VISUAL IMPACT MANAGEMENT PLAN

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1 INTRODUCTION

1.1 Background

Maxwell Ventures (Management) Pty Ltd (Maxwell), a wholly owned subsidiary of Malabar Resources Limited (Malabar) owns and operates the Maxwell Underground Project (the site). The site is located in the Upper Hunter Valley of New South Wales (NSW), east-southeast of Denman and south-southwest of Muswellbrook. The site is approved to extract a maximum of 8 million tonnes of run-of-mine coal per year over a period of 26 years. The site boundary is shown in **Figure 1**.

The site consists of the following areas:

- Underground area comprising the proposed area of underground mining operations and the mine entry area (MEA) to support underground mining and coal handling activities and provide for personnel and materials access;
- Maxwell Infrastructure (formerly Drayton mine) comprising previous open cut mining areas, existing coal handling and preparation plant (CHPP), train load-out facilities and rail loop, Antiene rail spur and other infrastructure and services; and
- Transport and services corridor between the underground area and Maxwell Infrastructure comprising the proposed site access road, covered overland conveyor, power supply and other ancillary infrastructure and services.

The area within and surrounding the site, which has previously been known as Mt Arthur South, Saddlers Creek and Drayton South, has long been identified as having a significant in-situ coal resource. Prospecting for coal commenced in the late 1940s, with exploration intensifying during the 1960s and 1970s. Open cut coal extraction and mining activities commenced at Maxwell Infrastructure in 1983 and ceased in October 2016. The previous open cut mining area is currently in the rehabilitation phase of the mine operations.

The development consent for State Significant Development 9526 (SSD 9526) was granted on 22 December 2020 under clause 8A of the *State Environmental Planning Policy (State and Regional Development) 2011* and section 4.5(a) of the *Environmental Planning and Assessment Act 1979* (EP&A Act). The development consent was modified on 19 November 2021 to allow for the repositioning of infrastructure primarily at the MEA and realignment of a section of the site access road.

The site also incorporates the development formerly authorised under the Maxwell Infrastructure Project Approval (PA) 06_0202. Development Consent DA 106-04-00 for the existing rail loop and Antiene Rail Spur was granted on 2 November 2000 under Section 76(A)9 and 80 of the EP&A Act and is still current.

1.2 Purpose and Scope

The purpose of this Visual Impact Management Plan (VIMP) is to detail the statutory requirements and to outline the controls to be implemented to manage visual amenity and off-site lighting impacts at the site. This VIMP is one of a series of Environmental Management Plans that together form the Environmental Management System for the site.

This VIMP applies to all activities within the SSD 9526 development application area and the Antiene Rail Spur Development Consent DA 106-04-00 boundary.

This VIMP was approved by the Planning Secretary on 15 February 2022. On 6 April 2022 Maxwell gave written notice to the Department of Planning and Environment (DPE) of its intention to commence permitted construction, in accordance with Condition A13(b), Schedule 2 of Development Consent SSD 9526. In accordance with Schedule 2, Condition B62 of Development Consent SSD 9526, Maxwell did not commence construction until the VIMP was approved by the Planning Secretary. In accordance with Schedule 2, Condition B63 of Development Consent SSD 9526, Maxwell is implementing this VIMP.

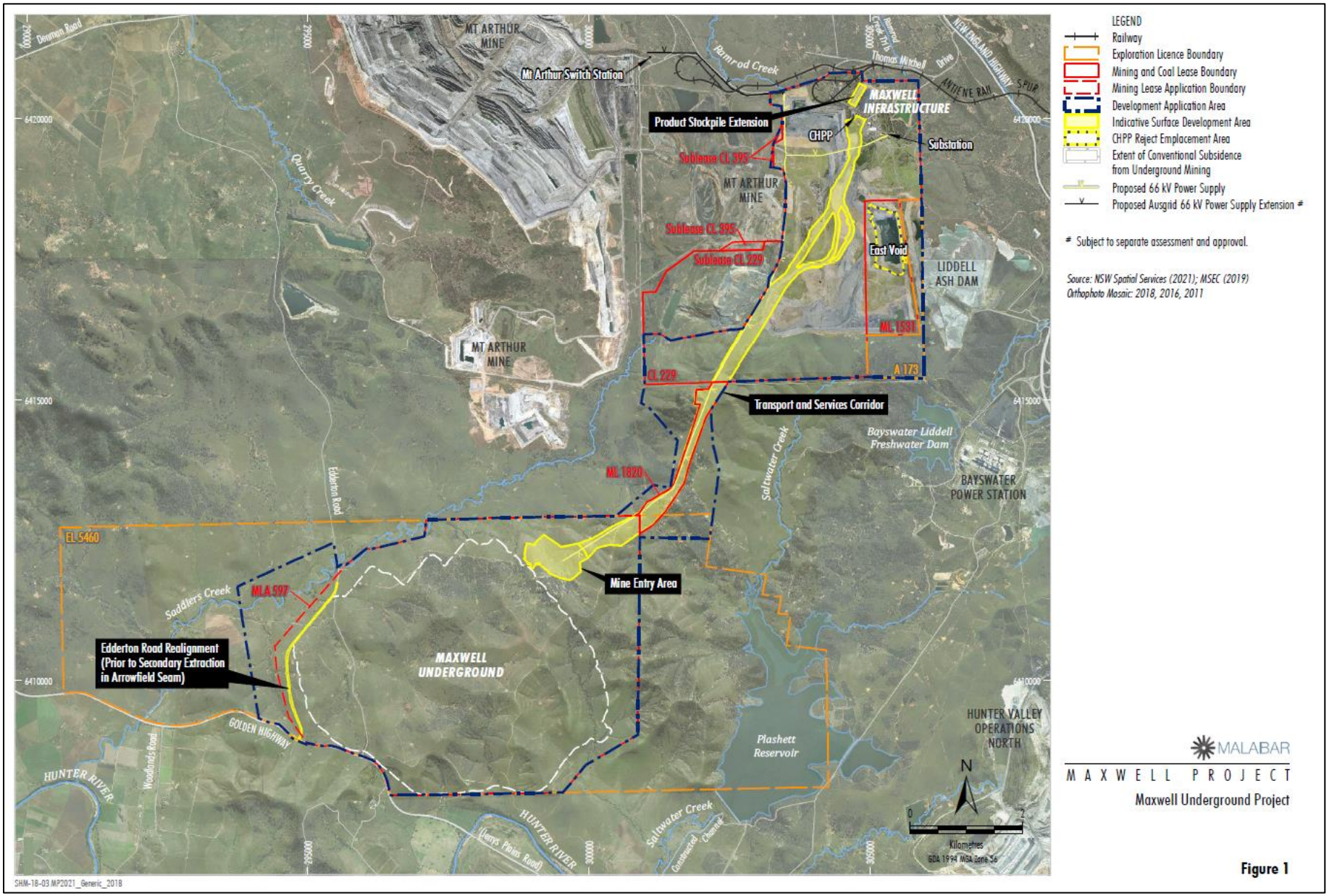

Figure 1. Maxwell Underground Project

1.3 Objectives

The objectives of this VIMP are to:

- Detail all relevant statutory requirements;
- Identify potential visual amenity and off-site lighting impacts;
- Describe measures to be implemented to minimise visual and off-site lighting impacts;
- Include a landscaping strategy to minimise views from key vantage points in the public or private domain;
- Include a program to monitor, maintain and report on the effectiveness of visual mitigation measures;
- Manage visual amenity and lighting related community complaints in a timely and effective manner; and
- Detail the procedure for reporting incidents and non-compliance with visual amenity and lighting impact development consent conditions to relevant stakeholders.

