MALABAR

MAXWELL UNDERGROUND MINE

REHABILITATION STRATEGY

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2 INTRODUCTION

2.1 Background

Maxwell Ventures (Management) Pty Ltd (Maxwell), a wholly owned subsidiary of Malabar Resources Limited (Malabar) owns and operates the Maxwell Underground Mine (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 regional location is shown in **Figure 1** and site boundary is shown in **Figure 2**.

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 (Maxwell MOD1) to allow for the repositioning of infrastructure primarily at the MEA and realignment of a section of the site access road. The development consent was further modified (Maxwell MOD2) on 19 October 2022 to allow for the following:

- Re-orientation of the longwall panels in the Woodlands Hill, Arrowfield and Bowfield Seams resulting in a minor increase in the approved underground mining extent.
- Reduction in the width of some of the longwall panels in the Woodlands Hill Seam.
- Repositioning of the upcast ventilation shaft site and associated infrastructure.
- Other minor works and ancillary infrastructure components (e.g. access road and ancillary water management infrastructure for the repositioned ventilation shaft site).

Another modification was made to the development consent (Maxwell MOD3) on 22 September 2025 to allow for the transfer of tailings from Mt Arthur Coal (MAC) to the Maxwell UG Mine East Void, and tailings and coarse rejects from the Maxwell CHPP to the North Void.

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. DA 106-04-00 was modified on 18 September 2023 (Antiene MOD1) to align with the approved operating life of the Maxwell Underground Mine (i.e. until 2047).

2.2 Purpose and Scope

This Rehabilitation Strategy has been prepared by Maxwell to satisfy the requirements of Schedule 2, Condition B79 of SSD 9526. The Rehabilitation Strategy applies to all employees and contractors at the site and covers all areas within the Mine boundary. The Rehabilitation Strategy applies for the life of the Mine, including (but not limited to) the period of mining operations specified in SSD 9526, which currently permits mining until 30 June 2047.

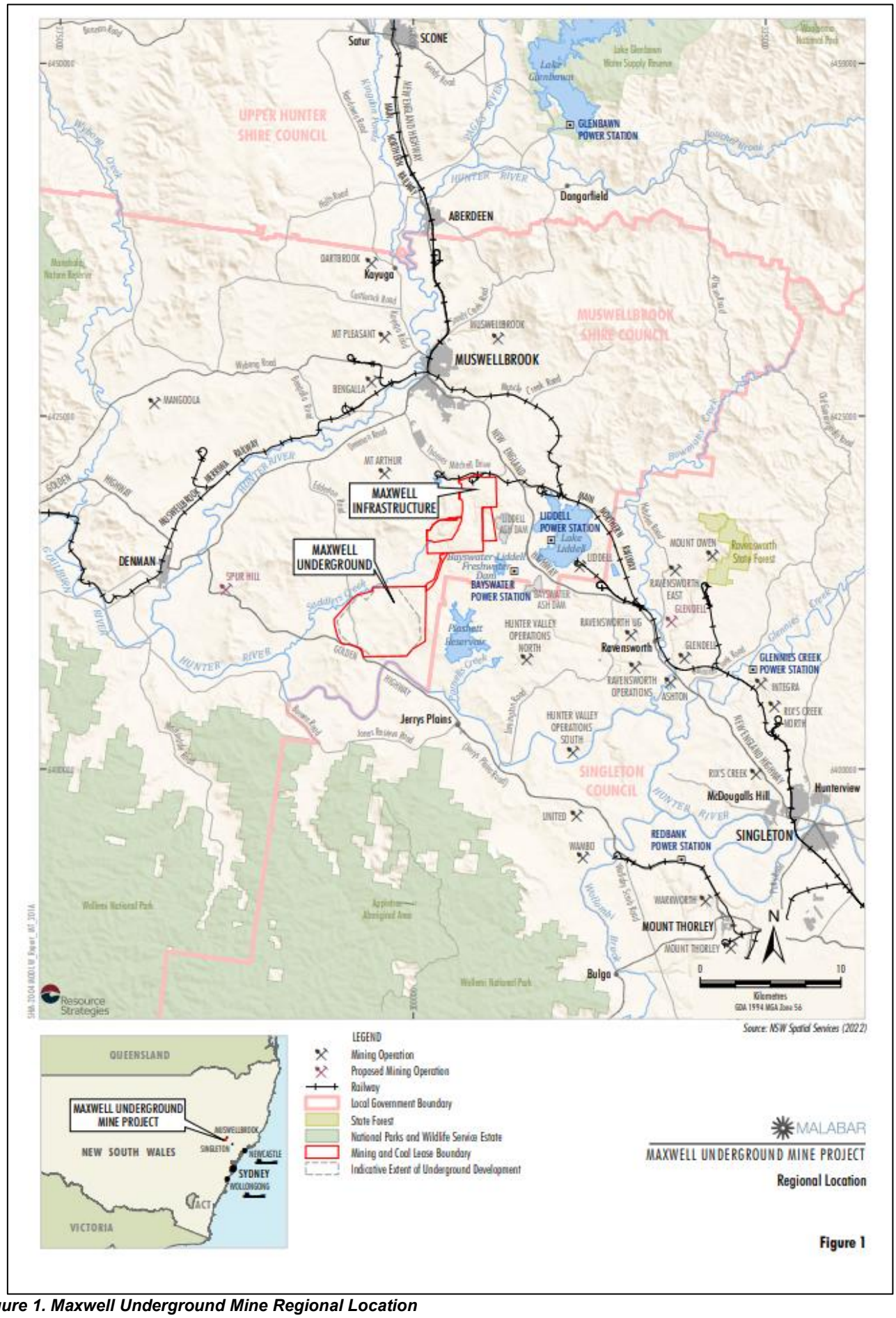

Figure 1. Maxwell Underground Mine Regional Location

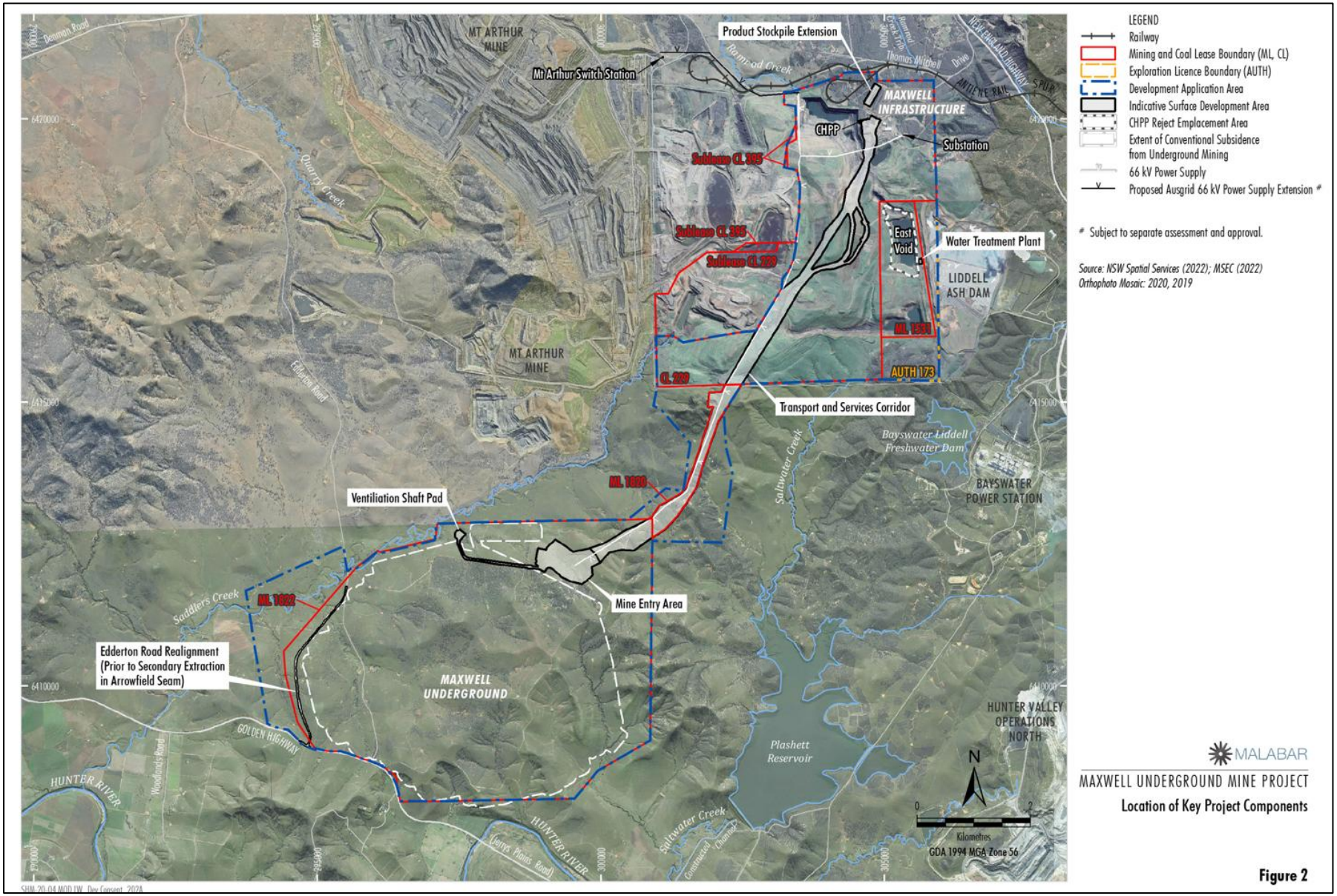

Figure 2. Maxwell Underground Mine Site Boundaries

As required by Schedule 2, Condition A6 of SSD 9526, this Rehabilitation Strategy will continue to apply (excluding mining operations) beyond 30 June 2047, as required, until the rehabilitation and any additional undertakings (required by the NSW Resources Regulator) have been carried out satisfactorily. In accordance with Schedule 2, Condition B80 and B81 of SSD 9526, Maxwell will implement the approved Rehabilitation Strategy and not commence first workings until the Rehabilitation Strategy is approved by the Planning Secretary.

2.3 Preparation and Consultation

Schedule 2, Condition B79(a) of SSD 9526, requires that this plan be prepared by a suitably qualified and experienced person/s whose appointment has been endorsed by the Planning Secretary. Maxwell has engaged Tasman Willis (Principal Ecologist from Emergent Ecology) to assist with the preparation of this plan. A copy of the endorsement by the Planning Secretary is included in **Appendix 1**.

As required by Schedule 2, Condition B79(b) of SSD 9526, this Rehabilitation Strategy has been prepared in consultation with the NSW Resources Regulator, Department of Planning and Environment (DPE) Water, Biodiversity and Conservation Division (BCD) and Council. Outcomes of the consultation are presented in **Appendix 3**.

At the request of Council, comments from Council will be discussed with Maxwell (where relevant) and addressed (where required) in subsequent versions of the Rehabilitation Strategy. For transparency, a copy of Council's comments has been provided in **Appendix 4**.

2.4 Strategic Framework for Mine Closure

The *Strategic Framework for Mine Closure* (Australian and New Zealand Minerals and Energy Council and Minerals Council of Australia [ANZMEC-MCA], 2000) provides a framework of issues to be considered as part of mine closure plan. The approach to mine closure as outlined in this Rehabilitation Strategy has been developed in consideration of the key objectives in the *Strategic Framework for Mine Closure*. The key objectives and where they have been addressed in this strategy are summarised in **Table 1**.

Table 1: Strategic Framework for Mine Closure - Objectives and Principles

Key Objectives	Relevant Section
To enable all stakeholders to have their interests considered during the mine closure process.	Section 2
To ensure the process of closure occurs in an orderly, cost-effective and timely manner.	Section 8 and RMP
To ensure the cost of closure is adequately represented in company accounts and that the community is not left with a liability.	Section 8
To ensure there is clear accountability, and adequate resources, for the implementation of the closure plan.	Section 8 and Section 10
To establish a set of indicators which will demonstrate the successful completion of the closure process.	Section 3
To reach a point where the company has met agreed completion criteria to the satisfaction of the Responsible Authority.	Section 3

3 STAKEHOLDER CONSULTATION

3.1 Consultation To Date

Stakeholder identification and consultation are integral in rehabilitation and mine closure planning. This Rehabilitation Strategy is informed by consultation undertaken during preparation of the previous *Mining Operations Plan* (MOP) and the *Maxwell UG Project Environmental Impact Statement* (Maxwell EIS).

Community Consultative Committee (CCC) meetings have been undertaken on a quarterly basis since the early 1990's. The CCC membership consists of local councillors, local residents and community members representing the broader community. Regulators and industry representatives are also invited to attend from time to time, as required. Quarterly meetings focus on ongoing environmental performance, mine rehabilitation, mine development issues and new developments. A community forum was also held at Muswellbrook in 2009 focussing on planning for the final landform and land use at the Drayton Mine (now Maxwell Infrastructure). The options discussed at the forum have been previously incorporated into the post-mining land use options and inform the mine closure planning process for the Maxwell Infrastructure. A summary of formal consultation relevant to this Rehabilitation Strategy (excluding CCC meetings) is provided in **Table 2**.

