



MAXWELL PROJECT

SECTION 8

Summary of Mitigation Measures



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8 SUMMARY OF MITIGATION MEASURES

In accordance with the SEARs, this section provides a consolidated summary of Malabar's commitments in relation to mitigation and monitoring activities for the Project.

Section 8.1 describes the general approach to environmental management for the Project. Section 8.2 lists key specific environmental mitigation measures and monitoring. Section 8.3 describes adaptive management measures, while Section 8.4 describes relevant environmental reporting for the Project.

8.1 PROJECT ENVIRONMENTAL MANAGEMENT

Section 6 of this EIS outlines proposed environmental mitigation, adaptive management, monitoring and offset measures for the Project.

These include measures relating to subsidence, groundwater, surface water, land resources and agriculture, biodiversity, noise, air quality, visual and landscape character, Aboriginal cultural heritage, road transport, social impact, greenhouse gas emissions, hazards, rehabilitation and mine closure.

Section 7 and Appendix U of this EIS describe the approach to rehabilitation, and how surface disturbance areas (including those disturbed by Project subsidence impacts) will be rehabilitated and remediated for the Project. The Biodiversity Offset Strategy for the Project is described in Section 6.7.6 of this EIS.

Malabar has implemented an Environmental Management System at the Maxwell Infrastructure to minimise the potential environmental impacts of its rehabilitation and care and maintenance activities (Section 2.2.2). These existing monitoring and management plans at the Maxwell Infrastructure will be reviewed accordingly to address Project activities.

Subsidence performance measures and mining constraints will be detailed in Extraction Plans for the Project, along with monitoring, mitigation, adaptive management and contingency measures.

Table 8-1 presents a proposed list of management plans for the Project. Management plans relating to potential impacts associated with underground operations will be included as part of Extraction Plans for the Project, and will be progressively updated as mining progresses.

It is recognised that changes to the Project environmental mitigation, adaptive management, monitoring and reporting proposed in the EIS may be considered necessary during further consultation with government agencies in the assessment and approval process for the Project, as well as an outcome of adaptive management during the life of the Project.

Project environmental mitigation, adaptive management, monitoring and reporting will be conducted in accordance with the finalised Development Consent conditions and associated licences and approvals, with the final monitoring details (locations, parameters and frequencies) to be provided in the relevant management plans and monitoring programs for the Project.

8.2 KEY SPECIFIC ENVIRONMENTAL MITIGATION MEASURES

There are numerous mitigation measures incorporated into the design of the Project (Section 3).

Malabar is committed to developing the Project solely as an underground mining operation. Underground mining methods significantly reduce environmental impacts, including dust produced, noise and surface disturbance, in comparison to open cut mining methods.

In addition to the proposed mining method, the following key Project design measures and constraints have been incorporated by Malabar in response to stakeholder feedback:

- limiting the requirement to develop new infrastructure through the use of the substantial existing Maxwell Infrastructure;
- placement of the MEA in a natural valley, and reducing the height of infrastructure components, to restrict direct views of the MEA from the Golden Highway and neighbouring horse studs;
- use of the existing site access to the Maxwell Infrastructure from Thomas Mitchell Drive, to limit Project traffic movements on the Golden Highway and Edderton Road;
- sealing the extended site access road to the MEA during the first year of mining operations;

Table 8-1
Summary of Project Management, Mitigation, Monitoring and Reporting

| Proposed Management, Monitoring and Reporting | Key EIS Sections and Appendices |
|---|--|
| Underground Mining Area – Plans to be Incorporated into Extraction Plan | |
| • Water Management Plan. | Sections 6.4 and 6.5 and Appendices B, C and D. |
| • Land Management Plan. | Section 6.6 and Appendix Q. |
| • Biodiversity Management Plan. | Section 6.7 and Appendix E. |
| • Aboriginal Cultural Heritage Management Plan. | Section 6.12 and Appendix G. |
| • Built Features Management Plan. | Section 6.3 and Appendix A. |
| • Public Safety Management Plan. | Section 6.3. |
| • Subsidence Monitoring Program. | Section 6.3 and Appendix A. |
| Overall Project Operations | |
| • Environmental Management Strategy. | - |
| • Water Management Plan, incorporating: <ul style="list-style-type: none"> - Groundwater Management Plan. - Surface Water Management Plan. - Site Water Balance. - Erosion and Sediment Control Plan. | Sections 6.4 and 6.5 and Appendices B, C and D. |
| • Biodiversity Management Plan. | Section 6.7 and Appendix E. |
| • Biodiversity Offset Strategy. | Section 6.7 and Appendix E. |
| • Noise Management Plan. | Sections 6.9 and 6.15 and Appendix I. |
| • Air Quality and Greenhouse Gas Management Plan. | Sections 6.10 and 6.19 and Appendix J. |
| • Aboriginal Cultural Heritage Management Plan. | Section 6.12 and Appendix G. |
| • Workforce Conduct Policy. | Section 6.17 and Appendix L. |
| • Emergency Response Management Plan. | Section 6.20. |
| • Bushfire Management Procedure. | Section 6.20 and Appendix T. |
| • Pollution Incident Response Management Plan. | Section 6.20 and Appendices S and T. |
| • Spill Response Procedure. | Section 6.20 and Appendix T. |
| • Mining Operations Plan. | Section 7.6 and Appendix U. |
| • Mine Closure Plan. | Sections 6.16, 6.17 and 7.7 and Appendices L, and U. |
| • Final Void Management Plan. | Sections 6.4, 6.5 and 7.3 and Appendices B, C and U. |
| Reporting Requirements | |
| • Annual Review. | Section 4.5.1. |
| • Greenhouse Gas Reporting. | Sections 4.5.2 and 6.19. |
| • Community Consultative Committee. | Section 6.17.4 and Appendix L. |
| • Complaints Register. | Section 6.17.4 and Appendix L. |

- use of a covered, overland conveyor to transport coal extracted by longwall mining machinery to further reduce potential dust and noise impacts;
- avoiding direct subsidence impacts on the Hunter River, the Hunter River alluvium and Saddlers Creek by imposing constraints on the design of the mine layout;
- limiting the extent of the underground mine layout to beneath freehold land owned by Malabar (i.e. there would be no direct subsidence impacts to land owned by neighbouring horse studs);
- use of water treatment systems that maximise the re-use of water on-site and remove any requirement to source water externally for mining operations (e.g. from the Hunter River); and
- development of a site water management system that avoids the need for controlled release of mine-affected water to the Hunter River.

