AGL Loy Yang Mine
Sustainability Report 2015-2016

Date: 27 March 2017

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1. Introduction

This Sustainability Report[1] has been prepared to comply with a notice received under section 26 of the *Mineral Resources (Sustainable Development) Act 1990*. This Sustainability Report relates to the AGL Loy Yang mine over the 2015/16 financial year.

The AGL Loy Yang Mine

The AGL Loy Yang Mine is situated in the Latrobe Valley approximately 160 km east of Melbourne. The AGL Loy Yang Partnership (AGL Loy Yang) currently owns the Loy Yang Mine, which provides coal to the 2200 MW Loy Yang A Power Station (also owned by the AGL Loy Yang Partnership), the 1050 MW Loy Yang B Power Station (owned by ENGIE), and other minor customers. AGL Loy Yang Mine is one of Australia's largest open cut mine with an annual nominal output of 30 million tonnes of brown coal and 6-8 million cubic metres of overburden and waste interseam (soil that overlies the coal seams).

The Open Cut Mine itself currently occupies an area of 600 ha and has a depth of 180 metres, is 4 km long and 2.5 km wide at its widest. An external overburden area is currently being filled to the south of Bartons Lane and occupies with plans to commence in pit overburden placement within the Mine from mid-2017.

Operations continue 24 hours a day, 365 days a year. Coal is fed directly to the power stations and other customers via conveyor belt systems, which includes up to 18 hours of reserve supply held in the 80,000t Raw Coal Bunker (RCB).

The Loy Yang Mine was initially opened up near the outlet in the southern area of the mine, with excavation developing in a north easterly direction. Excavation is now being developed in an easterly direction. In the future, excavation will swing further to the south.

Mine operations use Bucket Wheel Excavators (BWE) (or dredgers), tripper stackers, mobile plant and conveyor systems to dig and transport coal and dispose of overburden and inter-burden materials.

Operation of the entire AGL Loy Yang Mine facility is monitored via the Mine's Control Centre located at the Mine Administration Offices. The Mine Administration area includes a number of offices, depot, storage and workshop buildings all located on the south side of the Open Cut and are occupied by a variety of mining personnel and site based contractors.

The Infrastructure, Civil and Environmental (ICE) Group provides essential infrastructure services to the entire site, including Loy Yang B and the numerous contractors established on site. Their services include low quality and high quality water, sewerage, drainage, ash disposal system and roads.

Between the commencement of mining in 1982 and 30 June 2016 the area disturbed by mining is approximately 1,200 ha (including 245 ha already rehabilitated). The area of the external overburden dump is approximately 665 ha (of which 282 ha has been rehabilitated). The final area of the mine will be approximately 2,200 ha, and the final external dump 850 ha.

The open cut operations are covered by Mining Licence (MIN) 5189 and a Work Plan approved in May 1997 (which has been subject to minor variations). The area covered by MIN 5189 is 4,561.4 ha. The Loy Yang A and B Power Stations are located on an area excluded from MIN 5189.

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[1] In addition to this Sustainability Report, AGL annually publishes a company-wide sustainability report to provide a transparent account of our performance in relation to the social, environmental and economic challenges facing AGL and the energy industry. For more information on AGL's company-wide sustainability approach and performance over FY2016, visit: http://agl2016.sustainability-report.com.au/