Table 2. Consultation Log Relevant to Rehabilitation

Date	Stakeholder	Description of Consultation Undertaken
31 May 2013	DP&E	Meeting held to discuss the preferred final landform options, including: • long-term outcomes for final voids; • consistency of land use outcomes with MSC land zoning; • spontaneous combustion management; • availability of inert capping material and topsoil for rehabilitation; and • objectives and management for biodiversity offset areas.
20 August 2013 and 2 September 2013	DP&E and DRE	Meetings held to discuss: • final highwall design options and long-term sustainability; • alternate options available for final landform and final voids; • final land use objectives and domains; • process for decommissioning of site infrastructure; • risk assessment, including consideration of spontaneous combustion monitoring and management responses; and • rehabilitation schedule to mine closure and presentation of staged plans.
11 September 2013	MSC	Meeting held to discuss: • preferred option for final landform and the existing options available to AGL and BHP; • rehabilitation of the Mt Arthur Mine sublease area; • species mix applied to rehabilitation areas and suitability for landform and end land use; • final land use for the site after closure (including use of rail loop); • long-term stability of final landform; • consistency of proposed final land use with land zonings; • visual impacts and final landform sections; • mechanism for securing existing biodiversity offsets; and • employment strategy to transition to mine closure.
3 October 2013	NSW Office of Environment and Heritage (OEH)	Meeting held with OEH to discuss: • monitoring and maintenance procedures and timeline for the final landform and site rehabilitation areas; • final landform options for grassland rehabilitation and woodland corridors; • corridor connectivity between the Drayton Mine site and adjacent conservation and habitat areas; • mechanism for securing existing biodiversity offset areas; and use of habitat resources in rehabilitation areas.
28 November 2013	DP&E	DP&E review of draft closure plan for Drayton Mine.
29 January 2014	DRE	DRE review of draft closure plan for Drayton Mine.
15 January 2015	DP&E and DRE	Meeting held with DP&E and DRE to discuss: • the remaining areas where coal is to be extracted from within the approved footprint; • potential for AGL to dispose of ash in the final voids;

Date	Stakeholder	Description of Consultation Undertaken
		• the final highwall design and longer term maintenance options; • risks associated with blasting within the Notification Area of the Liddell Ash Dam and required consultation with the NSW Dams Safety Committee (DSC); and schedule for final rehabilitation across the site.
17 January 2015	DSC	Meeting to discuss interactions with Liddell Ash Dam Notification Area.
27 May 2015	DP&E and DRE	Meeting to discuss rehabilitation scheduling.
June 2015	DP&E and DRE	DP&E and DRE review of draft MOP[a].
16 September 2015	DP&E and DRE	Meeting held to discuss DP&E and DRE comments following review of the draft MOP provided in June 2015.
30 October 2015	DRE	Approval of the 2015-2020 MOP.
17 November 2015	DP&E	Approval of the 2015-2020 MOP[a] as fulfilling the requirements for a Landscape Management Plan, Final Void Management Plan and Mine Closure Plan.
15 September 2016	DRE	Meeting held to discuss revised mine closure schedule for the Drayton Mine.
December 2016	DP&E/DRG	Preparation of MOP[a] Amendment A (dated December 2016).
7 February 2017	DRG	Approved of the rehabilitation objectives, completion criteria and schedule of activities in MOP[a] Amendment A.
23 May 2018	DRG and NSW Resources Regulator	Conceptual Project Development Plan meeting held, including discussion of: progress of rehabilitation to date at the Maxwell Infrastructure; and reject emplacement in the East Void.
13 June 2018	DP&E	Scoping meeting held, including discussion of: • progress of rehabilitation to date at the Maxwell Infrastructure; potential beneficial uses of remaining voids at the Maxwell Infrastructure; and interim MOP[a] and Final Void Management Plan.
5 July 2018	MSC	Meeting held to provide an overview of the Project and update on approval process, including discussion of: beneficial use of existing voids (placement of reject material); and integration of Maxwell Infrastructure final landform with surrounding landscape.
10 July 2018	NSW Resources Regulator	Project briefing meeting and site inspection.
17 July 2018	OEH	Meeting held to provide an overview of the Project, including discussion of current status of Maxwell Infrastructure rehabilitation.
10 September 2018	Singleton Council	Meeting held to provide an overview of the Project, including discussion of current status of Maxwell Infrastructure rehabilitation.
3 October 2018	MSC	Meeting held to provide an overview of the Project and update on approval process. Muswellbrook Shire Council requested that Malabar consider incorporating micro-relief into the Maxwell Infrastructure landform.
5 November 2018	Singleton Council	Project briefing meeting and site inspection, including discussion of current status of Maxwell Infrastructure rehabilitation.
21 and 22 November 2018	Local Community	Community information sessions held which provided residents with access to Maxwell EIS technical expertise, including the Social Impact Assessment team, and Malabar's project and operational teams. Information on the Project and a feedback form were made available online and at the information sessions to facilitate broader input on the Project's potential impacts and benefits.
26 August 2019	Resources Regulator	Project briefing meeting and site inspection of rehabilitation at Maxwell Infrastructure.
12 June 2020	Resources Regulator	Feedback received on Maxwell MOP including discussion on voids and interaction with the Maxwell EIS.

Date	Stakeholder	Description of Consultation Undertaken
16 June 2020	Resources Regulator	Meeting held to discuss feedback on the Maxwell MOP including discussion on final voids.
14 April 2021	Resources Regulator	Maxwell MOP submitted.
25 June 2021	Resources Regulator	Maxwell MOP approved.
13 December 2021	Resources Regulator	Maxwell MOP – Amendment A submitted to capture new mining titles and MOD1.
23 February 2022	Resources Regulator	Maxwell MOP – Amendment A approved.
14 March 2023	Resources Regulator	Feedback received regarding Rehabilitation Objectives.
27 July 2024	Resources Regulator	Feedback received on the Final Landform and Rehabilitation Plan and Rehabilitation Objectives Statement.
26 November 2025	Resources Regulator	Approval of the Final Landform and Rehabilitation Plan and Rehabilitation Objectives Statement.

Notes:
DRE = Division of Resources and Energy (now the NSW Resources Regulator); DRG = Division of Resources and Geoscience; DP&E = Department of Planning and Environment (changed to Department of Planning, Industry and Environment [DPIE] and now the DPE; MOP = Mining Operations Plan.
[a.] *The RMP replaced the MOP as per Mining Regulators 2016.*

3.2 Stakeholder Engagement Plan

Maxwell recognises the value of identifying and engaging key stakeholders during the mine closure planning process. Engaging relevant stakeholder is one of the fundamental principles for effective mine closure, as the closure of the Mine would likely result in substantial changes to the community in which Maxwell operates.

As part of the *Social Impact Management Plan* (SIMP), a Stakeholder Engagement Plan has been developed to outline engagement tools and activities to proactively engage stakeholders and the community regarding the project and address the stakeholder engagement management strategies. A high-level stakeholder engagement plan for the remainder of the Mine is provided in **Table 3**. In addition, Maxwell operates a *Community Complaints and Enquiries Procedure* including a 24-hour community phone number that facilitates the investigation and response to community complaints and enquiries.

Table 3. Stakeholder Engagement Plan

Development Phase	Consultation Mechanism	Description
Pre-mining	RMP	• Malabar has prepared a detailed RMP for the which has been submitted to the NSW Resources Regulator.
	CCC Meetings	• Malabar would continue to hold CCC meetings, including updates on rehabilitation progress, outcomes of any rehabilitation trials and any proposed changes to the RMP.
During-mining	RMP	• Malabar would prepare subsequent Annual Rehabilitation Reports as rehabilitation progresses each year, in consultation with the relevant regulators and to the satisfaction of the NSW Resources Regulator.
	CCC Meetings	• Malabar would continue to hold CCC meetings, including updates on rehabilitation progress, outcomes of any rehabilitation trials and any proposed changes to the RMP.
	Site Visits	• Throughout the life of the Mine, Maxwell will conduct site visits of progressive rehabilitation of previously mined areas at the Maxwell Infrastructure for government agencies, Muswellbrook Shire Council and CCC's, if requested.
Pre-closure	Mine Closure Plan	• Consistent with the Maxwell Social Impact Management Plan, Malabar would update and implement the detailed Mine Closure Plan five years prior to mine closure in consultation with relevant stakeholders and to the satisfaction of the DPHI and/or NSW Resources Regulator.

Development Phase	Consultation Mechanism	Description
		• In accordance with the SIMP, five years prior to closure Maxwell would implement the mine closure process outlines in the Maxwell EIS. • In accordance with Condition B94(h) this SIMP will be updated three years prior to closure.
	CCC Meetings	• Malabar would present detailed mine closure strategies and provide updates on the performance of rehabilitation with respect to the approved rehabilitation completion criteria.
	Maxwell Website	• Malabar would update their website to inform the public of rehabilitation and mine closure activities and progression
Post-closure	Closure Committee Meetings	• Regular CCC meetings would continue during the post-closure phase for a period of at least five years, with the CCC being utilised as a Closure Committee. • Relevant regulators will also be invited to attend Closure Committee meetings as required. • Closure Committee meetings would include updates on the progress of rehabilitation in achieving rehabilitation completion criteria and any relinquishment activities.

4 REHABILITATION OUTCOMES

4.1 Final Land Use Statement

The overall objective for the final rehabilitated landform at Maxwell is to establish a safe, stable and non-polluting landform that is compatible with the surrounding landscape and fit for sustaining the intended post-mining land use.

The final design and location of surface drainage features will be designed to achieve a stable landform and where required maintain or improves riparian corridor functioning. This will be completed with reference to industry guidelines including *Rehabilitation Manual for Australian Streams (LWRRDC 2000)*, *Guideline: Works that interfere with water in a watercourse for a resource activity (DNRME 2019)* and *Guidelines for Controlled Activities on Waterfront Land (DPE 2022)* or their latest versions.

4.2 Rehabilitation Objectives and Completion Criteria

Rehabilitation objectives for the site (as defined in SSD 9526) are provided in **Table 4** and describe the outcomes required to achieve the post-mining land use. The rehabilitation objectives are consistent with the rehabilitation objectives outlined in Schedule 2, Condition B76 of SSD 9526 and apply to the entire site. These rehabilitation objectives take into account relevant strategic land use objectives in the region and the potential benefits of the post-mining land use to the environment, future landholders and the community.

Completion criteria are objective target levels assigned to a variety of indicators which can be measured to demonstrate progress and ultimate success of rehabilitation. They provide a defined end point, at which rehabilitation can be deemed successful and the lease relinquishment process can proceed. These indicators and criteria will be refined over time as more information is obtained from monitoring programs or knowledge gained from industry and operational experience.

Rehabilitation completion criteria will be submitted to the NSW Resources Regulator and be consistent with the proposed final land use for the site no later than three years before rehabilitation of the whole (or identified part) of the mining area is proposed to be completed.

Table 4. Rehabilitation Objectives in SSD 9526

Feature	Objective [a]
All areas of the site affected by the development	• Safe, stable and non-polluting. • Fit for the intended post-mining land use/s. • Achieve the final landform and post-mining land use/s.
Woodland Biodiversity Corridors, including the Southern Offset Area	• Establish self-sustaining native woodland ecosystems as described in the document/s listed in condition A2I and in Table 5[b]. • Establish local plant community types, with a particular focus on the CEECs listed in condition B50 of this Schedule. • Establish habitat, feed and foraging resources for threatened fauna species. • Facilitate local vegetation connectivity and wildlife corridors, particularly with respect to the adjacent Mt Arthur Coal Complex.
Areas proposed for agricultural or pastoral use	• Establish/restore grassland areas to support sustainable agricultural activities. • Use species found in the local area that are suitable for pasture production. • Achieve land and soil capabilities that are suitable for the intended final land use. • Located adjacent to surrounding agricultural land, where practicable.
Final landform	• Stable and sustainable for the intended post-mining land use/s. • Compatible with surrounding topography to minimise visual impacts. • Incorporate relief patterns and design principles consistent with natural drainage that mimic natural topography and mitigate erosion.

Final voids	• Reject emplacements are suitably capped and rehabilitated.
	• Designed as long term groundwater sink to prevent the release of saline water into the surrounding environment, unless further mine planning and final landform design processes identify a more suitable outcome for the final voids (see condition B79).
	• Minimise to the greatest extent practicable:
	  ○ the size and depth;
	  ○ surface evaporation in void lakes;
	  ○ the drainage catchment;
	  ○ any high wall instability risk;
	  ○ the risk of spillover into the downstream environment; and the risk of flood interaction;
	• Maximise potential for beneficial reuse, where practicable.