In addition, key environmental mitigation measures and commitments to be implemented for the Project include:

- management of potential Project subsidence impacts and associated consequences to natural and built features, which will be included in Extraction Plans for the Project;
- holding appropriate water licences under the *NSW Water Management Act, 2000* for water taken incidentally for the Project;
- ongoing groundwater and surface water monitoring programs, and validation of the predicted impacts throughout the Project life;
- biodiversity offsets for threatened species and communities;
- implementation of reasonable and feasible mitigation measures on-site to minimise noise and dust generation during construction and operation; and
- ongoing communication and engagement with Coolmore and Godolphin Woodlands Studs and Hollydene Estate Wines and neighbours to the north of the Maxwell Infrastructure.

The key environmental mitigation measures and commitments are described in the sections below, with reference to the relevant sections of this EIS where further detail is available.

8.2.1 Subsidence

Extraction Plans

Prior to causing any subsidence, Malabar will prepare and submit an Extraction Plan for approval by the DPIE.

Extraction Plans will be prepared for a series of panels that are a subset of the approved mine layout. Malabar will review the adequacy and effectiveness of an Extraction Plan during the preparation of a new Extraction Plan for subsequent panels.

The Extraction Plans will include performance measures for natural and built features. Malabar will implement an adaptive management approach to achieve the performance measures for the Project. Adaptive management will involve the monitoring and periodic evaluation of the environmental consequences against the performance measures, and adjustment (if necessary) of the management and control measures to achieve the adopted performance measures.

Extraction Plans prepared for the Project will include:

- a summary of relevant background or baseline data;
- a review of predictions of the potential subsidence effects, subsidence impacts and environmental consequences, incorporating any relevant information obtained since the EIS (such as monitoring results obtained during mining);
- a monitoring program to provide data to assist with the management of the risks associated with subsidence, validate subsidence predictions and analyse the relationship between subsidence effects and impacts and any ensuing environmental consequences;

- a plan to manage and remediate subsidence impacts and/or environmental consequences (e.g. remediation of observed cracking);
- trigger action response plans to identify risks and outline specific follow-up actions to avoid exceedances of agreed performance measures;
- contingency plans that provide for adaptive management where monitoring indicates that there has been an exceedance of agreed performance measures; and
- reporting and review mechanisms.

Extraction Plans for the Project will include the following key component documents:

- Water Management Plan;
- Land Management Plan;
- Biodiversity Management Plan;
- Aboriginal Cultural Heritage Management Plan;
- Built Features Management Plan(s);
- Public Safety Management Plan; and
- Subsidence Monitoring Program.

Public Infrastructure

A Built Features Management Plan will be developed for the Golden Highway in consultation with RMS prior to mining within 500 m of the highway. The Built Features Management Plan will include:

- pre-mining inspections for structural stability and potential susceptibility to subsidence;
- implementation of appropriate pre-mining mitigation measures to minimise impacts, where appropriate;
- implementation of a monitoring program, including subsidence surveys and visual monitoring at appropriate frequencies and locations (including cuttings and the bridge at Bowmans Crossing);
- development of trigger action response plans for unexpected subsidence impacts, including a commitment to mitigate, repair or compensate any impacts in a timely manner;
- development of protocols for the distribution of results to relevant stakeholders; and
- annual reporting procedures.

Potential subsidence impacts on Edderton Road will be managed through either: (i) road maintenance along the existing alignment; or (ii) the realignment of the road around the Maxwell Underground area.

In the event that Edderton Road is undermined, a Built Features Management Plan will be prepared in consultation with Muswellbrook Shire Council. The Built Features Management Plan will include:

- implementation of pre-mining mitigation measures to minimise impacts, where appropriate;
- implementation of a monitoring program, including subsidence surveys and visual monitoring at appropriate frequencies and locations;
- development of appropriate mitigation measures to maintain safety and serviceability, including:
 - a commitment to mitigate, repair, replace or compensate any impacts in a timely manner;
 - processes to schedule road pavement repairs outside of peak traffic times wherever possible; and
 - imposition of appropriate temporary speed restrictions;
- processes for notification of the community and other key stakeholders of works on Edderton Road during active subsidence;
- development of trigger action response plans for unexpected subsidence impacts;
- development of protocols for the distribution of results to relevant stakeholders; and
- annual reporting procedures.

Prior to Project-related maintenance or construction work on Edderton Road, Malabar will provide information about the road works program to Jerrys Plains, Coolmore Stud, Godolphin Woodlands Stud, Hollydene Estate Wines and residences on Edderton Road, along with contact details for the Project and details of Malabar's complaints mechanisms.

Potential subsidence consequences on the Ausgrid 11 kV overhead power line will be managed in consultation with Ausgrid, and may include the implementation of preventive measures such as the provision of cable rollers, guy wires or additional poles, or relocation of the power line around the Maxwell Underground area. A Built Features Management Plan will be developed in consultation with Ausgrid.

Malabar will manage the impacts of mine subsidence on survey marks in consultation with NSW Spatial Services, including lodging relevant applications under the *NSW Surveying and Spatial Information Regulation, 2017* as required by the *Surveyor-General's Direction No. 11 Preservation of Survey Infrastructure*.

Malabar-owned Infrastructure

Malabar will manage potential subsidence consequences for its own infrastructure as a component of the Extraction Plans.

Subsidence Monitoring

Surface subsidence monitoring data will be collected in accordance with the subsidence monitoring programs detailed in the Extraction Plans.

Subsidence monitoring may include transverse and longitudinal subsidence lines and survey lines/pegs around features of interest.

The subsidence monitoring data will be reviewed as part of the Extraction Plan and reporting processes to assist with the management of risks associated with subsidence, validate subsidence predictions and inform the adaptive management process.

8.2.2 Groundwater

Malabar will hold appropriate water licences under the *NSW Water Management Act, 2000* for water taken incidentally for the Project.

Groundwater Monitoring

Groundwater monitoring for the Project will be undertaken as documented under an approved Groundwater Management Plan (as part of the Water Management Plan), including:

- manual groundwater level monitoring for all open monitoring bores, with dataloggers installed within selected bores to gather temporal variations in water levels;

- recording of pressure readings in VWP's;
- sampling of field analytes (pH and EC); and
- annual sampling for laboratory analysis of a suite of analytes, including physio-chemical indicators, major ions, total alkalinity and dissolved and total metals.

Malabar will establish additional alluvial monitoring bores in the Saddlers Creek alluvium.

Yearly reporting of groundwater monitoring results will be included in the Annual Review. Where relevant, the reporting will include comparison to climate trends and surface water monitoring results to identify changes in the surface water and groundwater interactions.

