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Hillgrove Mines Environmental Assessment

Section 75W Modification to Development Consent 98/00802

Prepared for
Hillgrove Mines Pty Ltd

28 November 2014

DOCUMENT TRACKING

Item	Detail
Project Name	Hillgrove Mines Environmental Assessment – Section 75W Modification to Development Consent 98/00802
Project Number	580
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Status	FINAL
Version Number	1
Last saved on	28 November 2014

This report should be cited as 'Eco Logical Australia 2014. *Hillgrove Mines Environmental Assessment – Section 75W Modification to Development Consent 98/00802.* Prepared for Hillgrove Mines Pty Ltd.'

ACKNOWLEDGEMENTS

This document has been prepared by Eco Logical Australia Pty Ltd with support from Hillgrove Mines Pty Ltd.

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Submission of Environmental Assessment

Prepared under Section 75W of the *Environmental Planning and Assessment Act 1979*

Environmental Assessment Prepared By:

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Development Application

Proponent Name	Hillgrove Mines Pty Ltd
Proponent Address	130 Brackin Street, Hillgrove NSW 2350
Land to be Developed	Hillgrove Mines 51 Brackin St, Hillgrove NSW 2350 Local Government Area of Armidale Dumaresq Council
Development Description	Modification to existing Condition 4 of development consent DA98/00802 to prescribe the term for the authorised development to 31 December 2019.

Declaration

I hereby certify that I have prepared the contents of this document and to the best of my knowledge:

- It contains all available information that is relevant to the environmental assessment of the proposed development to which the document relates; and
- It is true in all material particular and does not, by its presentation or omission of information, materially mislead.

Name Daniel Magdi

Signature D. Magdi

Date 28/11/14

1 Introduction

1.1 Background

The Hillgrove mineral field is located approximately 30 kilometres from Armidale within the New England Region of New South Wales (Figure 1). Mining operations have been undertaken within the area since 1877. Modern mining operations commenced in 1969 with the re-opening of several old workings and construction of an antimony concentrate production facility. Hillgrove Mines Pty Ltd (HMPL) is the operator of Hillgrove Mines and is an Australian Private Company.

Development consent DA 98/00802 pursuant to section 91 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) was granted by the Minister for Urban Affairs and Planning on the 18 of November 1998 for the Hillgrove extension underground mining project. DA98/00802 has undergone two modifications following its approval. A copy of the consolidated development consent DA98/00802 is found in **Appendix A** of this document.

HMPL commenced ownership of mining operations in 2013. Since this time, HMPL has spent approximately $30 million in capital to make the mine operational again. Mining operations recommenced in April 2014. Operations that are currently undertaken at Hillgrove Mines include production of up to 250 ktpa of ore from the underground mining complex at Metz and processing of ore within the processing plant to allow production of two marketable concentrates (Hillgrove Mines Pty Ltd, 2014). Processed materials are then generally transported to Brisbane Port via road.

As part of the recommencement of mining activities, HMPL are required to operate under an approved Mining Operations Plan (MOP) (Hillgrove Mines Pty Ltd, 2014). Approval of the MOP was granted by the Department of Trade and Investment on the 3 of May 2014.

Condition 4 of the Development Consent (DA 98/00802) is a condition which purports to specify the life of the consent. The drafting of condition 4 appears to be unique – it differs from how contemporaneous and modern conditions contained in Ministerial development consents for mining projects are drafted. The peculiarities of condition 4, make it desirable from the perspectives of both HMPL and regulators that condition 4 is modified so that there is clarity about the period during which mining operations may be carried out under the Development Consent.

HMPL propose to modify DA98/00802 pursuant to Section 75W (s75W) of the EP&A Act to allow for the continuation of mining until 31 December 2019. The modification of Condition 4 of DA98/00802 to allow the period of time that mining activities may be undertaken to be prescribed, will allow operations to continue whilst HMPL undertake detailed planning of future operations, prepare an Environmental Impact Assessment and begin the approval requirements for a consolidated development application for future operations.

The modification will not include any changes to mining operations or activities currently approved.

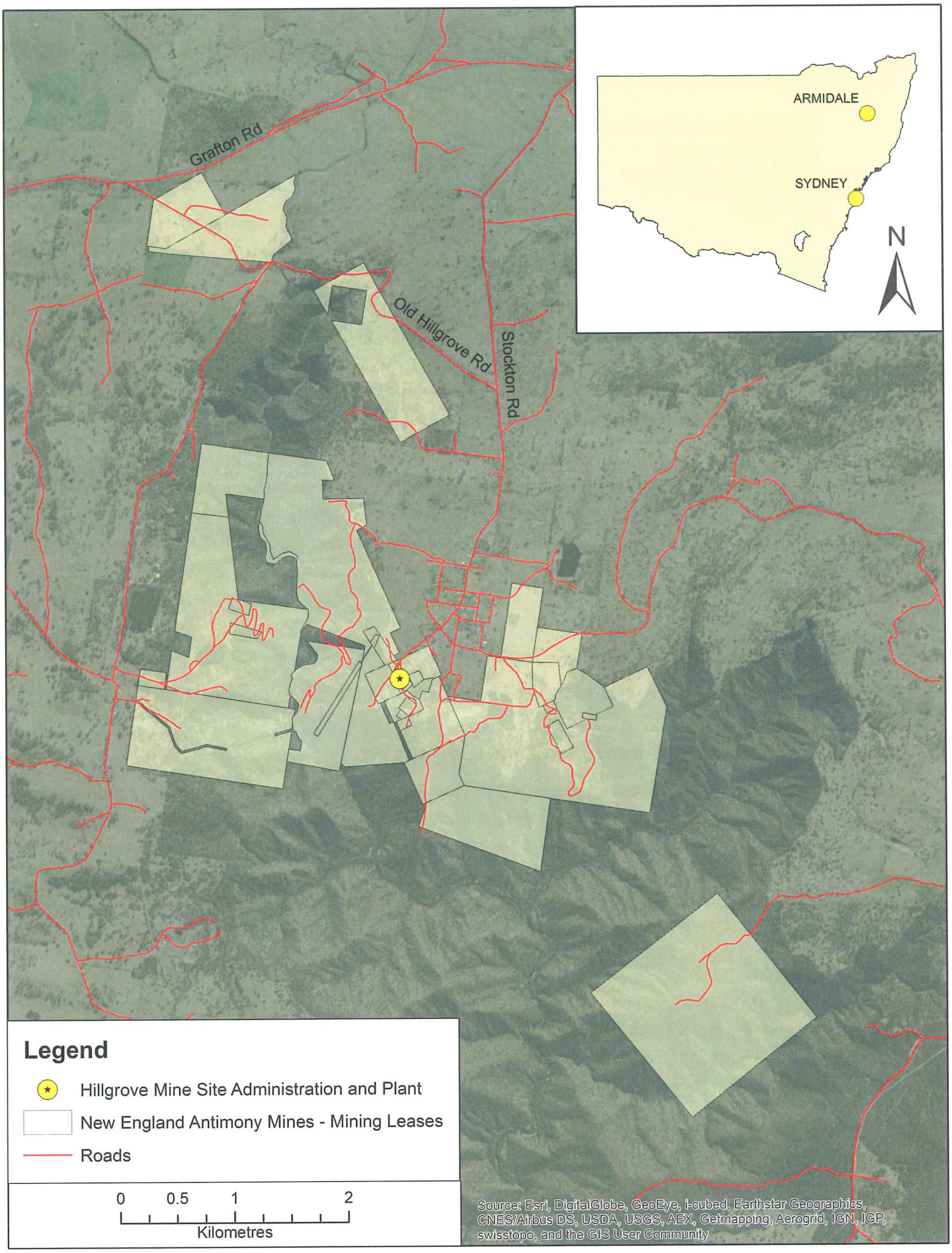

Figure 1: Location of Hillgrove Mines

1.2 The Applicant

The applicant for this modification is Hillgrove Mines Pty Ltd who are the owner and operator of Hillgrove Mines. The relevant postal address is:

Hillgrove Mines Pty Limited
130 Brackin Street
Hillgrove via Armidale
NSW 2350.

1.3 Document Purpose

This Environmental Assessment (EA) has been prepared by Eco Logical Australia to support the application to modify Condition 4 of Development Consent DA 98/00802 pursuant to Section 75W of the EP&A Act.

1.4 Overview of the Modification

The objective of this Modification is to replace existing condition 4 of the Development Consent, which suffers from uncertainty of meaning, with a condition which unambiguously prescribes the period of time during which mining operations may occur. This period will continue up to and including the 31 December 2019. This timeframe will allow HMPL to prepare and lodge a new Environmental Impact Statement with the purpose of consolidating the numerous development consents currently held and for future operations of the Hillgrove Mine.