Surface infrastructure of the development	• To be decommissioned and removed, unless the Resource Regulator agrees otherwise. • All surface infrastructure sites are to be revegetated with suitable local native plant species to a landform consistent with the surrounding environment.
Portals and vent shafts of the development	• To be decommissioned and made safe and stable.
Underground mining area[c]	• No decline in land and soil capability.
Watercourses subject to mine water discharges and/or subsidence impacts or environmental consequences that are greater than negligible[d]	• Hydraulically and geomorphologically stable. • Aquatic ecology and riparian vegetation that is the same or better than prior to grant of this consent.
Water Quality	• Water retained on the site is fit for the intended post-mining land use/s.

Feature	Objective [a]
	• Water management is consistent with the regional catchment management strategy.
Built features damaged by mining operations	• Repair to pre-mining condition or equivalent unless the: o owner agrees otherwise; or o damage is fully restored, repaired or compensated for under the Coal Mine Subsidence *Compensation Act 2017*
Steep slopes	• No additional risk to public safety compared to prior to mining.
Existing Edderton Road alignment	• All road and associated infrastructure to be removed unless otherwise agreed with Council. • Alignment to be rehabilitated to a standard compatible with the adjacent land use(s).
Community	• Ensure public safety. • Minimise adverse socio-economic effects associated with mine closure.

Notes:
[a] These rehabilitation objectives apply to all subsidence impacts and environmental consequences caused by all underground mining of the development and to all surface infrastructure components of the development.
[b] The requirements in Table 5 apply to the Southern Offset Area only.
[c] The underground mining area' means the subsidence area.
[d] Where remediation of watercourses is likely to cause subsidence impacts or environmental consequences greater than those that require rehabilitation, alternative equivalent works may be undertaken within the affected watercourse.

Following cessation of rail movements under DA 106-04-00, Maxwell will rehabilitate the rail loop and Antiene Rail Spur. Rehabilitation objectives for the site (as defined in DA 106-04-00) are provided in **Table 5** and describe the outcomes required to achieve the post-mining land use.

Table 5. Rehabilitation Objectives in DA 106-00-00

Feature	Objective
Site	• Safe, stable and non-polluting. • Fit for the intended post-mining land use/s.
Surface Infrastructure	• To be decommissioned and removed within 5 years of cessation of rail movements, unless the Planning Secretary agrees otherwise.
Community	• Ensure public safety at all times.

4.3 Rehabilitation Management Plan

Consistent with the requirements of the *NSW Mining Amendment (Standard Conditions of Mining Leases) – Rehabilitation Regulation 2021* under the *Mining Act 1992*, enacted on 2 July 2021, Maxwell have also prepared a *Rehabilitation Management Plan* (RMP) for the site in accordance with *Form and Way: Rehabilitation Management Plan Guidelines* (NSW Resources Regulator, 2022).

The Rehabilitation Strategy and the RMP both detail the implementation of rehabilitation. The intent of the Rehabilitation Strategy is to set the strategic direction and outcomes for the rehabilitation of the mine. The RMP defines how the rehabilitation will achieve the objectives required by SSD 9526 and DA 106-04-00. While both plans are closely linked, the Rehabilitation Strategy incorporates a longer time period than the RMP with the provision to review and refine the final landform and final void outcomes as a result of subsequent detailed design and ongoing refinement of rehabilitation techniques over the life of the Mine.

5 FINAL LANDFORM AND POST MINING LAND USE

5.1 Final Landform

As an underground mine, the impacts would result in minimal changes to existing landforms. The Mine however would support enhancement of the rehabilitation at Maxwell Infrastructure. Following the completion of mining, all infrastructure is currently planned to be decommissioned and returned to pasture or woodland, however as part of the mine closure process, infrastructure which is proposed to be utilised by subsequent approved land uses will be retained as required. A conceptual final landform is shown in **Figure 3**.

Underground portals and ventilation shafts would be sealed in accordance with the requirements of *MDG6001 Guidelines for the Permanent Filling and Capping of Surface Entries to Coal Seams* (NSW Trade and Investment, 2012) (or its latest version at the time). Surface impacts from subsidence would be progressively remediated and subsidence monitoring would continue for a period agreed with the NSW Resources Regulator, and any observed surface impacts would continue to be remediated by Maxwell.

Prior to MOD3, coarse rejects and fine rejects (also known as tailings) generated by Maxwell were being transported to the Maxwell East Void via a pipeline and directed into the void. MOD3 was approved in September 2025 and allowed for the transfer of tailings from MAC to the Maxwell East Void and tailings from the Maxwell CHPP to the North Void.

There is no change to the existing Maxwell rehabilitation objectives or final as a result of the Maxwell MOD3. Emplacement of tailings and coarse rejects in the Maxwell East Void and Maxwell North Void would occur within the approved period of operations for Maxwell. Emplacement in the Maxwell East Void would occur progressively until the Maxwell East Void is projected to reach its maximum tailings storage capacity. Tailings are proposed to be deposited in the North Void until the end of mining operations at Maxwell.

At the conclusion of mining operations, the CHPP rejects emplacement areas will be capped (to a minimum of 2 m) and rehabilitated, unless consent for continued emplacement is granted. Maxwell will prepare a capping strategy prior to the emplacement of fine rejects. The strategy will determine the appropriate capping depth and material to be used and any other geotechnical investigations required. The fine rejects emplacement area will be rehabilitated to pasture.

Conceptual models of how the groundwater and surface water systems interact with the conceptual final landform are provided in the Maxwell EIS. Further information regarding groundwater and surface water management is provided in **Section 6**.

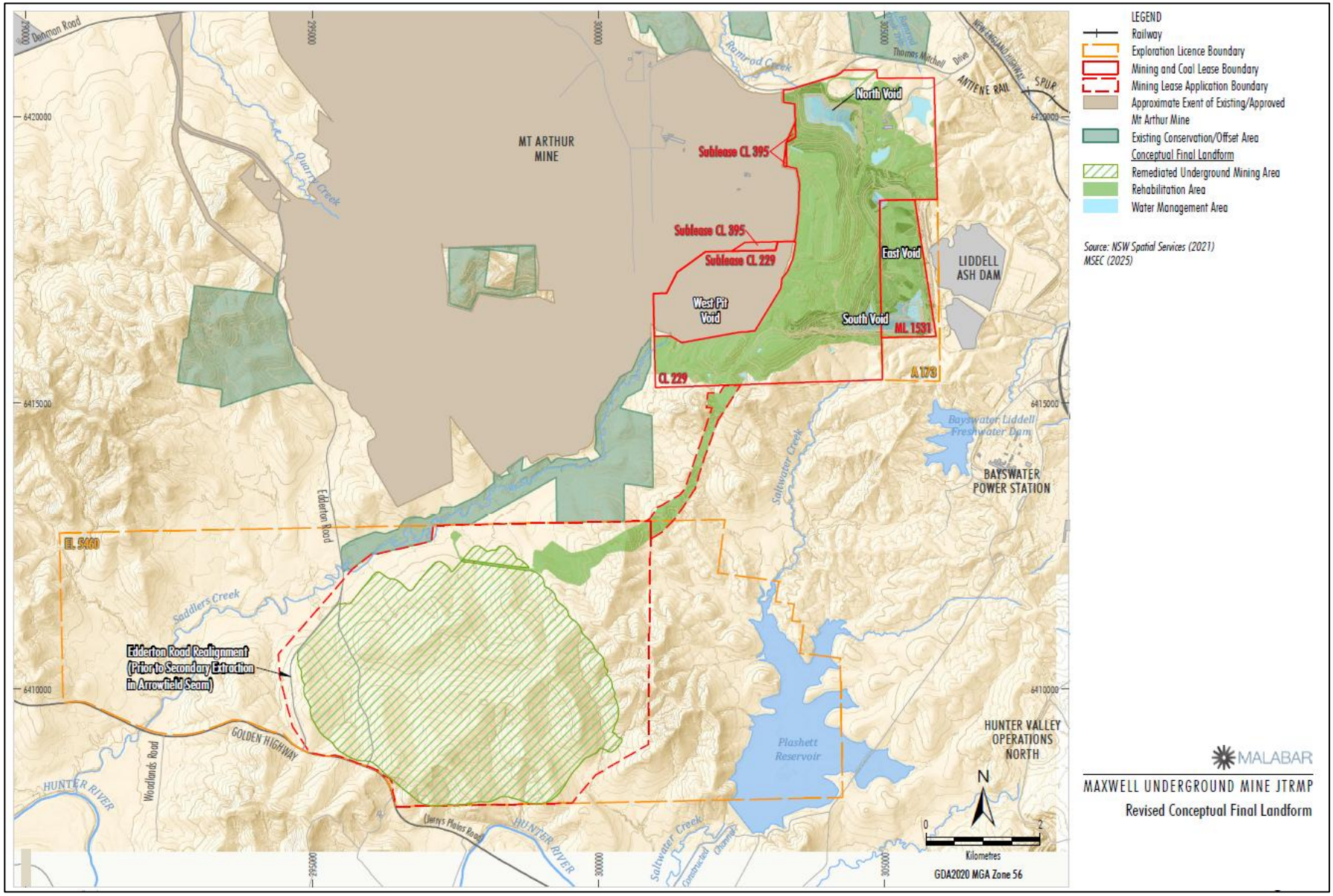

Figure 3. Conceptual Final Landform

5.2 Final Voids

The proposed final landform includes the three remaining voids at the Maxwell Infrastructure site, although the Maxwell UG Mine and Maxwell MOD3 would involve the partial backfilling of the East and North Void with CHPP reject material. HydroSimulations (2019) simulated the long-term behaviour of the final voids and determined that they would remain as permanent and localised groundwater sinks. The accumulation of surface runoff combined with groundwater inflows may result in the formation of a pond of water in the voids which would rise until the average rate of inflow is balanced by evaporation from its surface.

A Groundwater Assessment for the Mine was undertaken by HydroSimulations (2019) and is presented in Appendix B of the Maxwell EIS. The Groundwater Assessment has evaluated the potential impacts of the Mine on groundwater resources using a numerical regional groundwater model. Groundwater modelling included predictive modelling over the life of the Mine as well as recovery modelling for a 1,000-year period post-mining.

Initial pit lake equilibrium levels were determined based on direct rainfall to the void surface and catchment runoff, less evaporation losses. These pit lake levels were then implemented in the recovery groundwater model using a series of constant heads over time. The recovery groundwater modelling predicts that net groundwater inflows to the voids at the predicted equilibrium level would be negligible.

The final void water balance assessment for Maxwell Underground Mine and Maxwell MOD3 was undertaken by WRM (2019 and 2025). The simulated water levels within all three voids reach equilibrium of approximately 170 m Australian Height Datum (AHD) after 100 years and generally remain at these levels throughout the remainder of the 400-year simulation. The maximum modelled water level is approximately:

- 25 m below the North Void overflow level;
- 4 m below the East Void overflow level; and
- 3 m below the South Void overflow level.

Maxwell's strategic intent is to create adjoining underground mining operations (the approved Maxwell Mine and the proposed Spur Hill Underground Project and Maxwell North Project) with raw coal from both operations processed and handled through the Maxwell Infrastructure. Any future underground mining applications would consider the emplacement of rejects within the Maxwell Infrastructure voids (subject to separate assessments and approvals), which would further reduce the size and/or number of final voids.

Consistent with previous commitments under PA 06_0202, Maxwell will continue to investigate opportunities to further reduce the size of the voids. All would be subject to separate assessments and approvals. Opportunities may include:

- The emplacement of fly ash from the adjacent power stations within the East Void;
- The emplacement of rejects from future underground mining activities at Maxwell or Malabar's Spur Hill Underground Coking Coal Project); and
- Engagement with other mining and industrial facilities in the region.

The North Void highwall requires decommissioning of the rail loop and CHPP and as such cannot be completed until after the 30 June 2047.

Post-Mining Land Use

Maxwell's long-term strategy is to create a sustainable enterprise through the development of long-life underground mines focused on higher quality coals suitable for steel making and transitioning the previous open cut mining areas to renewable power generation and agricultural production.

Maxwell has already commenced a cattle grazing trial on a parcel of pasture mine rehabilitation. The trial aims to demonstrate that Maxwell can create a post mining landscape that is compatible with the surrounding landscape and capable of sustaining a productive land use. The grazing area has since been expanded and the trial will continue as Maxwell works towards relinquishment of the area.

Maxwell has received development consent for a 25 megawatt (MW) solar farm located at the Maxwell Infrastructure on a waste emplacement associated with the former Drayton Mine. Any remaining rehabilitation obligations required as part of the existing mining development consent for this area will be addressed prior to construction of the solar farm. The site is located adjacent to the major electricity generating hub in and in proximity to many high voltage transmission lines. Malabar has also entered into a memorandum of understanding with EDF Renewables to investigate large scale renewable energy projects on Malabar owned land within the designated Hunter Renewable Energy Zone. EDF Renewables is a wholly owned subsidiary of the French utility EDF Group, specialising in renewable energy production.

5.3 Outcomes of Investigations and Improvements

Should improvements to the final landform, final void outcomes or alternative post-mining beneficial land uses be identified, this Rehabilitation Strategy would be reviewed and updated in consultation with the relevant regulatory agencies required under Development Consent SSD 9526.