2 PLANNING

2.1 Regulatory Requirements

This VIMP describes management of visual amenity and lighting to meet relevant statutory requirements within SSD 9526 and DA 106-04-00. The various conditions that relate to visual amenity and lighting management and where they are addressed in this document are detailed in **Appendix 1**.

2.2 Maxwell Project EIS and Supporting Document Commitments

A Landscape and Visual Impact Assessment was undertaken for the Maxwell Underground Project Environmental Impact Statement (EIS) (published on 14 August 2019) and included assessment of potential impacts on the existing landscape and visual amenity values of the area. Commitments in the Maxwell Project EIS and supporting documents that relate to visual amenity and lighting management, and where they are addressed in this document, are detailed in **Appendix 2**.

3 IMPLEMENTATION

The predicted impacts and mitigation measures presented in this section are based on the Landscape and Visual Impact Assessment undertaken for the Maxwell Underground Project EIS. The assessment was prepared by VPA Visual Planning and Assessment.

3.1 Existing Environment

The topography that overlies the underground mining area has general elevations ranging from 150 metres (m) in the vicinity of Saddlers Creek to 277m. Dry open sclerophyll forest dominates on gentle to moderate slopes, with open grazing land on the lower slopes.

The facilities at Maxwell Infrastructure are located on an elevated flat approximately 250m in elevation. Facilities include administration and workshop buildings, CHPP, train load out facilities and coal stockpiles. This area lies within a region of significant disturbance due to previous open cut mining activity. A number of mining operations, power stations, residences and agricultural activities in the vicinity of the site already contribute to diffuse light effects into the night sky (sky glow). Adjacent surrounding elevations are generally above 220m with the existing overburden emplacement areas rising to over 260m. Vegetation buffers separate Maxwell Infrastructure from Thomas Mitchell Drive.

The MEA will provide for personnel and materials access to the underground mine. Surface infrastructure includes coal surge stockpiles, coal handling facilities, administration and workshop buildings and other supporting infrastructure. The MEA has been strategically positioned within a natural valley to limit views of the surface infrastructure.

There are a number of topographic features that limit the visibility of the MEA, including:

- the hills and low ranges associated with the Mt Arthur Coal Complex to the north and north-west of the MEA;
- the low ridgeline that runs north-south, east of the underground area;
- a series of low ridges and spurs adjacent to the Golden Highway and the Hunter River to the south and south-west of the MEA; and
- numerous low ridges on both sides of the Golden Highway.

The MEA and Maxwell Infrastructure will be connected by a transport and services corridor, which will include a road, an overland conveyor and other linear infrastructure components within the corridor. These components will be developed within gently undulating hills and cross the elevated north-south ridge to the east of the MEA.

3.2 Viewpoints Assessed

As part of the Landscape and Visual Impact Assessment undertaken for the Maxwell Underground Project EIS, the visual effects of the site were assessed from a number of representative viewing locations (i.e. viewpoints) in terms of visual contrast with the existing surrounding landscape. These representative viewing locations were analysed through various techniques, including photomontages. A summary of the visual effect on each representative viewing locations is provided in **Table 1**. The representative viewing locations are shown in **Figure 2**.

Table 1. Visual effect on representative viewing locations

Representative Viewing Location	Visual Effect
VP1 – Coolmore Stud– Oak Range Road	No visual effect
VP2 – Coolmore Stud – Horse Paddock	No visual effect
VP3 – Coolmore Stud – Highest Vantage Point	During construction: Level 2 – Low During operations: Level 3 – Low
VP4 – Godolphin Woodlands Stud - Highest vantage point	During construction: Level 2 – Low During operations: Level 3 – Low
VP5 – Godolphin Woodlands Stud - Lookout	No visual effect
VP6 – Godolphin Woodlands Stud – Manager’s House	No visual effect
VP7 – Jerrys Plains near Golden Highway	No visual effect
VP8 – New England Highway	No visual effect
VP9 – Golden Highway - Elevated Vantage Point	No visual effect
VP10 – Thomas Mitchell Drive	No visual effect
VP11 – Edderton Road	During construction: Level 2 – Low During operations: Level 3 – Low
VP12 – Potential Edderton Road realignment	During construction: Level 2 – Low During operations: Level 3 – Low
VP13 – Lake Liddell Recreation area	No visual effect