1.5 Director General's Requirements

There were no Director General's Requirements (DGR's) issued for this proposed Modification.

1.6 Development Consent Modification Process

Development consent 98/00802 was granted to New England Antimony Mines NL the applicant of the original development application on the 18 November 1998 by the then Minister for Urban Affairs and Planning under section 91 of Part 4 of the EP&A Act. Hillgrove Mines Pty Ltd, the current operator of Hillgrove Mines, is seeking a modification to DA 98/00802 under s75W of the EP&A Act. This modification will allow for the continuation of mining until 31 December 2019 through replacement of Condition 4 of DA 98/00802 with a condition that prescribes the term of the authorised development.

Although Part 3A of the EP&A Act was repealed in 2011, Schedule 6A of the EP&A Act allows s75W to continue to apply to modifications of approvals originally granted under Part 4. Transitional provisions for Part 3A projects have been provided within the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation). These provisions allow projects that were approved under Part 4 of the EP&A Act to be modified under s75W. Clause 8J(8) of the EP&A Regulation states that:

> *"For the purposes only of modification, the following development consents are taken to be approvals under Part 3A of the Act and section 75W of the Act applies to any modification of such a consent:*
>
> *(a) a development consent granted by the Minister under section 100A or 101 of the Act,*
>
> *(b) a development consent granted by the Minister under State Environmental Planning Policy No 34-Major Employment-Generating Industrial Development ,*

(c) a development consent granted by the Minister under Part 4 of the Act (relating to State significant development) before 1 August 2005 or under clause 89 of Schedule 6 to the Act,

(d) a development consent granted by the Land and Environment Court, if the original consent authority was the Minister and the consent was of a kind referred to in paragraph (c).

The development consent, if so modified, does not become an approval under Part 3A of the Act."

Clause 8J(8) of the EP&A Regulation refers to consents that the transitional provisions can be applied to. As development consent 98/00802 was granted under Part 4 of the EP&A Act before the 1 August 2005, clause 8J(8) is applicable to this modification thus allowing modification under section 75W.

The modification of a Part 4 development consent under s75W of the EP&A Act requires completion of the NSW DP&E Application to modify a development consent. This application form will be supported by the submission of this environmental assessment addressing the potential impacts that the Modification may have upon the principles of Ecologically Sustainable Development.

Section 75W allows the Minister for Planning to modify an existing development consent. Should the modification to DA 98/00802 be approved, it will remain a development consent under Part 4 of the EP&A Act.

2 SITE DESCRIPTION

2.1 Site Location

Hillgrove Mines (the site) is an existing underground mine located within the Hillgrove mineral fields approximately 30 kilometres west of Armidale within the New England Region of New South Wales (Figure 1). Hillgrove Mines operates under Environmental Protection Licence (EPL) 921 and it refers to a Syndicate Mine at Metz. The site is located within the local government area (LGA) of Armidale Dumaresq Council.

The main access into the site is via Waterfall Way from which two roads allow access to the site; Old Hillgrove Road and Stockton Road. The village of Hillgrove is immediately north of the site. The main surface facilities and infrastructure are located immediately south of the village of Hillgrove with some facilities being located within Bakers Creek Gorge.

The typical landscape of the region is flat to undulating plateau rising approximately 900 m above sea level. The site is on the edge of a plateau north of Bakers Creek which gives way to a series of deep dissecting gorges leading into the World Heritage listed area of Oxley Wild Rives National Park.

The site is surrounded by a typical rural setting with a previously cleared landscape associated with primary production and previous activities in the area. The entire Bakers Creek valley floor and the surrounding slopes have historically been cleared for the purpose of fuelling steam generation, although in the recent decades, re-establishment of vegetation has occurred within the slopes of the valley (New England Antimony Mines 1999).

2.2 Project Area

The project area (Figure 1) is within existing mine limits and existing development consent boundary (see **Table 1**). This s75W modification does not propose any changes to the project area.

2.3 Land Use & Ownership

The main land use of the surrounding land is primary production in the form of grazing and rural residential.

Four Crown Land portions have been subject to a Native Title agreement from three Aboriginal Nations (New England Antimony Mines 2000).

Land ownership within the site mainly consists of mining leases over Crown Land or freehold land owned by Hillgrove Mines.

Table 1: Hillgrove Mine Land Ownership, Title and Occupancy (Hillgrove Mines Pty Ltd, 2014)

Land Ownership, Title & Occupancy	Relevant Mining Lease (ML)	Relevant Gold Lease (GL)	Relevant Private Lands Lease (PLL)	Relevant Mining Purpose Lease (MPL)
Crown Land	ML600 ML749 ML772 ML810	GL3959 GL3980		MPL146 MPL220 MPL745 MPL919 MPL1427

Land Ownership, Title & Occupancy	Relevant Mining Lease (ML)	Relevant Gold Lease (GL)	Relevant Private Lands Lease (PLL)	Relevant Mining Purpose Lease (MPL)
	ML945 ML972 ML1100 ML1441 ML1442 ML1603 ML1604 ML5643 ML6282 ML5643			
Freehold Land Owned by Hillgrove Mines	ML231 ML391 ML392 ML655 ML1440 ML1598 ML1599 ML1601 ML1602		PLL350 PLL661 PLL804 PLL416 PLL1252 PLL3827	
Freehold Land Not Owned by Hillgrove Mines	ML205 ML219 ML592 ML649 ML714 ML961 ML1020 ML1026 ML1101 ML1332 ML1600	GL5845		
Total Leases	33	3	6	5

2.4 Land Zoning

The land zoning of the site is RU1 Primary Production according to Armidale Dumaresq Local Environmental Plan 2012 (LEP).

2.5 Geology, Topography and Hydrology

The geology of the Hillgrove mineral fields has some 200 individual deposits generally of vein type, up to 1.5 km in strike length and 5 m in width. The veins are the product of a multi-phase mineralisation in the following sequence:

- Barren Quartz
- Quartz-Scheelite
- Quartz-Arsenopyrite-Pyrite-Gold
- Quartz-Stibnite-Gold
- Quartz-Stibnite-Calcite
- Barren Quartz-Chlorite

The topography of the region varies from the undulating plateau rising approximately 900 m above sea level to the steep and dramatic gorges of Bakers Creek and Macleay River.

The main catchment of the immediate surrounds of the site is the Bakers Creek catchment, which ultimately flows into Macleay River and discharges into the Pacific Ocean at South West Rocks along the east coast of NSW. Bakers Creek flows through the Hillgrove Mines' leases before it drops from the New England escarpment at Baker's Creek Falls approximately 2.5 km NNW of Hillgrove village and flows south for 17 km before joining the Macleay River (Hillgrove Mines Pty Ltd 2014). Four Mile Creek (a smaller catchment) flows from the north-east and converges with Bakers Creek (Hillgrove Mines Pty Ltd 2014). A small local catchment drains into Swamp Creek, which flows south into Four Mile Creek. All of the drainage lines in the Bakers Creek catchment are intermittent (Hillgrove Mines Pty Ltd 2014). Bakers Creek sediment and water quality exhibit high levels of antimony and arsenic contamination due to the presence of the ore bodies and historic dumping of mine waste into the waterway.

2.6 Climate

The climate of the region is characterised by a cool temperate climate with warm summers. Temperatures range from the 26.8 °C (average maximum) in January to -0.4 °C (average minimum) in July (BOM 2014). Armidale has an average annual rainfall of 751.5 mm (BOM 2014). The mean rainfall is highest in November at 111 mm and lowest in the driest month of May at 31 mm. The climate data was obtained from the Armidale (Tree group nursery) weather station (056037) (BOM 2014) approximately 30 km west of the site.

During most months rates of evaporation exceed precipitation with annual average evaporation of approximately 1,230 mm and average daily evaporation of 3.4 mm (Hillgrove Mines Pty Ltd, 2014).

Winds direction and speed are variable although from January to April the winds are predominantly east to south-east and from June to August predominantly west to south-west (Hillgrove Mines Pty Ltd, 2014).

3 EXISTING AND PROPOSED MINE OPERATIONS

3.1 Overview

HMPL are returning the mine to normal operations since processing activities were suspended in 2009. These activities have been described within the HMPL MOP (Hillgrove Mines Pty Ltd, 2014). Normal operations include (Hillgrove Mines Pty Ltd, 2014):

- Production from the Syndicate mining complex at Metz, ramping up to production of 250 ktpa over the next two years; and
- Ore processing in a modified configuration of the process plant. This will allow production of two marketable concentrates.