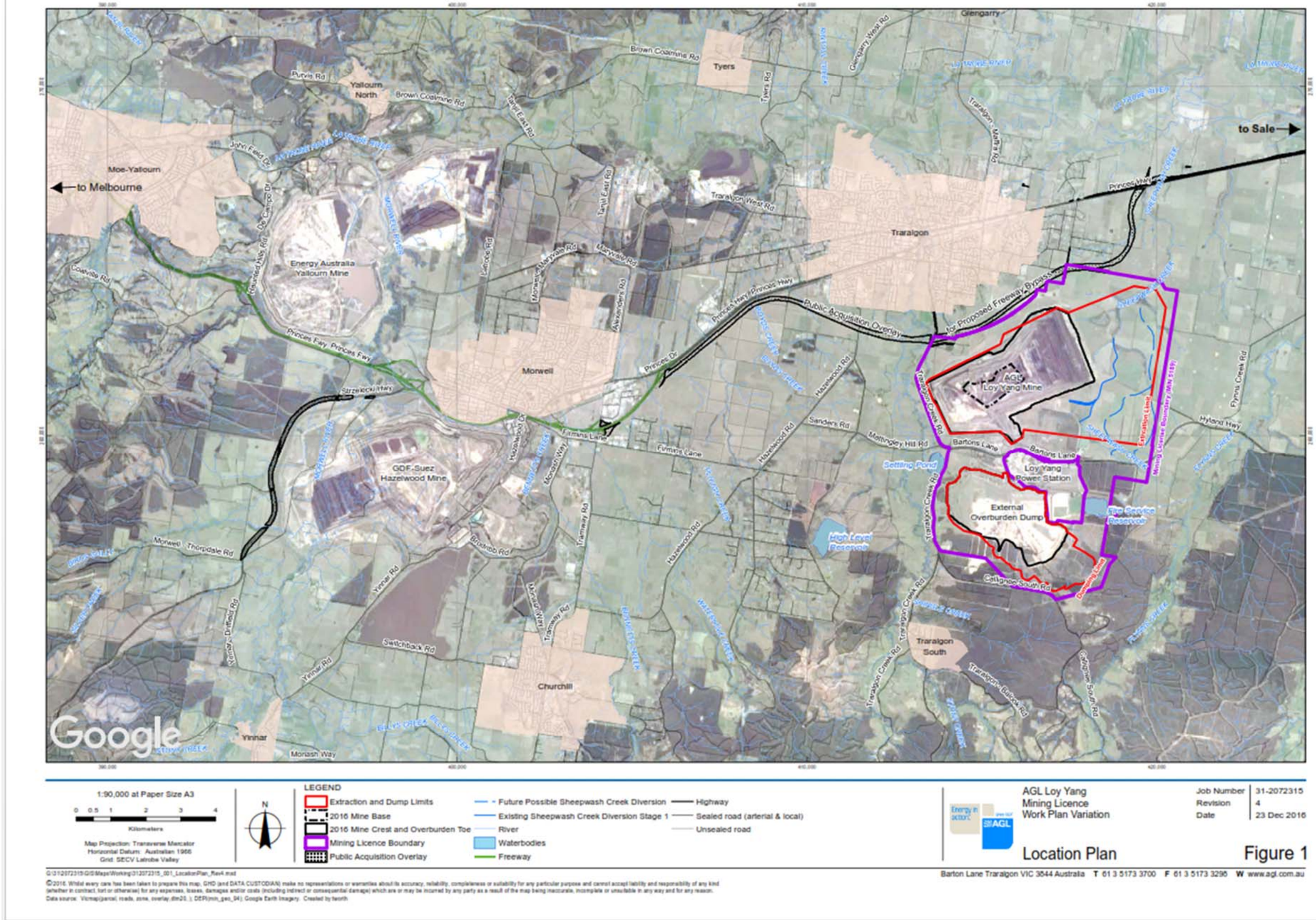

Figure 1 Loy Yang Mine Location Plan

2. Economic benefits of the operation

AGL Loy Yang Mine is Australia's largest open cut mine with an annual nominal output of 30 million tonnes of brown coal and 6-8 million cubic metres of overburden and waste interseam (soil that overlies the coal seams).

The Mine supplies coal that fuels the two adjacent Power Stations, namely:

- Loy Yang A Power Station operated by AGL Loy Yang.
- Loy Yang B Power Station operated by ENGIE Loy Yang B.

Power stations currently fed by the Loy Yang Mine provide approximately 50% of the electricity generated in Victoria. The mine and these two power stations have been identified as critical infrastructure for the State of Victoria.

AGL Loy Yang currently employs approximately 600 FTE and 300 contractors. It is estimated that Loy Yang Mine contributes $10 million per week to the local community through procurement, labour and the hiring of contractors.

3. Environmental management

3.1 Overview of environmental management plan

The Loy Yang Mine Environmental Management Plan (EMP) covers operations on MIN5189 and includes details on the following:

- Mining operations, organisations, individuals and associated processes at AGL Loy Yang Mine;
- Water treatment operations
- Waste storage and disposal operations, including ash waste and non-mineral waste
- Rehabilitation activities

The EMP does not include the power station operations as they are excluded from MIN5189.

The objective of the EMP is to outline the systems to manage environmental systems within the Loy Yang Mine.

The EMP identifies the environmental management structure and responsibilities, approvals and licencing requirements, reporting and training undertaken and property description. The EMP also describes the activities undertaken on site and the infrastructure onsite. The potential environmental impacts and the control and monitoring measures undertaken for each aspect of Loy Yang Mine's operation are described in the EMP and outlined in detail in separate management plans referenced in the EMP. Review of the environmental control systems is undertaken as part of the EMP.

Loy Yang Mine also has an Environmental Management System (EMS) that is designed to manage Loy Yang Mine's environmental obligations in a detailed, systematic, planned and documented manner.

The Loy Yang Mine EMS:

- serves as a tool to improve environmental performance
- provides a systematic way of managing environmental activities
- provides order and consistency to address environmental events through the allocation of resources, assignment of responsibilities and on-going evaluation of practices, procedures and processes
- consolidates environmental activities and responsibilities across the site, providing references to procedures, registers and policy documents
- focuses on continual improvement of the system.

The EMS is a critical component of Loy Yang Mine's environmental and social responsibility activities and underpins its on-going environmental performance.

In addition to organisational drivers which underpin the development of the EMS, the Environment Protection Authority of Victoria (EPA) also requires the establishment and implementation of an EMS as part of its accredited licensing provisions.

3.1.1 Key Environmental Risks

Table 1 below outlines the aspects of the environmental that have been identified as being potentially impacted by the activities undertaken at Loy Yang Mine. The key commitments and control strategies utilised at Loy Yang Mine are also outlined in Table 1.

Table 1 Summary of Loy Yang Mine Environmental Commitments and Control Strategies

Aspect	No.	Key Commitment	Control Strategies
AIR	1.	No loss of visual amenity due to air emissions	EPA licence #11149 limits Dust Trigger Action Response Plan Operational Controls for Dust Suppression Field Monitoring program (online monitoring)
NOISE	2.	No impact offsite from mining activities	Operational procedures Monitoring program
WATER	3.	No offsite discharge of water containing contaminants	EPA licence #11149 limits Operational management procedures Online monitoring program
	4.	Land disturbance does not result in adverse discharge to surface or groundwater	Strategic Mine Planning process Approved Work Plan Variation
	5.	Maintain ash containment systems to prevent contamination to surface and groundwater	EPA Licence #11149 limits Groundwater monitoring network and program
	6.	Maintain environmental flows in Traralgon Creek	EPA licence #11149 limits
	7.	No exceedance of SWOP licence conditions	Gippsland Water waste monitoring program Online controls to stop pumps if turbidity & pH exceeded Trigger Action Response Plan
	8.	Collect and use artesian water as a resource	SRW Licenced extraction Regional subsidence monitoring Groundwater modelling Monitoring monthly usage SRW usage report
	9.	Dosing system to treat water before discharge from site	EPA licence #11149 limits Online monitoring of discharge Automated treatment systems
	10.	Maintain adequate water supply	Bulk Entitlement rights (as granted by Minister) Review operation and liaison with Water Authorities for Lake Narracan
	11.	No negative impact on groundwater outside the boundary of the attenuation zone	EPA licence #11149 limits Monitoring bores and modelling