6 PLANNING AND MANAGEMENT

6.1 Risk Assessment

Environmental issues associated with activities at the Maxwell UG Mine have been assessed as part of the Maxwell EIS. Further to this, a rehabilitation risk assessment has been prepared. The purpose of the risk assessment was to identify and evaluate all potential threats to achieving the final land use and the specific measures to be implemented to mitigate the risks. The risk assessment was prepared in accordance with *AS NZS ISO 31000:2009 Risk Management – Principles and Guidelines*. A rehabilitation risk assessment is maintained on site and is available as a record. This risk assessment may be updated from time to time.

Maxwell is required to comply with rehabilitation requirements under the mining authorisations The applicability of the controls to achieve effective and sustainable rehabilitation is determined based on site-specific risk assessments. Maxwell may also be directed by the Resources Regulator to implement further risk control measures required to achieve effective rehabilitation outcomes during the life of the mine.

6.2 Final Land Use and Mining Domains

Final land use domains are defined on the basis of land management units characterised by a similar post-mining land use objective. The final land use domains are listed and defined in **Table 6** and shown in **Figure 4**.

Table 6. Final Land Use Domains

Final land Use Domain	Definition
Native ecosystem	Rehabilitation areas re-established with a native vegetation community suited for faunal habitat / movement and general ecological enhancement.
Agricultural – grazing	Rehabilitation areas re-established with an exotic pasture vegetation cover suited for livestock grazing land use.
Rehabilitation biodiversity offset area	Areas in the post-mining landscape designed and managed as Biodiversity Offsets, including the Southern Offset Area, Northern Offset Area, Wildlife Refuge and any biodiversity offset areas required for the Mine.
Water management areas	Water storages and watercourses remaining in the final landscape, including dams and voids.

Mining domains are defined on the basis of land management units within the site with unique operational and functional purpose and similar geophysical characteristics. The mining domains are listed and defined in **Table 7**.

Table 7. Mining Domains

Primary Domain	Definition
Infrastructure areas	Disturbed land modified by civil works and or the construction of operational structures, such as internal roads, laydown areas, hardstands and carparks, coal stockpile pads, fixed buildings, coal processing facilities, conveyors and gantries, rail loop, train load-out facilities
Tailings storage facility	Areas utilised for operational tailings management and emplacement.
Water management areas	All major water management dams and other structures. Water management structures and features used for the operational storage and conveyance of raw water, mine water and mine-affected water storage.
Underground mining area	Areas that would be actively managed for potential subsidence from the Maxwell Mine underground mining activities (i.e. those areas within the subsidence angle of draw).
Other - Legacy Open Cut Mining Area	Residual open cut pits previously used for operational purposes including highwalls, benches, pit floor, end walls and low walls. Areas previously utilised for the emplacement of overburden and interburden material.

6.3 Phases of Rehabilitation

The sequence of actions required to rehabilitate disturbed areas to achieve the final land use are classified into conceptual stages referred to as phases of rehabilitation. Rehabilitation phases are important to show progress towards the post mining land use goals. Rehabilitation phases can be divided into the following categories:

1. ***Active mining*** – includes activities undertaken as part of active mining that are associated with soils and materials, flora and fauna, rock/overburden emplacement, waste management, geology and geochemistry, spontaneous combustion, reject/tailings, erosion and sediment control, biological resources, mine subsidence, cultural heritage and exploration activities.
2. ***Decommissioning*** – includes the removal of buildings, CHPP, portals, ventilation shafts, mine entrances, hardstand areas, rail infrastructure (if no longer required) contaminated materials and hazardous materials.
3. ***Landform Establishment*** – incorporates gradient, slope, aspect, drainage, substrate material characterisation and capping of carbonaceous materials.
4. ***Growing Medium Development*** – incorporates physical, chemical and biological components of the growing media and ameliorants that are used to establish vegetative cover.
5. ***Ecosystem and Land use Establishment*** – incorporates habitat augmentation, species selection, species presence and growth, together with weed and pest management and establishment of flora.
6. ***Ecosystem and Land use Development*** – incorporates components of floristic structure, nutrient cycling recruitment and recovery, community structure and function.
7. ***Rehabilitation Complete*** – secondary domains meet completion criteria and can be relinquished in accordance with a Mine Closure Plan.

6.4 Temporary Rehabilitation

Temporary rehabilitation (i.e. seeding with a sterile cover crop or hydroseeding) will be undertaken on earthwork batters within the transport and services corridor. In addition, all topsoil stockpiles constructed will be ripped and sown with pasture mix once their construction is completed. This temporary rehabilitation will be undertaken where areas prone to dust generation, soil erosion and weed incursion cannot be permanently rehabilitated.

6.5 Progressive Rehabilitation

In accordance with Schedule 2, Condition B78 of SSD 9526, Maxwell is required to progressively rehabilitate disturbed land. As an underground mine, the Mine would result in minimal surface disturbance requiring rehabilitation. Notwithstanding, rehabilitation of existing open cut mining areas at the Maxwell Infrastructure site is undertaken progressively and aims to create a structurally stable landform capable of sustaining the agreed post-mining land use(s).

Consistent with *Form and Way: Rehabilitation Management Plan Guidelines* (NSW Resources Regulator, 2022), life-of-mine rehabilitation schedules from RMP commencement (i.e. 2022) until achievement of the rehabilitation completion criteria and relinquishment of the Mining Lease(s) (i.e. 2047) have been included in the RMP as Plans 6.1 and 6.2. The Mine Annual Rehabilitation Report and Forward Program provides further detail of rehabilitation activities at the Mine. Rehabilitation activities of new surface disturbance areas will be minimal until the cessation of mining activities as the majority of disturbance pertains to the installation and ongoing maintenance of the underground area.

Maxwell will prepare all documentation in accordance with *Schedule 8A* of *the Mining Regulation 2016* and carry out rehabilitation is accordance with the relevant documentation as soon as reasonably practicable.

6.5.1 Targeted Vegetation Communities

The establishment of appropriate flora species for targeted vegetation communities in rehabilitated areas and the management of existing flora across the site is essential to achieving mine closure objectives. Exotic pasture seed will be blended with on average 200 kilograms per hectare of fertiliser and applied with a tractor and seeder combination. A typical exotic pasture seed mix is provided in **Table 8**.

Table 8. Typical Pasture Seed Mix

Species	Seeding Rate (kg/ha)
Millet or Oats	8
Kikuyu	3
Panic	3
Couch	4
Lucerne	2
White Clover	2
Barrel Medic	1
Burr Medic	1
Vetch	2
Phalaris	2
Cocksfoot	2
Kangaroo Valley Rye	3

The native woodland seed mix will be combined with a native grass mix and a non-persistent cover crop such as Oats (during Autumn/Winter) or Japanese Millet (during Spring/Summer) and applied by hand seeding. Seed mixes may be modified, to target species that are more likely to germinate and successfully grow using the methods and equipment available. Species endemic to the local area will be

preferentially used, except where seed supply is a limiting factor. A typical native woodland seed mix is provided in **Table 9**.

Table 9. Typical Native Woodland Seed Mix

Species	Seeding Rate (kg/ha)
Millet or Oats	7.0
Cynodon dactylon	3.0
Atriplex semibaccata	0.1
Calotis lappulacea	0.0
Einadia hastata	0.1
Einadia trigonos	0.1
Enchylaena tomentosa	0.1
Hardenbergia violacea	0.1
Cassinia arcuata	0.1
Indigofera australis	0.1
Senna artemisioides ssp zygophylla	0.2
Acacia decora	0.2
Acacia falcata	0.2
Acacia filicifolia	0.1
Dodonaea viscosa	0.2
Allocasuarina littoralis	0.2
Acacia implexa	0.2
Acacia salicina	0.2
Eucalyptus blakelyi	0.1
Eucalyptus crebra	0.1
Corymbia maculata	0.3
Native Grass Seed Mix	
Aristida mix (includes A. ramosa, A. vagans)	2.0
Austrodanthonia mix (includes A. setacea, A. fulva, A. caespitosa)	
Austrostipa scabra	
Austrostipa verticillata	

Species	Seeding Rate (kg/ha)
Bothriochloa macra and B. decipiens	
Dichelachne micrantha	
Chloris truncata	
Cymbopogon refractus	
Dicanthium sericeum	
Microleana stipoides	
Panicum effusum	
Eragrostis sp.	
Elymus scaber	
Digitaria sp.	
Sporobolus creber	
Themeda triandra	
Chrysocephalum apiculatum (herb)	

6.5.2 Revegetation

Supplementary planting and replacement planting may occur on areas of existing rehabilitation, within the Woodland Corridor (refer to **Figure 4**). An ongoing planting schedule will be developed to cover three-year periods. Planting will occur during autumn (March to April) and/or spring (September to October), depending on local weather conditions in the months prior to planting. Native plant species will be selected based on the following target vegetation communities:

(i) White Box – Yellow Box – Blakely's Red Gum Grassy Woodland; and
(ii) Central Hunter Grey Box-Ironbark Woodland.

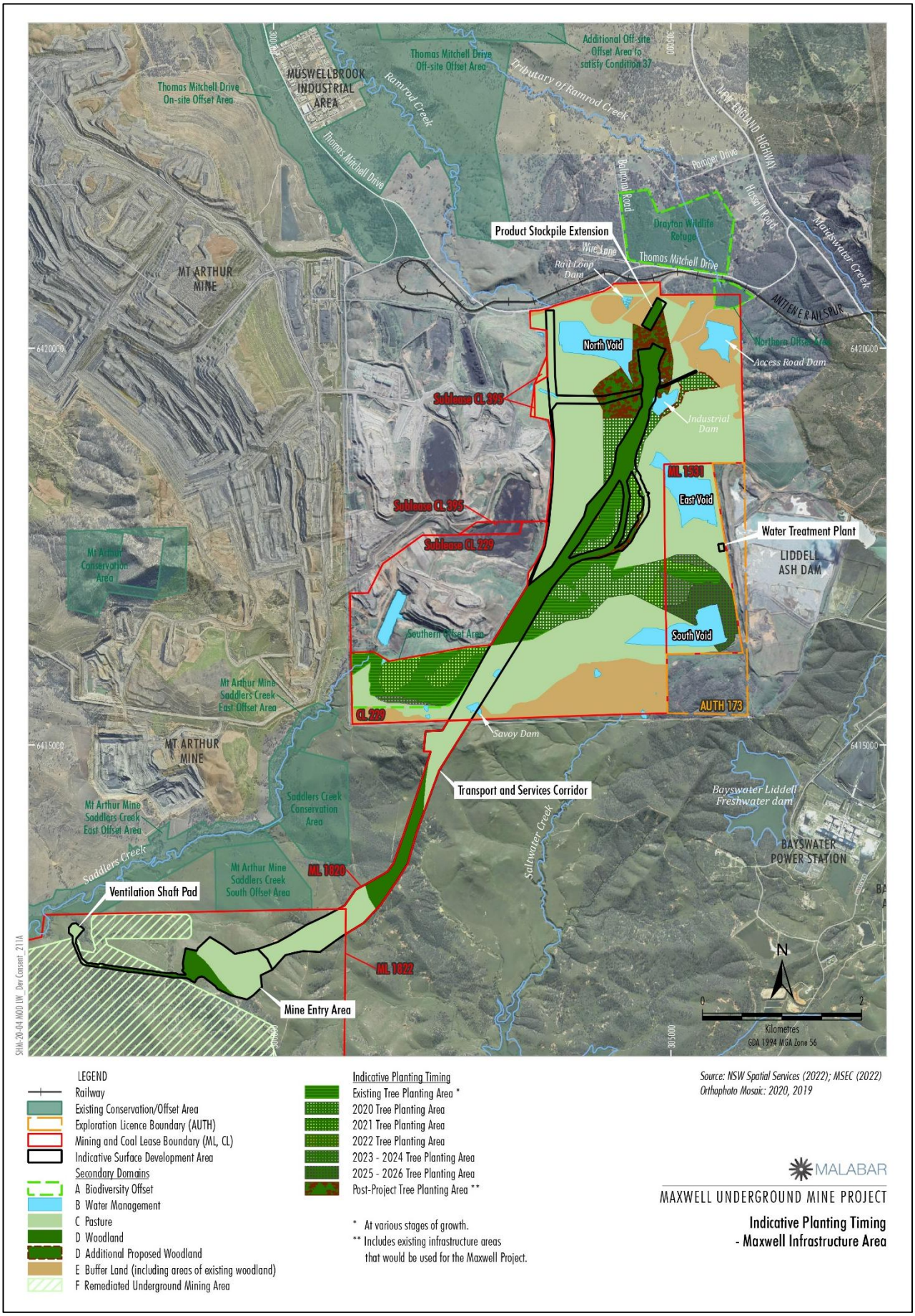

Figure 4. Secondary domains and indicative tree planting areas.

