buildings (incorporating the above visual treatments) has commenced in the MIA, as shown in Plates 5 and 6.

5.5 SPECIFIC VISUAL TREATMENT FOR MINE AREAS

5.5.1 Active Mining Area

Initially, overburden emplacements will be developed to the east of the open cut pits (Figures 2 and 3). Consistent with the Mining Operations Plan/Rehabilitation Management Plan and Rehabilitation Strategy, and as shown on Figures 2 and 3, progressive rehabilitation of the overburden emplacements will occur as areas become available for rehabilitation. During construction of the overburden emplacements, it will be progressively shaped to a naturalistic form and vegetated with endemic grasses and trees, characteristic of a woodland/grassland community.

As rehabilitation of the overburden emplacement progresses, it will act as an environmental bund, assisting to screen the open cut pits from the township of Muswellbrook, Wybong and Kayuga roads, the New England Highway, and the Main Northern Railway to the east (Figure 5). MACH Energy will prioritise construction of the lower batters of the overburden emplacements to final landform profile and the early revegetation of these batters to progressively minimise visual impacts at Muswellbrook and other viewpoints to the east.

In consultation with MSC, MACH Energy has developed design principles for the final landform as part of MOD 3, and in particular for the overburden emplacements, to minimise visual impacts from the east. These design principles will include:

- The emplacement landform would be designed to look less “engineered” when viewed from Muswellbrook (i.e. incorporation of macro-relief to avoid simple blocky forms).
- Surface water drainage from the emplacement landform would incorporate micro-relief to increase drainage stability and avoid major engineered drop structures where practical.
- MACH Energy would progressively develop and revegetate the final landform, to reduce visual impacts in Muswellbrook and other local vantage points.

A conceptual final landform and further discussion on the specific macro and micro-relief proposed for the final landform are presented in the MOD 3 EA (MACH Energy, 2017b).

As vegetation of the overburden emplacements will take a number of years to establish, strategic localised screen plantings will continue to be implemented to the east of the MPO area, along Kayuga and Wybong roads (Figure 5). This screen planting will assist in shielding the Active Mining Area from the east during the rehabilitation establishment phase of the overburden emplacements.

As described in Section 3.2, a visual bund with tree and shrub screen planting has been established along a portion of the eastern extent of Wybong Road. This bund and screen planting will assist in shielding the Active Mining Area from Wybong Road, as well as from other areas to the south.

5.5.2 Mine Infrastructure Area

The MIA is located in the south-west corner of the MPO area (Figures 2 and 3) and includes the CHPP and associated coal stockpiles and conveyor system, workshops, administration buildings, employee facilities and internal mine access roads. The rail loading facility including a rail loop spur from the Muswellbrook – Ulan Rail Line is currently located on the southern side of Wybong Road (Figures 2)) and will be relocated as part of MOD 4 (Figure 3).

The MIA has been constructed to minimise, as far as practical, the clearance of existing stands of trees and to utilise the existing topography as much as possible. As outlined in the EIS, planting of native trees will be interspersed throughout the MIA to improve the aesthetics of the area and enhance the surrounding environment (Figure 5). As construction and rehabilitation of the overburden emplacement progresses, the rehabilitated emplacements will assist in shielding the MIA from viewpoints to the east of the site, including Kayuga and Wybong roads, and the township of Muswellbrook.

The MIA is most visible from the south, positioned directly north of Wybong Road. The existing visual bund and screen plantings along Wybong Road currently assists in shielding proportions of the MIA from Wybong Road. As construction and mining progresses, the existing bund will be extended along the southern boundary of the MPO area, adjacent to Wybong Road. Screen plantings will be established along the bund, where necessary, to increase shielding of the MIA from Wybong Road (Figure 5).

Buildings within the MIA have been designed to minimise visual impacts, consistent with the treatments outlined in Section 5.4. As described in Section 5.4, construction of various buildings incorporating visual building treatments has been completed in the MIA, as shown on Plates 5 and 6.

5.5.3 Fines Emplacement Area

The Fines Emplacement Area is located to the north-west of the MIA (Figures 2 and 3). As outlined in the EIS (ERM Mitchell McCotter, 1997), the area is located within a gully and will be largely screened from public viewpoints by the topography and existing remnant woodland vegetation.

Notwithstanding, visual screening is proposed from areas to the south via planting along the Fines Emplacement Area access road (Figure 5). This will consist of planting tree and shrub species. An indicative species list for screen planting is outlined in Table 4.