Aspect	No.	Key Commitment	Control Strategies
			Groundwater monitoring program every six months
WASTE	12.	Appropriate waste disposal	EPA accredited waste disposal contractors used Regular "housekeeping" audits Routine maintenance
REHABILITATION	13.	Weed control	Operational procedures
	14.	Maintain topsoil resource	Long Term Rehabilitation programs Topsoil stripping / stockpiling plans
	15.	Use appropriate rehabilitation techniques	Work Plan Variation Plantation management plan Long Term Rehabilitation programs Land Rehabilitation Manual
	16.	Maintain progressive rehabilitation	Work Plan Variation Rehabilitation standards / audit protocols Long Term Rehab Strategy Strategic Mine Rehabilitation Plan
LAND	17.	Discharge of wastewater to land must not adversely affect the land.	EPA licence #11149 limits Monitoring and design program
	18.	Land disturbance does not result in adverse discharge to land	Work Plan Variation Rehabilitation Strategic Mine Planning process
	19.	Maintain ash containment systems to prevent contamination to land	EPA licence #11149 limits Placement of ash as per design Leachate return systems to ash pond Containment practices
	20.	Control soil erosion	Work Plan Variation Operational procedures Land management Rehabilitation
	21.	Minimise acid mine drainage	Clay capping Dump management plan Adjusted pH of final effluent as required to meet EPA regulations Online monitoring & alarms Retention ponds/ drainage flows managed
CULTURAL HERITAGE	22.	Recognition of Archaeology and Heritage native title and reclamation of land parcel	Traditional Owner Settlement Act 2010 – S31 deed agreement CHMP for mining areas

Aspect	No.	Key Commitment	Control Strategies
	23.	Gain consent for destruction or removal of European and Aboriginal Archaeology and Heritage sites	Operational procedure Archaeological surveys – survey and recovery process
ENVIRONMENTAL AWARENESS	24.	Ensure all site personnel know their environmental commitments and responsibilities	Integrate environmental awareness into training package EMS work developing procedures Succession planning Appropriately trained contractors used on site JSEAs, RA's undertaken before activities
COMMUNITY	25.	Community support and no negative perception of AGL LY activities	Community consultation (through activities such as the Environmental Review Committee) Stakeholder Management Process EPA licence requirement to undertake reporting Reports to the Community, Annual Sustainability Report, Public Forums, etc.
ENVIRONMENTAL MANAGEMENT SYSTEM	26.	Compliance with EMS	Compliance calendar Monitoring program Internal and EPA Audits Review

Table 2 below outlines the environmental monitoring undertaken at Loy Yang Mine. For each of the identified environmental aspects monitoring is undertaken to determine the impact on the environment from the operational activities at Loy Yang Mine. The timing, frequency and responsibility for each monitoring activity is also outlined in Table 2.

Table 2 Loy Yang Mine Environmental Monitoring

Monitoring Type	Monitoring Locations	Timing and Frequency	Responsibility
Air	Ambient air monitoring as part of the Latrobe Valley Air Monitoring Network Deposition gauges at 2 locations (D7, D8) outside the site boundary and nearby sensitive receptors (e.g. Flynn Farm) Visual inspections from elevated viewing point Particulate monitoring at numerous (currently 5) locations (S1 – S4 and 'Stuckeys'), sensitive receiver	Monthly site walk around during operating hours Monitoring following complaints Regular audits of environmental performance Visual inspections weekly, or during dry, windy weather events. Particulate monitoring – continuous recording of PM10 concentration.	Scientific Services Manager Infrastructure, Civil and Environmental Manager Environmental Superintendent Environment Business Partner

Monitoring Type	Monitoring Locations	Timing and Frequency	Responsibility
	locations, or appropriate representative locations. Odour survey along the boundary of the premises	Dust deposition – continuous, with monitors replaced monthly. Regular audits of environmental performance – once annually as part of an annual non-statutory audit.	
Noise	Unattended Noise logging when required (previously undertaken at the six sensitive receiver locations: Whitelaws track, Liddiard Road (Hilltop Park), Chester Park Drive, Stuart Creek, Traralgon Creek Road, Sagars Road).	Monthly site walk around during operating hours Monitoring following complaints Regular audits of environmental performance	Scientific Services Manager Infrastructure, Civil and Environmental Manager Environmental Superintendent Environment Business Partner
Water	Surface water monitoring at surface water discharge locations - Discharge points (L150, L160, L171) and upstream location L203 and downstream location L201 of Traralgon Creek. Visual inspection of surface water/stormwater drains and discharge points. Effectiveness of leachate collection and pump back system Visual inspection - stormwater management systems. Visual inspections of OB dump surface. Regular statutory audits Regular observation Land and Drainage Systems Groundwater bore monitoring and modelling for groundwater plume Background Water Monitoring Irrigation site runoff and site boundary runoff monitoring	On line sampling at non-licenced discharge point following an event. On line and sampling at licenced discharge points Locations L203, L171, L201 and L160 sampled weekly when flowing. Visual inspection – once per week and after each significant rain event. Six monthly for groundwater bores. Recording of all spillage incidents on Incident Register.	Infrastructure, Civil and Environmental Manager Environmental Superintendent Environment Business Partner

Monitoring Type	Monitoring Locations	Timing and Frequency	Responsibility
Ash	Visual inspections of leached ash disposal areas.	Recording of all incidents on Incident Register. Regular audits	Environment Business Partner Infrastructure, Civil and Environmental Manager Environmental Superintendent
Hazardous Materials	EPA Transport Certificates Monitoring of litter complaints and inspection of area.		Environment Business Partner Infrastructure, Civil and Environmental Manager Environmental Superintendent

3.2 Activities and monitoring outcomes 2015 - 16

During the 2015-2016 period the following environmental management activities were undertaken:

- Dust suppression through placement of paper mulch within the mine, water sprays within the mine, water trucks on unsealed roads;
- Weed spraying;
- Water treatment before discharge offsite through polymer and caustic dosing; and

Table 3 below outlines the water monitoring results at each discharge point from July 2015 and June 2016. The exceedances of the target limits observed at L160 are discussed in this section.