Numerical Model Review

After the first three years of mining, and every five years thereafter, the validity of the groundwater model predictions will be assessed and if the data indicates significant deviation from the model predictions, an updated groundwater simulation model will be developed.

Make Good Provisions

Should monitoring or an investigation show greater than 2 m drawdown at a privately-owned bore, and the drawdown is attributable to the Project, 'make good' provisions for the affected groundwater user will be implemented, and may include:

- deepening the affected groundwater bore;
- construction of a new groundwater bore; and/or
- provision of an alternative water supply of suitable quality and quantity.

8.2.3 Surface Water

Malabar will hold appropriate water licences under the *NSW Water Management Act, 2000* for water taken incidentally for the Project.

Erosion and Sediment Control

Erosion and sediment control structures will be maintained in accordance with *Managing Urban Stormwater Soils and Construction* (Landcom, 2004).

Proper drainage of the site will be maintained by:

- removing accumulated sediment from basins/drains (if required);
- checking that drains are operating as intended and any damaged works are repaired where necessary;
- confirming recent works have not resulted in the diversion of sediment-laden water away from their intended destination; and
- checking that rehabilitated lands have established sufficient groundcover.

Surface Water Monitoring

Surface water monitoring for the Project will be undertaken as documented under an approved Surface Water Management Plan (as part of the Water Management Plan), and will address the following issues:

- water quality;
- water balance;
- site water management system integrity;
- erosion and sediment control;
- stream health; and
- geomorphic response to subsidence.

Yearly reporting of surface water monitoring results will be included in the Annual Review.

8.2.4 Land Resources and Agriculture

Mitigation and Remediation of Potential Subsidence Impacts on Agricultural Land

Temporary remedial actions to mitigate the potential subsidence impacts could include the following:

- relocation of stock outside of the areas directly above active underground mining;
- installation of fencing to limit access by livestock or unauthorised personnel to areas of active subsidence;
- where necessary, ripping, tyning and/or infilling of surface cracks; and
- erosion control measures and/or revegetation works.

Remediation of grazing land affected by subsidence will be undertaken, as required, during Project operations to minimise hazard to persons, livestock and native fauna, and long-term potential environmental impacts.

The requirement and methodology for any subsidence remediation techniques will be determined in consideration of:

- potential impacts of the unmitigated impact, including potential risks to public safety and the potential for self-healing or long-term degradation; and
- potential impacts of the remediation technique, including site accessibility.

Subsidence remediation will generally be undertaken using conventional earthmoving equipment (such as a backhoe or grader), and will include:

- in-fill of minor surface cracks by cultivation of the ground surface;
- in-fill of larger surface cracks with suitable soil or other material;
- localised regrading or reshaping to limit the potential for water ponding; and/or
- stabilisation of disturbed areas with temporary erosion controls (e.g. silt fences) and long-term measures (e.g. vegetation planting).

Minor cracks (i.e. less than 50 mm) that develop are not expected to require remediation, as these cracks would not impact agricultural productivity and geomorphological processes would result in the cracks filling naturally over time.

The above mitigation and remediation measures will be outlined in further detail in the Land Management Plan component of future Extraction Plans (Section 8.2.1). This will include a program to monitor the success of subsidence remediation supported by trigger action response plans to implement specific follow-up actions in the event that monitoring indicates additional measures are required.

Soil Resource Management Measures

General soil resource management practices will involve the stripping and stockpiling of soil resources prior to any Project-related surface disturbance.

The objectives of soil resource management for the Project will be to:

- identify and quantify potential soil resources for rehabilitation;
- optimise the recovery of useable topsoil and subsoil during stripping operations;
- manage topsoil and subsoil reserves so they do not degrade whilst stockpiled;
- establish effective soil amelioration procedures to maximise the availability of soil for future rehabilitation; and
- take into account the need to provide conditions that minimise the risk of soil loss via wind and water erosion during and after rehabilitation.

Further details on soil resource management will be provided in the MOP for the Project (or equivalent documentation).

Land Contamination

General measures to reduce the potential for contamination of land will include the following:

- The transportation, handling and storage of all dangerous goods for the Project will be conducted in accordance with the requirements of the *NSW Work Health and Safety Regulation, 2017* (or its latest equivalent).
- Dangerous goods required for the Project will be transported in accordance with State legislation.
- On-site consumable storage areas will be designed with appropriate bunding.
- Fuel and explosive storage areas will be regularly inspected and maintained.
- The response to any accidental spills or ground contamination will be assessed on a case-by-case basis and remediated in accordance with the Spill Response Procedure.
- Emergency response procedures will be enacted as required under a Pollution Incident Response Management Plan.

Prior to undertaking any of the following activities, Malabar will undertake a hazardous material survey (e.g. to assess the potential for asbestos-containing material) and will develop and implement appropriate mitigation measures (and removal actions) for any identified contamination:

- soil excavation or disturbance near the identified former sheep dip;
- disturbance of any soil that may contain fragments of asbestos-containing materials;
- demolition or other works on rural residences and structures (including the Nissen hut);
- soil excavation in areas of surface staining adjacent to rural structures; and
- disturbance of any previously-imported fill material.

8.2.5 Biodiversity

Measures to mitigate impacts from the Project on biodiversity are outlined in Table 8-2. In addition, the following measures will be implemented to conserve threatened flora not likely to be impacted by the Project:

- Malabar will erect a livestock-proof fence around a 20 m buffer from the *Hunter Valley Weeping Myall (Acacia pendula) Woodland/Acacia pendula* population in the Hunter Catchment. The area will be signed 'Environmental Protection Area'.
- Malabar will erect a livestock-proof fence around a 20 m buffer from the *Diuris tricolor* records. The area will be signed 'Environmental Protection Area'.

Biodiversity Offset Strategy

Existing Biodiversity Offsets

The existing biodiversity offsets for the Maxwell Infrastructure will be incorporated into the Biodiversity Offset Strategy for the Project.

Project Biodiversity Offset Strategy

The sub-sections below describe how the Project Biodiversity Offset Strategy will address both Commonwealth and NSW biodiversity offset requirements.