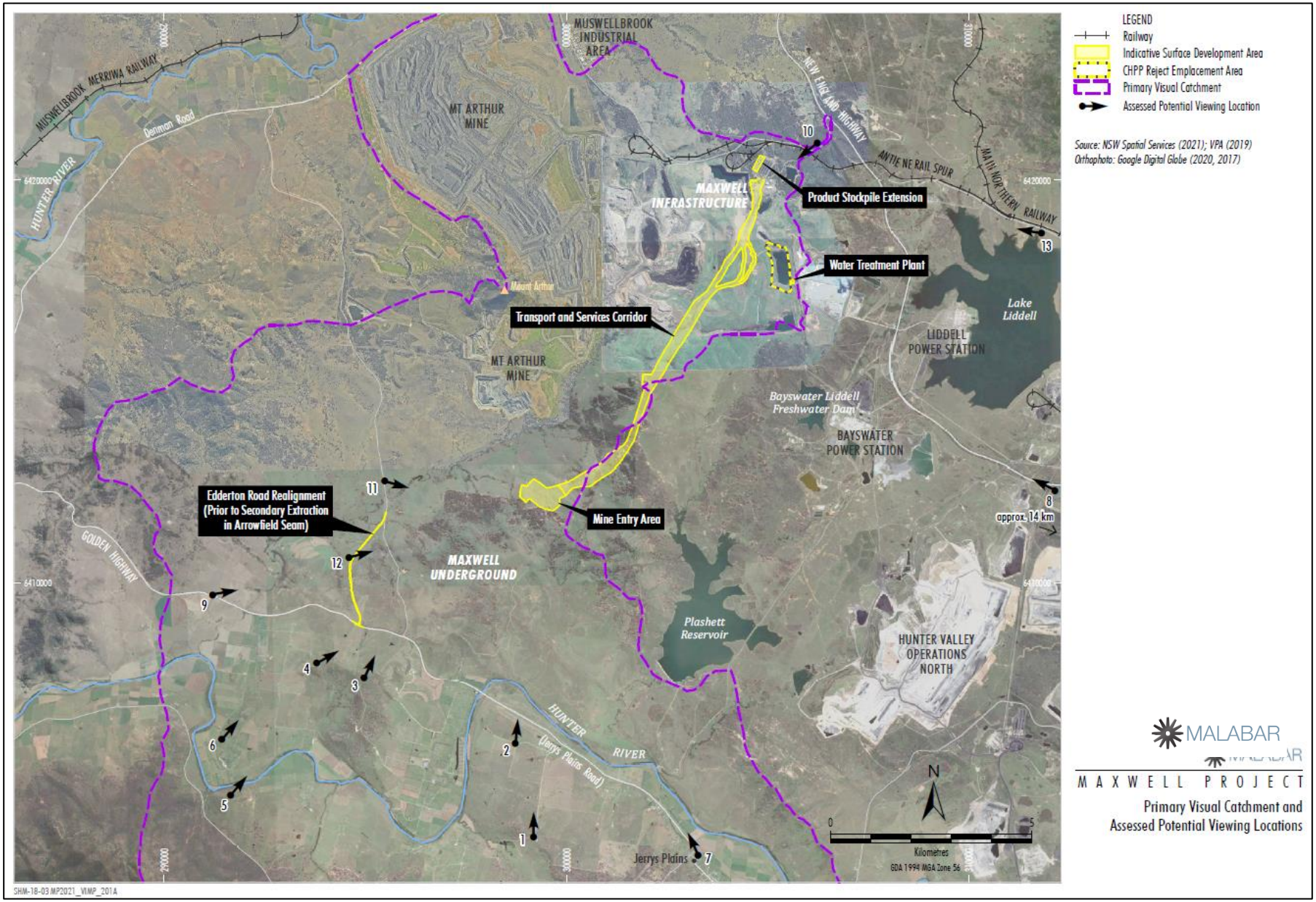

Figure 2. Location of representative viewing locations

3.3 Potential Visual and Light Impacts

Potential visual impacts for representative viewpoints shown in **Figure 2** were assessed in the Landscape and Visual Impact Assessment undertaken for the Maxwell Underground Project EIS. A summary of the results is provided in this section.

3.3.1 Direct Visual Impacts

The site will have inherently low visual impacts because the mining operation is underground and the MEA is located in a natural valley. There will be no views of the site from the majority of the Coolmore Stud and the Godolphin Woodlands Stud.

There will be minimal to no impacts associated with additional components within the Maxwell Infrastructure area. The Maxwell Infrastructure boundaries are screened by topography to the north, east, south and west. Vegetation and the Mt Arthur Coal mine also screen views to any new components from Thomas Mitchell Drive.

A section of the transport and services corridor will be potentially visible at the highest vantage point on both the Coolmore Stud and the Godolphin Woodlands Stud and a low-lying section of Edderton Road near Saddlers Creek. Bowfield Homestead, owned by Malabar and located west of the MEA, could also potentially have views of the site. The assessed visual impacts at these viewpoints are low.

Views to the site from Hollydene Estate Wines, other rural residences in the vicinity of the site, Jerrys Plains village, the New England Highway, the Golden Highway, and the Lake Liddell Recreation Area will be screened by intervening topographic features. Accordingly, there will be no visual impacts from the site at these viewpoints.

Edderton Homestead, a residence owned by BHP and located approximately 3.3 kilometres from the MEA, will potentially have views of the site. Existing views to the east from some areas of the property include the Bayswater Power Station and some high voltage transmission line pylons along the horizon ridgeline. The elevated position of the property and residences gives it broader, but limited views to the MEA and infrastructure within the transport and services corridor. Visual impacts at the Edderton Homestead are considered moderate.

3.3.2 Off-site Lighting Impacts

There are two types of lighting effects that could be generated by the site, direct light effects and diffuse light effects into the night sky (sky glow). Direct light effects result from when the light source is directly visible and will be experienced if there is a direct line of sight between the light source and the viewpoint. Diffuse light effects relate to the general night glow that results from light of sufficient strength being reflected into the atmosphere. Direct lighting has the potential to result in a higher impact, in comparison to diffuse lighting.

Lighting associated with the infrastructure at the MEA will be either hooded or shielded (where appropriate) which restricts the ability to produce potential direct light effects. The majority of direct lighting from vehicle and mobile equipment along the transport and services corridor and MEA will be screened to sensitive receptors by local topography and existing vegetation and will contribute only a minor cumulative impact to overall lighting in the context of the surrounding mining operations and power stations.

Potential direct lighting impacts from the transport and services corridor and MEA will be limited to the north and west of the site during the operations. In the south, direct light impacts would be limited to intermittent lights associated with subsidence-related maintenance of Edderton Road (the majority of this work would be in daylight hours). Impacts of Edderton Road maintenance will be isolated and temporary in nature.

During construction and operation, the increase in diffuse light effects associated with the majority of the transport and services corridor is anticipated to be negligible compared to the existing diffuse light effects as a result of the surrounding mining operations and power stations.

The visual impact of night-lighting on sensitive receptors will not be significant. Night-lighting at the Maxwell Infrastructure will not be materially different to that previously experienced.

3.3.3 Indirect or Dynamic Impacts

The Landscape and Visual Impact Assessment assessed dynamic landscape impacts. Dynamic landscape assessment refers to the collective evaluation of people's perceptions as they move through the landscape and focuses on the perceptual and aesthetic characteristics of a landscape, including visual, sound, smell, touch/feel, preferences, associations and memories. The dynamic landscape assessment evaluated ephemeral effects (noise, dust and smell), visual experiences at regional and sub-regional scale, and knowledge-based perception. Receptors considered particularly sensitive to potential dynamic impacts of the site on the local landscape are Jerrys Plains village, Coolmore and Godolphin Woodlands Studs, Hollydene Estate Wines and rural residences.

The dynamic landscape impact of the site will be low, based on the limited scale of impact of the site on visual and other perceptual experiences, and in the context of existing mining in the locality, sub-region and region.

It was noted in the Landscape and Visual Impact Assessment, that there are those who have an existing adverse perception of mining activity no matter how low the impacts or how informative the educational inputs. This impact is not necessarily tied to one's experience of the actual landscape and can create an adverse perception in those that have not even experienced the area.

The potential dynamic landscape impact on Denman and Jerrys Plains was assessed. The potential for mining to affect the tourism atmosphere of these small towns, and local sentiment against turning into 'high vis' mining towns, has previously been recognised. Given that most of the employees will work in the underground, these individuals are likely to change out of high visibility clothing prior to leaving the site, due to the nature of their work environment. A bath house facility will be provided for personnel to change in and out of their high visibility clothing before and after a shift.

3.4 Mitigation Measures

Mitigation measures proposed in relation to reducing visual impacts include:

- on-site treatments to reduce visual effects of the site by reducing the level of visibility at potential viewer locations and reducing the level of contrast; and
- off-site treatments at viewer locations to reduce visual sensitivity.

3.4.1 On-site Treatments

The MEA has been purposely located in a natural valley within undulating topography that limits most views into the area from surrounding sensitive receptors including the Coolmore and Godolphin Woodlands Stud. Local topography will screen most views from the north, east and south reducing potential for visual impact.

Earthwork batters within the transport and services corridor will be vegetated as soon as reasonably practicable. Areas disturbed for construction laydown areas and access will be revegetated as soon as practicable after the completion of construction. Final rehabilitation at the underground area will be undertaken to meet the rehabilitation objectives and completion criteria in the Mining Operations Plan which have been developed in consideration of visual amenity risks.

Where practicable, transmission line poles to be constructed for the transport and services corridor and underground area will be placed in locations of high visual absorption. The cladding for the covered overland conveyor and buildings at the MEA will include tonal variations of existing colours in the

surrounding landscape. Contrasting and discordant colours that stand out in the landscape will be avoided.