Table 3 Loy Yang Mine 2015-2016 EPA Licence Limits vs Actual Discharge Water Qualities

Sampling Point		Suspended Solids (mg/l)	Total Dissolved Solids (mg/l)	Turbidity (NTU)	pH	Colour (Pt/Co)
L160 – EPA Licence Limit	Maximum	40	700	40	6 – 8.5	70
	Median	20	500	20		50
L160 - Combined SW and NW floc ponds discharge	Maximum	81	300	80	7.6	210
	Median	16	200	13	7.3	140
L171 – EPA Licence Limit	Maximum	40	700	40	6 – 8.5	70
	Median	20	500	20		50
L171- Settling pond & O/B runoff ponds discharge	Maximum	11	490	35	8.0	60
	Median	5	400	3.3	7.2	20

°C = Degrees Celsius

mg/l = Milligrams/litre

NTU = Nephelometric Turbidity Units

pH = pH units

PtCo = Platinum Cobalt Units

Table 4 Total Groundwater Pumped and Collected 2015-2016

Month	Pumped ML	Pumped to LYPS ML	Collected %
July	1135.6	1104.8	97.3
August	1037.9	1022.9	98.6
September	1006.9	985.8	97.9
October	878.8	859.3	97.8
November	749.8	738.9	98.5
December	1060.6	1058.0	99.8
January	986.7	938.9	95.2
February	980.3	921.3	94.0

Month	Pumped ML	Pumped to LYPS ML	Collected %
March	1109.9	1089.3	98.1
April	997.7	983.9	98.6
May	1053.9	1036.3	98.3
June	994.3	962.2	96.8
Total	11992.4	11701.6	97.6

Table 5 Groundwater Pumped M2B, M2C and Traralgon (ML)

Month	Traralgon	M2C	M2B	Total Seepage
July	878.4	257.2	0	53.6
August	802.2	235.7	0	54.1
September	723.5	283.5	0	59.4
October	619.3	259.5	0	55.7
November	521.9	227.9	0	53.8
December	805.0	255.7	0	59.3
January	744.2	242.5	0	56.0
February	730.7	249.6	0	53.7
March	824.6	285.2	0	61.3
April	771.4	226.3	0	54.3
May	830.9	223.1	0	59.0
June	794.5	199.8	0	55.8
Total	9046.7	2946.0	0	675.9

4. Rehabilitation

4.1 Final Concept Rehabilitation Plan

The rehabilitation goals for Loy Yang Mine area are:

- Cover all exposed coal with non-combustible inert material and vegetated where applicable
- Create a geotechnical stable landform
- Safe to humans and wildlife
- Non-polluting
- Create a land form that sustains post-mining land use.
- Complete the majority of the rehabilitation works within 15 years of closure; with a subsequent period of monitoring and maintenance as required.

Loy Yang Mine is committed to the progressive and final rehabilitation of the Loy Yang open cut mine. Loy Yang Mine recognises that there are challenges in achieving the key objectives as outlined above. As a result Loy Yang Mine commits to work with government bodies, researchers and the operators of the Yallourn and Hazelwood mines to better understand the risks.

4.1.1 Final Closure concept and closure plan

The closure concept is to partially flood the final open cut void to form a lake, return the remaining disturbed land to agricultural use, and develop native flora/fauna vegetation corridors that connect to the remaining bush reserves adjacent to the Mining licence area. Current undisturbed land will continue to be used as pasture/grazing land. The closure concept is shown in Figure 2 (Figure 19b of the Work Plan Variation).
AGL Loy Yang is committed to achieving a final closure concept over the Mining Licence area with the following rehabilitation goals:

- Reduce the mining footprint
- Reinstate a natural ecosystem similar to that which existed pre-mining, over parts of the area,
- Reinstate previous land use over parts of the area, and develop a lake for the remainder of the area.

AGL Loy Yang is committed to rehabilitating some land immediately adjacent to the Mining Licence area within the final rehabilitation concept.

At this point in time, it is AGL's intention that the land will remain in private ownership at the completion of mining with limited public access. Land will be made available through leasing to the public. AGL Loy Yang commits to flooding the mine as soon as practicable after the completion of mining and earthworks associated with rehabilitation.

4.2.3 Community Consultation

AGL Energy has adopted company-wide principles that guide our approach to engaging with stakeholders about rehabilitation. These principles include:

- **Transparency** – AGL will provide stakeholders with information to enable better understanding of the issues related to rehabilitation of AGL sites.
- **Engagement** – AGL will undertake ongoing engagement with stakeholders to ensure a diverse range of views are considered in rehabilitation plants and processes.
- **Accountability** - AGL will publish relevant information at least annually to enable external assessment of rehabilitation activities.

Consistent with these AGL-wide rehabilitation principles, AGL Loy Yang has adopted a set of rehabilitation principles to provide a framework for planning and undertaking rehabilitation activities and for setting appropriate objectives and targets. One of the rehabilitation principles adopted by AGL Loy Yang is “regular consultation to be conducted with stakeholders during the rehabilitation planning process and their interest taken into account”. The local community is considered to be a stakeholder of the final closure plan and consultation on rehabilitation planning will be included in the community engagement plan as outlined in Section 5.

Figure 2 Final Closure Plan

4.2 Progressive rehabilitation milestones

Progressive rehabilitation will take into account future mining development and designated final land uses to maximise the efficient use of resources. Progressive rehabilitation of the coal mine is carried out as and when final pit batters and floor areas become available, that is, are no longer required for production or support infrastructure, such as flood protection, fire water infrastructure and power supply purposes.

Loy Yang Mine's plans for the progressive rehabilitation of the coal exposed in the final slopes mine (above the overburden fill level) is determined by the on-going access, infrastructure layout and geotechnical stability of the coal batters. Loy Yang Mine's experience with coal slope rehabilitation shows that there are competing issues still to be resolved in determining the design for progressive coal slope rehabilitation. In order to assist in resolving some of these technical issues, Loy Yang Mine is conducting a comprehensive number of trials of rehabilitation options on sections along the west and north western permanent slopes. The trials will assist in determining the final rehabilitation design (inter-slope angle, clay and topsoil coverage, infrastructure layout, drainage and maintenance) for the existing slopes and maintenance requirements.