**Table 8-2
Measures to Mitigate and Manage Potential Biodiversity Impacts**

| Potential Impact | Mitigation Measure | Techniques | Timing/Frequency |
|--|---|---|--|
| Displacement of Fauna | Presence of a Trained Ecological or Licensed Wildlife Handler | Capture and release. | During native vegetation clearance and clearance of rocky areas. |
| Clearance Impacts on Native Vegetation and Habitat | Vegetation Clearance Protocol | Areas to be cleared are delineated to prevent accidental damage during vegetation clearance activities or other works. | During native vegetation clearance and clearance of rocky areas. |
| | | Pre-clearance fauna surveys by suitably qualified personnel. | During native vegetation clearance and clearance of rocky areas. |
| | | Impacts on fauna are managed during clearing activities by suitably qualified personnel. | During native vegetation clearance and clearance of rocky areas. |
| | | Review of environmental impacts that may result from subsidence remediation (threatened flora species and populations, rocky areas that may provide habitat for threatened lizards) and consideration of whether alternative methods of remediation are warranted (e.g. without machinery). | Prior to any remediation of surface cracks. |
| | | Restricting vegetation clearance to the slashing of vegetation where possible along power line easements (i.e. leaving the lower stem and roots <i>in-situ</i> to maximise the potential for natural regrowth). | During vegetation clearance. |
| | | Lopping of branches, rather than the removal of trees where possible along power line easements. | During vegetation clearance. |
| | Mine Site Rehabilitation and Revegetation | Surface disturbance areas associated with the Biodiversity Assessment Development Footprint will be rehabilitated and revegetated. | Over the life of the Project. Surface facilities used for the Project will be decommissioned when they are no longer required or at the end of the mine life where no further ongoing beneficial use is identified. |
| | Salvage and Re-use of Material for Habitat Enhancement within the Mine Site Rehabilitation | Identification of habitat features (e.g. cleared trees, surface rocks) that will be beneficial for habitat enhancement. | During and after vegetation clearance. |
| Site Induction | Where possible, encourage Malabar personnel to use existing tracks for site access to Project areas to minimise potential disturbance of soils and revegetated areas. | During construction and operational stages. | |
| Access | Use of defined tracks to access sites to minimise the disturbance of soils. | During construction and operational stages. | |

Table 8-2 (Continued)
Measures to Mitigate and Manage Potential Biodiversity Impacts

| Potential Impact | Mitigation Measure | Techniques | Timing/Frequency |
|---|-------------------------------|--|---|
| Subsidence Impacts on Native Vegetation and Habitat | Remediation of Surface Cracks | Remediation of mine subsidence effects (e.g. surface cracking and minor erosion). | As required, where impacts are identified as part of the subsidence monitoring program. |
| Indirect Impacts on Native Vegetation and Habitat | Feral Animal Management | Maintain a clean, rubbish-free environment to discourage scavenging and reduce the potential for colonisation of these areas by non-endemic fauna. | During construction and operational stages. |
| | Weed Management | When they have been off-road, washdown of vehicles and mechanical equipment to minimise seed transport off the site. | During construction and operational stages. |
| | | Identification of weeds requiring control. | Regular site inspections. |
| | | Mechanical removal of identified weeds and/or the application of approved herbicides. | During construction and operational stages. |
| | | Follow-up site inspections to determine the effectiveness of the eradication programs. | During construction and operational stages. |
| | Bushfire Management | According to the Bushfire Management Procedure. | During construction and operational stages. |
| Vehicle Strike | Fencing | Fencing along the length of the site access road to exclude kangaroos (and cattle). | Installation during construction of the site access road. |
| | Speed Limits | Imposing a maximum 60 km per hour speed limit on internal roads and maximum 80 km per hour speed limit on the sealed site access road. | During construction and operational stages. |

Source: After Appendix E.

NSW Biodiversity Offset

Malabar will address NSW offset requirements by one, or a combination of the following options, consistent with the NSW Biodiversity Offsets Scheme:

1. the retirement of biodiversity credits (either like-for-like or in accordance with the variation rules);
2. the funding of a biodiversity conservation action;
3. undertaking ecological mine rehabilitation; or
4. payment into the Biodiversity Conservation Fund.

Commonwealth Biodiversity Offset

Malabar will undertake like-for-like biodiversity offset measures for relevant EPBC Act listed threatened species and ecological communities as required by the EPBC Act. These biodiversity credits or other offset measures will be associated with the following EPBC Act listed threatened species and communities:

- *White Box – Yellow Box – Blakely’s Red Gum Grassy Woodland and Derived Native Grassland*;
- *Central Hunter Valley Eucalypt Forest and Woodland*;
- Pink-tailed Legless Lizard;
- Striped Legless Lizard;
- Swift Parrot; and
- Regent Honeyeater.

8.2.6 Noise

Real-time Monitoring and Meteorological Forecasting System

The noise management system for the Project will include a real-time noise and meteorological monitoring network, as well as a meteorological forecasting system.

Real-time noise monitors will be installed in locations that will provide representative noise levels at privately-owned receivers most likely to experience noise impacts associated with the Project (e.g. to the north of the Maxwell Infrastructure). Locations for these monitors will be determined once operations commence and in consultation with the relevant government agencies and local landowners.

Real-time meteorological data will be recorded at the Maxwell Infrastructure AWS (or a suitable replacement).

A meteorological forecasting system will also be implemented for the Project to anticipate upcoming periods of adverse weather conditions (e.g. based on wind speed, direction and atmospheric stability).

Attended Noise Monitoring

Attended noise monitoring will be undertaken regularly at locations representative of the most sensitive receivers to determine compliance of Project noise levels with relevant Development Consent criteria.

Monitoring results will be assessed against the NPfI with respect to modifying factors (including for low frequency noise). If monitoring results are found to contain dominant low-frequency content, appropriate modifying factors will be applied to measured noise levels, in accordance with the NPfI, to account for additional annoyance at the receiver.

Noise Management Plan

A Noise Management Plan will be prepared for the Project, which will describe the noise management system for the Project, including details of:

- applicable Development Consent noise and vibration criteria;
- the noise mitigation measures for the Project;
- attended noise monitoring locations;
- real-time noise monitoring locations;
- the predictive meteorological forecasting system;
- the pro-active noise management system (Section 8.3.5);
- specified trigger levels for the implementation of additional mitigation measures;
- protocols for the implementation of additional mitigation measures; and
- complaint response protocols.

Noise Management Zone

The privately-owned receivers where noise emissions are predicted to exceed the Project Noise Trigger Levels (i.e. with either negligible or marginal exceedances) will be classified as being within the Project’s noise management zone.

In addition to the mitigation measures described above, proposed management procedures for receivers in this zone will include:

- response to any community issues of concern or complaints including discussions with relevant landowners;
- refinement of on-site noise mitigation measures and mine operating procedures; and
- implementation of feasible and reasonable acoustical mitigation at receivers with predicted marginal residual impacts, in accordance with the Voluntary Land Acquisition and Mitigation Policy (NSW Government, 2018b) (or its latest version).