Progressive rehabilitation has continually occurred at the Maxwell Infrastructure site. Maxwell has completed over 200 hectares of rehabilitation since taking control of the site in 2018. This rehabilitation involved reshaping overburden and exposed areas then seeding with a native woodland or pasture seed mix. In addition, tree planting programs were also undertaken during 2019, 2020 and 2021 to improve vegetation within the conceptual woodland corridor. Rehabilitation activities at Maxwell Infrastructure will continue to be undertaken in accordance with the rehabilitation objectives and completion criteria in the Mining Operations Plan and will improve the visual amenity.

Maxwell will continue to maintain fence lines, entrances and roadside plantings around Malabar-owned properties to present a visually pleasing appearance that is congruent and sympathetic with the appearance of surrounding rural properties.

3.4.2 External-Lighting

All external lighting associated with the site will comply with *AS/NZS 4282:2019 – Control of the Obtrusive Effects of Outdoor Lighting*, including the minimisation of light spill, through the following:

- Adequate aiming during installation of light fittings (including consideration of mounting heights).
- Use of shielded fittings, where available and safe to do so.
- Use of anti-reflective paint on surfaces which night-lighting could spill into (where a choice of surface is available, a surface with the lowest practical reflectance be selected, compatible with the function of the area).
- Upward spill light will be minimised and lighting will generally be directed either downwards, or away from the residences and public roads.
- Night-lighting will be restricted to the minimum required for operational and safety requirements to avoid over-lighting.
- Energy efficient lighting will be used for any new fixed lighting installed, where available and safe to do so.
- Where floodlights are required, asymmetric beams will be used.
- Fixed lights will not be directed towards reflective surfaces.
- Lighting for fixed installations will use warm white colours, where available and compliant with industrial lighting standards.
- Fixed outdoor lighting will not shine above the horizontal or above the building line or any illuminated structure.
- Mobile lighting will not shine above the horizontal (except where required for emergency purposes).

3.4.3 Landscaping Strategy

A landscaping strategy has been developed to minimise views of the site from key vantage points including Edderton Road and the Edderton Homestead. The strategy is focussed on the installation and maintenance of tree screens. It is recognised that whilst visual sensitivity is moderate and visual impacts are low (and planting in this context is not essential), it is an opportunity for further reduction of visual effects, resulting in reduced visual impacts in the landscape. The Landscaping Strategy is provided in **Appendix 3**.

3.4.4 Management of Dynamic Landscape Impacts

Effects of potential noise, ground vibration and dust are unlikely to impact on the perception of the local landscape. The potential for ephemeral effects to lessen the experience of the landscape has been reduced through project design.

In addition, Maxwell would discourage workers from wearing high visibility clothing when travelling to public places in quiet rural areas such as Jerrys Plains and Denman. This would be managed through the site induction process and through Maxwell's contractor management procedures. A similar

approach for Muswellbrook and Singleton is not considered warranted given the existing strong influence of mining in these towns.

3.4.5 Consultation

Maxwell will make attempts to conduct ongoing consultation with stakeholders surrounding the site over the life of the mine to identify any issues in relation to visual impacts on surrounding sensitive viewing locations. Following further consultation with the stakeholders, additional measures may be implemented to improve visual mitigation at specific sensitive viewer locations. Maxwell will continue to offer to meet regularly with representatives of the Coolmore Stud and Godolphin Woodlands Stud over the life of the mine.

4 MEASUREMENT AND EVALUATION

4.1 Monitoring

4.1.1 Tree Screen Establishment

The MEA tree screen (planted in 2019) and the Edderton Homestead tree screen (if requested to be planted by the landowner or tenant) will be monitored on an annual basis for at least the first five years after installation. The focus of this monitoring is to make sure the trees establish and become self-sustaining. As a minimum, this monitoring will include an assessment of the survival rate, tree height, tree width and identify any impacts from weeds, feral animals and grazing (where appropriate).

Triggers for mitigation or remedial measures are shown in **Table 2**. A summary of the monitoring results will be provided in the Annual Review.

Table 2. Triggers for mitigation and remedial measures

Trigger	Mitigation/Remedial Measures
Survival rate is less than 70 per cent.	Undertake additional infill planting.
More than 50 per cent of tree heights or widths do not record an increase from the previous monitoring.	Undertake additional infill planting.
More than 50 per cent of trees have been damaged due to grazing or feral animals.	Install fencing or barricades. Undertake pest management as required.
Weed species are impacting tree growth.	Undertake targeted weed management.

4.1.2 Visual Impact

Once the tree screen has been established (i.e. five years after planting), annual monitoring will be undertaken to measure the visual impact and determine the effectiveness of the tree screen.

Monitoring will be undertaken from the representative viewing location along Edderton Road (VP11) and the Edderton Homestead (if planted). Representative viewing locations VP7, VP9, VP10 and VP13 are predicted to have no visual impact and will also be monitored. A summary of the monitoring locations is provided in **Table 3**.

Monitoring will compare the actual visual impact against the EIS predictions. Any discrepancies between the predicted and actual view will be discussed with impacted landholders and additional tree screening may be undertaken. A summary of the monitoring results will be provided in the Annual Review.

Table 3. Visual impact monitoring sites

Visual Impact Monitoring Site	EIS Predicted Impact
Edderton Homestead	Moderate impact
VP7 – Jerrys Plains near Golden Highway	No visual effect
VP9 – Golden Highway - Elevated Vantage Point	No visual effect
VP10 – Thomas Mitchell Drive	No visual effect
VP11 – Edderton Road	Low impact
VP13 – Lake Liddell Recreation area	No visual effect

4.1.3 Lighting Impact

During construction only (i.e. when mobile lighting plants are more likely to be used) night time lighting impact inspections will be undertaken on a monthly basis at VP7, VP9 and VP10. Monitoring will be undertaken to determine if there are any direct lighting impacts (i.e. lights shining off site and towards sensitive receptors). Any direct lighting impacts will be corrected immediately. A summary of the monitoring results will be provided in the Annual Review.

An annual inspection will be undertaken of the MEA, transport and services corridor, and infrastructure at Maxwell Infrastructure, to ensure lighting mitigation measures described in Section 3.4.2 are being implemented. A summary of the monitoring results will be provided in the Annual Review.

4.2 Incident and Non-Compliance Notification

An incident is defined in SSD 9526 as an occurrence or set of circumstances that causes or threatens to cause material harm and which may or may not be or cause a non-compliance.

In accordance with Schedule 2, Part E, Condition E9 of SSD 9526, Maxwell shall immediately notify DPE and any other relevant agencies, immediately after it becomes aware of an incident. The notification shall be in writing via the Department's Major Projects Website and identify the development (including the development application number and name) and set out the location and nature of the incident.

In accordance with Schedule 2, Part E, Condition E10 of SSD 9526, Maxwell shall notify DPE within seven days of becoming aware of a non-compliance. The notification shall be in writing via the Department's Major Projects Website and identify the development (including the development application number and name), set out the condition of SSD 9526 that the Project is non-compliant with, why it does not comply and the reasons for the non-compliance (if known) and what actions have been, or will be, undertaken to address the non-compliance. A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.