6.6 Habitat Enhancement

Rehabilitation areas within the Woodland Corridor will be re-established with native vegetation and structures suited for fauna habitat/movement and general ecological enhancement. Where appropriate, habitat trees and other habitat features, such as fallen timber and ponds, may be installed. Habitat and/or foraging resources will be targeted at the following threatened species:

(i) Pink-tailed Legless Lizard;
(ii) Hunter Valley Delma;
(iii) Swift Parrot; and
(iv) Regent Honeyeater.

6.7 Rehabilitation Monitoring

Rehabilitation monitoring is undertaken to compare progress against rehabilitation objectives. The monitoring program includes topsoil analysis, land and soil capability assessment, feed sample analysis, landform stability monitoring, post rainfall inspections, spontaneous combustion inspections, walkover inspections and flora and fauna monitoring. As new areas of rehabilitation are completed, new rehabilitation monitoring sites will be established in consultation with an Ecologist. The rehabilitation monitoring is discussed in more detail in the RMP. Results from monitoring will be discussed in the Annual Review.

6.8 Rehabilitation Completion

This final phase of rehabilitation occurs where a rehabilitation area has achieved the final land use for the mining area as stated in the approved rehabilitation objectives, the approved rehabilitation completion criteria and spatially depicted in the approved Final Landform in the RMP. Rehabilitation areas may be classified as complete when the NSW Resources Regulator has determined in writing that rehabilitation has achieved the final land use following submission of the relevant application by the lease holder.

7 WATER MANAGEMENT

The water management system at the site is designed and operated to achieve the following general water management performance measures:

- Maintain separation between clean, dirty and mine water.
- Minimise the use of clean and potable water.
- Maximise water recycling, reuse and sharing opportunities.
- Minimise the use of make-up water from external sources.
- Design, install, operate and maintain water management infrastructure in a proper and efficient manner. Minimise risks to the receiving environment and downstream water users.

Maxwell acknowledges that the sharing of water must protect the water source, its dependent ecosystems and basic landholder rights.

7.1 Surface Water

A Surface Water Assessment has been prepared for the Maxwell UG Mine by WRM (2019). The Surface Water Assessment is supported by a Geomorphology Assessment by Fluvial Systems (2019).

The water management system for the site has been designed to comply with accepted best practice principles for mine site water management. The Mine would not involve controlled release of water to the Hunter River or Saddlers Creek or pumping of water from the Hunter River for water supply. Runoff from Mine disturbance areas would be captured in on-site storages and managed on-site. As an underground mine, the Mine would result in limited catchment excision. Dirty runoff catchment areas will be rehabilitated, and the conveyance of clean surface runoff downstream will be maximised.

Maxwell has a surface water monitoring program which is documented within the site's Water Management Plan. Dams forming part of the mine water management system will be removed unless they are associated with long-term water management, or are beneficial to subsequent land uses (e.g., stock dams). As part of this, process water from existing dams that are no longer required maybe pumped into the final voids. Removal of sediment from mine water dams will occur as required as part of the closure and rehabilitation processes, regardless of the suitability of the dams for other purposes. Any activities within a water source will avoid or minimise land degradation, including soil erosion, compaction, geomorphic instability, contamination, and where possible land will be rehabilitated.

7.2 Groundwater

A Groundwater Assessment has been prepared by HydroSimulations (2019). The Groundwater Assessment evaluated the potential impacts of the Mine on groundwater resources using a numerical regional groundwater model. Based on groundwater flow modelling, as a consequence of the Mine, there is expected to be:

- negligible groundwater drawdown in the alluvial sediments of the Hunter River;
- localised drawdown of up to 8 m within the alluvium along Saddlers Creek and Saltwater Creek; no high priority GDEs are mapped within this area, but vegetation like the Swamp Oak that may access groundwater has been identified in this area;
- no impacts on landholder bores intersecting alluvium;
- predicted reduction in groundwater levels at one privately owned bore that intersects the Permian coal measures and is predicted to have groundwater present;
- substantial depressurisation in the fractured and porous rock groundwater sources in the near vicinity of the Mine;
- negligible reductions in surface water flows/balance resulting from changes in groundwater baseflows to surface stream systems (i.e. Hunter River and Saddlers Creek);
- total groundwater inflows to the underground workings of approximately 750 ML/year on average (during the 26 years of the Mine), and ranging up to a peak in the order of 1,387 ML/year in Year 12 of the Mine;
- total inflow to the remaining voids at the Maxwell Infrastructure is very low, on average 3 ML/year, but can be up to 11 ML/year during the Mine. Post mining the groundwater levels in the final voids equilibrate and all three voids act as a sink;
- negligible change in groundwater quality at the Maxwell Underground area as a result of the Mine in the short-term and in the long-term; and
- potential mixing of water quality between the backfilled pit at the Maxwell Infrastructure area and Greta Coal Measures underlying the Liddell Ash Dam to the east. Geochemical analysis indicates water quality within the spoil and leachate from rejects is similar to the water quality within the Greta Coal Measures. Groundwater within the Greta Coal Measures are also not utilised by landholders, therefore unlikely to be an impact on the beneficial use of groundwater.

Maxwell has a groundwater monitoring program which is documented within the site's Water Management Plan. Any groundwater bores will be decommissioned in accordance with the *Minimum Construction Requirements for Water Bores in Australia (2020)*.

7.3 Water Sharing

No surface water is proposed to be directly or indirectly extracted from the Hunter River for the site. Accordingly, no water access licences for Management Zone 1A (Hunter River from Glenbawn Dam to Goulburn River Junction) of the Hunter Regulated River Water Source under the *Water Sharing Plan of the Hunter Regulated River Water Source 2016* will be required. Malabar currently holds sufficient licences to cover the predicted indirect water take associated with the Management Zone 1B (Hunter River from Goulburn River Junction to Glennies Creek Junction) of the Hunter Regulated River Water Source under the *Water Sharing Plan of the Hunter Regulated River Water Source 2016*. Aquifer interference activities have been designed to minimise ongoing water take and water quality impacts.

7.4 Groundwater Dependent Ecosystem

There are no 'high priority' Groundwater Dependent Ecosystem (GDEs) listed in water sharing plans in and surrounding the Maxwell Mine area. Therefore, there is no known risk from the Mine to 'high priority' GDEs. The Swamp Oak along Saddlers Creek and Saltwater Creek are Type 2 GDEs that are dependent on the surface expression of groundwater (i.e. baseflow). Negligible reduction in baseflow is predicted for Saddlers Creek or Saltwater Creek. Consequently, it is unlikely that the predicted Maxwell Mine groundwater drawdown would adversely impact the Swamp Oak along either Saddlers or Saltwater Creeks.

8 BIODIVERSITY AND VISUAL IMPACT MANAGEMENT

The Maxwell Infrastructure Biodiversity Offsets Areas comprise the Drayton Wildlife Refuge, Northern Offset Area, Southern Offset Area and Maxwell Underground Biodiversity Stewardship Site. The Drayton Wildlife Refuge, Northern Offset Area and Southern Offset Area were established as offsets for the former Drayton Mine. The Maxwell Underground Biodiversity Stewardship Site was established as an offset for the Maxwell Underground Mine.

The Mine's *Biodiversity Management Plan* and *Visual Impacts Management Plan* has been prepared in order to address Schedule 2, Conditions B51 and B61 of SSD 9526. This Rehabilitation Strategy provides the overarching concepts for decision making in terms of landscape and land for the Mine, whilst the *Biodiversity Management Plan* and *Visual Impact Management Plan* provide specific details for management.

The *Biodiversity Management Plan* and *Visual Impact Management Plan* have been developed to ensure that the post-mining landscape of the Mine and associated offset areas provide for:

- pastoral, recreation and wildlife habitat opportunities with due consideration to visual amenity aligned to the surround landscape;
- successful design and rehabilitation of landforms to ensure structural stability, revegetation success and containment of wastes;
- post-mining land uses that are compatible with surrounding land uses to provide suitable environmental and community benefits;
- re-establishment of significant and/or threatened plant communities focussing on:
    - White Box – Yellow Box – Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highlands, NSW South Western Slopes, South East Corner and Riverina Bioregions CEEC.
    - Central Hunter Grey Box-Iron Bark Woodland in the NSW North Coast and Sydney Basin Bioregions Endangered Ecological Community.
- re-establishment of significant and/or threatened plant and flora species including;
    - Pink-tailed Legless Lizard;
    - Delma vescolineata;
    - Swift Parrot; and
    - Regent Honeyeater.

Rehabilitation measures outlined in this Rehabilitation Strategy are consistent with the *Biodiversity Management Plan* and *Visual Impact Management Plan*, where relevant. Key areas where consistency has been applied include:

- Locating rehabilitated woodland in areas that are adjacent to native vegetation and/or included in existing/proposed biodiversity offset sites.
- Use of permanent and/or temporary rehabilitation to mitigate visual impacts.
- The application of vegetation management controls (including weed and pest management) to rehabilitation areas and existing/proposed biodiversity offset sites.

9 MINE CLOSURE

9.1 Mine Closure Plan

A *Mine Closure Plan* will be developed in consultation with relevant regulatory authorities and community stakeholders. The *Mine Closure Plan* would be developed over the Mine life, with more detailed measures developed closer to Mine completion. Lease relinquishment criteria would be detailed in the Mine Closure Plan. The *Strategic Framework for Mine Closure* would be used as a guide for mine closure.

Upon cessation of mining operations, tenure of the mining leases would be maintained by Maxwell until such time as mining lease and other statutory approval relinquishment criteria were satisfied. These criteria would be formulated and prescribed in consultation with relevant regulatory authorities and stakeholders. Maxwell would transfer to the relevant regulators any documents required to preserve the history of the site, once closed, to facilitate future land use planning. It is anticipated that mine relinquishment criteria would include, but not necessarily be limited to, the following:

- decommissioning and removal of infrastructure, where appropriate and required;
- confirmation of landform stability and public safety;
- confirmation that rehabilitation established in previously cleared areas is self-sustaining;
- quality of surface water runoff is comparable to the surrounding environment; and
- fulfilment of mining lease and other statutory approval conditions.

The following regional and local strategic land use objectives and outcomes will be considered as part of the closure planning process for the Maxwell UG Mine:

- Muswellbrook Local Environmental Plan (LEP) (2009);
- Synoptic Plan Integrated Landscapes for Coal Mine Rehabilitation in the Hunter Valley of NSW (Andrews, 1999);
- The Upper Hunter Strategic Regional Land Use Plan (Department of Planning and Infrastructure 2012); and
- The Hunter Regional Plan 2036 (DPE 2016).

9.2 Social Transition

The *Social Impact Assessment* (Elliott Whiteing, 2019) undertaken for the Maxwell EIS described that the closure of large mining operations in rural communities results in job losses for operational personnel and can also result in material changes to:

- local populations, should people leave the area to seek new employment and economic opportunities;
- housing availability and affordability, as some people move from the area and others move in with different employment backgrounds and potentially different housing needs; and
- social infrastructure and local business trade associated with the change in local populations and associated demand for consumable goods and services.

Malabar would minimise the adverse socio-economic effects associated with mine closure as far as practicable. An operational workforce would be retained until the cessation of mining operations. It is then anticipated that a reduced workforce would be retained to complete any final decommissioning and rehabilitation works.

The *Mine Closure Plan* would include consideration of amelioration of potential adverse socio-economic effects due to the reduction in employment at site closure. A review of expected socio-economic implications of mine closure will be undertaken closer to the end of the approved mine life. This review will consider the economic and social baseline of the local community at the time of closure and recommend mitigation strategies that could be implemented to reduce any unwanted impact during the closure phase (where reasonable and feasible).

9.3 Financial Provision for Mine Closure

Maxwell operates within the NSW Government's stated policy that the people of NSW should not incur a financial liability as a result of coal, mineral and petroleum exploration and production activities. Therefore, all titleholders engaged in mining activities are required to lodge a security deposit. The security deposit covers the NSW Government's full estimated costs in undertaking rehabilitation in the event of default by the titleholder.

A security deposit is currently held by the Government for rehabilitation activities at the Mine in the form of a bank guarantee. The security deposit is periodically reviewed so that sufficient financial resources are available to satisfactorily complete rehabilitation and mine closure (including for any unplanned mine closure).

9.4 Premature Closure

Premature closure of the Mine could occur as the following:

- short term care and maintenance lasting less than one to two years which may result from harsh external conditions that has a foreseeable resolution date;
- long term care and maintenance lasting more than one to two years, which may trigger technical or financial impacts, however there is a foreseeable solution for future operations; and
- unplanned early closure where future operations are not foreseeable under any plausible circumstances.