Other activities outlined within the approved MOP (Hillgrove Mines Pty Ltd, 2014) include:

- Further modification of the process plant to allow solid metal production, in particular;
    - Modification of the electrowinning circuit to include a waste treatment section.
    - Addition of a gold recovery circuit that recovers gold from electrowinning solutions.
    - Re-instatement of the pressure oxidation gold treatment facility to extract gold from solid residues.
    - Addition of intermediate product production stages, such as bulk concentrate, sodium antimonite and a lower quality antimony solid.
- Expansion of the mining headings to other areas within the mining leases, driven by exploration.
- The potential re-treatment of Tailings Storage Facility 1 (TSF1).
- The use of the micro-filtration/reverse osmosis to treat storm water and discharges from historical mine adits.
- The lifting of Tailings Dam 2 and the construction of Tailings Dam 3 (the latter being subject to a separate consent).

3.2 Existing Approvals

DA 98/00802 was approved on the 18 November 1998 pursuant to the EP&A Act. DA 98/00802 provides consent for the Hillgrove Mine expansion, Brackins Spur and Lower Cooney Haul Roads, as well as Tailings Storage Facility 1.

DA 98/00802 has been modified two times. **Table** 2 below provides the details of each Modification to DA 98/00802.

Hillgrove Mines operate under Environment Protection Licence (EPL) 921, which authorises the pollution of waters from 12 discharge points across the site subject to conditions contained within the licence.

Table 2: Details of previous Modifications to DA 98/00802

Modification	Date Approved	Details of Modification
1	10/11/2000	Re-alignment of the haul road to Brackins spur
2	25/11/2005	Relocation of TSF 2

All leases, licences, consents and approvals relevant to the operations at Hillgrove Mines Pty Ltd are listed in **Table 3** below.

Table 3: Leases, Licenses, Consents and Approvals (Hillgrove Mines Pty Ltd, 2014)

Consent	Date	Authority	Comments
DUAP Mining Extension CC-7 Dec 1998 DA S98/00802	18/11/1998	DP&E	Consent for mine expansion. Brackins Spur and Lower Cooney Haul roads, TSF1
Environmental Protection Licence 921	N/A	EPA	Environmental Protection Licence for the Hillgrove mine
DA 19/2000/A Metals Processing Facility (formerly Antimony Trioxide Plant DA 0001/0019)	29/09/2006	ADC	Modification to initial consent DA 0001/0019 for construction of a metals processing facility
Metz Development - DA42/82	23/07/1982	ADC	Initial development of the Metz mining area
Mining lease application 35 and 76 portion 15 parish of Metz	09/07/1981	ADC	Mining lease application 35 and 76 portion 15 parish of Metz
Clarks Gully open pit – DA 37/92	12/11/1992	ADC	Open cast gold mining operation on Lot 1 DP 976685, parish of Metz
Storage and Mixing of Dangerous Goods – DA 1999/105	17/04/2000	ADC	Storage of explosives in magazines at Freehold
Radiation Licence to Sell/Possess	N/A	EPA	Licence to sell or possess radioactive substances or items containing radioactive substances - Currently being renewed
On-Site Sewage System – DA 9900/1655SEP	30/06/2004	ADC	Garibaldi winder septic system
On-Site Sewage System – DA 9900/1656SEP	30/06/2004	ADC	Office septic system
On-Site Sewage System - DA 9900/0337SEP	30/04/2004	ADC	Licence for septic system at Metz
Surface Water Licence 30SL043402	12/08/2003	Office of Water (OoW)	Bakers Creek
Surface Water Licence 30SL037535	27/02/2005	OoW	Town Reservoir
DSC letter ref Hillgrove 2 – TSF 2 design dated 18 March 2005	18/03/2005	NSW DSC	DSC letter accepting TSF 2 design with conditions

Consent	Date	Authority	Comments
Bakers Creek Crossings	29/06/2000	DPI - Fisheries	Requirements for construction of Bakers Creek crossings for Brackins Spur and Lower Cooney Road
Dredging and Reclamation Permit 13/143	05/11/13	DPI - Fisheries	Permit to dredge Bakers Creek to construct two crossings for the Lower Cooney Road
DA 22/81 Workshop	23/06/1981	ADC	Workshop
DA 95/26 Continuing Mineral Extraction	08/03/2004	ADC	Continuing Mineral Extraction – covering leases that pre-date the EP&A Act 1979
Mining Lease Application No. 47	16/04/1980	ADC	Supporting documentation for ML 1101
DA 43/81 Mining Lease Application 35 and 76	09/07/1981	ADC	
DA 0102/005AM Modification to Metz consent (42/82) for 7 level pad	25/05/2003	ADC	DA 0102/005AM Modification to Metz consent (42/82) for 7 level pad
Hillgrove Crown Land Licence No. LI 382759	09/12/08	DoL	Licence for lease of 15 crown land blocks in Hillgrove.
DA 26/2005/A Construction of Sunlight Haul Road	21/9/06	ADC	Construction of Sunlight haul road from Metz to Bakers Creek
DA 0607/0022	14/08/2009	ADC	Construction of Office and amenities block at Hillgrove

All tenements held are shown below in **Table 4**. The Hillgrove project encompasses a total of 51 tenements comprised of 33 Mining Leases, 3 Gold Leases, 6 Private Lands Leases, 5 Mining Purpose Leases and 4 Exploration Licences (Hillgrove Mines Pty Ltd, 2014).

Table 4: Tenements (Hillgrove Mines Pty Ltd, 2014)

Licence Number	Date Granted	Expiry Date	Status
EL3326	23/08/1989	22/08/2015	Current
EL5973	19/08/2002	18/08/2019	Current
EL5997	27/09/2002	26/09/2019	Current
EL6419	17/05/2005	16/05/2015	Current
GL3959	08/02/1933	11/02/2020	Current
GL3980	29/03/1933	11/02/2020	Current
GL5845	16/02/1968	11/02/2030	Current
ML205	21/05/1976	11/02/2020	Current
ML219	16/06/1976	11/02/2020	Current
ML231	21/07/1976	11/02/2020	Current
ML391	16/02/1977	11/02/2020	Current
ML392	16/02/1977	11/02/2020	Current
ML592	03/05/1978	11/02/2020	Current
ML600	10/05/1978	11/02/2020	Current
ML649	04/10/1978	11/02/2020	Current
ML655	04/10/1978	11/02/2020	Current
ML714	21/03/1979	11/02/2020	Current
ML749	04/07/1979	11/02/2020	Current
ML772	05/09/1979	04/09/2000	Renewal has been submitted*
ML810	05/03/1980	11/02/2020	Current
ML945	08/07/1981	11/02/2020	Current
ML961	09/12/1981	11/02/2020	Current
ML972	06/01/1982	11/02/2020	Current
ML1020	03/11/1982	11/02/2020	Current
ML1026	08/12/1982	11/02/2020	Current
ML1100	09/11/1983	11/02/2020	Current
ML1101	09/11/1983	11/02/2020	Current
ML1332	07/10/1993	11/02/2020	Current
ML1440	12/02/1999	11/02/2020	Current
ML1441	12/02/1999	11/02/2020	Current
ML1442	12/02/1999	11/02/2020	Current
ML1598	04/12/2007	11/02/2020	Current

Licence Number	Date Granted	Expiry Date	Status
ML1599	04/12/2007	11/02/2020	Current
ML1600	04/12/2007	11/02/2020	Current
ML1601	04/12/2007	11/02/2020	Current
ML1602	04/12/2007	11/02/2020	Current
ML1603	04/12/2007	11/02/2020	Current
ML1604	04/12/2007	11/02/2020	Current
ML5643	14/11/1958	11/02/2020	Current
ML6282	12/03/1971	11/02/2020	Current
MPL146	09/08/1978	11/02/2020	Current
MPL220	07/12/1983	11/02/2020	Current
MPL745	29/03/1933	11/02/2020	Current
MPL919	31/08/1938	11/02/2020	Current
MPL1427	06/07/1973	11/02/2020	Current
PLL350	28/05/1932	11/02/2020	Current
PLL416	20/12/1935	11/02/2020	Current
PLL661	27/07/1943	11/02/2020	Current
PLL804	22/07/1949	22/07/2011	Renewal submitted*
PLL1252	23/12/1969	11/02/2020	Current
PLL3827	21/08/1973	11/02/2020	Current

*Hillgrove has been working with DRE to determine the delay/issues with the renewal of these tenements.