For progressive rehabilitation all future permanent batters will be designed for an overall slope of 1V:3H, or flatter, as measured from top of mine crest to the toe at the Base of Mine (BoM). The results from the aforementioned trials will be used to inform the rehabilitation design for these permanent batters on the northern, eastern and southern slopes (about 14 km).

In assessing the acceptability of rehabilitation objectives, indictors and completion criteria Loy Yang Mine has had regard to the hierarchy for mine rehabilitation. AGL Loy Yang has selected strategies that are listed higher in this hierarchy in preference to those listed lower. The hierarchy in order of decreasing capacity to prevent or minimise environmental harm is:

1. Avoid disturbance that will require rehabilitation
2. Reinstate a "natural" ecosystem as similar as possible to other existing ecosystem in the region
3. Reinstate previous land use (e.g. grazing or plantation)
4. Develop lower value land use
5. Leave the site in an unusable condition or with potential to generate future pollution or adversely affect environmental values.

There are 9 domains within the closure concept plan. The domain closure indicators and acceptance criteria for each domain are summarised in **Error! Reference source not found.**. Within the acceptance criteria defined by this rehabilitation plan certification is to be read as self-certification by Loy Yang Mine.

Table 6 Closure domain indicators and acceptance criteria

Closure Domain	Closure Indicators	Closure Acceptance Criteria
Unaffected land	Continuance of existing pasture, grazing land use Develop visual screens along the southern edge of the proposed Traralgon by-pass	Certification that vegetation type and density are suitable for visual screening.
Waterways	Native species Revegetation Water quality Flooding	Certification that vegetation type and coverage is suited to the regional assessment of waterway requirements. Certification report on vegetation self-supporting over a continuous 3 year period. Certification of water quality meeting EPA guidelines within the waterways over a continuous 3 year period. Certification that water ways will not overflow in 1:100 ARI event.
Overburden dumps (external)	Return to pasture, grazing land use	Certification that pasture grasses are established and self-sustaining Certification that weed management is successful.
Overburden batters	Stable batters	Certification that slopes are safe and stable in the long term. Erosion restricted to less than 10% of exposed area. Certification that pasture grasses are established and self-sustaining. Certification that weed management is successful.
Coal batters above lake water line	Stable batters	Certification that slopes are safe and stable in the long term. Certification that erosion rates meet regional expectations. Certification that pasture grasses are established and self-sustaining with over 70% coverage. Certification that weed management is successful. Certification that exposed coal in the batters is covered with overburden to a minimum depth of 0.5 m.
Coal batters below final lake water level	Stable batters Removal of infrastructure	Certification that slopes are safe and stable in the long term. Certification that groundwater pumps and associated infrastructure can be removed from the batters progressively as lake water level rises.
Pit floor (exposed)	Floor coverage Removal of infrastructure	Certification that exposed coal in the pit floor is covered with overburden to a minimum depth of 0.5 m. Certification that groundwater pumps and associated infrastructure can be removed from the pit floor.

Pit void (Lake)	Stable batters Minimal erosion due to wave action	Certification that slopes are safe and stable in the long term. Certification of long term stability of the beach areas and lower batters.

4.3 Overview of rehabilitation activities 2015 - 16

Table 7 below outlines the land disturbance and rehabilitation during the reporting period. All rehabilitation works include the shaping of the batter, placement of fill and topsoil and revegetation.

Table 7 2015-2016 Land Disturbance and Rehabilitation

2015-2016 Land Disturbance and Rehabilitation	
Pits	872.5 ha
Overburden and waste rock dumps	296 ha
Total current area of land disturbed	1168.5 ha
Pits 2015-2016	68.08 ha
Overburden and waste rock dumps	6.4 ha
Total area of land disturbed in 2015-2016	74. ha
Area rehabilitated in 2015-2016	14.8 ha
Percentage of the area rehabilitated in 2015-2016 that was revegetated with local native vegetation	0%

Figure 3 below displays the rehabilitation undertaken at Loy Yang Mine in the reporting period and since mining commenced.