4.3 Adaptive Management and Contingency Plan

In accordance with Schedule 2, Part E, Condition E4 of SSD 9526, where any exceedance of performance measures has occurred (i.e., light shining above the horizontal, ineffective tree screens or external lighting failing to comply with the appropriate standards, complaints about workers wearing high visibility clothing in quiet rural areas) Maxwell shall, at the earliest opportunity:

- Take all reasonable and feasible steps to ensure that the exceedance ceases and does not recur. Steps may include (where appropriate)
    - A review of the positioning of fixed and or mobile lighting.
    - A survey of MEA infrastructure to verify sight lines from representative viewing locations.
    - An audit of external lighting against *Australian Standard AS4282 (INT) 1997 – Control of Obtrusive Effects of Outdoor Lighting.*

    - Additional lighting management training for personnel.
    - A review of the landscaping strategy to improve tree screens.
    - Mitigation or remedial measures for tree screens (refer to **Table 2**).
    - Reinforce through toolbox talks that workers are discouraged from wearing high visibility clothing when travelling to public places in quiet rural areas.
- Consider all reasonable and feasible options for remediation (where relevant) and submit a report to DPE describing those options and any preferred remediation measures or other course of action; and
- Implement reasonable remediation measures as directed by the Planning Secretary.

In accordance with Schedule 2, Part E, Condition E5 (f) of SSD 9526, the following contingency plan is used to manage any unpredicted impacts and their consequences, and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible:

- Review the unpredicted impact with consideration of any relevant activities and monitoring data;
- Identify the most likely source of the unpredicted impact;
- Review the existing process and current visual impact controls; and
- Implement appropriate mitigation measures.

4.4 Complaints Handling

If a complaint or enquiry is received regarding visual amenity and lighting, it is investigated as soon as reasonably practicable and managed in accordance with Maxwell's *Community Complaints and Enquiries Procedure*. Details such as complainant name, contact details, nature of concern, date, time and method of receival are recorded. While details of the enquiry vary depending on the nature and source of the enquiry, the following actions may result:

- Confirmation of whether the complainant would like the matter raised as a complaint or an enquiry.
- Identify further details which may assist in determining the cause of the complaint.
- Carry out an inspection of the site or conduct an assessment of monitoring results to identify the source.
- Identify if there is an exceedance or non-compliance with any consent or licence condition.
- Identify, where necessary and practical, methods to manage the source of the complaint and minimise the chance of a recurrence or the potential to generate further complaints.

All enquiries and/or complaints are recorded in an enquiries database. A summary of complaints is presented to the Community Consultative Committee and included in the Annual Review and EPL Annual Return.

5 AUDIT, REVIEW AND IMPROVEMENT

5.1 Review Schedule

The suitability of this VIMP will be reviewed in accordance with Schedule 2, Part E, Condition E7 of SSD 9526, that is within three months of:

- the submission of an incident notification under condition E9;
- the submission of an Annual Review under condition E11;
- the submission of an Independent Environmental Audit under condition E13;
- the approval of any modification of the conditions of SSD 9526; or
- notification of a change in development phase under condition A13.

In accordance with Condition E8, if necessary, to improve the environmental performance of the site, cater for a modification or comply with a direction, this plan will be revised. The revised plan will be submitted to DPE for approval within six weeks of the review.

5.2 Reporting

In accordance with Schedule 2, Part E, Condition E11 of SSD 9526, by the end of March in each year after the commencement of the development, or other timeframe agreed by the Planning Secretary, an Annual Review report will be submitted to DPE. The Annual Review will include the following:

- A description of the development that was carried out in the previous calendar year and the development proposed to be carried out over the current calendar year.
- A comprehensive review of any monitoring results and complaints over the previous calendar year.
- A description of non-compliances which occurred in the previous calendar year and actions that were (or are being) taken to rectify the non-compliance and avoid reoccurrence.
- Evaluation of the effectiveness of visual and lighting management measures.
- Trends in monitoring data and any discrepancies between predicted and actual impacts.
- Measures to be implemented over the next calendar year to improve the environmental performance of the development.

In accordance with Schedule 2, Part E, Condition E12 of SSD 9526 copies of the Annual Review shall be submitted to Muswellbrook Shire Council and made available to the CCC and any interested person upon request.

In accordance with Schedule 2, Part E, Condition E17(a) of SSD 9526, the Annual Review will be publicly available on Malabar's website at https://malabarresources.com.au/sustainability/documentation.

5.3 Auditing

In accordance with Schedule 2, Part E, Condition E13 of SSD 9256 within one year of commencement of development under this consent, and every three years after, unless the Planning Secretary directs otherwise, Maxwell will commission and pay the full cost of an Independent Environmental Audit of the development.

5.4 Access to Information

In accordance with Schedule 2, Part E, Condition E17 of SSD 9526 before the commencement of construction until the completion of all rehabilitation required under SSD 9526, Maxwell will make the following information and documents (as they are obtained, approved or as otherwise stipulated within the conditions of SSD 9526) that are relevant to this plan publicly available on Malabar's website:

- this VIMP;
- the proposed staging plans for the development if the construction, operation or decommissioning of the development is to be staged;
- minutes of CCC meetings;
- regular reporting on the environmental performance of the development in accordance with the reporting requirements in any plans or programs approved under the conditions of this consent;
- a comprehensive summary of the monitoring results of the development, reported in accordance with the specifications in any conditions of this consent, or any approved plans and programs;
- a summary of the current phase and progress of the development;
- contact details to enquire about the development or to make a complaint;
- a complaints register, updated monthly;
- the Annual Reviews of the development; and
- audit reports prepared as part of any Independent Environmental Audit of the development and the Applicant's response to the recommendations in any audit report.

This information shall be kept up to date, to the satisfaction of the Planning Secretary.

5.5 Records Management

All visual amenity monitoring data will be maintained in accordance with the Environmental Management Strategy and maintained on the premise for a period of at least four years.

5.6 Continuous Improvement

Maxwell will continuously investigate and implement reasonable and feasible visual and lighting impact management measures on site. Feedback from monitoring results and any complaints will be used to assess impacts and determine where improvements or mitigation measures are required. Maxwell will maintain awareness of new technologies through participation in relevant industry groups.

Maxwell will engage with the community through the CCC and or individual stakeholder meetings to discuss visual and lighting impacts and mitigation measures. Any operational changes due to community feedback or complaints (i.e. redirecting of lighting plants) will be captured and included as part of the operational planning process. Lighting management training as discussed in **Section 6.2** will also be provided to all employees and contractors with more detailed awareness training provided personnel involved in supervisory roles.

The above measures will be reviewed annually and any improvements will be reported on in the Annual Review.

5.7 Document Review History

A summary of the document history is outlined in **Table 4**.

Table 4. Document Revision Status

Issue	Date	Completed By	Details
1	Mar 2021	Robyn Skinner James Johnson Donna McLaughlin	Document prepared following approval of SSD 9526 for the Maxwell UG Project.
1.1	May 2021	Robyn Skinner Donna McLaughlin	Document updated following review by DPIE.
2	Feb 2022	Alex Newton Donna McLaughlin	Document updated following approval of Modification 1.
3	August 2022	Robyn Skinner	Document updated following AEMR submission (to meet Condition E7(b)) and Independent Environmental Audit submission (to meet Condition E7(c)) and notification of construction commencement ((to meet Condition E7(e)).