Rail Noise

The Project will use locomotives and rolling stock approved to operate on the NSW rail network in accordance with EPLs issued by the EPA.

Road Transport Noise

Project employees will be made aware of the potential for road noise impacts through site-specific inductions and staff education programs to reinforce quiet driving styles/attitudes.

Other Measures

Malabar will design the parameters required for any blasting activities with a high margin of conservatism to meet the applicable criteria at the nearest sensitive receivers or any proximal infrastructure (e.g. Liddell Ash Dam).

8.2.7 Air Quality

Real-time Air Quality Monitoring

Malabar currently operates a meteorological monitoring station and real-time air quality monitoring station at the Maxwell Infrastructure.

The real-time monitoring network will be reviewed for the operation of the Project and detailed in the Air Quality and Greenhouse Gas Management Plan.

Trigger levels will be determined to facilitate the implementation of adaptive management in response to elevated particulate matter concentrations being identified (Section 8.3.6).

Air Quality Management Plan

An Air Quality and Greenhouse Gas Management Plan will be prepared for the Project and will include:

- details of the air quality mitigation measures to be implemented for the Project;
- measures to avoid potential spontaneous combustion events, including mine planning, risk identification and assessment and identification of hot spots;
- measures to control dust emissions from rail wagons, such as streamlining, consistent profiling and regular collection of coal spillages;
- the real-time air quality monitoring program;
- details of trigger levels for the investigation of additional mitigation measures; and
- adaptive management response protocols (Section 8.3.6).

8.2.8 Visual and Landscape Character

Mitigation measures proposed in relation to reducing visual impacts relevant to the Project include:

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

On-site Treatments

The following on-site treatments will be implemented for the Project:

- Earthwork batters within the transport and services corridor will be vegetated.
- Areas disturbed for construction laydown areas and access will be revegetated as soon as practicable after the completion of construction.
- Where feasible, landscaping will be undertaken to emulate existing landscape patterns, colours and texture continuums.
- Compatible tones will be used for the covered, overland conveyor infrastructure and cladding colours.
- Power line design will consider the placement of poles in locations of high visual absorption, where possible.

Malabar will maintain the screening vegetation adjacent to the MEA planted in July 2019, on the west slope of the bounding ridgeline to reduce the visual effect of the Project on Edderton Road.

Night-lighting

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

- Installation of light fittings will consider adequate aiming (including consideration of mounting heights).
- Shielded fittings will be used, where available and safe to do so.
- Anti-reflective paint will be used on surfaces which night-lighting could spill onto.
- Upward spill light will be minimised and lighting will generally be directed either downwards, or away from the sensitive receptors to the south and Edderton Road.
- Night-lighting will be restricted to the minimum required for operational and safety requirements so as to avoid over-lighting.
- Energy-efficient lighting will be used for any new fixed lighting installed, where available and safe to do so.
- Where floodlights are required, asymmetric beams will be used.
- Fixed lights will not be directed towards reflective surfaces.
- Lighting for fixed installations will use warm white colours, where available and if compliant with industrial lighting standards.

Off-site Treatments

If requested by the landowner (i.e. BHP) and/or tenant, landscaping works along the eastern and southern boundary fence line of Edderton Homestead will be undertaken to supplement existing vegetation and further screen views of the Project.

Implementation of the visual mitigation measures will be subject to consultation and agreement with the landowner and/or tenant.

Other Measures

Malabar will implement the following measures to mitigate potential impacts on knowledge-based perceptions, in addition to the Project design measures already incorporated and the engagement conducted to date:

- Malabar has offered (and will reiterate the offer) to meet with representatives of the Coolmore and Godolphin Woodlands Studs to discuss the findings of this EIS, once it is on public exhibition.
- Malabar will continue to offer to meet regularly with representatives of the Coolmore Stud and Godolphin Woodlands Stud over the life of the Project.
- Malabar will maintain fence lines, entrances and roadside plantings within Malabar-owned properties to present a visually pleasing appearance that is congruent and sympathetic with the appearance of surrounding rural properties.
- Malabar will discourage workers from wearing high-visibility clothing when visiting smaller, local communities.
- When and where appropriate, Malabar will:
 - Use appropriate media platforms to disseminate current Project information that outlines the relative benefits of underground mining and the beneficial outcomes of the Project.
 - Offer to release joint media with horse studs or other sensitive receptors regarding the potential for co-existence between underground mining and other local industries (including equine, viticulture and agriculture).

8.2.9 Aboriginal Cultural Heritage

Aboriginal Cultural Heritage Management Plan

An ACHMP will be developed for the Project in consultation with the registered Aboriginal parties to the satisfaction of the DPIE.

A summary of measures expected to be included in the ACHMP and implemented over the life of the Project is provided below. Further detail is provided in Appendix G.

Surface Development

An archaeological salvage program will be documented in the ACHMP to manage potential impacts to Aboriginal heritage from surface disturbance, including:

- Creation and maintenance of an Aboriginal Site Database for known Aboriginal heritage sites within the Project area and surrounds.
- Progressive surface collection of Aboriginal objects/sites potentially impacted by surface development.
- A program of open area salvage excavation for sites AHIMS #37-2-0004 and AHIMS #37-2-0505, representing the only sites assessed of moderate scientific significance that would be directly impacted by the Project (these sites lie within 100 m of each other and essentially comprise a single archaeological site).
- Involvement of a qualified archaeologist and field representative(s) from registered Aboriginal parties in salvage works.
- Submission of Aboriginal Site Impact Recording forms for all salvaged sites.

Sites assessed of moderate significance will be subject to surface collection and other forms of mitigation (such as detailed recording, test or open area excavation).

During the development of the ACHMP, registered Aboriginal parties will be requested to provide advice on the curation of all the Aboriginal objects salvaged as part of the excavation program.

Potential Impacts from Subsidence

The following measures will be undertaken to manage potential impacts to Aboriginal heritage from subsidence throughout the life of the Project:

- Subsidence monitoring will be conducted during mining and for a specified period post-mining, with a digital record kept of the nature, location and extent of all subsidence-related surface impacts within the Project area.

- Where subsidence-related impacts, such as surface cracking, are identified within the boundary of an existing site of moderate (or high) scientific significance, or where remediation works are required to address subsidence impacts, the site will be inspected by a qualified archaeologist to determine the nature and extent of impacts, and whether mitigation is required.
- Mitigation measures for subsidence may include further monitoring, surface collection or open area salvage excavation.