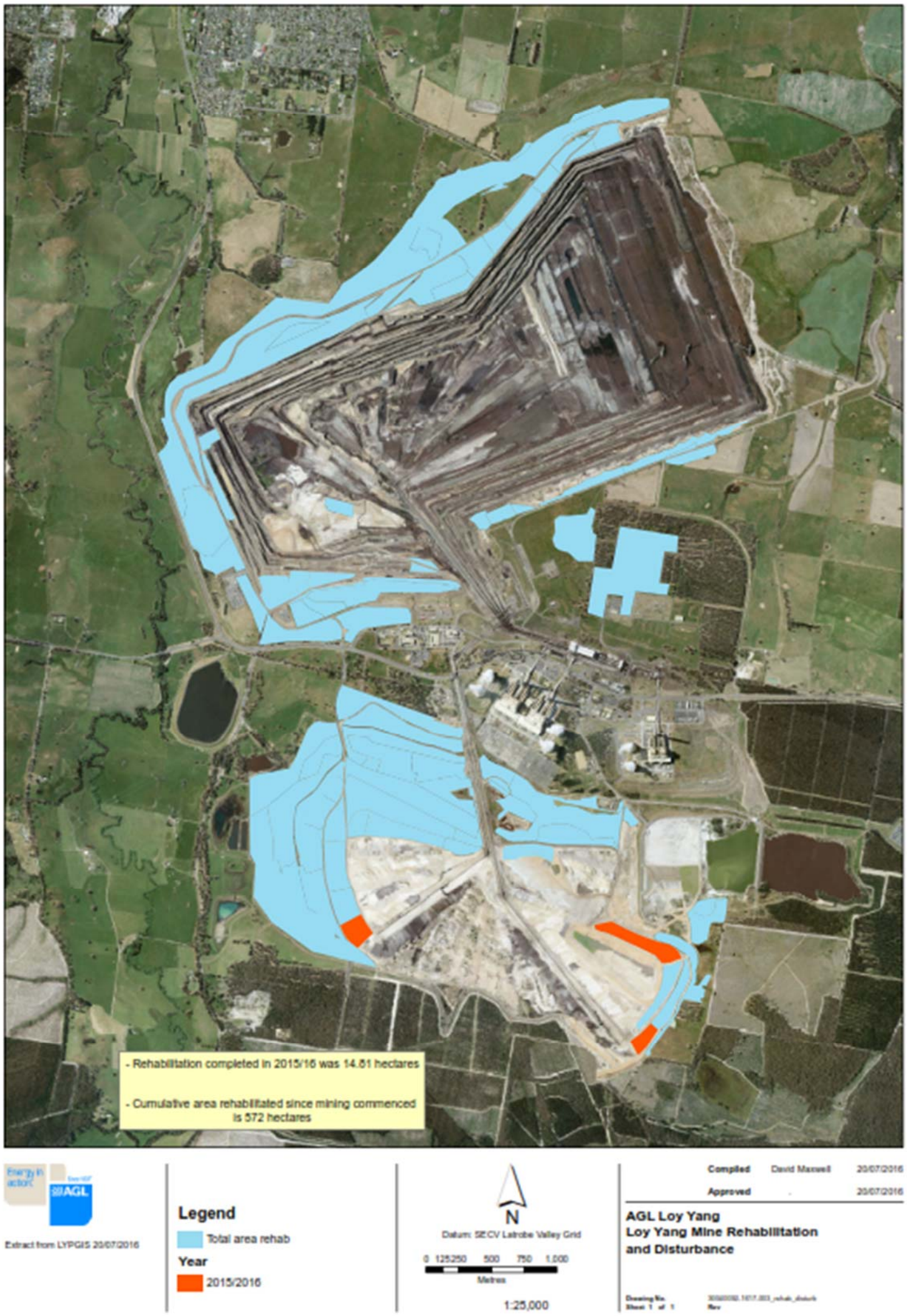

Figure 3 Rehabilitation at Loy Yang Mine

5. Community engagement

5.1 Overview of community engagement plan

For AGL, authentic community engagement will ensure high quality services and operations that understand and respond to stakeholder interests.

In delivering high quality engagement practices which identify, seek to understand, and respond to the interests, concerns, risks and interdependencies of its stakeholders, AGL will make better quality decisions, and will aim to exceed its regulatory requirements for engagement.

AGL Energy follows the approach of the IAP2 International Association for Public Participation Australasia Quality Assurance Standard for Community and Stakeholder Engagement.

Ensuring individuals affected by a decision have input into that decision enables better quality decisions to be made, and helps to ensure that everywhere AGL operates, communities are better off as a result of AGL's activities.

AGL's key commitments include the points listed below. A move towards a standard Community Engagement practice is across AGL's fleet is ongoing.

- Knowing where you stand – we combine local presence, knowledge and research to understand the communities in which we operate.
- Using a range of communication channels that suit community needs – we seek to understand how stakeholders like to be informed and involved in our projects.
- Keeping it local – we take opportunities to employ local people, use locally sourced products, involve local communities and build local relationships. We seek feedback from stakeholders to improve the way we work together.
- Showing not telling – we provide opportunities for stakeholders to see and experience how we operate, including site tours, equipment inspections and community engagement activities.
- Doing what we say we'll do – we build trust by delivering on our promises. We record, measure and report on our commitments to ensure we are keeping them.
- Building internal capacity – we review and improve our communication activities so our people are informed, engaged and understand the commitments we make.

In line with AGL's overarching Community Engagement Policy and standards, AGL Loy Yang is currently undertaking consultation with key stakeholders regarding the appropriate model to oversee its community engagement activities. This includes an evaluation of AGL's Community Dialogue model which is the general model proposed for all AGL assets. Currently this work is undertaken by the Environmental Review Committee (ERC).

Alongside this, AGL has placed a strong emphasis on diversity and inclusion. To develop and strengthen relationships with Aboriginal and Torres Strait Islander (ATSI) peoples and their local communities, AGL is undertaking preliminary work, including consultation with Reconciliation Australia, to establish a formalised, strategic Reconciliation Action Plan to

support engagement. Consultation will be undertaken with the Gunaikurnai people to ensure the local community is engaged and empowered during the planning and implementation stages of this strategy, and any operations of AGL Loy Yang which may impact that community.

AGL Loy Yang will clearly outline as part of its community engagement what is and is not negotiable. While the majority of the operations of the Loy Yang mine must meet mandated requirements set out in other areas of the Work Plan, the community is empowered to decide how it wishes to provide and receive communication from AGL Loy Yang around its operations.

AGL Loy Yang's key commitments to community engagement are provided in Table 8

Table 8 AGL Loy Yang's Key Commitments to Community Engagement

Area of Focus	Purpose and Outcome	Approach
Community Engagement is an integral part of operations	AGL Loy Yang will ensure that the community is engaged early, involved in the decision making process wherever possible, and made area of any potential impacts. Community expectations will be understood and managed.	The AGL Loy Yang Community Engagement Plan will detail objectives, opportunities and outcomes of community involvement. AGL Loy Yang will capture all information regarding its stakeholders in its stakeholder register, Consultation Manager, and engage with stakeholders per their level or interest, involvement or impact. AGL Loy Yang will offer opportunities to engage interested and relevant stakeholders. The Community Relations Manager (CRM) will support all community engagement activates and will identify opportunities to build local relationships. The CRM will undertake a periodic review of the Community Engagement Plan and the Stakeholder Register to ensure both are current and reflect changing requirements. Community engagement will be supported by Operations Management and the relevant Business Partners on site, along with the broader Government and Community Relations Team within AGL Energy. Communications will clearly state the intent and issues to be dealt with, and will detail what the community is being asked to participate in and why.