Malabar recognises these scenarios may occur prior to completion of mining activities and would prepare a Mine Closure Plan in accordance with the *Strategic Framework for Mine Closure*. The Mine Closure Plan would also be prepared in consultation with relevant regulatory agencies and stakeholders. Potential rehabilitation activities undertaken as a result of premature closure include:

- overburden emplacement areas;
    - final rehabilitation completed as per approved final landform;
- water storages:
    - dams would remain or be filled in accordance with approved final landform;
- tailings storage:
    - final rehabilitation completed as per approved final landform;
- infrastructure:
    - Identification of all, and removal and/or reuse of infrastructure as per the approved RMP;
    - Waste sources disposed of in accordance with relevant legislation;
- personnel:
    - consultation with workforce and suppliers on cessation of work and development of a relevant plan;
    - assessment of impacts and measures to address impacts on the local community; and
- regulations:
    - licensing and approvals relinquished in accordance with legislation; and
    - relevant plans and strategies updated and/or relinquished.

10 AUDIT, REVIEW AND IMPROVEMENT

10.1 Annual Review

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 DPHI. In relation to rehabilitation, the Annual Review will include:

- a description of rehabilitation activities undertaken during the reporting period and the forecasted rehabilitation activities planned for the next reporting period;

- a summary of rehabilitation monitoring results and any observations of the effectiveness of the rehabilitation practices and measures; and
- a summary of any rehabilitation related non-compliance over the past year, and describe what actions were (or are being) taken to ensure compliance.

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/corporate-governance/.

10.2 Auditing

In accordance with Schedule 2, Part E, Condition E13 of SSD 9526 and Schedule 2, Part C, Condition C7 of DA 106-04-00, within one year of commencement of development under SSD 9526 and within one year of approval of Antiene MOD1, 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. The audit shall:

(a) be led by a suitably qualified, experienced and independent auditor whose appointment has been endorsed by the Planning Secretary;

(b) be conducted by a suitably qualified, experienced and independent team of experts (including any expert in field/s specified by the Planning Secretary) whose appointment has been endorsed by the Planning Secretary;

(c) be carried out in consultation with the relevant agencies and the CCC;

(d) assess the environmental performance of the development and whether it is complying with the relevant requirements in this consent, water licences and mining leases for the development (including any assessment, strategy, plan or program required under these approvals);

(e) review the adequacy of any approved strategy, plan or program required under the abovementioned approvals and this consent;

(f) recommend appropriate measures or actions to improve the environmental performance of the development and any assessment, strategy, plan or program required under the abovementioned approvals and this consent; and

(g) be conducted and reported to the satisfaction of the Planning Secretary.

In accordance with Schedule 2, Part E, Condition E14 of SSD 9526 and Schedule 2, Part C, Condition C8 of DA 106-04-00, within three months of commencing an Independent Environmental Audit, or other timeframe agreed by the Planning Secretary. Maxwell shall submit a copy of the audit report to the Planning Secretary, and any other NSW agency that requests it, together with its response to any recommendations contained in the audit report, and a timetable for the implementation of the recommendations. The recommendations shall be implemented to the satisfaction of the Planning Secretary.

10.3 Access to Information

In accordance with Schedule 2, Part E, Condition E17 of SSD 9526 and Schedule 2, Part C, Condition C11 of DA 106-04-00 before the commencement of construction and within 3 months of the approval of Antiene MOD1 until the completion of all rehabilitation required under SSD 9526 and DA 106-04-00, Maxwell will make the following information and documents (as they are obtained, approved or as otherwise stipulated within the conditions of SSD 9526 and DA 106-04-00) that are relevant to this plan publicly available on Malabar's website (https://malabarresources.com.au/corporate-governance/):

- this Rehabilitation Strategy;

- 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.

10.4 Continuous Improvement

Feedback from the monitoring results and any complaints will be used to assess impacts and determine where improvements or mitigation measures are required. These measures will be reported on in the Annual Review.

10.5 Rehabilitation Strategy Revision

In accordance with Condition E7, Schedule 1 of Development Consent SSD 9526 and Schedule 2, Part C, Condition C3 of DA 106-04-00, this Rehabilitation Strategy will be reviewed, and if necessary revised (to the satisfaction of the Secretary of the DPHI), within three months of the submission of:

- an Annual Review (Condition E11, Schedule 1 of Development Consent SSD 9526);
- an incident report (Condition E9, Schedule 1 of Development Consent SSD 9526 and Condition C5, Schedule 2 of DA 106-04-00);
- an Independent Environmental Audit (Condition E13, Schedule 1 of Development Consent SSD 9526 and Condition C7, Schedule 2 of DA 106-04-00); and
- any modification to the conditions of Development Consent SSD 9526 or DA 106-04-00; and
- notification of a change in development phase (Condition A13, Schedule 1 of Development Consents SSD 9526).

In accordance with Schedule 2, Part E, Condition E8 of SSD 9526 and Schedule 2, Part C, Condition C4 of DA 106-04-00, if necessary, to improve the environmental performance of the site, cater for a modification or comply with a direction, this strategy will be revised. The revised strategy will be submitted to DPHI for approval within six weeks of the review.

This Rehabilitation Strategy has been prepared to satisfy the rehabilitation requirements of Development Consent SSD 9526 and relevant rehabilitation guidelines. The dynamic nature of closure planning requires regular and critical review to reflect changing circumstances (ANZMEC-MCA, 2000). Accordingly, this Rehabilitation Strategy would be progressively reviewed and updated at least every three years in accordance with Condition B79(n) of Development Consent SSD 9526.

10.6 Document Review History

A summary of the document history is outlined in **Table 10**.

Table 10. Document Revision Status

Issue	Issue Date	Review Team	Details of Change / Communication
1	March 2023	Tasman Willis Robyn Skinner Donna McLaughlin	Document prepared following approval of SSD Consent 9526 for the Maxwell UG Mine.
1.1	March 2023	Tasman Willis Robyn Skinner Donna McLaughlin	Document updated following feedback from DPHI.
2	January 2024	Donna McLaughlin Alex Newton	Document updated following approval of Modification 1 of development consent DA 106-04-00 for the Drayton Rail Loop and Antiene Rail Spur.
3	December 2025	Tasman Willis Donna McLaughlin	Updated following submission of Independent Environmental Audit report and approval of Maxwell MOD3.

11 RESPONSIBILITIES

Responsibilities associated with this strategy are outlined **Table 11**.

Table 11. Responsibilities

Position	Responsibilities
General Manager	• Provide adequate resources for the implementation of this Strategy.
Environment, Community and Approvals (EC&A) Manager	• Oversee the implementation of this Strategy. • Notify regulatory authorities and affected stakeholders of incidents in accordance with this Strategy. • Allocate sufficient resources and time for the implementation of the rehabilitation monitoring program. • Coordinate periodic reviews of this Strategy. • Facilitate training in accordance with this Strategy.
Land and Property Coordinator	• Assist the EC&A Manager as required in the implementation of this Strategy. • Coordinate investigations of rehabilitation related incidents or complaints. • Coordinate the implementation of the rehabilitation monitoring program in accordance with this Strategy. • Coordinate the management of records and reporting of rehabilitation data. • Manage rehabilitation related complaints in accordance with the complaints management procedure. • Provide training to all relevant personnel.
All Personnel	• Undertake works in accordance with the objectives and principles of this Strategy. • Report any incidents and exceedances rehabilitation.

12 DOCUMENT INFORMATION

12.1 References

Australian and New Zealand Minerals and Energy Council and the Minerals Council of Australia (2000) *Strategic Framework for Mine Closure.*

Australian Government (2016a) *Mine Rehabilitation – Leading Practice Sustainable Development Program for the Mining Industry.*

Australian Government (2016b) *Mine Closure and Completion – Leading Practice Sustainable Development Program for the Mining Industry.*

Department of Mineral Resources (1999) *Synoptic Plan: Integrated Landscapes for Coal Mine Rehabilitation in the Hunter Valley of New South Wales.*

Elliott Whiteing Pty Ltd (2019) *Maxwell Project Social Impact Assessment.*

HydroAlgorithmics *(2025). Maxwell Underground Mine Joint Tailings and Rejects Management Project - Groundwater Review*

HydroSimulations (2019) *Maxwell Project: Groundwater Assessment*

Mining, Exploration and Geoscience (2022) *Guidelines: Rehabilitation security deposits.*

New South Wales Resources Regulator (2021) *Guideline: Rehabilitation Cost Estimate.*

New South Wales Resources Regulator (2022) *Form and Way – Rehabilitation Management Plan for Large Mines.*

New South Wales Trade and Investment (2012) *MDG6001 Guideline for the Permanent Filling and Capping of Surface Entries to Coal Seams*.

WRM Water & Environment (2019) Surface Water Assessment Maxwell Project

WRM Water & Environment Pty Ltd (2025). Maxwell Underground Mine Joint Tailings and Rejects Management Project - Surface Water Assessment

12.2 Definitions and Abbreviations

Term	Definition
Antiene MOD1	Drayton Rail Loop and Antiene Rail Spur (DA 106-04-00) Modification 1
BCD	Biodiversity Conservation Division
CCC	Community Consultative Committee
CHPP	Coal Handling and Preparation Plant
DA	Development Approval
DPE	NSW Department of Planning and Environment
DPHI	NSW Department of Planning, Housing and Infrastructure
EIS	Environmental Impact Statement
EP&A	Environmental Planning and Assessment
MAC	Mt Arthur Coal
Maxwell MOD1	Maxwell Underground Project (SSD 9526) Modification 1
Maxwell MOD2	Maxwell Underground Project (SSD 9526) Modification 2

Term	Definition
Maxwell MOD3	Maxwell Underground Project (SSD 9526) Modification 3
MEA	Mine Entry Area
MOP	Mining Operations Plan
MW	Megawatt
NSW	New South Wales
PA	Project Approval
RMP	Rehabilitation Management Plan
SSD	State Significant Development
UG	Underground

13 APPENDIX 1 – PLANNING SECRETARY ENDORSEMENT

Department of Planning and Environment

Our ref: SSD-9526-PA-83

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

04/11/2022

Subject: Appointment of Tasman Willis as Suitability Qualified and Experienced (SQE) Person

Dear Ms. McLaughlin,

I refer to your request dated 2 November 2022 for the Planning Secretary's endorsement of Tasman Willis as SQE person under Condition B79(a) of Maxwell Underground (SSD-9526).The Department has reviewed the nomination and information you have provided and is satisfied.

Accordingly, I can advise that the Planning Secretary endorses the appointment of Tasman Willis as SQE person.

If you wish to discuss the matter further, please contact Charissa Pillay on 02 99955944.

Yours sincerely

Wayne Jones
Team Leader - Post Approval
Resource Assessments

As nominee of the Planning Secretary

4 Parramatta Square, 12 Darcy Street, Parramatta NSW 2150 www.dpie.nsw.gov.au 1
Locked Bag 5022, Parramatta NSW 2124

14 APPENDIX 2 – REGULATORY REQUIREMENTS

State Significant Development Consent 9526

<table>
<tr><th>Condition</th><th>Maxwell Development Consent SSD-9526</th><th>Relevant Rehabilitation Strategy Section</th></tr>
<tr><td>Condition B50, Schedule 2</td><td>The Applicant must ensure that the Biodiversity Offset Strategy and the Rehabilitation Strategy for the development focus on the regeneration, enhancement and/or re-establishment of:
(a) the following vegetation communities:
(i) White Box – Yellow Box – Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highlands, NSW South Western Slopes, South East Corner and Riverina Bioregions CEEC;
(ii) Central Hunter Grey Box-Iron Bark Woodland in the NSW North Coast and Sydney Basin Bioregions CEEC; and
(b) habitat and/or foraging resources for other significant and/or threatened flora and fauna species, including:
(i) Pink-tailed Legless Lizard;
(ii) Delma vescolineata;
(iii) Swift Parrot; and
(iv) Regent Honeyeater.
Notes:
• Identified species and communities are as defined under the BC Act.</td><td>Section 7.0

Section 7.0</td></tr>
<tr><td>Condition B76, Schedule 2</td><td>Rehabilitation Objectives
The Applicant must rehabilitate the site in accordance with the conditions imposed on the mining lease(s) associated with the development under the Mining Act 1992. This rehabilitation must be generally consistent with the proposed rehabilitation activities described in the document/s listed in condition A2(c) (and shown conceptually in the Rehabilitation Plans in Appendix 5), and must comply with the objectives in Table 8.
Table 8: Rehabilitation objectives
<table>
<tr><th>Feature</th><th>Objective[a]</th></tr>
<tr><td>All areas of the site affected by the development</td><td>• Safe, stable and non-polluting
• Fit for the intended post-mining land use/s
• Achieve the final landform and post-mining land use/s</td></tr>
</table></td><td>Section 3.2</td></tr>
</table>