5.5.4 Water Storage Dams

Water storage dams on the site consist of mine water and sediment dams. As shown on Figures 2 and 3, the proposed water storage dams for the site are primarily situated in the south and east of the MPO area. The dams in the southern extent of the site will be shielded from viewpoints to the south through the proposed/existing visual bunding along Wybong Road, and to the east from the overburden emplacement/visual bund (Figure 5). The sedimentation dams situated on the eastern side of the overburden emplacement will be shielded from the east via the existing/proposed screen planting along Kayuga and Wybong roads (Figure 5).

5.5.5 Site Access/Haul Roads

The site access road is constructed in the southern extent of the site, linking the MIA with Wybong Road to the south. The mine access road is shielded by natural topography and will be visually enhanced by completing the visual bund proposed along the northern edge of Wybong Road (Figure 5).

The majority of the mine haul/access roads are located in close proximity to the MIA and open cut pits. Haul roads and other site access roads are most visible from the south at Wybong Road. Completing the proposed/existing visual bund and targeted screen plantings along Wybong Road will assist shielding these internal roads. As outlined in Section 5.5.3, the proposed screen plantings along a section of internal road to the Fines Emplacement Area, will shield viewpoints to the south (Figure 5).

5.5.6 Relocated Rail Infrastructure

As part of MOD 4, the rail spur, rail loop, train load-out facility and product conveyor will be relocated as shown on Figures 2 and 3. Train lighting screens will be established to minimise direct train lighting impacts on the Muswellbrook township from the relocated rail infrastructure. The rail lighting screens will nominally be constructed from a steel frame, chain wire mesh and shade cloth.

Overhead rail lighting screens may extend across the rail spur at locations along Wybong Road. The width and height of the screens will vary dependent upon the position and detailed design. An overpass rail lighting screen at ground level may also be established on the eastern side of the rail spur at the point it turns south across Wybong Road, subject to detailed design.

The size, location and construction material of screens will be determined as part of the detailed design. Screens may also be supplemented with vegetative and/or earth bunds.

Rehabilitation

MACH Energy will prioritise the rapid rehabilitation of disturbed areas (e.g. establishment of a cover crop on rail batters) to reduce visual contrast of these elements with the surrounding area.

Furthermore, additional native tree and shrub species will be established, where practical, between the ground level lighting screen and Muswellbrook to improve visual integration over time.

5.6 PRIVATELY OWNED LAND

In accordance with Condition 46, Schedule 3 of Development Consent DA 92/97, upon receiving a written request from the owner of any residence on privately-owned land which has, or would have, a significant direct view of the mining operations on-site¹, MACH Energy will implement visual mitigation measures (such as landscaping treatments or vegetation screens) on the privately-owned land in consultation with the landowner. These mitigation measures will be feasible and reasonable, with an aim toward minimising the visibility of mining operations from the residence.

Following consultation with the landowner, if within 3 months of receiving the request MACH Energy and the landowner cannot agree on measures to be implemented, or there is a dispute about the implementation of the measures, MACH Energy will refer the issue to the Secretary of the DPIE for resolution.

¹ In accordance with Development Consent DA 92/97, except in exceptional circumstances this signifies residences within 3 km of the mining operations.

6 LANDSCAPE MONITORING

Routine inspections (i.e. at least annually, but also opportunistically and quarterly for vegetation screens) of the MPO landscape treatment areas will be undertaken to ensure that landscape treatments are consistent with the objectives of this VIMP and the performance indicators outlined in Table 3. The landscape monitoring program and proposed actions as a result of monitoring (where necessary) are outlined in Table 5.