General Mitigation Measures

In addition to the above, Malabar will implement the following general measures that have been formulated in consultation with the registered Aboriginal parties:

- An Aboriginal cultural heritage awareness package will be developed, and all relevant contractors and staff engaged on the Project who may have interactions with Aboriginal heritage will receive awareness training prior to commencing work on-site.
- Sites will be identified on relevant site plans, with details for the care of sites that will be conserved *in-situ* incorporated into the ACHMP.
- AHIMS site cards will be lodged in a timely manner with the DPIE for any previously unidentified Aboriginal heritage site(s) that are discovered during the course of Project operations and/or further heritage assessments.
- The ACHMP will outline provisions to guide the management of any previously unrecorded Aboriginal heritage sites that may be identified during future investigations or works consistent with the protocol in the ACHA (Appendix G).
- Should any skeletal remains be identified during the course of the Project, work in that location would cease immediately and the find would be notified to the relevant authorities (including the NSW Police). Subject to the NSW Police requiring no further involvement, the management of any Aboriginal skeletal remains would be determined in consultation with the DPIE and the registered Aboriginal parties.

8.2.10 Road Transport

The Road Transport Assessment concluded that the existing road network can satisfactorily accommodate the forecast traffic demands resulting from the Project without any specific additional road upgrade requirements.

Should Malabar elect to realign the southern portion of Edderton Road, the realigned road and new intersection with the Golden Highway will be designed and constructed consistent with Austroads (2017c) *Guide to Road Design* requirements and in consultation with Muswellbrook Shire Council and RMS.

Malabar will continue to consult with Muswellbrook Shire Council and the DPIE to develop a plan to contribute to the maintenance of local roads under the control of the Muswellbrook Shire Council.

Management of Deliveries to the Project

The proposed movement for any oversize vehicles will be negotiated with RMS and relevant local councils on a case-by-case basis. All oversize loads will be transported with the relevant permits and load declarations obtained in accordance with *Additional Access Conditions for Oversize and Overmass Heavy Vehicles and Loads* (RMS, 2019) (or its latest version), and any other licences and escorts as required by regulatory authorities.

The transportation, handling and storage of all dangerous goods at the Project will be conducted in accordance with the requirements of the *Storage and Handling of Dangerous Goods – Code of Practice 2005* (WorkCover, 2005) (or its latest version). Dangerous goods required for the Project will be transported in accordance with relevant legislation.

8.2.11 Social and Community Infrastructure

Malabar will work with local government and the local community to minimise potential social impacts of the Project and maximise potential opportunities. In addition to other commitments identified in Section 8, Malabar maintains the following commitments that will underpin the Project's social impact management strategies:

- A strong local employment commitment.
- Planned recruitment of approximately 50% of the operational workforce from individuals outside of the underground mining sector, including young people, and people who are unemployed.
- A strong workforce diversity policy with a target for individuals new to the underground mining sector to be 20% female and 10% Indigenous.
- A Workforce Conduct Policy establishing:
 - clear standards of behaviour for employees and contractors while on and off-shift;
 - clear standards in relation to drug and alcohol use; and
 - fatigue management requirements.
- Community investment support for:
 - local community infrastructure, including health, education and childcare;
 - local community values and cohesion, including support for local events and community-led projects; and
 - community liveability, promoting environmental qualities, family life and community resilience.
- Positive contributions to local agriculture and agricultural suppliers and services, as Malabar is actively improving its agricultural properties and viticultural operations so that these will be long-term sustainable and productive businesses.
- Continued support to local farmers by providing agistment opportunities on improved pastures owned by Malabar, and where possible leasing excess water rights to neighbours.

Section 6.17.4 outlines in detail the mitigation strategies that have been identified in the SIA and will be implemented by Malabar.

8.2.12 Greenhouse Gas Emissions

The Project will use various mitigation measures to minimise the overall generation of greenhouse gas emissions.

Greenhouse gas abatement measures for the Project will be documented in the Air Quality and Greenhouse Gas Management Plan, including:

- Where practical, storage of gas underground in the goaf.
- A small gas-powered plant may be used to generate power from gas drained in the underground workings, subject to the presence of sufficient methane content in the deeper coal seams.

- The gas management system will flare gas if it contains sufficient methane to do so, in the absence of a small gas-powered plant.
- Selection and design of equipment and processes will aim to optimise efficiency and reduce energy consumption.
- Equipment and plant will be regularly maintained.
- The consumption of fuel and electricity will be monitored.
- Electricity will be sourced from renewable resources where available, and economically reasonable and feasible.

Ongoing monitoring and management of greenhouse gas emissions and energy consumption at the Project will occur through Malabar's participation in the NGERs (Section 8.4.6).

8.2.13 Hazards and Risk

Malabar has a safety management system to manage risks to health and safety in accordance with the requirements of the *Work Health and Safety (Mines and Petroleum Sites) Act, 2013* and the *Work Health and Safety (Mines and Petroleum Sites) Regulation, 2014*. Malabar will continue to meet these obligations for the Project.

In addition, a number of hazard control and mitigation measures will be described in management plans for the Project, including:

- Water Management Plan.
- Pollution Incident Response Management Plan.
- Bushfire Management Procedure.

The following hazard control and mitigation measures will be adopted for the Project:

- *Maintenance* – Maintenance of all mobile and fixed plant equipment consistent with the maintenance schemes required by legislation and the original equipment manufacturer.
- *Staff Training* – Only those personnel authorised to undertake skilled or potentially hazardous work will be permitted to do so.
- *Engineering Structures* – Mining and civil engineering structures will be constructed in accordance with applicable codes, guidelines and Australian Standards. Where applicable, Malabar will obtain the necessary licences and permits for engineering structures.

- *Contractor Management* – All contractors engaged by Malabar will be required to operate in accordance with the relevant Australian Standards and NSW legislation.
- *Water Management* – Water management structures will be constructed to generally separate runoff from undisturbed areas and disturbed areas (Section 3.10) and in accordance with the *Dams Safety Act, 1978* and/or *Dams Safety Act, 2015*.
- *Coal Stockpile Management* – Coal stockpiles will be managed to reduce the potential for spontaneous combustion.
- *Storage Facilities* – Storage and usage procedures for potentially hazardous materials (e.g. fuels, oils, greases) will be developed in accordance with Australian Standards and relevant legislation (Section 3.13).
- *Emergency Response* – Fire-fighting and spill management equipment will be kept on-site in appropriate locations. Emergency response training, procedures, manuals and systems will continue to be implemented.

Bushfire Hazards

Bushfire risk mitigation measures currently employed by Malabar, as part of the existing Bushfire Management Procedure, will continue for the Project.