3.3 Environmental Management

All environmental management plans (EMP) are provided within the HMPL MOP which was approved on the 3rd of May 2014 by the Department of Trade and Investment. These plans cover environmental aspects such as air quality, surface and ground water, erosion and sediment control, heritage, flora and fauna and hydrocarbon management. These management plans provide procedures and standards for the management of environmental risks and the ability to measure the environmental performance of Hillgrove Mines and identify management actions that may be required. Environmental management actions required during exploration activities are addressed in the Exploration Environmental Management Plans.

Condition 8 of DA 98/00802 requires HMPL to prepare and submit an Annual Environmental Management Plan (AEMP) Report. This report is required to include:

- A review of the effectiveness of environmental management for the subject land, including all control, mitigation and management measures required in the conditions of the consent.
- a review of performance in terms of the conditions of development consent;

- results of environmental monitoring in respect of air quality, water quality, and noise and vibration; and
- a record of any complaints received in relation to the environmental performance of the mine and actions taken in response to complaints.

Environmental monitoring is undertaken onsite for a number of different environmental aspects addressed within the environmental management plans. Environmental monitoring is undertaken in accordance with the requirements of statutory approvals including DA 98/00802 and EPL 921. The monitoring activities undertaken at HM are outlined within **Table 5** below.

Table 5: Environmental Monitoring (Hillgrove Mines Pty Ltd, 2014)

Environmental aspect	Monitoring undertaken
Air Quality	HM operates under EPL 921, which requires a dust monitoring network of 11 depositional dust gauges maintained in accordance with AS/NZS 3580.10.1:2003. These gauges are monitored monthly and samples are analysed for antimony, arsenic, lead, mercury, total insoluble matter, total solids and coarse particulates.
Noise and Vibration	Noise monitoring is undertaken on an as required basis to determine compliance with EPL conditions. Noise monitoring will generally aim to be completed at the closest residence in Hillgrove on a bimonthly basis.
Surface water	The EPL requires implementation of a surface water monitoring network around the site. Surface water is monitored monthly and samples are analysed for a variety of analytes.
Groundwater	The EPL requires ground water monitoring of 11 adits around the site. Water from these adits is monitored quarterly and samples are analysed for a variety of analytes.
Erosion and Sediment Control	Suspended solids are measured on a monthly basis at all surface water monitoring locations. In addition, regular inspections are conducted of critical areas within the recycled water storage system for signs of erosion or potential issues.
Hydrocarbons and Chemicals	A register of MSDS for hydrocarbon and chemical products used on the site will be maintained. These record the places of storage and use of each substance. Records of the volumes of use (store issue and fuel farm records) will be kept to track volumes being used. All hydrocarbon and chemical storage and dispensing facilities will be subject to regular inspections.
Waste Management	Regular inspections will be carried out on waste management facilities. Waste tracking data will be received from the waste contractor regularly and the data will be reviewed.
Waste Rock	Regular inspections of waste rock stockpiles will be completed. This generally occur on a monthly basis and is carried out by a qualified engineer. Sampling of waste rock being placed into a stockpile will occur on a six monthly basis or when there is a

Environmental aspect	Monitoring undertaken
	significant operational or geological changes (eg. new parent rock being mined). Testing will be completed for various metals.
Exploration	Monitoring of exploration activities will include: o Regular inspections of drill sites (pre, post and during); o Noise monitoring in response to noise complaints; o Water, soil, dust sampling and analysis as required; and o Inspections of drill site following rehabilitation until completed.
Aboriginal and European Heritage	Any issues arising at HM regarding Aboriginal or European heritage will be reported as part of the AEMR process. Any artefacts that require destruction due to mining operations will be reported to the relevant authorities and necessary approvals gained prior to destruction.
Feral Animals and Weeds	Inspections will be completed regularly on areas where there are known colonies of weeds/feral animals until such time as they are effectively controlled or eradicated. Whilst conducting other routines activities (eg. water monitoring) any existence of weeds/feral animals will noted and recorded for corrective actions. Monitoring for specific weeds and feral animals will be undertaken in accordance with a species specific management plan (contained within the MOP).
Rare and Threatened Flora and Fauna	Issues arising at HM regarding Rare and Threatened Flora and Fauna will be reported as part of the AEMR process.

3.4 Proposed Future Operations

HPML plan to prepare a new consolidated development application for approval under the NSW Environmental Planning Policy (State and Regional Development) 2011, as a State Significant Development. The replacement of Condition 4 of the Development Consent with a condition that prescribes that period of time that the development is authorised (as requested within this Modification) will allow for the planning, assessment and approval phases of the development application. The prescription of time for the continued operations of the approved Hillgrove Mine (DA 98/00802) up until the 31 December 2019 will allow, during that period of continued operations, for the following to occur:

- Exploration, Environmental and Feasibility investigations;
- Mineable/probable resource defined and concept mine/production plans developed;
- Presentation of Conceptual Project Development Plan to Division of Resources and Energy (DRE) - Mineral Resources;
- DRE in principle support for mining/production concept, Department of Planning & Environment (DP&E) notified;
- Request for Director General Requirements (DGRs) lodged with DP&E;
- Lodgement of State Significant Development Application with DP&E (Lodgement of Mining Lease Application (MLA) with DRE);

- Environmental Impact Statement (EIS) Requirements Issued (DGRs);
- EIS Studies and Preparation of EIS;
- Approval process, including:
    - Public exhibition of EIS and submissions invited from agencies, community and any interested parties
    - Assessment of EIS and submissions by DP&E
    - Minister for Planning and Environment may appoint Planning Assessment Commission (PAC) to advise on certain key issues
    - Minister for Planning & Environment (or the Minister's delegate) determines application.

4 REGULATORY FRAMEWORK

4.1 Approvals Path

Development consent 98/00802 was granted to New England Antimony Mines NL the applicant of the original development application on the 18 November 1998 by the then Minister for Urban Affairs and Planning under section 91 of Part 4 of the EP&A Act. Hillgrove Mines Pty Ltd, the current operator of Hillgrove Mines, is seeking a modification to DA 98/00802 under s75W of the EP&A Act. This modification will allow for the continuation of mining until 31 December 2019 through replacement of Condition 4 of DA 98/00802 with a condition prescribing the term of the authorised development.

Although Part 3A of the EP&A Act was repealed in 2011, Schedule 6A of the EP&A Act allows s75W to continue to apply to modifications of approvals originally granted under Part 4. Clause 8J(8) of the EP&A Regulation refers to consents that the transitional provisions can be applied to. As development consent 98/00802 was granted under Part 4 of the EP&A Act before the 1 August 2005, clause 8J(8) is applicable to this modification thus allowing modification under section 75W.

Section 75W allows the Minister for Planning to modify an existing development consent. Should the modification to DA 98/00802 be approved, it will remain a development consent under Part 4 of the EP&A Act.

In addition to this, Part 2 clause 7 of the State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007, states that mining development for underground mining carried out on any land may be carried out with development consent.

There were no Director General's Requirements issues for this modification.

4.2 New South Wales Legislation

4.2.1 Environmental Planning & Assessment Act 1979

The EP&A Act is the principal planning legislation for NSW. It provides a framework for the overall environmental planning and assessment of development proposals. The objects of the EP&A Act generally seek to promote management and conservation of natural and artificial resources, whilst allowing appropriate development to occur. The principles of ecologically sustainable development and public participation are also objects of the EP&A Act. The consistency of this Modification with the objects of the EP&A Act are outlined in **Table 6**.

Table 6: Objects of the NSW EP&A Act

Objects of the EP&A Act	Consistency with the Proposed Modification
5 a) to encourage: (i) the proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages for the purpose of promoting the social and economic welfare of the community and a better environment,	Operational impacts from the current operations of the Hillgrove Mine have been considered within the existing approval (DA98/00802) and within the approved MOP.
(ii) the promotion and co-ordination of the orderly and economic use and development of land,	The proposed Modification is consistent with the statutory and strategic planning controls of the region and will be compliant

Objects of the EP&A Act	Consistency with the Proposed Modification
	with relevant conditions of approval under DA98/00802.
(iii) the protection, provision and co-ordination of communication and utility services,	Not applicable to the proposed Modification
(iv) the provision of land for public purposes,	Not applicable to the proposed Modification
(v) the provision and co-ordination of community services and facilities, and	Not applicable to the proposed Modification
(vi) the protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats, and	The proposed Modification will not further impact the environment beyond what has been assessed and approved within existing approvals. This Modification is requesting replacement of Condition 4 with a new condition that prescribes the term of the authorised development, with no additional disturbance areas to those already approved.
(vii) ecologically sustainable development, and	This proposed Modification is consistent with the principles of ecological sustainable development as outlined in Section 6.
(viii) the provision and maintenance of affordable housing, and	Not applicable to the proposed Modification
5 b) to promote the sharing of the responsibility for environmental planning between the different levels of government in the State, and	Not applicable to the proposed Modification
5 c) to provide increased opportunity for public involvement and participation in environmental planning and assessment.	Hillgrove Mine undertook significant consultation during the preparing of the latest approved MOP for the site. This consultation process is outlined in Section 5.