Table 5
Landscape Monitoring Program

| Parameter | Monitoring Proposed | Remedial Actions |
|---------------------|---|--|
| Screen Planting | <p>Routine visual inspection of screen planting areas (Figure 5) to ensure:</p> <ul style="list-style-type: none"> Tree/shrub species are in suitable condition and provide sufficient screening (through reviewing planting logs and monitoring survival rate). <p>Routine inspections of screen planting will initially be undertaken at least quarterly, to highlight areas requiring attention during early growth stages (i.e. during the first year of growth). As screen planting becomes more established, inspections will be carried out on a quarterly basis.</p> | <ul style="list-style-type: none"> If monitoring indicates that tree/shrub species within screen planting areas have not been planted at a minimum density of 2000 stems/hectare (from planting logs) or have a survival rate lower than 50%, maintenance works (e.g. reseeding, watering and application of fertiliser where necessary) will be undertaken until adequate shielding is achieved. The maintenance works can include: <ul style="list-style-type: none"> change of plant species; replantation of tree/shrubs; thinning; and infill planting. |
| Visual Bunds | <p>Routine visual inspection of visual bunds to ensure that bunds:</p> <ul style="list-style-type: none"> Are sufficiently stable and no uncontrolled erosion is occurring. With tree screens have tree/shrub species which are in suitable condition (through measuring screen planting groundcover percentage). With tree screens do not contain a prevalence of weed species (through measuring weed groundcover percentage). | <ul style="list-style-type: none"> If monitoring indicates that slope failure or uncontrolled erosion has/will occur, stabilisation works will be undertaken (Section 5.2.1). If monitoring indicates that groundcover of mature screen planting areas on visual bunds is less than 70%, maintenance works (e.g. reseeding, watering and application of fertiliser where necessary) will be undertaken until adequate shielding is achieved. If monitoring indicates that weeds constitute 20% or greater of the groundcover in mature screen planting areas, weed control measures will be undertaken (Section 5.1.1). |
| Light Screens | <p>Routine visual inspection of light screens to ensure all screens are kept in an orderly condition (i.e. wire mesh and shade cloth maintained in suitable condition, paint maintained etc.).</p> | <ul style="list-style-type: none"> If required, maintenance works will be undertaken on screens which are found to be in a poor condition and are deemed to be having a negative visual impact on the vicinity. |
| MIA | <p>Routine visual inspection of the MIA to ensure that the interspersed tree plantings are in suitable condition, and the infrastructure area is consistent with mine plans.</p> | <ul style="list-style-type: none"> If required, maintenance works and reseeding will be undertaken on tree plantings interspersed within the MIA which are found to be in poor condition. |
| Site Infrastructure | <p>Routine visual inspection of infrastructure areas to ensure all infrastructure is kept in an orderly condition (i.e. paint maintained, tidy work areas etc.).</p> | <ul style="list-style-type: none"> If required, maintenance works will be undertaken on infrastructure areas which are found to be in an unsuitable condition and are deemed to be having a negative visual impact on the vicinity. |

The results of the monitoring program and any necessary maintenance works undertaken on the landscape treatment parameters will be presented in the relevant MPO Annual Review (Section 8.1).

7 CONTINGENCY PLAN

Key risks to the success of landscaping treatments and proposed contingency measures to mitigate these risks are outlined in Table 6.

Table 6
Contingency Plan

| Risk | Contingency Measure |
|--|--|
| Inadequate weed control leading to widespread failure of screen plantings. | <ul style="list-style-type: none"> • Increase frequency of routine inspections and application of control measures. • Review weed control measures (Section 5.1.1) and consult with an appropriate rehabilitation specialist to introduce more appropriate control measures. • Replant tree and shrubs species as required to provide adequate shielding. |
| Adverse weather conditions (e.g. drought, bushfire, flooding etc.) leading to failure of tree screening species. | <ul style="list-style-type: none"> • Replant tree screening using species identified as adapted to local climatic conditions and more suited towards adverse weather events (e.g. <i>Eucalyptus crebra</i> [Narrow-leaved Ironbark], <i>Eucalyptus blakelyi</i> [Blakely's Red Gum] etc. [Table 4]). |
| Insufficient screening identified in screen planting areas. | <ul style="list-style-type: none"> • Additional screen planting, with a focus on introducing species to thicken established screen planting (i.e. further introduction of understorey species if screen planting does not adequately shield at lower heights) or improving current screen planting through infill planting or thinning. |
| Uncontrolled erosion of visual bunds leading to widespread slope failure. | <ul style="list-style-type: none"> • Consult with a rehabilitation specialist and consider measures to redesign bunds to avoid future failure (Section 5.2.1). • Repair and reinstate bunds as required. |
| Pest/insect disturbance leading to failure of screen plantings. | <ul style="list-style-type: none"> • Consider use of approved pesticides during early stages of screen planting growth. • Increase frequency of routine inspections and maintenance works to ensure establishment of vegetation. • Replant tree and shrubs species as required to provide adequate shielding. |
| Repeated complaints of adverse night-time lighting impacts from the MPO. | <ul style="list-style-type: none"> • Identify the site area/activity associated with the complaints and implement appropriate control measures (Section 5.3). Additional control measures will be investigated where complaints persist. • Ensure all site staff completing night-time operations are aware of the visual control measures required to be undertaken (Section 5.3), as well as MACH Energy's statutory obligations regarding lighting impacts (Section 2.1.1). |
| Repeated complaints regarding the negative visual impact of the MPO. | <ul style="list-style-type: none"> • Consult with the complainant and implement visual mitigation measures (such as landscaping treatments or vegetation screens) on the privately-owned land experiencing the impacts in accordance with Section 5.6. • Where treatments on privately-owned land are not feasible or where public land is affected, consideration of further landscape treatments on-site to ameliorate the impact. |
| Repeated complaints regarding direct lighting impact from the rail spur. | <ul style="list-style-type: none"> • Identify the site area associated with the complaints and inspect relevant lighting screens and screen planting in accordance with Section 6. Additional control measures will be investigated where complaints persist. |

