



Environmental Management Strategy

Name	Position
Document Owner	Superintendent Environment
Document Approver	Superintendent Environment

People involved in the review of this plan

Name	Position	Company/Site	Exp (yrs)	Revision
Chris Schultz	Superintendent Environment	ICHPL	28	Dec 2024
Luca Franceschini	Specialist Environment	ICHPL	3	Nov 2024
Josh Carlon	Coordinator Environment	ICHPL	15	Nov 2024
Antony Leone	Manager Corporate Affairs	ICHPL	13	Nov 2024

Document Revisions

Revision	Description of Changes	Date
1.0	Original Document (ID: DENMP0039)	February 2005
2.0	Review Modified Development Consent	April 2009
3.0	Review and update Roles and Responsibilities	March 2012
4.0	The following changes have been made: Updated Roles and Responsibilities; References to parent company; Addition of EMS overview figure; References to documents update	April 2018
5.0	The following changes have been made: Update to reflect changed conditions from MOD 8; Updated roles and responsibilities; Administrative changes	March 2019
6.0	Update to new format and general update of content.	July 2021
7.0	General update in response to MOD 9.	August 2023
8.0	Administrative changes. Update references from South32 to GM ³ , update of links. Remove South32 logos. General update.	December 2024

Table of Contents

1	Introduction	5
1.1	Objectives.....	5
1.2	Scope	6
1.3	Environmental Management System.....	6
1.4	Consultation	7
2	Roles and Responsibilities	7
3	Legislation and Planning	8
3.1	Consent Conditions.....	8
3.2	Wollongong City Council Consent	9
3.3	Environment Protection Licence Requirements	9
3.4	Mining Leases.....	9
3.5	Water NSW Access Consent	9
3.6	Other Approvals	9
3.7	Guidelines and Standards	10
4	Environmental Management	11
5	Communications.....	13
5.1	Internal and External Communications	13
5.2	Dendrobium Community Consultative Committee	15
5.3	Access to Information	15
6	Complaints, Non-conformance, Non-compliance and Risk Management	16
6.1	Complaints and Dispute Resolution.....	16
6.2	Events, Cumulative Impacts, Non-Compliances, Corrective Actions and Preventative Actions	17
6.3	Risk Management	17
7	Emergency Response	18
8	Reporting and Review	19
8.1	Reporting	19
8.2	Incident and Exceedance Notifications	20
8.3	Review of EMS	21
8.4	Audits	22
9	Summary of Commitments	23
10	Acronyms.....	24
11	References.....	25
12	Plans	26
13	Appendices.....	30
	Appendix 1: Consent Conditions - EMS	30
	Appendix 2: Mitigation Hierarchy	35

Appendix 3: Agency Consultation 36

Appendix 4: Management Plan Approval 37

1 Introduction

Dendrobium Mine is an underground mine which commenced construction in January 2002 following approval from the Minister of the then Department of Urban Affairs and Planning on 20 November 2001. Longwall mining commenced at Dendrobium in April 2005. The mine is owned and operated by Dendrobium Coal Pty Ltd, a subsidiary of Illawarra Coal Holdings Pty Ltd (ICHPL), which is a wholly owned subsidiary of Gear M Illawarra Met Coal Pty Ltd. The mine operates on a continuous basis, 24 hours a day and 7 days a week.

The mining operations are located immediately adjacent to Mount Kembla, approximately 8 km west of Wollongong, NSW, on the Illawarra escarpment (refer to Plan 1). Mount Kembla village, located within 500 m of the Pit Top site, has close historical links with coal mining.

Dendrobium produces predominantly metallurgical coal from the Wongawilli Seam (Areas 1, 2, 3) and is approved to produce up to 5.2 million tonnes of run of mine (RoM) coal per annum. The BlueScope Steel Port Kembla Steel Works (PKSW) is a major customer. In addition to the Australian based customers, coal is exported via the Port Kembla Coal Terminal to international customers.

Approval for mining in Areas 1, 2 and 3 was granted under DA 60-03-2001, as modified (the Consent).

The Consent allows mining operations to take place in the mining area until 31 December 2030. Resources are available for mining to extend beyond this period and would be subject to further approvals.

Cordeaux Colliery is owned and operated by Endeavour Coal Pty Ltd, a subsidiary of ICHPL. Coal production ceased at the site in March 2001 and recovery of longwall mining equipment was completed on 12 April 2001. Following cessation of mining, the Colliery was placed on care and maintenance, on which it remains. The Cordeaux Colliery Pit Top functions as office space and a storage facility for various ICHPL departments. The Pit Top is also used as a base for exploration activity across the Dendrobium and Appin mining leases and exploration tenements, and for access into the WaterNSW Catchment Special Area (Special Area).