4.2.2 Other Key NSW State Legislation

The existing approvals relevant to the Hillgrove Mine are outlined in Section 3.

This Modification will require the use of existing approvals, licenses and/or authorities under various other pieces of NSW legislation for the modification to replace Condition 4. **Table 7** outlines the relevant NSW legislation and indicates the implications for the Modification.

Table 7: Relevant NSW State Legislation

NSW Legislation	Implications (approvals, licenses and/or authorities)
*Protection of the Environment Operations Act 1997 (*POEO Act)	This proposed Modification will continue to operate within the existing approved disturbance footprints within the ML's outlined in Section 3.
Mining Act 1992	Hillgrove Mine currently holds multiple ML's as outlined within Section 3.
Dams Safety Act 1978	Not relevant to this Modification
Crown Lands Act 1989	*The Crown Lands Act 1989* provides for the administration and management of Crown land. The project area includes Crown land. This Modification will not require a licence to use Crown land under the provision of the *Crown Lands Act 1989*.
Roads Act 1989	Not relevant to this Modification
Threatened Species Conservation Act 1995 (TSC Act)	No listed threatened species under the TSC Act will be impacted as no further disturbance areas are proposed. No approvals under the TSC Act are required for this Modification.
National Parks & Wildlife Act 1974 (NPW Act)	The NPW Act contains for the provisions for the protection of national parks and conservation areas, as well as native fauna and flora and Aboriginal places and objects in NSW. No approvals under the NPW Act are required for this Modification.
Aboriginal Land Rights Act 1983	Not relevant to this Modification
Heritage Act 1977	Not relevant to this Modification
Contaminated Land Management Act 1997	Not relevant to this Modification

4.2.3 State Environmental Planning Policies

Table 8 below gives an overview of the State Environmental Planning Policies (SEPP) that are of relevance to Hillgrove Mines and whether they are applicable to this Modification.

Table 8: Summary of State Environmental Policies

SEPP	Description	Relevance to HMPL
SEPP Mining, Petroleum Production and Extractive Industries 2007	The Mining SEPP recognises the importance of mining, petroleum production and extractive industries in NSW. It provides a series of overarching aims relating to the development and sustainable management of these industries.	The mine is not located on Strategic Agricultural Land (Part 4AA). This SEPP is not considered to be applicable to this Modification.

SEPP	Description	Relevance to HMPL
State Environmental Planning Policy No. 44 – Koala Habitat Protection	This SEPP was introduced to protect potential and core Koala habitat in NSW. Under SEPP 44, developers of land with Koala habitat (as defined in the SEPP) have to consider the impact of their proposals on Koalas, and in certain circumstances, prepare individual Koala plans of management for their land.	Armidale Dumaresq Council is listed as one of the Councils to which SEPP 44 applies. This SEPP is not considered to be applicable to this Modification.
State Environmental Planning Policy No. 33 – Hazardous and Offensive Development	State Environmental Planning Policy 33 (SEPP 33) aims to ensure that proposals are suitably located and able to demonstrate that they can be built and operated with an adequate level of safety and pollution control.	This SEPP is not considered to be applicable to this Modification.

4.3 Commonwealth Legislation

4.3.1 Environment Protection & Biodiversity Conservation Act 1999

The EPBC Act protects matters of National Environmental Significance (NES), such as threatened species and ecological communities, migratory species (protected under international agreements), and National Heritage places (among others).

Any actions that will, or are likely to have a significant impact on the matters of NES require referral and approval from the Australian Government Environment Minister. Significant impacts are defined by the Commonwealth (reference http://www.environment.gov.au/epbc/guidelines-policies.html) for matters of NES. The EPBC Act referrals process can produce one of three outcomes:

- Non-controlled action: Assessment and approval under the EPBC Act is not required. The project may proceed without further approval under the EPBC Act
- Non-controlled action – specified manner: Assessment and approval under the EPBC Act is not required provided the action is undertaken in a specific way (similar to conditions)
- Controlled Action: The project will, or is likely, to have a significant impact on one or more matters of national environmental significance.

Modification to replace Condition 4 of DA98/00802 will not further impact any matters of NES as the Hillgrove Mine impact footprint will not change from existing approved disturbance boundaries. There are no Commonwealth approvals that will require updating as a result of this modification.

5 STAKEHOLDER ENGAGEMENT

Stakeholder engagement is ongoing and forms part of the activities of Hillgrove Mines. The stakeholder engagement described below is relevant only to the Modification.

HMPL have undertaken consultation with the DP&E regarding this Modification. The sections below outline the nature of the consultation that was undertaken.

5.1 Department Trade and Investment, Regional Infrastructure and Services

As part of the recommencement and commissioning of mining activities at Hillgrove Mines, approval was required for the MOP from the Department of Trade and Investment, Regional Infrastructure and Services – Division of Resources and Energy (DRE). The requirement for a MOP is a condition of the Hillgrove Mines mining leases.

On the 3 May 2014, the new MOP was approved by DRE.

HMPL has held discussions with DP&E concerning the problematic drafting of condition 4 of the Development Consent.

DP&E has acknowledged that there are issues concerning the drafting of condition 4 and has agreed to accept a s75W request to replace condition 4 with a condition in the standard form which clearly prescribes the period during which mining operations may be carried out.

5.2 Local Government

For the purposes of this Modification, there has been no requirement for engagement with Local Government.

5.3 Commonwealth

For the purposes of this Modification, there has been no requirement for engagement with the Commonwealth.

6 JUSTIFICATION FOR MODIFICATION

The requirement and justification of the proposed Modification is shown below. This justification has considered environmental, social and economic matters, as well as the principles of Sustainable Development and the compliance of the proposed Modification with the objectives of the EP&A Act.

6.1 Justification

Condition 4 of the Development Consent states:

This consent shall lapse 12 (twelve) years after the date of commencement of substantial construction. The Applicant shall provide the Director-General with written advice of the date of commencement of substantial construction, as soon as is practicable after that date.

Condition 4 has been used to regulate the term that the Development Consent covers. However, the wording and composition of Condition 4 differs from the wording of conditions contained in Ministerial development consents which regulate the period of the approved mining operations for current mining projects. Current Development Consent conditions nominate a specific date as being the end date for the approved mining operations.

In addition to this, the expression "substantial construction" used in Condition 4, is not an expression that is defined or used in the EP&A Act.

At the time when the Development Consent was granted, the then Section 99 of the EP&A Act contained a detailed scheme for determining when a development consent "lapses". A consent authority, such as the Minister, was not conferred with power by any provision in the then EP&A Act to lawfully impose a condition that would cause a development consent to "lapse" in the statutory sense.

The issues identified above make it desirable that Condition 4 be replaced so that there is clarity about the period of time in which the Development Consent remains approved.

There will be no change to current mining operations or infrastructure as a result of this Modification. Therefore, there will be no greater environmental impact than that previously approved under the existing DA 98/00802.

It is suggested that condition 4 be replaced with the wording used in the equivalent condition contained in modern Ministerial development consents that are granted for mines. Accordingly, it is suggested that the new condition 4 state:

> 4. The Applicant may carry out mining operations on the site until the end of December 2019.

6.2 Sustainable Development

Through activities currently undertaken at Hillgrove Mines, it has been shown that the principles of Ecologically Sustainable Development have been considered and integrated into existing mining plans and operations. Examples of this include risk assessment, environmental monitoring, mitigation measures and risk controls, communication with employees and the community, as well as efficient mine planning have ensured that the development at Hillgrove Mines is consistent with the principles of Ecologically Sustainable Development.

Hillgrove Mines is currently the largest private sector employer within the Armidale region with approximately 100 personnel directly employed at the operations. In addition to this, there are approximately 240 indirect and induced jobs within the Armidale Region that are dependent upon the continued operations of the mine. The impact of operations ceasing at Hillgrove Mines will result in loss of employment for Hillgrove Mines employees and deleterious impacts upon supporting businesses and contractors thus impacting upon the local economy.

As there is no change to current mining operations proposed within this Modification, there will be no further environmental impacts resulting from activities at Hillgrove Mines other than those previously identified.