8 REVIEW AND IMPROVEMENT OF ENVIRONMENTAL PERFORMANCE

8.1 ANNUAL REVIEW

In accordance with Condition 3, Schedule 5 of Development Consent DA 92/97, MACH Energy will review and evaluate the environmental performance of the MPO by the end of March each year (for the preceding calendar year) (or other such timing as agreed by the Secretary of the DPIE).

In relation to landscape management, the Annual Review will:

- include a summary of all landscape treatments undertaken in the past year;
- include a summary of the monitoring undertaken in accordance with the VIMP in the past year;
- identify any visual-related non-compliance over the past year, and describe what actions were (or are being) taken to ensure compliance;
- include a summary of visual-related complaints received in the past year;
- identify any trends in the visual monitoring data over the life of the MPO; and
- describe what visual-related measures will be implemented over the next year to improve the environmental performance of the MPO.

The Annual Review will be made publicly available on the MACH Energy website in accordance with Condition 11, Schedule 5 of Development Consent DA 92/97.

8.2 VISUAL IMPACT MANAGEMENT PLAN REVISION

In accordance with Condition 4, Schedule 5 of Development Consent DA 92/97, this VIMP will be reviewed, and if necessary, revised (to the satisfaction of the Secretary of the DPIE), within three months of the submission of:

- an Annual Review (Condition 3, Schedule 5);
- an incident report (Condition 7, Schedule 5);
- an Independent Environmental Audit (Condition 9, Schedule 5); and
- any modification to the conditions of Development Consent DA 92/97.

Within four weeks of conducting any such revision, MACH Energy will advise the Secretary of the DPIE of the outcomes of the review, and submit any revised documents to the Secretary of the DPIE for approval.

If necessary, this VIMP will be reviewed and revised to include additional details on the rail lighting screens, earth bunds and screen planting associated with the MOD 4 rail infrastructure. This would be undertaken following completion of a detailed design, and approval of the Construction Environmental Management Plan (required by Condition 44I, Schedule 3 of Development Consent DA 92/97) to reflect construction works undertaken as part of MOD 4.

The monitoring and maintenance procedures relating to the visual impact mitigation infrastructure (Section 6) would also be revised if necessary.

In accordance with Condition 4A, Schedule 5 of Development Consent 92/97, MACH Energy may submit a revised VIMP for the approval of the Secretary at any time, and may also submit any revision to this VIMP required under Development Consent DA 92/97 on a staged basis.

If agreed with the Secretary of the DPIE, a revision to this VIMP required under Development Consent DA 92/97 may be prepared without undertaking consultation with all parties nominated under the relevant Condition of Development Consent DA 92/97.

This VIMP will be made publicly available on the MACH Energy website, in accordance with Condition 11, Schedule 5 of Development Consent DA 92/97.

8.3 INDEPENDENT ENVIRONMENTAL AUDIT

In accordance with Condition 9, Schedule 5 of Development Consent DA 92/97, an independent environmental audit of the MPO will be conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary of the DPIE.

The independent environmental audit will assess the environmental performance of the MPO and review the adequacy of this VIMP. If necessary, appropriate measures or actions to improve the environmental performance of the MPO or this VIMP will be recommended.

9 REPORTING PROCEDURES

In accordance with Condition 2, Schedule 5 of Development Consent DA 92/97, MACH Energy has developed protocols for managing and reporting the following:

- incidents;
- complaints;
- non-compliances with statutory requirements; and
- exceedances of the impact assessment criteria and/or performance criteria.