Malabar will continue to promote bushfire awareness through:

- provision of fire safety training for all personnel and contractors undertaking work associated with the Project; and
- provision of relevant information regarding bushfire management, where appropriate, via notice boards and during daily pre-start meetings.

Specific mitigation measures to reduce bushfire risk will include:

- maintenance of non-operational, grassed areas to reduce fuel loads;
- slashing infrastructure areas and property boundaries prior to the summer period;
- establishment and maintenance of fire breaks and access tracks;
- where practical, limiting all activities classed as 'hot work' to workshop and hardstand areas;

- regular inspection of vegetation within power line easements to avoid interference with power lines;
- limiting vehicular movements to existing access tracks where possible to reduce the potential for spark emissions;
- prohibiting smoking in any restricted area, such as near fuel storage areas, inside vehicles or buildings, or within any area designated as a non-smoking area; and
- prohibiting the lighting of fires or fireworks.

Further to the measures described above, fire-fighting equipment located on-site will continue to be regularly serviced and maintained in accordance with relevant Australian Standards.

Fire-fighting equipment will continue to be provided around each building along with a trailer equipped for mobile fire-fighting on-site. The equipment on-site will include fire extinguishers, aqueous film-forming foam, fire hydrants, hoses, and appropriate fittings and nozzles.

Malabar will continue to consult with the Edinglassie Rural Fire Brigade with regard to bushfire management on-site, and will report any bush or grass fires on-site to the Edinglassie Rural Fire Brigade. The Emergency Response Management Plan will outline the protocol to be followed in the event of a fire.

If the Project is approved, Malabar will review and update the Bushfire Management Procedure to consider the additional surface infrastructure and activities required to support the Project.

Prescribed Dams

Malabar will continue to operate the Access Road Dam under the *Dams Safety Act, 1978* and/or *Dams Safety Act, 2015*, including construction and inspection requirements.

Malabar will comply with the *Dams Safety Act, 1978* and/or *Dams Safety Act, 2015*, where relevant, for new dams constructed as part of the Project.

Malabar will continue to consult with Dams Safety Committee regarding the management of prescribed dams operated by Malabar (including the Access Road Dam) and interactions with the Liddell Ash Dam (and associated levee) adjacent to the Maxwell Infrastructure.

8.2.14 Rehabilitation and Mine Closure

Appendix U provides a preliminary rehabilitation and mine closure strategy for the Project. Key components are summarised below.

In the long-term, all sites will be rehabilitated to a safe, stable and sustainable landform of a similar character to surrounding areas. A conceptual post-mining land use of a combination of agriculture and nature conservation has been selected for the majority of the Project domains.

Malabar recognises that government and community stakeholders may identify final land uses that provide greater net benefits to the locality. Malabar will encourage and be supportive of other community and government proposals or initiatives for the use of Malabar land or infrastructure that can co-exist with the Project. These alternative final land uses would be subject to separate assessments and approval, and do not form part of the Project.

A MOP will be developed for the Project in accordance with the latest NSW Government guidelines. The MOP will describe the rehabilitation and performance measures and completion criteria, including more detailed and quantified criteria where applicable (based on the Development Consent conditions for the Project). The rehabilitation performance measures and completion criteria included in the MOP will be specific, measurable, realistic and time-bound.

Over the life of the Project, rehabilitation performance measures and completion criteria will, periodically, be updated and refined in consultation with relevant regulatory authorities and stakeholders to reflect evolving mine site rehabilitation practices and standards.

A Mine Closure Plan will be developed for the Project approximately five years prior to closure, which will be developed in consultation with the Muswellbrook Shire Council, the DPIE and the local community.

The Mine Closure Plan will include consideration of amelioration of potential adverse socio-economic effects due to the reduction in employment at Project closure.

8.3 ADAPTIVE MANAGEMENT

8.3.1 Subsidence

Malabar will implement an adaptive management approach during the life of the Project, including:

- the use of subsidence monitoring data collected during the life of the Project to validate and refine subsidence predictions;
- evaluation of environmental monitoring results against performance measures, with adjustment (if necessary) of the management and control measures to, as a minimum, achieve the adopted performance measures;
- monitoring of the performance of subsidence remediation methods, and adjustment (if necessary) to improve long-term outcomes; and
- implementation of contingency measures in the event of unexpected subsidence impacts.

Where relevant, performance measures, monitoring locations/methods, trigger action response plans and contingency measures will be developed in consultation with relevant asset owners and government agencies.

8.3.2 Groundwater

The Water Management Plan will specify groundwater level and quality triggers for the Project, along with trigger action response plans and contingency measures.

Observed groundwater levels will also be reviewed against the model predictions on an annual basis. A suitably qualified hydrogeologist will determine when water levels deviate significantly from that predicted by the groundwater model and determine the reason for this deviation. The review will consider the impact of mining, and other factors that could result in declining water levels including climatic conditions, rainfall recharge and pumping from privately-owned bores and/or other mining operations.

During the Project, additional hydrogeological data will be collected, including details on lithology, groundwater intersection and intersection of structures (i.e. faults and dykes). The additional hydrogeological data will be stored and made available as required for future groundwater investigations and/or updates to the model.

8.3.3 Surface Water

The Water Management Plan will specify surface water trigger levels for the Project based on historical monitoring data, along with trigger action response plans and contingency measures.

A process of adaptive management will also be used to address the risk of knickpoint formation and stream channel alignment change as a result of subsidence. This process will involve:

- regular monitoring to detect if and where a potential geomorphic risk occurs;
- an assessment to determine the potential consequences of the observed risk; and
- development and implementation of appropriate control works.

If a significant increase is observed in the rate of knickpoint development or migration, these will be assessed by a suitably qualified geomorphologist in order to determine the most appropriate control measure in accordance with the Extraction Plan.

8.3.4 Biodiversity

Monitoring of potential subsidence impacts on threatened ecological communities, threatened fauna habitat and threatened flora will occur in accordance with the Biodiversity Management Plan prepared as a component of the Extraction Plan. In the event that significant environmental consequences are observed as a result of subsidence, Malabar will implement remediation measures and/or additional compensatory measures in accordance with approved contingency plans.

8.3.5 Noise

Pro-active Noise Management System

A pro-active noise management system will be implemented to manage noise levels from the Project at nearby receivers (i.e. to reduce the likelihood that Project noise levels will exceed predicted operational noise levels at receiver locations).

The meteorological forecasting system will be used in conjunction with the real-time noise monitoring system, and will provide an alert for Malabar personnel to review the real-time data and manage surface operations as may be required.