6.3 Conclusion

Replacement of Condition 4 of Development Consent 98/00802 with a new condition prescribing the term of the authorised development requires a Modification to be prepared. This Modification will provide greater clarity as to the period of time that mining operations are approved to be carried out at Hillgrove Mines. As the Modification does not contain proposed changes to existing operations, the Modification will not result in any additional environmental impacts other than those previously outlined within the existing Environmental Assessment that formed part of the original Development Consent (98/00802).

The objectives of the EP&A Act and the principles of Ecologically Sustainable Development have been considered as part of this development. Therefore, it is recommended that this Modification for replacement of Condition 4 with a new, prescriptive condition within Development Consent 98/00802 be approved to allow greater clarity as to its meaning and definition of when the Development Consent shall lapse.

7 REFERENCES

Bureau of Meteorology (BOM). 2014. Monthly Climate Stats, Armidale (tree group nursery) (056037) Available: http://www.bom.gov.au/climate/averages/tables/cw_056037.shtml [20 November 2014].

Hillgrove Mines Pty Ltd. 2014. *Hillgrove Mines, Mining Operations Plan 2014-2016.*

New England Antimony Mines. 1999. *Hillgrove Extension Underground Mining Project, Amendment to Development Application S98/00802, Statement of Environmental Effects,* Prepared by Martin and Associated Pty Ltd.

New England Antimony Mines. 2000. *Hillgrove Extension Underground Mining Project, Amendment to Development Application S98/00802, Statement of Environmental Effects*, Prepared by E.A. Systems Pty Limited.

8 ABBREVIATIONS

ADC	Armidale Dumaresq Council
DP&E	Department of Planning and Environment
DPI	NSW Department of Primary Industries
DRE	Division of Resources and Energy (Division of the Department Trade and Investment, Regional Infrastructure and Services)
DSC	NSW Dams Safety Committee
EPA	Environmental Protection Authority
EP&A Act	Environmental Protection and Assessment Act 1979
EP&A Regulation	Environmental Protection and Assessment Regulation 2000
HM	Hillgrove Mines
HMPL	Hillgrove Mines Pty Ltd
LEP	Armidale Dumaresq Council Local Environmental Plan 2012
LGA	Local Government Area
ML	Mining Lease
MOP	Mining Operations Plan
MSDS	Material Safety Data Sheet
NSW	New South Wales
OoW	NSW Office of Water
s75W	Part 3A, section 75W of the *Environmental Protection and Assessment Act 1979*
TSF	Tailings Storage Facility

Appendix A Development Consent DA98/00802

30 NOV 1998

New South Wales Government
Department of Urban Affairs and Planning

Mr Pat Bradley
New England Antimony Mines NL
Hillgrove
via ARMIDALE NSW 2350

Contact: Chris Ritchie

Our Reference: S98/00802/Pt1

Your Reference:

Dear Mr Bradley,

Proposed Extension of the Hillgrove Antimony Underground Mines, Hillgrove, Dumaresq LGA

I refer to the development application (DA) and environmental impact statement for the above proposal lodged by Douglas Martin of Martin Associates Pty Ltd, on behalf of New England Antimony Mines, for determination under State Environmental Planning Policy No. 34 – Major Employment Generating Industrial Development.

The Minister for Urban Affairs and Planning has now determined the DA in accordance with section 91 of the "Unamended Environmental Planning and Assessment Act 1979" (EP&A Act) by granting consent.

In approving the development, the Minister has imposed 48 conditions designed to protect the environment, community amenity and, to provide for environmental monitoring and reporting of the future performance of the development

A copy of the Minister's determination is enclosed. Under section 93(1) of the EP&A Act, the development consent takes effect and operates 28 days from the date of this letter. To ascertain the date upon which this consent is liable to lapse, refer to section 99 of the Act.

If you are dissatisfied with this decision, section 97 of the Environmental Planning and Assessment Act, 1979 gives you the right to appeal to the Land and Environment Court within 12 months after the date on which you receive this notice.

Should you require any further information on this matter, please contact Chris Wilson on (02) 9391 2344.

Yours sincerely

25.11.98

Geoff Noonan
Director
Development and Infrastructure Assessment

Governor Macquarie Tower
1 Farrer Place, Sydney 2000
Box 3927 GPO, Sydney 2001

Telephone: (02) 9391 2000
Facsimile: (02) 9391 2111

10 NOV 1998

ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

DETERMINATION OF DEVELOPMENT APPLICATION UNDER SECTION 91 OF THE UNAMENDED ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

I, the Minister for Urban Affairs and Planning, under section 91 of the unamended Environmental Planning and Assessment Act 1979 (EP&A Act) determine the development application referred to in Schedule 1 by granting consent to that application subject to the conditions set out in Schedule 2.

The reason for the imposition of conditions generally is to minimise any adverse effects from the development, consistent with the objectives of the Act. These conditions are listed in Schedule 2.

The "unamended" EP&A Act means the EP&A Act, as in force immediately before 1 July 1998.

Craig Knowles MP
Minister for Urban Affairs and Planning

Sydney 18/11 1998 File No: S98/00802

Note: Section 91 of the unamended EP&A Act continues to apply to development applications that were made but not determined by the consent authority under that section before the appointed day as if the EP&A Amendment Act 1997 had not been enacted.

SCHEDULE 1

Application made by:	New England Antimony Mines NL
To:	The Minister for Urban Affairs and Planning
In respect of:	MLA 141, MLA 195, MLA 216 and Portions 2, 101, 130, 171, 380, 406, Parish Metz, County Sandon, Hillgrove via Armidale
For the following:	Hillgrove extension underground mining project
Development Application:	Development Application No. 98/35 lodged with Dumaresq Council on 30 June 1998, accompanied by an Environmental Impact

	Statement prepared by Martin and Associates Pty Ltd dated June 1998
Determination:	(1) To determine the date upon which this consent becomes effective, refer to section 93 of the unamended Act; (2) To determine the date on which this consent lapses, refer to section 99 of the unamended Act; (3) Section 97 of the unamended Act confers on an applicant who is dissatisfied with the determination of a consent authority a right of appeal to the Land and Environment Court exercisable within 12 months after the receipt of the notice under section 92 of the unamended Act.

SCHEDULE 2

CONDITIONS OF DEVELOPMENT CONSENT

LIST OF ABBREVIATIONS

The Applicant	New England Antimony Mines NL
Council	Dumaresq Shire Council
The Department	The Department of Urban Affairs and Planning
The Director-General	Director-General of the Department of Urban Affairs and Planning
DLWC	Department of Land and Water Conservation
DMR	Department of Mineral Resources
EPA	Environment Protection Authority
NPWS	National Parks and Wildlife Service
Subject development	the development to which this consent applies
Subject land	the land to which this consent applies

GENERAL

1. The development is to be carried out generally in accordance with the Environmental Impact Statement dated June 1998, prepared by Martin and Associates Pty Ltd, except as modified by the following conditions.

STATUTORY AND OTHER REQUIREMENTS

2. The Applicant shall meet the statutory requirements of all public authorities having responsibilities for environmental protection, pollution control, and land and water conservation approvals and licences in respect of the mine extension and associated works encompassed by DA No. 98/35.

3. The Applicant shall comply with all reasonable requirements of the Director-General in respect of the implementation of any measures arising from reports submitted in accordance with the conditions of this consent, within such time as the Director-General may agree.

DURATION AND SCOPE OF CONSENT

4. This consent shall lapse 12 (twelve) years after the date of commencement of substantial construction. The Applicant shall provide the Director-General with written advice of the date of commencement of substantial construction, as soon as is practicable after that date.

5. This consent does not apply to the construction and operation of the Antimony Trioxide Plant or the construction and operation of a water supply pipeline to the mine from the Gara River. These works require a separate development consent.

ENVIRONMENTAL OFFICER

6. The Applicant shall employ an Environmental Officer whose qualifications are acceptable to the Director-General in consultation with Council and the Department of Mineral Resources. The Environmental Officer shall be responsible for ensuring that all environmental safeguards proposed for the development and as required by this consent and other statutory approvals are monitored and enforced from the commencement of construction.

ENVIRONMENTAL MANAGEMENT PLAN

7. The Applicant shall prepare an Environmental Management Plan/s (EMP/s) covering both the construction and operation phases of the development. The Plan/s shall include, but not be limited to:

(a) details of the mine infrastructure and facilities to be developed;
(b) erosion and sediment control measures (Condition 16);
(c) noise and vibration management procedures (Condition 32);
(d) results of investigations into potentially acid producing waste rock (Condition 20);
(e) where relevant, monitoring procedures relating to water quality, air quality, noise and vibration, and the tailings storage facility;
(f) management measures for any fauna and flora species listed under the Threatened Species Conservation Act 1995 that occur on the site.