These protocols are described in detail in the [MPO Environmental Management Strategy](#) (MACH Energy, 2019).

In accordance with Condition 8, Schedule 5 of Development Consent DA 92/97, MACH Energy will provide regular reporting on the environmental performance of the MPO on the MACH Energy website.

10 REFERENCES

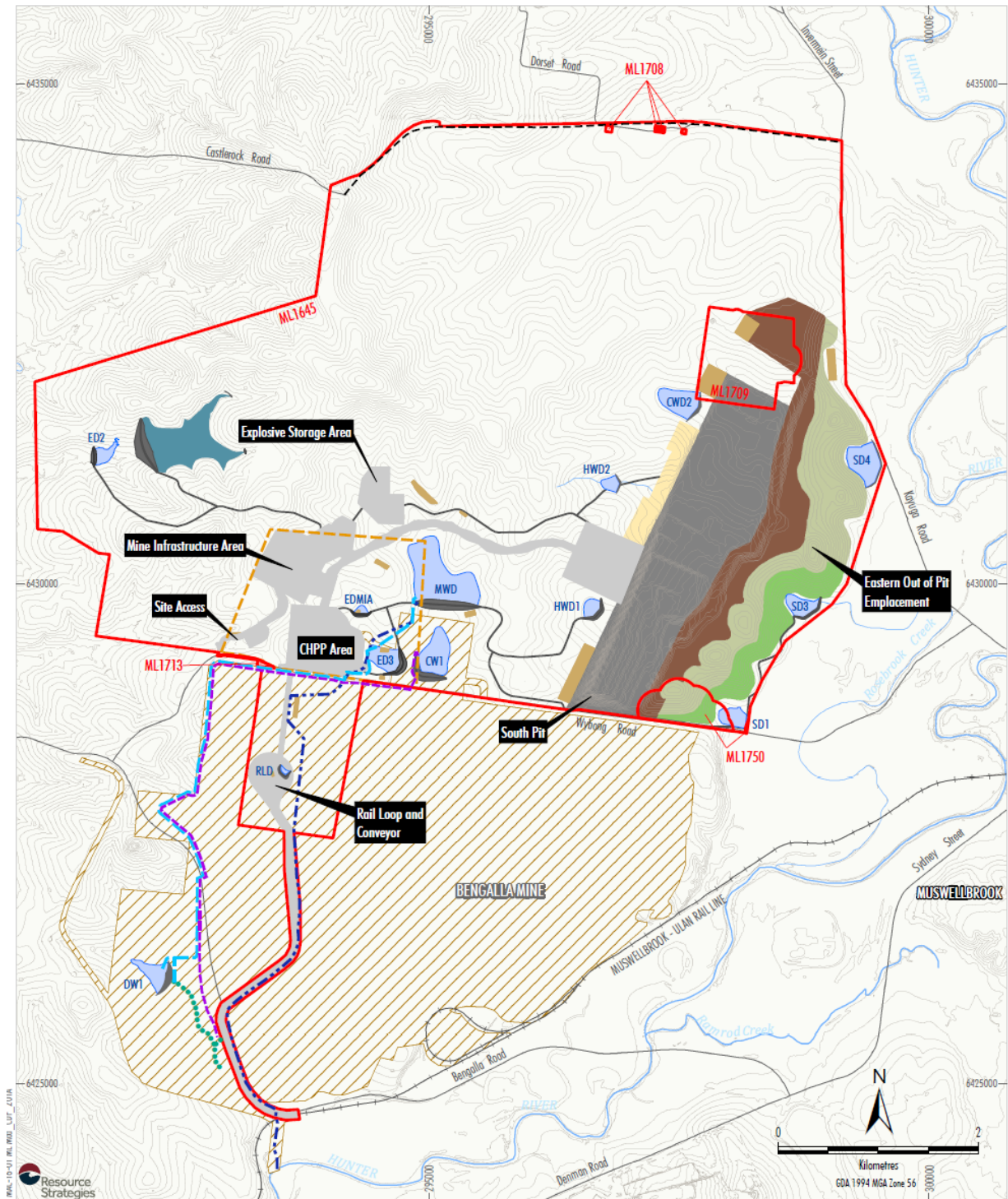
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- MACH Energy Australia Pty Ltd (2017b) *Mount Pleasant Operation – Mine Optimisation Modification Environmental Assessment*.
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ATTACHMENT 1