6 INFORMATION, TRAINING AND INSTRUCTION

6.1 Competent Persons

Suitably qualified, competent and experienced persons shall be involved in the design, planning and implementation of this plan and related procedures.

6.2 Training

Lighting management training is provided to all employees and contractors through the site induction process. From time to time, workforce communication and toolbox talks allow for discussion of the objectives and requirements of this and any other relevant Management Plans.

All site personnel involved in supervisory roles will undertake a more detailed awareness training package to assist in the effective implementation of lighting management controls.

7 RESPONSIBILITIES

Responsibilities associated with this management plan are outlined **Table 5**.

Table 5. Responsibilities

Position	Responsibilities
General Manager	• Provide adequate resources for the implementation of this Plan.
HSEC Manager	• Oversee the implementation of this Plan. • Coordinate monitoring in accordance with this Plan. • Notify regulatory authorities and affected landholders of non-compliance with relevant consent conditions and undertake the associated reporting. • Coordinate periodic reviews of this Plan. • Ensure all personnel are trained in accordance with this Plan.
Environmental Coordinator	• Assist the HSEC Manager as required in the implementation of this Plan. • Coordinate investigations of non-compliances, incidents or complaints. • Coordinate the implementation of the visual amenity and lighting monitoring program in accordance with this Plan. • Coordinate the management of records and reporting of monitoring results in accordance with this Plan. • Manage visual amenity and lighting related complaints in accordance with the complaints management procedure. • Provide training to all relevant personnel.
Supervisors	• Notify the Environmental Coordinator of any incidents and exceedances involving visual amenity and lighting. • Implement visual amenity and lighting management measures as defined in this Plan.
All Personnel	• Awareness of visual amenity and lighting controls as part of site induction. • Undertake works in accordance with the objectives and principles of this Plan. • Report any incidents involving visual amenity and lighting. • Report any equipment which is not consistent with the lighting mitigation strategies.

8 DOCUMENT INFORMATION

8.1 References

VPA Visual Planning and Assessment (2019). *Maxwell Project, Landscape and Visual Impact Assessment*.

Standards Australia (2019) *Control of the Obtrusive Effects of Outdoor Lighting*, *AS/NZS 4282:2019.*

State Significant Development 9526

8.2 Definitions and Abbreviations

Term	Definition
AS	Australian Standard
CCC	Community Consultative Committee
CHPP	Coal Handling and Preparation Plant

Term	Definition
DA	Development Approval
DPE	NSW Department of Planning and Environment
DPIE	NSW Department of Planning, Industry and Environment (now NSW Department of Planning and Environment)
EIS	Environmental Impact Statement
EP&A	Environmental Planning and Assessment
EPL	Environment Protection Licence
MEA	Mine Entry Area
NSW	New South Wales
PA	Project Approval (Development Consent)
SSD	State Significant Development
Toolbox Talk	A forum where information is presented to the crews
VIMP	Visual Impact Management Plan
VPA	Visual Planning and Assessment

APPENDIX 1 – REGULATORY REQUIREMENTS

State Significant Development Consent 9526

Clause	Requirement	Section of Plan
B60	**Visual Amenity and Lighting** The Applicant must: (a) take all reasonable steps to minimise the visual and off-site lighting impacts of the development;	**3.4, 4.1, 4.3**
	(b) take all reasonable steps to shield views of mining operations and associated equipment from users of public roads and privately-owned residences;	**3.4.3, Appendix 3, 4.1.1, 4.1.2**
	(c) ensure no fixed outdoor lights shine directly above the horizontal or above the building line or any illuminated structure;	**3.4.2, 4.1.3, 4.3**
	(d) ensure mobile lighting rigs do not shine directly above the horizontal (except where required for emergency safety purposes);	**3.4.2, 4.1.3, 4.3**
	(e) ensure that all external lighting associated with the development complies with relevant *Australian Standards including the latest version of Australian Standard AS4282 (INT) 1997 – Control of Obtrusive Effects of Outdoor Lighting*;	**3.4.2, 4.1.3, 4.3**
	(f) ensure that the visual appearance of any new buildings, structures, facilities or works (including paint colours and specifications) is aimed at blending as far as possible with the surrounding landscape; and	**3.4.1**
B61	**Visual Impact Management Plan** The Applicant must prepare a Visual Impact Management Plan for the development to the satisfaction of the Planning Secretary. This plan must:	
	(a) describe the measures to be implemented to minimise the visual and off-site lighting impacts of the development (including the construction phase);	**3.4, 4.1, 4.3**
	(b) include a landscaping strategy to minimise views of the development from key vantage points in the public and/or private domain, which includes:	**3.4.3, Appendix 3.**
	(i) the establishment and maintenance of tree screens to shield views of the MEA from Edderton Road to the greatest extent practicable; and	**3.4.3, 4.1.1, Appendix 3.**
	(ii) the establishment of tree screens along the eastern and/or southern boundaries of Edderton Homestead, upon request by the landowner or tenant; and	**3.4.3, 4.1.1, Appendix 3.**
	(c) include a program to monitor, maintain and report on the effectiveness of visual impact mitigation measures, to the satisfaction of the Planning Secretary.	**4.1, 5.2.**
B62	The Applicant must not commence construction until the Visual Impact Management Plan is approved by the Planning Secretary.	**1.2**
B63	The Applicant must implement the Visual Impact Management Plan as approved by the Planning Secretary.	**Noted**

Clause	Requirement	Section of Plan
E4	The Applicant must assess and manage development-related risks to ensure that there are no exceedances of the criteria and performance measures in this consent. Any exceedance of these criteria or performance measures constitutes a breach of this consent and may be subject to penalty or offence provisions under the EP&A Act or EP&A Regulation. Where any exceedance of these criteria or performance measures has occurred, the Applicant must, at the earliest opportunity: (a) Take all reasonable and feasible steps to ensure that the exceedance ceases and does not recur; (b) Consider all reasonable and feasible options for remediation (where relevant) and submit a report to the Department describing those options and any preferred remediation measures or other course of action; and (c) Implement reasonable remediation measures as directed by the Planning Secretary.	**3.4** **4.3** **4.3** **4.3**
E5	Management plans required under this consent must be prepared in accordance with relevant guidelines, and include: (a) a summary of relevant background or baseline data; (b) details of: (i) the relevant statutory requirements (including any relevant approval, licence or lease conditions); (ii) any relevant limits or performance measures and criteria; and (iii) 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; (c) any relevant commitments or recommendations identified in the document/s listed in condition A2(c); (d) a description of the measures to be implemented to comply with the relevant statutory requirements, limits, or performance measures and criteria; (e) a program to monitor and report on the: (i) impacts and environmental performance of the development; and (ii) effectiveness of the management measures set out pursuant to condition E5(d); (f) A contingency plan to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible; (g) a program to investigate and implement ways to improve the environmental performance of the development over time; (h) a protocol for managing and reporting any: (i) incident, non-compliance or exceedance of any impact assessment criterion or performance criterion); (ii) complaint; or (iii) failure to comply with other statutory requirements; (i) public sources of information and data to assist stakeholders in understanding environmental impacts of the development; and (j) a protocol for periodic review of the plan. ***Note:*** *The Planning Secretary may waive some of these requirements if they are unnecessary or unwarranted for particular management plans.*	**3.1** **Appendix 1** **3.4, 4.1** **3.4, 4.1** **Appendix 2** **3.4, 4.1** **4.1, 5.2.** **4.1, 5.2.** **4.3** **5.6** **4.2** **4.44.2** **4.1, 5.2** **5.1**