The EMP/s shall be prepared to the satisfaction of the Director-General, Council, DMR, EPA, NPWS and DLWC. The construction EMP (or that part of the EMP covering the construction phase) shall be submitted prior to the commencement of construction works. The operation EMP (or that part of the EMP covering the operation phase) shall be submitted before the commencement of operations on the site.

ENVIRONMENTAL MANAGEMENT PLAN REPORT

8. The Applicant shall prepare and submit to the Director-General an Annual Environmental Management Plan (AEMP) Report. The first report shall be prepared and submitted within twelve (12) months of the substantial commencement of construction. A copy of the EMP Report should also be submitted to the Council and EPA. The report shall generally include:

(a) a review of the effectiveness of environmental management for the subject land, including all control, mitigation and management measures required in the conditions of this consent;
(b) a review of performance in terms of the conditions of development consent;

(c) results of environmental monitoring in respect of air quality, water quality, and noise and vibration; and
(d) a record of any complaints received in relation to the environmental performance of the mine and actions taken in response to complaints.

(Note: Provided all requirements of this condition are met, the Applicant may prepare the above AEMP Report in conjunction with any other annual environmental report required by another regulatory authority).

COMPLIANCE REPORTS

9. At least 2 (two) weeks prior to the commencement of substantial construction (or within such period as otherwise agreed to by the Director-General), the Applicant shall submit for the approval of the Director-General a compliance report detailing compliance with all the relevant conditions that apply at this stage.

At least 2 (two) weeks prior to the commencement of operations associated with the development (or within such period as otherwise agreed to by the Director-General), the Applicant shall submit for the approval of the Director-General a compliance report detailing compliance with all the relevant conditions that apply at this stage.

The compliance reports shall include:

(a) the dates of submissions of the various studies and/or requirements of various relevant conditions, and of their approvals and terms of approvals;
(b) action taken or proposed to implement the recommendations made in the terms of approvals and/or studies

INDEPENDENT ENVIRONMENTAL AUDITING

10. 12 (twelve) months after the commencement of operations, an independent environmental audit report shall be submitted to the Director-General, Council, the DMR and the EPA.

The audit shall be carried out at the Applicant's expense and shall be undertaken in accordance with the requirements of the Director-General in consultation with the EPA. The audit shall cover all aspects of monitoring and environmental performance, and compliance with reporting requirements, conditions of this consent and all relevant approvals and licences. The audit report shall be made available to the Director-General and Council. Further independent audits shall be conducted as directed by the Director-General.

The audit shall be carried out by a suitably qualified person as approved by the Director-General.

The Applicant shall comply with all reasonable requirements of the Director-General in respect of any measures arising from or recommended by the audit and within such time as agreed to by the Director-General.

CONSTRUCTION HOURS

11. Any construction activity resulting in noise emission levels greater than 5 dB(A) above background, or resulting in tonal noise or impact noise likely to cause annoyance at any residence, shall be limited to the following hours:

    7:00 am to 6:00 pm – Monday to Friday
    7:00 am to 1:00 pm – Saturday
    No construction activity on Sundays or public holidays.

TAILINGS STORAGE FACILITY

12. The Applicant shall obtain approval from the NSW Dam Safety Committee for the construction of the tailings storage facility. All construction and operation works and monitoring and maintenance procedures shall be in accordance with the requirements of the NSW Dam Safety Committee. Copies of all relevant approvals from the NSW Dam Safety Committee shall be forwarded to the Director-General prior to the commencement of construction of the tailings storage facility.

13. The tailings storage facility shall be designed, constructed, operated, monitored and maintained such that all water received in the facility is evaporated, retained or reused and that there is no discharge of tailings water to the environment. The Applicant shall comply with all requirements of the EPA, DMR, and the NSW Dam Safety Committee to ensure that there is no seepage, leakage or overflow from the tailings storage facility.

14. Construction of the tailings storage facility shall be supervised at all times and certified by the Applicant's dam design engineer.

WATER QUALITY

15. Any new effluent disposal system shall be subject to relevant approvals from the EPA and Council.

16. Prior to the commencement of construction, the Applicant shall prepare an Erosion and Sediment Control Plan to the satisfaction of DLWC, DMR and the EPA. The Plan shall provide details on all control measures to be implemented during construction works, including haul road construction and upgrading, and include contingency measures for dealing with high rainfall events during construction. The Plan shall also cover erosion and sediment control during the operational phase of the development. The Plan shall form part of the EMPs referred to in Condition 7.

17. In order to prevent dust and sediment trapped in vehicle wheels from entering Bakers Creek, all vehicle crossings over Bakers Creek shall be constructed such that under normal flow conditions vehicles do not enter the water.

18. The Applicant shall, in accordance with the requirements of the EPA, DMR and DLWC and the Director-General:

(a) monitor and report on groundwater discharges from the existing and new mine adits; and
(b) implement appropriate measures to control contaminated water discharges from existing and new adits

19. Waste rock materials shall be stockpiled in controlled discharge areas such that there is no discharge of leachate to the environment.

20. Prior to the construction of any new adits and the commencement of mining operations at Brackins Spur, the Applicant shall conduct investigations to determine whether potentially acid producing waste rock will be extracted during construction and mining. Should these investigations reveal the existence of potentially acid producing waste rock, management measures for this material shall be included in the EMP referred to in Condition 7.

FLORA AND FAUNA

21. Prior to the commencement of construction, the Applicant shall consult with the Comprehensive Resource Assessment (CRA) Manager at NPWS Northern Zone in relation to the possible occurrence of new eucalyptus species in the *Eucalyptus cypellocarpa* group on the subject land.

22. During construction of haul roads, all practical measures shall be implemented to reduce impacts on individuals and stands of *Eucalyptus michaeliana* and *Acacia ingramii*. These measures shall include, but not be limited to, the fencing and flagging of individuals and stands and, where practicable, the avoidance of blasting in the vicinity of these species.

23. The Applicant shall implement all appropriate measures to avoid disturbance of all mature hollow-bearing trees on the subject land. Should disturbance of mature hollow-bearing trees be unavoidable, a suitably qualified person shall, prior to disturbance, inspect the relevant tree/s for the presence of the Black Cockatoo *Calyptorhynchus lathami,* the Red-tailed Black Cockatoo *Calyptorhynchus magnificus* and the Greater Broad-nosed *Bat Scoteanax rueppellii*. Should any these species be detected, the Applicant shall immediately contact NPWS with regard to the implementation of appropriate measures to minimise impacts on these species.

24. Prior to the disturbance of any tunnels, adits or mine shafts on the subject land, the Applicant shall conduct an inspection for the presence of the Large Bent-wing Bat *Miniopterus schreibersii*. Should this species be detected, the Applicant shall contact NPWS with regard to the implementation of appropriate measures to minimise impacts on the species.

25. Prior to the commencement of construction, the Applicant shall, in accordance with the requirements of the NPWS, undertake further investigations to determine the validity of the record of the Red-tailed Black Cockatoo *Calyptorhynchus magnificus* occurring on the subject land.

VEGETATION MANAGEMENT AND LANDSCAPE PLAN

26. The Applicant shall submit a detailed Vegetation Management and Landscape Plan with the Building Application lodged with Council, or at another date as agreed to by Council. The Plan shall be prepared by a suitably qualified person and shall address, but not be limited to, the following matters:

    (a) details of likely vegetation loss, means to minimise such loss and additional tree planting to offset this loss;
    (b) details on screen planting around the new tailings storage facility, with particular attention to minimising the visibility of the facility from residences to the north; and
    (c) details on the proposed landscaping treatment of the mine processing area and the new office area on the Bakers Creek Flat.

27. All landscaping and tree planting works shall be completed to the satisfaction of Council within 12 (twelve) months of the commissioning of the development.

EXTERNAL APPEARANCE OF BUILDINGS AND STRUCTURES

28. All buildings and structures shall be constructed using suitably coloured, non-reflective materials to the satisfaction of Council. Details shall be submitted with the Building Application lodged with Council.

TRAFFIC AND PARKING

29. All heavy vehicle movements associated with the subject development shall use the Stockton Road and Waterfall Way route for site ingress and egress.

30. Prior to the commencement of operations, the Applicant shall consult the RTA and Council on the funding and timing for the provision of a right hand turning lane (slip lane) for eastbound traffic on Waterfall Way at its intersection with Stockton Road. The turning lane shall be provided at the Applicant's expense.

31. On-site parking arrangements shall be to the satisfaction of Council.

NOISE

32. The applicant shall prepare a Noise and Vibration Management Plan in consultation with and to the approval of the EPA. The plan shall define the noise management procedures, monitoring protocols and measures for mitigating impacts including potential cumulative impacts, that can be implemented where necessary throughout the life of the project under normal meteorological conditions.