Area of Focus	Purpose and Outcome	Approach
Community attitudes and expectations are identified	AGL Loy Yang will make every effort to be a legitimate and trusted partner	Annual public engagement forums are held, and open to any interested stakeholder. AGL Loy Yang will support community groups and initiatives through its Community Partnerships Program. AGL Loy Yang will identify areas of opportunity to support community groups and initiatives outside of the program where it aligns with AGL's strategic priorities. Briefings will be provided to key community groups and interested parties on topics either identified by the community or by AGL Loy Yang, where the topic may impact or be of interest to the community. AGL Loy Yang will support a Community Monitor survey to be undertaken annually. AGL Loy Yang will further develop its external website at agl.com.au/loyyang AGL Loy Yang is committed to a health and safety culture that serves in the best interests of its staff and contractors, the broader communities, and complies with all environmental requirement and incident response procedures. AGL Loy Yang will ensure stakeholders have the opportunity to be informed of potential or actual impacts of its operations. AGL Loy Yang will implement its emergency response plans in the case of an environmental or safety incident.
Social impacts	AGL will identify and communicate potential impacts to stakeholders. A complaints management system is in place with regular reviews of emerging issues.	AGL Loy Yang will identify potential impacts and recommend management and / or mitigation strategies. AGL Loy Yang will offer information to interested stakeholders and briefings to affected landowners and neighbours. initiatives AGL Loy Yang will seek to minimise intrusion and disruption to stakeholders, existing land use activities and existing infrastructure.

Area of Focus	Purpose and Outcome	Approach
		AGL Loy Yang will conduct all activities in accordance with the relevant approvals. Safe works practices will be followed and ensure the site does not pose any health and safety risks for those onsite, neighbours and those passing by. AGL's Community Complaints Policy and Management Procedures will be followed.
Evaluation and measurement of effective stakeholder engagement	AGL Loy Yang will continue to identify areas for improvement in its practice of community engagement.	Evaluate the communication and engagement activities against quality, cost and timeliness of consultation. E.g. • Communicating stakeholder and community engagement feedback to identify areas of improvement and success • Participants evaluation of consultation activities to include consulting key stakeholders for their feedback • Measuring feedback over time to demonstrate if consultation has resulted in an increase in the percentage of people who say AGL listens to their view or who have expressed satisfaction with AGL Community Monitor survey • Regular, formal review to determine successes and identify areas for improvement • Measuring the timeliness of preparation of communications resources and delivery of them as well as community satisfaction with the standard of information provided • Refine engagement techniques and practices to increase community involvement as required.

AGL Loy Yang employs a comprehensive suite of communication and engagement tools to identify the attitudes, expectations and concerns of key stakeholders and the wider community. This information is used to inform key decisions made by the business.

The IAP2 Spectrum of Public Participation recognises five streams of engagement – Inform, Consult, Involve, Collaborate and Empower.

Methods for identifying attitudes, expectations and concerns are outlined in Table 9.

Table 9 Community and Stakeholder Engagement Methods

Method and/or Technique	Inform	Consult	Involve	Collaborate	Empower
Advertising	✓				
Advisory Committees	✓	✓	✓	✓	
Briefings	✓	✓	✓		
Community fairs/events	✓	✓	✓		
Community meetings	✓	✓	✓		
Community reference groups	✓	✓	✓	✓	
Discussion groups and workshops	✓	✓	✓		
Displays	✓	✓			
Education and awareness programs	✓	✓	✓		
Fact sheets	✓	✓			
Media stories	✓				
Newsletters	✓				
One on One interviews or meetings	✓	✓	✓	✓	
Open days	✓	✓	✓		
Policy actions teams	✓	✓	✓	✓	
Survey research		✓			

5.2 Stakeholder Categorisation

The Community Engagement Plan identifies a stakeholder as an individual, organisation or group who is affected by the operations of AGL Loy Yang.

Stakeholders are categorised using the following definition, and communication is targeted to each category depending on their identified requirement and interest.

- Stakeholders directly impacted or involved.
  - Individuals, businesses, government agencies, community or social groups who are directly impacted by, or involved in, the operation of the mine.
- Stakeholders with a direct interest.
  - Individuals, businesses, government agencies, community or social groups who have a direct interest in the operation of the mine.
- Stakeholders of standing.
  - Individuals, businesses, government agencies, community or social groups of standing in the local community.
- Broader stakeholders, indirect stakeholders.
  - Individuals, businesses, government agencies, community or social groups who are based in the region and who are not impacted directly by, but may have an interest in, the operation of the mine.

5.2 Overview of community engagement activities 2015-16

Table 10 Community Engagement Activities 2016-2016

Activity	Date	Activity promotion or advertising	Stakeholders involved
CCC forums associated with Hazelwood Mine Fire Inquiry	Various		Various
Environment Victoria and Australian Conservation Foundation site visit	29/07/2015	Mine tour via Perimeter Rd	EMV, AGL
Voices of the Valley site visit	15/07/2015 29 /01/2016	Mine tour via Perimeter Rd	20 Voice of the Valley members AGL Loy Yang
Morwell Neighbourhood House site visit	3/09/2015	Mine tour via Perimeter Rd	Approximately 20 community reps, AGL representatives
Exhibition of fossilised tree trunk from Loy Yang at Latrobe Regional Gallery (LRG)	1 August - 20 September 2015	Exhibition held over seven weeks at LRG. More than 3650 visitors to the space during this time	LRG, community members
Participation in Living with Bushfire Community Conference	9/10/2015	Attend conference at Federation University Churchill campus	AGL representatives, community members, various other agencies