The Noise Management Plan will provide details on the operation of the pro-active noise management system. It is anticipated that the process will involve a review of meteorological forecasting data by a nominated person prior to the commencement of each mining shift. If favourable conditions are predicted, then typical operations will be conducted. If unfavourable conditions are predicted, Malabar will plan operational alternatives.

During operations, if noise from the Project exceeds specified trigger levels, Malabar personnel will be alerted and additional mitigation measures will be implemented until noise levels reduce below the trigger levels. This will occur even if surface operations have already been modified.

The trigger levels will be specified such that the equivalent noise level at the closest receivers will be below the permitted maximum operational noise levels.

Transport Noise

Project road and rail transport noise adaptive management measures will include response to any community issues of concern or complaints, including discussions with relevant landowners and liaison with rail operators regarding train operating procedures.

8.3.6 Air Quality

When the real-time air quality monitoring system indicates specified short-term trigger levels are reached or exceeded, a message will be delivered to a Malabar representative, alerting them to the elevated short-term dust levels.

The Project meteorological station will report wind conditions at the time, allowing personnel to evaluate the likely origin of the elevated dust levels (i.e. on-site or off-site sources), enabling appropriate mitigation and response measures to be implemented.

Project personnel will also undertake visual monitoring of stockpiles and exposed areas. In the event that any substantial dust plumes are observed, additional dust management measures will be implemented.

Project air quality adaptive management measures will include response to any community issues of concern or complaints, including discussions with relevant landowners and/or refinement of on-site air quality mitigation measures and mine operating procedures.

8.3.7 Social and Community Infrastructure

Preliminary proposed performance measures and monitoring and reporting requirements for each mitigation actions related to potential social and community infrastructure impacts are provided in Appendix L.

Social indicators will be monitored to support adaptive management of cumulative social impacts and benefits. Key social indicators and their proposed monitoring frequency are summarised in Section 6.17.5.

8.3.8 Greenhouse Gas Emissions

Malabar will manage its contribution to Australian greenhouse gas emissions inventories through participation in the NGERs, as well as any other government initiatives implemented to manage emissions at the national level.

8.3.9 Rehabilitation and Mine Closure

A rehabilitation monitoring program will be developed for the Project that, along with the application of adaptive management, will allow the desired outcomes to be achieved. It is expected that the rehabilitation monitoring will include (subject to final land use agreement):

- Baseline monitoring to determine conditions pre-mining and during mining.
- Documentation of all rehabilitation activities undertaken.
- Initial monitoring for a period of one to two years post-closure and comparison with control sites.
- Ongoing monitoring (less frequently) from two years post-mining until lease relinquishment.
- Post-lease relinquishment monitoring (to be negotiated with future landholders).
- Use of adaptive management techniques and facilitation of research trials where appropriate.

Malabar will undertake field investigations to identify appropriate control/reference sites for each secondary rehabilitation domain and collect monitoring data, which will be used to assess the status of rehabilitation against completion criteria.

The effectiveness of subsidence remediation practices will also be monitored and the outcomes used to inform the application of subsidence remediation in future.

Trigger action response plans will specify follow-up actions in the event that monitoring indicates additional remediation or other measures are required.

8.3.10 Other Aspects

Throughout the life of the Project, Malabar will review and regularly report its environmental performance and local community feedback received on the Project. Malabar will investigate and respond to any community issues of concern or complaints.

Environmental management plans prepared for the Project will include:

- contingency plans to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible; and
- programs to investigate and implement ways to improve the environmental performance of the Project over time.

8.4 REPORTING

The following subsections describe the expected reporting requirements for the Project (based on requirements at the time of preparation of this EIS). Malabar will adjust its reporting should requirements change in the future.

8.4.1 Incident Reporting

Consistent with the reporting requirements of the *Standard Conditions for State Significant Development Mining Projects August 2018* (NSW Government, 2018c), Malabar will notify the DPIE immediately after becoming aware of the incident.

Malabar will also notify the EPA and any other relevant government agencies of incidents causing or threatening material harm to the environment immediately after becoming aware of the incident, in accordance with Part 5.7 of the PoEO Act and consistent with any requirements of an EPL for the Project.

Within seven days after becoming aware of the incident, Malabar will give written incident notification to the DPIE and within 30 days of the date on which the incident occurred, provide a detailed report on the incident to the Secretary and any relevant government agencies.

8.4.2 Annual Review

Malabar will produce an Annual Review to describe the environmental performance of the Project for a 12 month reporting period. Copies of the Annual Review will be made available on the Malabar website, consistent with the reporting requirements of the *Standard Conditions for State Significant Development Mining Projects August 2018* (NSW Government, 2018c).

Environmental monitoring results will be compared against relevant statutory requirements, the requirements of any plan or program required under the Development Consent, monitoring results of previous years and relevant predictions of this EIS.

Biodiversity management, proposed development and rehabilitation, as well as environmental performance improvement measures proposed for the next 12 month period will also be discussed in the Annual Review.

8.4.3 Development Consent Requirements

Malabar will provide regular reporting of environmental performance of the Project on its website, in accordance with the reporting arrangements in any plans or programs approved under the conditions of the Development Consent and associated licences and approvals.

8.4.4 Community Consultative Committee

Malabar will operate a CCC in accordance with the conditions of the Development Consent and consistent with the *Community Consultative Committee Guideline: State Significant Projects January 2019* (NSW Government, 2019) (or its latest equivalent version).

8.4.5 Independent Environmental Auditing

Consistent with the reporting requirements of the *Standard Conditions for State Significant Development Mining Projects August 2018* (NSW Government, 2018c), Malabar will commission an independent environmental audit of the Project within one year of the commencement of any Development Consent, and every three years after or at an alternative interval, as required by any Development Consent for the Project.

Upon completion of the independent environmental audit, Malabar will submit a copy of the independent environmental audit and its responses to the DPIE.

8.4.6 Other Reporting

Annual Return

A summary of the results of any monitoring required by an EPL, granted under the PoEO Act, for the Project (including a register of any complaints) and a Statement of Compliance will be provided in Annual Returns and submitted to the EPA.

EPBC Act Approval – Annual Reporting

Malabar will prepare annual reports assessing compliance with relevant conditions of an EPBC Act approval for the Project, as required.

Greenhouse Gas Reporting

The Project is anticipated to trigger the current NGER Act reporting threshold during the Project life, based on the Scope 1 and 2 greenhouse gas emission estimates provided in Appendix J. If required, Malabar will report relevant energy use and greenhouse gas emissions associated with its activities.

Community Complaints Register

A community complaints register will be maintained for the Project. Complaints and subsequent actions undertaken will be reported in the Annual Review and on the Malabar website.