Condition B76, Schedule 2 (Continued)	***Table 8 [Continued]:*** *Rehabilitation objectives* *Feature* / *Objective*[a] *Woodland Biodiversity Corridors, including the Southern Offset Area* • *Establish self-sustaining native woodland ecosystems as described in the document/s listed in condition A2(c) and in Table 5b* • *Establish local plant community types, with a particular focus on the CEECs listed in condition B50 of this Schedule* • *Establish habitat, feed and foraging resources for threatened fauna species* • *Facilitate local vegetation connectivity and wildlife corridors, particularly with respect to the adjacent Mt Arthur Coal Complex* *Areas proposed for agricultural or pastoral use* • *Establish/restore grassland areas to support sustainable agricultural activities* • *Use species found in the local area that are suitable for pasture production* • *Achieve land and soil capabilities that are suitable for the intended final land use* • *Located adjacent to surrounding agricultural land, where practicable* *Final Landform* • *Stable and sustainable for the intended post-mining land use/s* • *Compatible with surrounding topography to minimise visual impacts* • *Incorporate relief patterns and design principles consistent with natural drainage that mimic natural topography and mitigate erosion* *Final voids* • *Reject emplacements are suitably capped and rehabilitated* • *Designed as long term groundwater sink to prevent the release of saline water into the surrounding environment, unless further mine planning and final landform design processes identify a more suitable outcome for the final voids (see condition B79)* • *Minimise to the greatest extent practicable:* – *the size and depth;* – *surface evaporation in void lakes;* – *the drainage catchment;* – *any high wall instability risk; and* – *the risk of spillover into the downstream environment;* – *the risk of flood interaction;* • *Maximise potential for beneficial reuse, where practicable* *Surface infrastructure of the development* • *To be decommissioned and removed, unless the Resource Regulator agrees otherwise* • *All surface infrastructure sites are to be revegetated with suitable local native plant species to a landform consistent with the surrounding environment*	As above

<table>
<tr>
<td>Condition B76, Schedule 2 (Continued)</td>
<td>
Table 8 [Continued]: Rehabilitation objectives
<table>
<tr><th>Feature</th><th>Objective[a]</th></tr>
<tr><td>Surface infrastructure of the development</td><td>• To be decommissioned and removed, unless the Resource Regulator agrees otherwise
• All surface infrastructure sites are to be revegetated with suitable local native plant species to a landform consistent with the surrounding environment</td></tr>
<tr><td>Portals and vent</td><td>• To be decommissioned and made safe and stable</td></tr>
<tr><td>Underground mining area[c]</td><td>• No decline in land and soil capability</td></tr>
<tr><td>Watercourses subject to mine water discharges and/or subsidence impacts or environmental consequences that are greater than negligible[d]</td><td>• Hydraulically and geomorphologically stable
• Aquatic ecology and riparian vegetation that is the same or better than prior to grant of this consent</td></tr>
<tr><td>Water quality</td><td>• Water retained on the site is fit for the intended post-mining land use/s
• Water management is consistent with the regional catchment management strategy</td></tr>
<tr><td>Built features damaged by mining operations</td><td>• Repair to pre-mining condition or equivalent unless the:
– owner agrees otherwise; or
– damage is fully restored, repaired or compensated for under the Coal Mine Subsidence Compensation Act 2017</td></tr>
<tr><td>Steep slopes</td><td>• No additional risk to public safety compared to prior to mining</td></tr>
<tr><td>Existing Edderton Road alignment</td><td>• All road and associated infrastructure to be removed unless otherwise agreed with Council
• Alignment to be rehabilitated to a standard compatible with the adjacent land use(s)</td></tr>
<tr><td>Community</td><td>• Ensure public safety
• Minimise adverse socio-economic effects associated with mine closure</td></tr>
</table>
a. These rehabilitation objectives apply to all subsidence impacts and environmental consequences caused by all underground mining of the development and to all surface infrastructure components of the development.
b. The requirements in Table 5 apply to the Southern Offset Area only
c. In Table 8, the ‘underground mining area’ means the subsidence area
d. Where remediation of watercourses is likely to cause subsidence impacts or environmental consequences greater than those that require rehabilitation, alternative equivalent works may be undertaken within the affected watercourse
</td>
<td>As above</td>
</tr>
<tr>
<td>Condition B77, Schedule 2</td>
<td>The rehabilitation objectives in Table 8 apply to the entire site, including all disturbance under either this consent or previous consents. However, the Applicant is not required to undertake any additional earthmoving works on landforms that have been approved and constructed consistent with previous consents, except where those earthworks are required for the establishment of a stable, non-polluting and free-draining landform.</td>
<td>Section 3.2</td>
</tr>
</table>

Condition B78, Schedule 2	***Progressive Rehabilitation*** *The Applicant must rehabilitate[a] the site progressively, that is, as soon as reasonably practicable following disturbance. All reasonable steps must be taken to minimise the total area exposed at any time. Interim stabilisation and temporary vegetation strategies must be employed when areas prone to dust generation, soil erosion and weed incursion cannot be permanently rehabilitated.* *[a] Nothing in this condition prevents further disturbance at some later stage of the development of areas that have been rehabilitated.*	Section 5.5
Condition B79, Schedule 2	***Rehabilitation Strategy*** *The Applicant must prepare a Rehabilitation Strategy for the site to the satisfaction of the Planning Secretary. This strategy must:*	This Document
	(a) be prepared by a suitably qualified and experienced person/s whose appointment has been endorsed by the Planning Secretary;	Section 1.3
	(b) be prepared in consultation with the Resources Regulator, DPE Water, BCD and Council;	Section 1.3
	(c) build upon the Rehabilitation Objectives in Table 8, describe the overall rehabilitation outcomes for the site, and address all aspects of rehabilitation including mine closure, final landform (including final voids), post-mining land use/s and water management;	Section 3
	(d) align with strategic rehabilitation and mine closure objectives and address the principles of the Strategic Framework for Mine Closure (ANZMEC and MCA, 2000);	Section 1.4
	(e) describe how the rehabilitation measures would be integrated with the measures in the Biodiversity Management Plan referred to in condition B51 and the Visual Impact Management Plan referred to in condition B61;	Section 7
	(f) describe the interim stabilisation procedures and temporary vegetation strategies to be used on site to reasonably minimise the area exposed for dust generation;	Section 5.4
	(g) describe how rehabilitation will be integrated with the mine planning process, including a plan to address premature or temporary mine closure;	Section 5
	(h) include indicative mine plans and scheduling for life-of-mine rehabilitation showing each rehabilitation domain;	Section 5
	(i) include details of target vegetation communities and species to be established within the proposed revegetation areas;	Section 5.5.1
	(j) investigate opportunities to refine and improve the final landform and final void outcomes over time, including any opportunities to:	Section 4.1 and 4.2
	(iii) reduce the number and size of final voids; and	
	(iv) minimise surface evaporation in the East Void;	
	(k) include a post-mining land use strategy to investigate and facilitate post-mining beneficial land uses for the site (including the final void), that:	Section 4.3
	(i) align with regional and local strategic land use planning objectives and outcomes;	
	(ii) support a sustainable future for the local community;	
	(iii) utilise existing mining infrastructure, where practicable; and	
	(iv) avoid disturbing self-sustaining native ecosystems, where practicable;	
	(l) include a stakeholder engagement plan to guide rehabilitation and mine closure planning processes and outcomes, including the establishment of a post-mining working group generally as described in the EIS;	Section 2.2

	(m) investigate ways to minimise adverse socio-economic effects associated with rehabilitation and mine closure; and *(n) include a program to:* *(i) report on the outcomes of investigations required under paragraphs (j) and (k); and* *(ii) review and update this strategy, at least every three years.*	Section 8.2 Section 4.4
Condition B80, Schedule 2	*The Applicant must not commence first workings until the Rehabilitation Strategy is approved by the Planning Secretary.*	Section 1.2
Condition B81, Schedule 2	*The Applicant must implement the Rehabilitation Strategy approved by the Planning Secretary*	Section 1.2

Note: BCD, Biodiversity Conservation Division; DPE Water= Department of Planning and Environment – Water; CEEC = Critically Endangered Ecological Communities.

Development Consent DA 106-04-00

Clause	Requirement	Section of Plan
B10	Following cessation of rail movements under this consent, the Applicant must rehabilitate the site to comply with the objectives in Table 2. ***Table 2:*** *Rehabilitation objectives* ***Feature*** / ***Objective*** Site: • Safe, stable and non-polluting • Fit for the intended post-mining land use/s Surface infrastructure: • To be decommissioned and removed within 5 years of cessation of rail movements, unless the Planning Secretary agrees otherwise Community: • Ensure public safety at all times	**4.2**
C3	Within three months of: (a) the submission of an incident report under condition C5 or C6; (b) the submission of an Independent Environmental Audit under condition C7; (c) the approval of any modification of the conditions of this consent (unless the conditions require otherwise); the suitability of existing strategies, plans and programs required under this consent must be reviewed by the Applicant.	**10.5**
C7	Within one year of approval of Mod 1, and every three years after, unless the Planning Secretary directs otherwise, the Applicant must commission and pay the full cost of an Independent Environmental Audit of the development. The audit must: (a) be led by a suitably qualified, experienced and independent auditor whose appointment has been endorsed by the Planning Secretary; (b) be conducted by a suitably qualified, experienced and independent team of experts (including any expert in field/s specified by the Planning Secretary) whose appointment has been endorsed by the Planning Secretary; (c) be carried out in consultation with the relevant agencies; (d) assess the environmental performance of the development and whether it is complying with the relevant requirements in this consent, water licences and mining leases for the development (including any assessment, strategy, plan or program required under these approvals);	**10.2**

Clause	Requirement	Section of Plan
	(e) review the adequacy of any approved strategy, plan or program required under the abovementioned approvals and this consent; (f) recommend appropriate measures or actions to improve the environmental performance of the development and any assessment, strategy, plan or program required under the abovementioned approvals and this consent; and be conducted and reported to the satisfaction of the Planning Secretary.	
C8	Within three months of commencing an Independent Environmental Audit the Applicant must submit a copy of the audit report to the Planning Secretary, and any other NSW agency that requests it, together with its response to any recommendations contained in the audit report, and a timetable for the implementation of the recommendations. The recommendations must be implemented to the satisfaction of the Planning Secretary.	**10.2**
C11	Within 3 months of the approval of Mod 1, until the completion of all rehabilitation required under this consent, the Applicant must: (a) make the following information and documents (as they are obtained, approved or as otherwise stipulated within the conditions of this consent) publicly available on its website: (i) the documents listed in condition A2(c) of this consent; (ii) all current statutory approvals for the development; (iii) all approved strategies, plans and programs required under the conditions of this consent; (iv) a summary of the current phase and progress of the development; (v) contact details to enquire about the development or to make a complaint; (vi) a complaints register, updated monthly following the receipt of any complaints; (vii) 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; (viii) any other matter required by the Planning Secretary; and (b) keep such information up to date, to the satisfaction of the Planning Secretary	**10.3**

15 APPENDIX 3 – CONSULTATION

Raised By	Consultation Feedback	Outcome
DPE Water	Sharing of water must protect the water source, its dependent ecosystems and basic landholder rights.	Section 6.0 has been amended to include this commitment.
	Water sources, floodplains and dependent ecosystems are protected and restored.	Sections 6.1, 6.2, 6.3 and 6.4 have been added to address this point.
	Activities within a water source should avoid or minimise land degradation, including soil erosion, compaction, geomorphic instability, contamination, and where possible land should be rehabilitated.	Addressed in Section 6.1.
	The final Rehabilitation Management Plan/Strategy is made electronically available on a public accessible website.	Addressed in Section 9.3.
	A conceptual model/diagram clearly presents how the groundwater and surface water systems interact with the final landform. This is to be informed by recent environmental assessments/modelling reviews.	Addressed in Section 4.1.
	The final design and location of surface drainage features achieves a stable landform and maintains or improves riparian corridor functioning. This is to be completed with reference to industry guidelines such as: “Rehabilitation Manual for Australian Streams (LWRRDC 2000)”, “Guideline: Works that interfere with water in a watercourse for a resource activity (DNRME 2019)” and “Guidelines for Controlled Activities on Waterfront Land (DPE 2022)” or their latest versions.	Section 3.1 has been amended to include this commitment.
	Dirty runoff catchment areas are rehabilitated and the conveyance of clean surface runoff downstream is maximised.	Section 6.1 has been amended to include this commitment.
	Decommissioning of groundwater boreholes is in accordance with the “Minimum Construction Requirements for Water Bores in Australia (2020)”.	Section 6.1 has been amended to include this commitment.
	Ongoing water take by the final landform via interception, storage or diversion is quantified and complies with relevant approvals and licences under the Water Management Act 2000 or a relevant exemption. Please note exemptions from the requirement to hold approvals under s.90 and 91 of the Water Management Act 2000 for approved SSD/SSI projects will not apply once the project approval ceases. Therefore, any relevant water management works that are to be retained will need to obtain an approval prior to the development consent lapsing.	Addressed in Section 6.3.
	Aquifer interference activities are designed to minimise ongoing water take and water quality impacts and meet the requirements of the NSW Aquifer Interference Policy.	Addressed in Section 6.3.
	Final voids do not present a risk to important groundwater ecosystems and assets (groundwater	Addressed in Sections 6.2 and 6.4.