APPENDIX 2 OF DEVELOPMENT CONSENT DA 92/97

APPENDIX 2

FIGURE 1 - CONCEPTUAL PROJECT LAYOUT PLAN AT 2021



- LEGEND**
- Mining Lease Boundary
 - Bengalla Mine Approved Disturbance Boundary (SSD-5170)
 - Infrastructure Area Envelope
 - Active Stripping Area
 - Active Mining Area
 - Active Overburden Emplacement Area
 - Topsoil Stockpile
 - Initial Rehabilitation
 - Established Rehabilitation
 - Infrastructure and Borrow/Stockpile Area
 - Access Road
 - Northern Link Road
 - Indicative Water Pipeline Alignment
 - MPO Hunter River Supply Pipeline
 - MPO DW1 Pipeline (Bi-directional)
 - Bengalla Mine CW1 Pipeline
 - Approximate Extent of Scour Protection
 - Water Dam
 - Fines Emplacement Area

Source: NSW Land & Property Information (2017); NSW Division of Resources & Energy (2017); MACH Energy (2017)

MACHEnergy
MOUNT PLEASANT OPERATION

FIGURE 2 - CONCEPTUAL PROJECT LAYOUT PLAN AT 2025

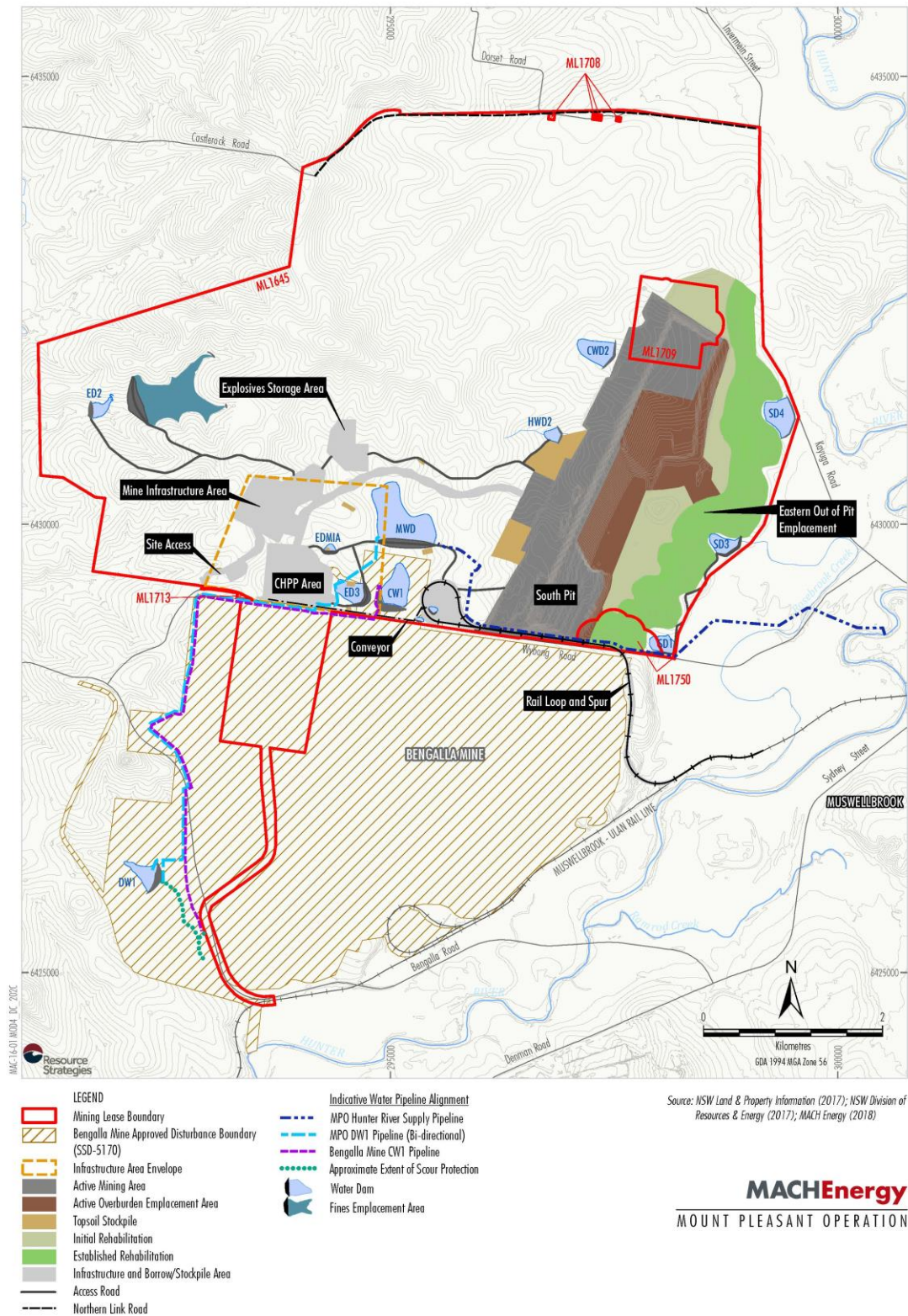


FIGURE 3 - APPROVED SURFACE DISTURBANCE PLAN

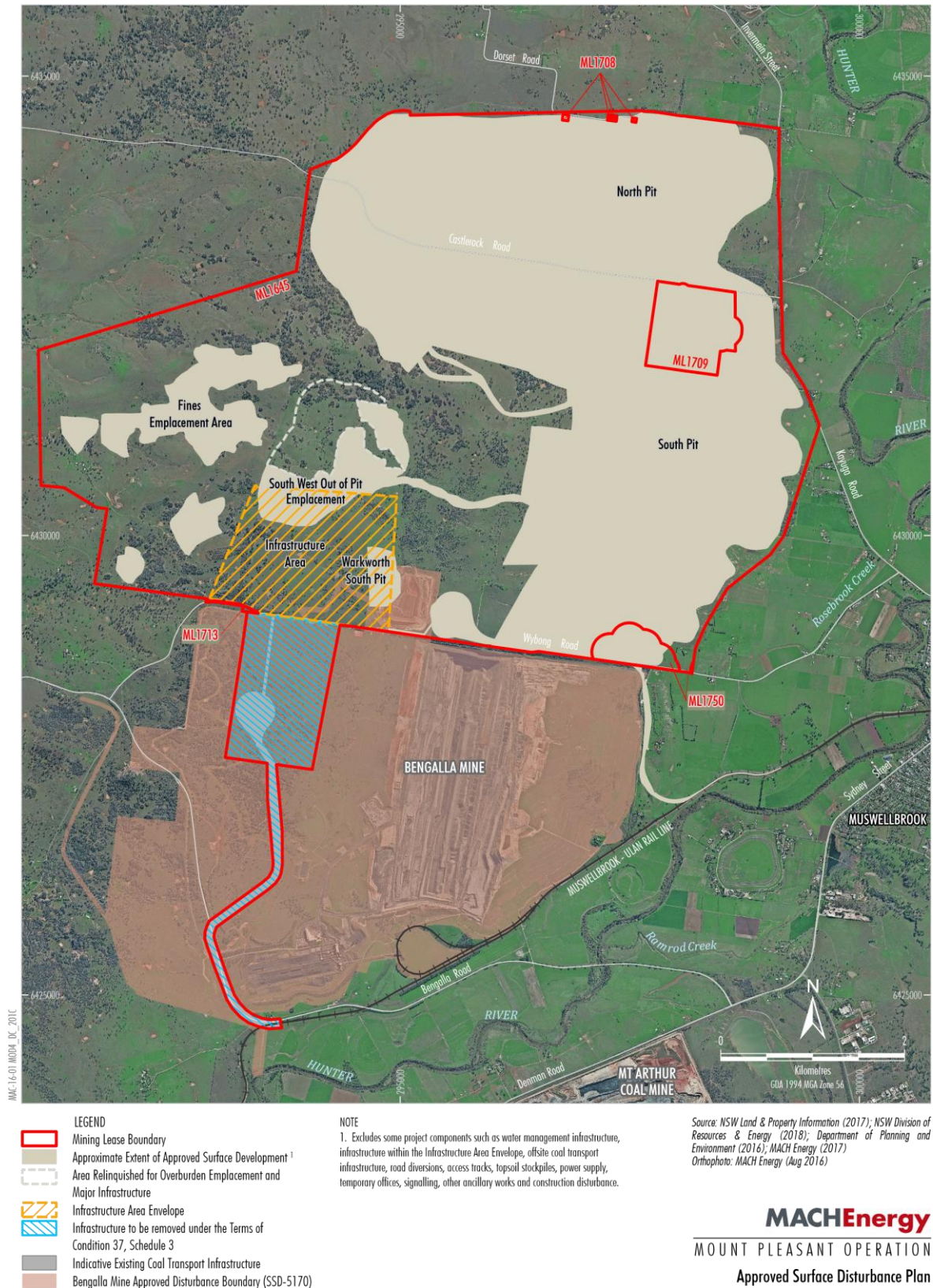
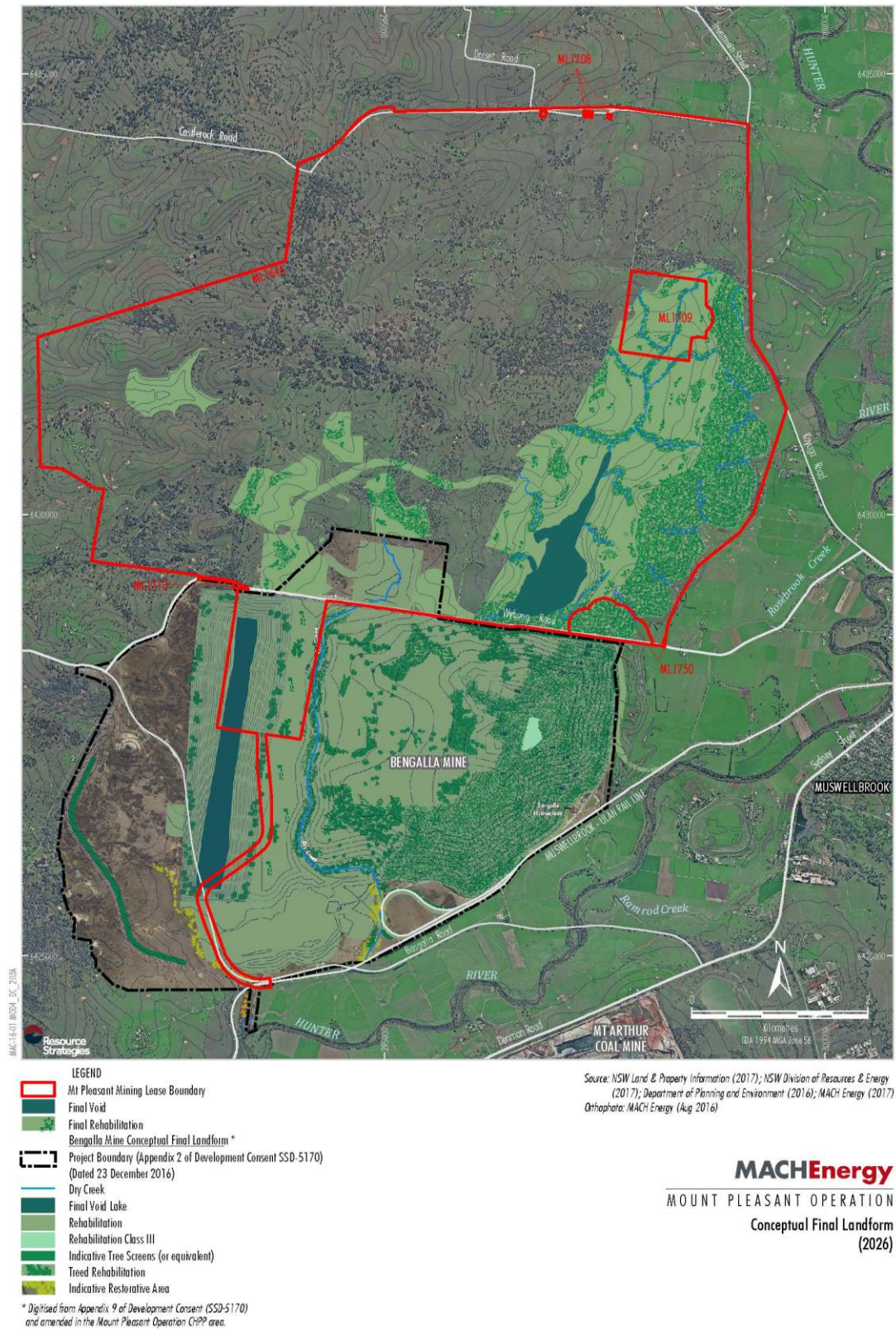


FIGURE 4 - CONCEPTUAL FINAL LANDFORM



APPENDIX A
CONSULTEE FEEDBACK – KEY CORRESPONDENCE
(AVAILABLE ON REQUEST)