Clause	Requirement	Section of Plan
E6	The Applicant must ensure that management plans prepared for the development are consistent with the conditions of this consent and any EPL issued for the site.	**Not triggered**
E7	Within three months of: (a) the submission of an incident report under condition E9; (b) the submission of an Annual Review under condition E11; (c) the submission of an Independent Environmental Audit under condition E13; (d) the approval of any modification of the conditions of this consent (unless the conditions require otherwise); or (e) notification of a change in development phase under condition A13; The suitability of existing strategies, plans and programs required under this consent must be reviewed by the Applicant.	**5.1**
E8	If necessary, to either improve the environmental performance of the development, cater for a modification or comply with a direction, the strategies, plans and programs required under this consent must be revised, to the satisfaction of the Planning Secretary. Where revisions are required, the revised document must be submitted to the Planning Secretary for approval within six weeks of the review. Note: This is to ensure strategies, plans and programs are updated on a regular basis and to incorporate any recommended measures to improve the environmental performance of the development.:	**5.1**
E9	The Applicant must immediately notify the Department and any other relevant agencies immediately after it becomes aware of an incident. The notification must be in writing to compliance@planning.nsw.gov.au and identify the development (including the development application number and name) and set out the location and nature of the incident	**4.2**
E10	Within seven days of becoming aware of a non-compliance, the Applicant must notify the Department of the non- compliance. The notification must be in writing to compliance@planning.nsw.gov.au and identify the development (including the development application number and name), set out the condition of this consent that the development is non-compliant with, why it does not comply and the reasons for the non-compliance (if known) and what actions have been, or will be, undertaken to address the non-compliance. (a) Note: A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.	**4.2**

Development Consent DA 106-04-00

Clause	Requirement	Section of Plan
Section 5.4	Light Emissions. The Applicant shall screen or direct all on-site lighting away from residences and roadways, or manage such lighting to the satisfaction of MSC.	**3.4.2**

APPENDIX 2 – MAXWELL PROJECT EIS AND SUPPORTING DOCUMENT COMMITMENTS

Source	Details	Reference
EIS Section 6.11.4 and 8.2.8	There are numerous visual mitigation measures incorporated into the design of the Project. These include: • locating the mine underground; • utilising the substantial, existing infrastructure at the Maxwell Infrastructure; • positioning the MEA in a natural valley, which encloses most operational components within natural topography; • ongoing rehabilitation at the Maxwell Infrastructure; • use of compatible tones for building and cladding colours (such colours would include tonal variations of existing colours in the surrounding landscape); and • landscaping at the MEA to create tonal variations when viewed from the air.	**3.4.1** **3.4.1** **3.4.1** **3.4.1** **3.4.1** **3.4.3, Appendix 3**
EIS Section 6.11.4 and 8.2.8	Mitigation measures proposed in relation to reducing visual impacts relevant to the Project include: • on-site treatments to reduce visual effects of the Project components by reducing the level of visibility at potential viewer locations and reducing the level of contrast; and • off-site treatments at viewer locations to reduce visual sensitivity.	**3.4.1, 3.4.2** **3.4.3, Appendix 3.**
EIS Section 6.11.4 and 8.2.8	The following on-site treatments would be implemented for the Project: • Earthwork batters within the transport and services corridor would be vegetated. • Areas disturbed for construction laydown areas and access would be revegetated as soon as practicable after the completion of construction. • Where feasible, landscaping would be undertaken to emulate existing landscape patterns, colours and texture continuums. • Compatible tones would be used for the covered, overland conveyor infrastructure and cladding colours. • Power line design would consider the placement of poles in locations of high visual absorption, where possible.	**3.4.1** **3.4.1** **3.4.1** **3.4.1** **3.4.1**

EIS Section 6.11.4 and 8.2.8	All external lighting associated with the Project would comply with *AS/NZS 4282:2019 – Control of the Obtrusive Effects of Outdoor Lighting*, including the minimisation of light spill through the following: • Installation of light fittings would consider adequate aiming (including consideration of mounting heights). • Shielded fittings would be used, where available and safe to do so. • Use of anti-reflective paint on surfaces which night-lighting could spill onto. • Upward spill light would be minimised and lighting would generally be directed either downwards, or away from the sensitive receptors to the south and Edderton Road. • Night-lighting would be restricted to the minimum required for operational and safety requirements so as to avoid over-lighting. • Energy-efficient lighting would be used for any new fixed lighting installed, where available and safe to do so. • Where floodlights are required, asymmetric beams would be used. • Fixed lights would not be directed towards reflective surfaces. • Lighting for fixed installations would use warm white colours, where available and if compliant with industrial lighting standards.	**3.4.2**
EIS Section 6.11.4 and 8.2.8	If requested by the landowner (i.e. BHP) and/or tenant, landscaping works along the eastern and southern boundary fence line of Edderton Homestead would be undertaken to supplement existing vegetation and further screen views of the Project.	**3.4.3, Appendix 3**
EIS Section 6.11.4 and 8.2.8	Malabar will continue to offer to meet regularly with representatives of the Coolmore Stud and Godolphin Woodlands Stud over the life of the Project. Malabar would maintain fence lines, entrances and roadside plantings within Malabar-owned properties to present a visually pleasing appearance that is congruent and sympathetic with the appearance of surrounding rural properties. Malabar would discourage workers from wearing high-visibility clothing when visiting smaller, local communities	**3.4.5** **3.4.1** **3.4.4**

APPENDIX 3 – LANDSCAPING STRATEGY

1.0 Introduction

1.1 Purpose

In accordance with Schedule 2, Part B, Condition B61 of SSD 9526, Maxwell must prepare a Visual Impact Management Plan (VIMP) for the Maxwell Underground (UG) Project to the satisfaction of the Planning Secretary.

This plan must include a Landscaping Strategy to minimise views of the development from key vantage points in the public and/or private domain, which includes:

- the establishment and maintenance of tree screens to shield views of the Mine Entry Area (MEA) from Edderton Road to the greatest extent practicable; and
- the establishment of tree screens along the eastern and/or southern boundaries of Edderton Homestead, upon request by the landowner or tenant.

This document has been prepared to address the requirement for a Landscaping Strategy under Schedule 2, Part B, Condition B61 (b) of SSD 9526.

2.0 Context

2.1 Potential Impacts

A Landscape and Visual Impact Assessment was undertaken for the Maxwell UG Project Environmental Impact Statement (published on 14 August 2019) and included assessment of potential impacts on the existing landscape and visual amenity values of the area.

The assessment found:

- That the Maxwell UG Project would have inherently low visual impacts because the mining operation would be underground.
- The MEA would be located in a natural valley within undulating topography that limits most views into the operational area from surrounding sensitive receptors.
- Local topography would screen most views from the north, east and south reducing potential for visual impacts.
- Impacted views to the mine entry area and transport and services corridor would be limited.
- The visual impacts associated with additions to the Maxwell Infrastructure area would be minimal.