Raised By	Consultation Feedback	Outcome
	dependent ecosystems, alluvial aquifers, and landholder bores).	
	Final voids are designed to be sinks or to flow through the local groundwater system and need to be confirmed by a post-mining groundwater model.	Section 4.2 has been amended to include this commitment.
	Residual risk to water sources is clearly understood and minimised. This is to include relevant assessment documentation and updated risk assessments to meet the requirements of the NSW Aquifer Interference Policy. Further detail can be found in Fact Sheet 5 in Appendix C of the "Guidelines for Groundwater Documentation for SSD/SSI Projects. Technical guideline (DPE 2022)".	Predicted impacts (i.e., residual risks) have been included in Section 6.2 and are further discussed in the Maxwell UG Project EIS.
	A monitoring and review program is included to ensure the rehabilitation outcomes are met.	Surface water monitoring is addressed in Section 6.1. Groundwater monitoring is addressed in Section 6.2 Ecological monitoring is addressed in Section 6.3. The Annual Review and Continuous Improvement processes are addressed in Sections 9.1 and 9.4 respectively.
Resource Regulator (RR)	The Regulator notes the submission of the Maxwell Underground Rehabilitation Strategy in accordance with Schedule 2, Condition B79(b) of SSD-9526. Whilst the Rehabilitation Strategy references that an approval has been received for a 25 megawatt solar farm, it is the Regulator's expectations that any remaining rehabilitation obligations required as part of the existing mining development consent for this area will need to be addressed before the solar farm is constructed.	Section 4.3 has been amended to include this commitment.
	Please note the Regulator requires Maxwell Underground Coal Mine to prepare all documentation in accordance with Schedule 8A of the Mining Regulation 2016 and to carry out rehabilitation is accordance with that documentation as soon as reasonably practicable. The rehabilitation outcome documents required under Schedule 8A will need to be consistent with the Rehabilitation Strategy approved by the Department of Planning and Environment.	Section 5.5 has been amended to include this commitment.
	Limitations • It should be noted that the Resources Regulator does not provide any endorsement of the proposed rehabilitation methodologies presented in the plans provided. Under the conditions of a mining authorisation granted under the Mining Act 1992, the Resources Regulator requires the holder to adopt a risk-based approach to achieving the required rehabilitation outcomes. • The applicability of the controls to achieve effective and sustainable rehabilitation is to be determined based on site-specific risk	Noted – no change required to the Rehabilitation Strategy. Section 5.1 has been amended to include this information.

Raised By	Consultation Feedback	Outcome
	assessments conducted by the authorisation holder. An authorisation holder may also be directed by the Resources Regulator to implement further risk control measures required to achieve effective rehabilitation outcomes during the life of the mine.	
	Regulatory Requirements if Approved • The proponent will be required to comply with rehabilitation requirements under the mining authorisations prior to the commencement of the works associated with the proposal. • The Resources Regulator may undertake assessments of the mine operators' proposed mining activities under the Work Health and Safety (Mines and Petroleum Sites) Act 2013 and Regulation as well as other WHS regulatory obligations.	Section 5.1 has been amended to include this information. Noted – no change required to the Rehabilitation Strategy.
	Background • The Mining Act Inspectorate within the Resources Regulator undertake risk-based compliance and enforcement activities in relation to obligations under the Mining Act 1992. This includes undertaking assessment and compliance activities in relation to mine rehabilitation activities and determination of security deposits. To ensure consistency, the Regulator requests the opportunity to review a copy of the draft development consent prior to any approval of the project. • The Mine Safety Inspectorate within the Resources Regulator is responsible for ensuring the mine operators' compliance with the Work Health and Safety (WHS) legislation, in particular the effective management of risks associated with the principal hazards as specified in the Work Health and Safety (Mines and Petroleum Sites) Regulation 2014.	Noted – no change required to the Rehabilitation Strategy. Noted – no change required to the Rehabilitation Strategy.

16 APPENDIX 4 – COMMENTS FROM COUNCIL

muswellbrook shire council

Enquiries
Please ask for Theresa Folpp
Direct 02 6549 3700
Our Ref Maxwell Mine

13 March 2023

Donna McLaughlin
Health, Safety, Environment and Community Manager
Malabar – Maxwell Underground

Dear Ms McLaughlin

Maxwell Underground Coal Mine (SSD 9526)
Muswellbrook Shire Council comments on Rehabilitation Strategy

Reference is made to the following:

- 'Maxwell Underground Coal Mine Rehabilitation Strategy' (v1 dated 10/02/2023) (Rehabilitation Strategy); and
- Email requesting feedback via the Major Projects Portal.

Consultation with Council regarding the Rehabilitation Strategy is required and has been undertaken in accordance with Schedule 2 Condition B79 of SSD 9526.

Although Officers are not entirely satisfied with the Rehabilitation Strategy, preference is that the Rehabilitation Strategy be submitted to the Department of Planning and Environment (DPE) for approval and that comments from Council staff be discussed with Malabar (where relevant) and addressed (where required) in subsequent versions of the Rehabilitation Strategy.

Officers comments are provided below.

Consultation

01. Officers request that any revisions made under Sch 1 Cond E7 of SSD 9526, are made in consultation with Council staff.

02. Any future revisions will need to consider Council's Rehabilitation Policy which is currently being drafted.

03. Officers note that the Rehabilitation Strategy has not been reviewed by the Registered Aboriginal Parties for the Project. This is recommended for future revisions.

Scope

04. Preference is to include a figure showing previously rehabilitated areas and a summary of rehabilitation undertaken to date, or a reference to where this information is included in other documentation.

05. It is assumed that the Rehabilitation Strategy incorporates development consent DA 106-04-00 for the Antienne Rail Spur.

Final Landform

06. Officers are particularly interested in the shape of the final landform including the following design principles:

Muswellbrook Shire Council (02) 6549 3700 council@muswellbrook.nsw.gov.au
Campbell's Corner 60-82 Bridge Street Muswellbrook NSW 2333 PO Box 122 Muswellbrook 2333
muswellbrook.nsw.gov.au muswellbrook shire council ABN 86 864 180 944

- Emplacement landforms designed to look less "engineered" profile (to avoid simple blocky forms) that is consistent with the surrounding natural environment.
- Incorporation of micro-relief to increase drainage stability and to avoid major engineered drop structure.
- Shaping of the final voids to reflect a less engineered profile; and
- Shaping in areas near road infrastructure that may enable more intensive land uses in the future when mining ceases.

07. It is difficult to interpret the overall shape of the final landform from the Rehabilitation Strategy and whether there will be any areas that have micro-relief and principles of GeoFluv applied.

08. Officers require some confidence that final landforms will generally meet the design principles listed above in Point 6.

Final Voids

09. The proposed final landform includes three voids: North Void, East Void and South Void.

10. East void will be partially backfilled with CHPP reject material from the Project.

11. The North Void and South Voids will be used as water storage.

12. Section 8.3 of the Maxwell Project – Preliminary Rehabilitation and Mine Closure Strategy (July 2019) references a Final Void Management Plan and includes the process for closure of the final voids.

13. Officers expect that the Final Void Management Plan including key closure steps will be referenced in future revisions of the Rehabilitation Strategy and that plans showing dimensions for each void be included.

14. Officers support the emplacement of rejects from other projects (subject to approval) into the voids to reduce the size and/or number of final voids.

Final Land Use

15. There are no figures in the Rehabilitation Strategy showing the location of pasture/woodlands.

16. Officers would prefer Figure 11 from SSD 9526 consent included which shows domains (including areas of proposed woodland and pasture) and indicative tree planting timing.

17. For consistency, final land use domains referenced in Table 5 should match secondary domains shown in Figure 11 from SSD 9526.

Native Woodland

18. Clarification is required as to whether all areas identified as "Woodland" in Figure 11 of SSD 9526 will be re-established with the following:

    - White Box – Yellow Box – Blakely's Red Gum Grassy Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highlands, NSW South Western Slopes, South East Corner and Riverina Bioregions CEEC.
    - Central Hunter Grey Box-Iron Bark Woodland in the NSW North Coast and Sydney Basin Bioregions CEEC.

Alternate Final Land Uses

19. Officers note and support the following:

    - Development of the Maxwell solar farm located at Maxwell Infrastructure on a waste emplacement associated with the former Drayton Mine; and
    - Malabar and EDF Renewables Memorandum of Understanding to investigate large scale renewable energy projects on Malabar owned land.

20. Officers request that alternate final uses and alternate uses for buffer land be regularly considered and investigated and reported in the Annual Review.

21. Officers are aware that proponents have obligations under the *Mining Act 1992* to rehabilitate the site. However, these obligations can inhibit the future use of the site for other industry and utilisation of infrastructure that was constructed for the operation of the Mine and may still have an economic purpose. Whilst Council Officers acknowledge that in the first instance the site should be safe, stable, and non-polluting, there should be an increasing move in the industry toward planning for a range of uses on sites dependent on capability, services and infrastructure and vehicle access. This may allow employment generating activities on part of the site, and similar equivalent employment numbers, rather than the simply returning all the site back to farmland and native ecosystems with minimal employment opportunities.

22. The HRP 2041 contains a discussion on strategic land use opportunities in Strategy 1.1 and 1.2 to encourage early consideration of alternate land uses in mine planning. Although the timing of when alternate land use planning is required is not clear, the proponent should incorporate any relevant outcomes of these studies as part of mine closure.

23. Any final land use option study should consider and build upon future plans for the neighbouring AGL and Mt Arthur sites, where appropriate.

Rehabilitation Objectives

24. Existing Edderton Road alignment - Preference is that some woodland trees be planted in this area rather than returning the site back to exotic grassland (Agriculture – Grazing).

25. Any Land Capability Assessment should be undertaken using the *Land and soil capability assessment scheme: second approximation - a general rural land evaluation system for New South Wales (NSW Office of Environment and Heritage* [OEH], *2012*).

Rehabilitation Materials

26. Whilst materials sourcing is described in Section 6.2.1.1 of the Rehabilitation Management Plan, it would be useful to include high-level principles within the Rehabilitation Strategy e.g implementation of a Vegetation Clearance Protocol, seed collection, material characterisation and stockpiling of material.

27. Is should be noted that seed collection and harvesting during vegetation clearance was referenced in the *Preliminary Rehabilitation and Mine Closure Strategy* and has not been reflected in the Rehabilitation Strategy.

Vegetation Corridors and Cumulative Impacts

28. Officers note a reference to the *Synoptic Plan: Integrated Landscapes for Coal Mine Rehabilitation in the Hunter Valley of NSW*.

29. Preference is to include a figure showing the neighbouring Mt Arthur mine final landform to demonstrate vegetation connectivity and wildlife corridors. Noting that this will need to include any future modifications to final landform for the Mount Arthur site.

Premature Mine Closure

30. Officers would prefer that Section 8.4 be updated to clearly state the timing for when a Mine Closure Plan is prepared in response to premature closure. It is recommended that a commitment be made that within a given timeframe e.g six months of either entering care and maintenance or unplanned closure, a Mine Closure Plan is prepared in accordance with the *Strategic Framework for Mine Closure*.

Research

31. Officers support the trialling of cattle grazing on pasture mine rehabilitation at Maxwell to demonstrate the capability of sustaining a productive land use.

32. As stated in the Environmental Impact Statement, various rehabilitation trials have been conducted at the Maxwell Infrastructure over the life of the mine, including a native grassland establishment trial and a horse grazing trial. Officers would like to see these trials incorporated into the Rehabilitation Strategy and to continue into the future.

Administration

33. Delete reference to Air Quality and Greenhouse Gas Management Plan in footer.

Council staff appreciate the opportunity to comment and would be pleased to provide additional information if requested. Should you need to discuss the above, please contact Theresa Folpp, Development Compliance Officer on 02 6549 3700 or email council@muswellbrook.nsw.gov.au.

Yours faithfully

Sharon Pope
Director Environment and Planning

17 APPENDIX 5 – PLANNING SECRETARY APPROVAL

Department of Planning, Housing and Infrastructure

NSW GOVERNMENT

Our ref: SSD-9526-PA-186

Donna Tiananga
Environment, Community and Approvals Manager
Maxwell Ventures (Management) Pty Ltd
Thomas Mitchell Drive
Muswellbrook, NSW, 2333

30/01/2026

Subject: Maxwell Underground – Rehabilitation Strategy

Dear Ms. Tiananga

I refer to your submission requesting review and approval fo a revised Rehabilitation Strategy in accordance with Schedule 2, Condition B79 of the Development Consent for Maxwell Underground Mine (SSD-9526).

I note the Rehabilitation Strategy was revised following submission of an Independent Environmental Audit on 24 July 2025, the approval of Modification 3 of SSD-9526 and DPHI letter of 7/10/2025 (SSD-9526-PA-173).

Accordingly, as nominee of the Planning Secretary, I approve the revised Rehabilitation Strategy (Rev 3, dated December 2025).

Please ensure you make the document publicly available on the project website at the earliest convenience.

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

Yours sincerely

Stephen O'Donoghue
Director
Resource Assessments

As nominee of the Planning Secretary

4 Parramatta Square, 12 Darcy Street, Parramatta NSW 2150 www.dphi.nsw.gov.au 1
Locked Bag 5022, Parramatta NSW 2124