Activity	Date	Activity promotion or advertising	Stakeholders involved
Loy Yang Learning centre hosted 80 community reps on site to discuss plans for building of Morwell Technical School	22/10/2015	Gippsland Community Leadership Program Tech school boot camp - discussion of ideas	80 reps from across the community, AGL representatives
Discussions with PowerWorks regarding regional carbon transition project			
Meetings with The Smith Family to discuss renewal of partnership contract. Media and stakeholder launch held.	06/08/2015 07/10/2015 05/11/2015 07/12/2015 10/12/2015	Kurnai Education Hub Pilot (KEHP) evaluation KEHP & LY catchup Discussion around renewing KEHP/LY partnership KEHP & LY Prep discussions re: Partnership launch Partnership launch, WIN news and LV Express	Representatives from The Smith Family, Kurnai College, Baw Baw Latrobe Learning and Employment Network, WIN News, the Latrobe Valley Express, and AGL.
Environment Review Committee meetings	17 Aug 2015 16 Nov 2015 17 Dec 2015 – ERC Community Engagement Conversation (& end of yr celebration) 29 Feb 2016 19 May 2016 24 May 2016 Community Forum		Environment Review Committee Members, AGL, community members
On-site launch of post-combustion carbon project at Loy Yang with government, industry, community and media	18/03/2016	Approx 60 attendees	CSIRO, BCIA and 15 x LY reps
Loy Yang GM attended meeting with shadow cabinet to discuss energy	15-Mar-16	Presentation to Shadow Cabinet	Shadow Cabinet members and staff, AGL

Activity	Date	Activity promotion or advertising	Stakeholders involved
policy and Loy Yang issues.			
Public Forum - Community forum held in the Latrobe Valley, hosted by the Environment Review Committee (ERC). (24/5) Topics to include environmental performance, mine workplan variation, rehabilitation, mine closure, HMFI and community engagement.	24/05/2016	WIN News, LV Express x 3 public notice adverts	Environment Review Committee chairman, 6 x LY representatives, external facilitator, DEDJTR rep x 1
The Smith Family and Kurnai College partnership year 8 tours approximately 140 students.	10/05/20 16 11/05/2016 18/05/2016	Approx 100 Yr 8 Kurnai students conducted tour of the LY Mine via Perimeter Rd	Kurnai College staff and students, AGL representatives
Gippsland community leadership program participants onsite including presentations from LY GM and ERC chairman.	29/04/2016	Gippsland community leadership program industry day. Approx 25 attendees	Environment Review Committee members, AGL representatives, community members

6. Compliance record

6.1 Reportable events and corrective actions

There were no Notice's or Reportable Events reported during the period.

7. Mine Stability

6.1 High level summary of Declared Mine Report

During the period two reports detailing the geotechnical and hydrogeological performance of Loy Yang Mine between 1 July 2015 and 30 June 2016 were prepared. This is in

accordance with the Loy Yang Mine Ground Control Management Plan (GCMP) and Department of Economic Development, Jobs, Transport and Resources reporting guidelines.

These reports are based on the results of the monitoring program as outlined in the GCMP and structured as mitigating controls for the geotechnical risks. This program included the following activities:

- Ground movement surveys based on pin network – June and December
- Monitoring of groundwater pressures for both mine batter stability and aquifer depressurisation
- Periodic inspections of mine domains (Fortnightly, monthly, and annually)
- Annual inspection and mapping of operating faces to record defects (mostly update crack / joint orientations)
- Dam inspections (daily, monthly, and annually)
- Repair and maintenance of cracks and other geotechnical issues

The reports detail performance of permanent batters, the mine operating face, mine floor, dams and the external overburden dump as well as providing a summary of other reports generated during the period.

A summary of findings, contained in the two reports are detailed below.

Aquifer depressurisation

- Traralgon and Morwell (M2B and M2C) aquifer pressures remained at acceptable levels from July to December 2015 across all mine domains.
- Morwell (M2C) aquifer pressures exceeded Trigger Level 1 by less than 5 m from January to June 2015, in a small area in the North East of the mine, due to mining, low flow rate and operational performance of nearby pump bores. Improved operation of pump bores in June reduced pressures and the issue has been resolved. There were no impacts outside of the mine operational areas.
- There were several outages of Traralgon pump bores during the year resulting in low and high level outages (Trigger Levels 1 and 2). These outage were a result of pump failures, planned cabling upgrades and lightning strikes. Recommissioning of pumps occurred as soon as possible and apart from one occasion Upper Traralgon aquifer pressures remained at acceptable levels. The aquifer pressure trigger occurred during May when Trigger Level 1 was exceeded by less than 5 metres in a small central mine floor area with no impact external to the mine operation.

- Total groundwater extraction (including seepage) during the July 2015 to June 2016 period was 12,668 ML, as summarised in Table 5. Extractions remained below the monthly licenced allocations for the Morwell and Traralgon Formation aquifers. Extraction including seepage for the July 2014 to June 2015 period was 13,116 ML and below annual and monthly licenced allocations.
- Operational performance for the Traralgon and M2C aquifer pump bores was 81% and 83.5% respectively for the reporting period.
- One new Traralgon pump bore was drilled on the southern batters of Block 2 during the year. Drilling and development of a new Morwell (M2C) pump bore on the northern batters of Block 2 was completed in September. No existing pump bores failed in the reporting period.

Geotechnical Performance

- There were six occasions when rainfall events results in additional inspections and groundwater level readings being carried out. Minor drainage remediation works were actioned and completed on three occasions. Groundwater levels exceeded normal limits in three locations (Trigger Level 1). Additional checks were completed on all of these bores. No instability issues were observed. Additional water level checks were completed and showed ground water levels receded quickly after the rainfall event. Issues with bore functionality were identified for two of these bores. These two bores will be repaired or replaced.
- There was one pin and one borehole that exceeded expected horizontal movement rates during the year (Trigger Level 1). Both of these points are located in the south east corner of mine, adjacent close to operational areas where extraction is occurring. Stress relief cracking has been observed in the area, however, there are no signs of large scale batter instability has been observed.
- No significant subsurface movements have been recorded by the shear monitoring boreholes installed across the mine site.
- The operational issues reported during the period were resolved effectively with existing site resources and were done so in a timely manner.

There were no significant events, developments, or issues of a geotechnical or hydrogeological nature at Loy Yang Mine during the year that would be classified Reportable Incidents and therefore require reporting to the regulator and formal investigation. Actions, improvements and GCMP implementation progressed and continued through the period.