33. The two 175kW air compressors within the Pressure Oxidation Plant shall be enclosed in insulated cabinets and shall meet the noise level requirements referred to in Condition 34. The insulated cabinets are to be installed prior to the operation of the compressors.

34. The Applicant shall ensure that the $L_{A10(15\ minute)}$ noise levels due to the normal operation of the mine, when measured or computed at any residence (other than one owned by the Applicant), shall not exceed a noise level of 35 dB(A) or 30 dB(A) where the noise source is tonal in nature and shall comply with the requirements of the Environmental Noise Control Manual and the Noise Control Act 1975.

    Should a noise complaint be received from any nearby residence, the Applicant shall investigate the complaint and implement appropriate mitigation measures as required. Any such complaints and subsequent actions undertaken by the Applicant shall be addressed in the Annual Environmental Management Plan Report (Condition 8).

35. Noise measurement shall be undertaken under prevailing weather conditions, in the absence of temperature inversions and over a period of time sufficient to be representative of the noise levels being emitted from the mine.

36. All above-ground blasting shall only be carried out between 9:00am and 3:00pm Monday to Friday. Blasting shall not be allowed on public holidays unless the Council in special circumstances and in consultation with the EPA, approves other times.

37. The Applicant shall give notice of proposed above-ground blasting times to residents within two (2) kilometres of the blasting site if requested by residents

HERITAGE

38. A "Consent to Destroy" application under section 90 of the National Parks and Wildlife Act 1974 must be submitted and issued by the Director-General of National Parks and Wildlife for any Aboriginal archaeological sites that are to be damaged or destroyed as a result of any development.

    The Applicant shall consult with the relevant local Aboriginal groups and to the satisfaction of the NPWS prior to a "Consent to Destroy" application being submitted.

39. In the event that Aboriginal artefacts are identified on the site during development through earthworks, construction or operation of the quarry, the Applicant shall contact the NPWS and cease work in the relevant location pending investigation and assessment of its heritage value by NPWS and the relevant local Aboriginal groups.

40. The Applicant shall consult with the NSW Heritage Council, Dumaresq Council, Armidale Folk Museum and Hillgrove Mining Museum if any European Heritage items, including any future item listed as an environmental heritage item in the Dumaresq LEP 1985, would be potentially affected during the life of the subject development.

AIR QUALITY

41. The Applicant shall implement, in consultation with the EPA, dust control measures aimed at achieving relevant EPA dust deposition standards.

42. Dust sampling shall occur monthly within the development site at locations determined by the EPA with the results submitted annually to the EPA or such shorter intervals as required by the EPA.

43. As part of the EMP/s referred to in Condition 7, the Applicant shall prepare a Dust Management Plan which is to have particular regard to the tailings dams, ore stockpiles, internal haul roads and processing facilities.

44. The Applicant shall undertake periodic dust monitoring at any nearby property as required by the EPA following the request of a resident. The Applicant shall notify the resident/s of the general results of dust monitoring. Monitoring results shall be included in the EMP Report (Condition 8).

HAZARDS AND SAFETY

45. At least one month prior to the commencement of construction of the proposed process plant (except for construction of those preliminary works that are outside the scope of the hazard studies), or within such further period as the Director-General may agree, the Applicant shall prepare and submit for the approval of the Director-General the studies set out in paragraphs (a) to (d) (the pre-construction studies) below. Construction, other than of preliminary works, shall not commence until the Director-General has given approval and, with respect to the fire safety study, the Commissioner of the NSW Fire Brigades has also given approval.

(a) FIRE SAFETY STUDY

A fire safety study for the proposed development. This study shall cover all aspects detailed in the Department of Urban Affairs and Planning's *Hazardous Industry Planning Advisory Paper No. 2, "Fire Safety Study Guidelines"*. The study shall also be submitted for approval, to the NSW Fire Brigades.

In particular the study should address the fire related issues associated with the storage and use of Ammonium nitrate, AN explosive emulsion, SIBX and PAX and Cyanide

(b) HAZARD AND OPERABILITY STUDY

A Hazard and Operability Study for the proposed development, chaired by an independent qualified person approved by the Director-General prior to the commencement of the study. The study shall in particular address the monitoring, control, alarm and shutdown systems associated with the cyanide and xanthate process streams and be carried out in accordance with the Department of Urban Affairs and Planning's *Hazardous Industry Planning Advisory Paper No. 8, "HAZOP Guidelines"*.

(c) FINAL HAZARD ANALYSIS

A final hazard analysis of the proposed development. The analysis should be prepared in accordance with the Department of Urban Affairs and *Planning's Hazardous Industry Planning Advisory Paper No. 6, "Guidelines for Hazard Analysis"*. The FHA shall in particular address in detail of issues associated with the possible release of toxic materials from processes or the ponds due to plant upsets;

46. No later than 2 (two) months prior to the commencement of commissioning of the proposed development, or within such further period as the Director-General may agree, the Applicant shall prepare and submit for the approval of the Director-General the studies set out under paragraphs (a) to (c) (the pre-commissioning studies) below. Commissioning shall not commence until the Director-General has given approval.

(a) TRANSPORT OF HAZARDOUS MATERIALS .

Arrangements covering the transport of hazardous materials including details of routes to be used for the movement of vehicles carrying hazardous materials to or from the proposed development. The study shall be carried out in accordance with the Department of Urban Affairs and Planning's draft *"Route Selection" guidelines*. Suitable routes identified in the study shall be used except where departures are necessary for local deliveries or emergencies.

The study should also address

i) issues associated with spills, cleanup procedures, training of clean-up teams, communication and liaison with organisations such as the fire Brigade and state emergency services

ii) the inspection and monitoring procedures for chemicals such as explosives, xanthates and cyanides prior to commencement of a trip, to verify the integrity of the packaging;

iii) measures to be taken to ensure that the temperature of the materials does not rise about safe levels

(b) EMERGENCY PLAN

A comprehensive emergency plan and detailed emergency procedures for the proposed development. This plan shall include detailed procedures for the safety of all people outside of the development who may be at risk from the development. The plan shall be in accordance with the Department's *Hazardous Industry Planning Advisory Paper No. 1, "Industry Emergency Planning Guidelines"*.

(c) SAFETY MANAGEMENT SYSTEM

A document setting out a comprehensive safety management system, covering all operations on-site and associated transport activities involving hazardous materials. The document shall clearly specify all safety related procedures, responsibilities and policies, along with details of mechanisms for ensuring adherence to procedures. Records shall be kept on-site and shall be available for inspection by the Director-General upon request. The Safety Management System shall be developed in accordance with the *Department's Hazardous Industry Planning Advisory Paper No. 9, "Safety Management"*.

The SMS shall include details of:

i) the location and control of all ignition sources throughout the plant;

ii) safety features used in storage, transporting and usage of Xanthates including temperature and moisture control and ventilation.

iii) equipment for monitoring cyanide levels and detection of system malfunction should have adequate redundancy in order to ensure a high level of integrity;

iv) a detailed maintenance and testing program for the detection and shutdown systems should be included in the site safety manual and other relevant manuals;

v) isolation valves which need to be operated in an emergency should have the capability of remote operation from a safe distance in the event of a localised failure, and

vi) design of the emergency shutdown system should give particular attention to achieving fast detection and isolation of potentially high consequence leaks and spills

HAZARD AUDIT

47. Twelve (12) months after the commencement of operations of the proposed development or within such further period as the Director-General may agree, the applicant shall carry out a comprehensive hazard audit of the proposed development and within one (1) month of the audit submit a report to the Director-General. The audit shall be carried out at the applicant's expense by a duly qualified independent person or team approved by the Director-General prior to commencement of the audit. Further audits shall be carried out every three (3) years or as determined by the Director-General and a report of each audit shall within one (1) month of the audit be submitted to the Director-General. Hazard audits shall be carried out in accordance with the Department's *Hazardous Industry Planning Advisory Paper No. 5, "Hazard Audit Guidelines"*.

    The audit shall include a review of the site safety management system and a review of all entries made in the incident register since the previous audit.

48. Within one (1) month of the date of this consent that Applicant shall consult with WorkCover NSW with regard to the storage and use of dangerous goods. At this time, the Applicant shall ensure that all WorkCover licences are valid.

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CERTIFIED ENVIRONMENTAL MANAGEMENT SYSTEM ISO 14001

CERTIFIED QUALITY MANAGEMENT SYSTEM ISO 9001

CERTIFIED SAFETY MANAGEMENT SYSTEM AS/NZS 4801

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