There are numerous visual mitigation measures that have been developed and incorporated into the Visual Impact Management Plan. This document focusses on the Landscaping Strategy to minimise views of the development from key vantage points in the public and/or private domain.

3.0 Implementation

3.1 On-site Treatment

In 2019, Maxwell planted trees and shrubs along ridge line contours located west of the mine entry area to provide a visual screen (as shown in **Figure 1**). The planting comprised four rows (at 2 metre centres) of native trees and 2-metre tall shrub species, consistent with the Spotted Gum Ironbark Woodland, Red Gum Woodland and White Box Woodland vegetation communities. A total of 2,000 plants were planted as part of the tree screen. Plants were installed using a growth promoting compound and immediately

watered in with a minimum of one litre per plant. Follow-up watering was undertaken for several months after installation due to drier than normal conditions at the time of planting.

Visual sensitivity is this area is considered moderate and visual impacts are low. As such planting was, in this context not essential, however, it was an opportunity for further reduction of visual effects, resulting in reduced visual impacts in the landscape.

Figure 1. On-site mitigation of the Mine Entry Area

3.2 Off-site Treatments

Edderton Homestead (owned by BHP) is located approximately 3.3 kilometres from the MEA (as shown in **Figure 2**) and qualifies for the consideration of off-site treatment due to the predicted moderate visual impacts. In accordance with Schedule 2, Part B, Condition B61 (b) of SSD 9526, if requested by the landowner and/or tenant, Maxwell will undertake landscaping works along the eastern and southern boundary fence line of Edderton Homestead to supplement existing vegetation and further screen views of the Maxwell UG Project.

Figure 2. Distance from Edderton Homestead to the Mine Entry Area

Initial discussions have already been undertaken with the landowner and tenant however at the time of writing this strategy, the landowner and tenant have not requested the tree screen to be installed.

Once requested, Maxwell will establish tree screens at the Edderton Homestead in the approximate locations shown in **Figure 3** and will consult with the landowner and/or tenant regarding the species to be planted, noting exotic species may be used to complement the existing garden.

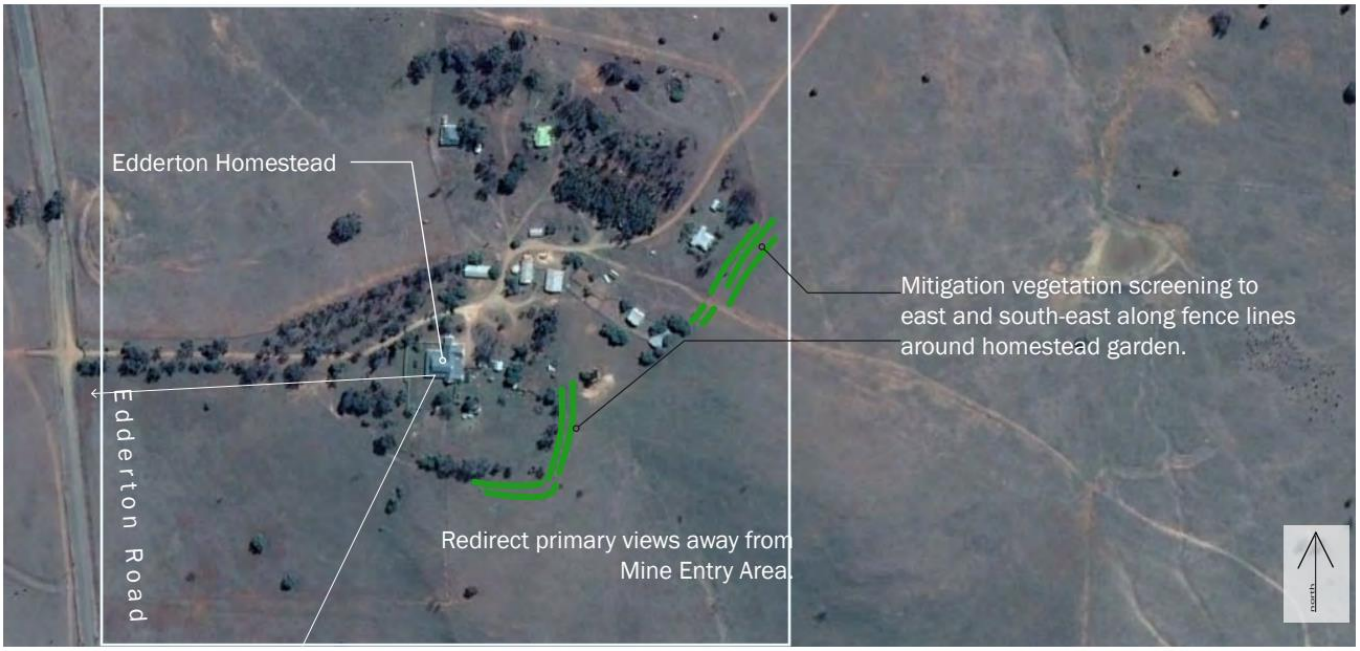

Figure 3. Off-site mitigation at Edderton Homestead

Maxwell will install at least 4 rows with plants evenly spaced 2 metres apart with a mixture of shrub and canopy species. Plants will be installed using a growth promoting compound and immediately watered in with a minimum of one litre per plant. Follow-up watering will be undertaken after installation until the trees are established and become self-sustaining.

3.3 Monitoring

Monitoring of the tree screens will be undertaken in accordance with Section 4.1.1 of the VIMP. Triggers for mitigation or remedial measures are also included in Section 4.1.1 of the VIMP.

3.4 Maintenance

Mitigation and remedial measures identified as part of the monitoring described in Section 4.1.1 of the VIMP will be at the cost of Maxwell (i.e. no cost to the landowner and or tenant).

4.0 Review

Maxwell will continuously investigate and implement reasonable and feasible visual impact management measures to shield views of the MEA from Edderton Road and Edderton Homestead. Feedback from monitoring results, landholder enquiries and any complaints may be used to assess impacts and determine where improvements or mitigation measures are required.

APPENDIX 4 – PLANNING SECRETARY APPROVAL

Planning, Industry & Environment

Donna McLaughlin
HSEC Manager
Maxwell Ventures (Management) Pty Ltd
Thomas Mitchell Drive
Muswellbrook. NSW, 2333

15/02/2022

Dear Ms. McLaughlin

Maxwell Underground (SSD-9526)
Visual Impact Management Plan

I refer to the Visual Impact Management Plan submitted in accordance with Condition B61 of Schedule 2 of the Development Consent for the Maxwell Underground (SSD-9526).

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

Accordingly, the Secretary has approved the Visual Impact Management Plan (Version 2, dated 10 February 2022). Please ensure that the approved plan is placed on the project website at the earliest convenience.

If you wish to discuss the matter further, please contact Wayne Jones on (02) 6575 3406.

Yours sincerely

Stephen O'Donoghue
Director
Resource Assessments
As nominee of the Secretary

4 Parramatta Square, 12 Darcy Street Parramatta 2150 | dpie.nsw.gov.au | 1