Dendrobium Mine, Cordeaux Colliery and Appin Mine (and associated facilities) are collectively operated by GM³.

This Environmental Management Strategy (EMS) has been prepared to detail the strategic framework for environment management relating to the mining operations and associated activities. This EMS has been prepared to satisfy Condition 1 of Schedule 8 of the Consent for the Environmental Management Strategy.

1.1 Objectives

The objectives of the EMS are to:

- a) provide the strategic framework for environmental management at Dendrobium Mine and Cordeaux Colliery;
- b) identify the statutory approvals that apply to the project;
- c) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the project; and
- d) describe the procedures that would be implemented to:
 - keep the local community and relevant agencies informed about the operation and environmental performance of the project;
 - receive, handle, respond to, and record complaints;

- resolve any disputes that may arise during the course of the project;
- respond to any non-compliance.

1.2 Scope

The scope of the EMS applies to all existing and future operational and construction activities related to Dendrobium Mine at:

- Dendrobium Pit Top - consists of administration buildings, workshop, machinery and equipment storage areas, personnel and materials access to the underground workings via the Dendrobium Tunnel, sediment pond and water treatment facility.
- Kemira Valley Coal Loading Facility (KVCLF) – receives coal from underground via the Kemira Valley Tunnel. RoM coal is transported from underground to KVCLF via an extensive coal clearance system. The coal is fed into a rill tower and deposited onto a 140,000-tonne stockpile from which it is loaded into trains via an enclosed rail-loading chute. Sediment ponds are in place.
- Dendrobium Coal Preparation Plant (DCPP) – located within the PKSW, the DCPP receives and washes RoM coal from the underground operations.
- Kemira Valley Rail Line (KVRL) – used to transport the coal from KVCLF to the DCPP.
- Ventilation Shaft (VS) 1 - located within the Special Area administered by WaterNSW, operates as a downcast shaft (i.e. drawing fresh air into the underground workings). VS1 is located on land owned by ICHPL.
- VS2 and VS3 – located within the Special Area and within Mining Lease (ML) 1566. VS2 operates as a downcast shaft whilst VS3 operates as an upcast shaft (i.e. drawing air out of the underground workings). The site includes gas drainage infrastructure for Area 3C and future mining domains.
- Cordeaux Pit Top - consists of administration buildings, workshop, machinery and equipment storage areas, personnel and materials access to the underground workings via a shaft (no longer utilised), ventilation fans, coal storage bins, exploration core shed, sediment pond and stabilisation lagoons. Corrimal #3 shaft is located approximately 3.5 km from the pit top. Cordeaux Pit Top and Corrimal #3 shaft are on care and maintenance.
- Dendrobium Underground Operations – coal is extracted from the Wongawilli Seam. The underground operations consist of a longwall shearer and roof supports, development units, gas drainage infrastructure, coal clearance conveyor network and associated infrastructure.

Refer to Plan 1 for locations of the above.

1.3 Environmental Management System

ICHPL has a comprehensive Environmental Management System in place to minimise the impact of its operations on the local environment and community. The EMS is a component of the Environmental Management System which is certified to ISO 14001.

1.4 Consultation

Consultation with external stakeholders is not required for the EMS. Any comments received from regulatory agencies will be documented in Appendix 3 and incorporated into the EMS as required.

2 Roles and Responsibilities

Table 1 outlines the roles and responsibilities associated with the implementation and periodic review of the EMS.

Table 1: Roles and Responsibilities

Role	Responsibilities	Authorities
Site General Managers General Manager Sustainability and Approvals	Provide operational resources to site personnel to effectively implement and maintain the EMS.	Implement changes to the plant, stop or suspend operations as required to meet environmental obligations.
Superintendent Environment	- Implement environmental management strategies, plans, programs and associated procedures in accordance with the requirements of this EMS and other external requirements. - Provide leadership and support to the ICHPL Environment Team to effectively implement and maintain the EMS.	- Make recommendations to suspend operations as required to meet environmental obligations. - Liaise with Government authorities regarding environmental issues on behalf of the operations. - Implement any additional environmental controls as necessary to meet environmental obligations. - Ongoing review of environmental performance and associated management/preventative actions.
Specialist Environment Coordinator Environment	- Implement environmental management strategies, plans, programs and associated procedures. - Advise, coach and mentor operational personnel with respect to meeting the standards and requirements of the EMS and associated management plans. - Monitor and review compliance against these requirements. - Undertake monitoring as required.	- Liaise with operations personnel to implement corrective actions. - Implement any additional environmental controls as necessary to meet environmental obligations.
General Manager Sustainability and Approvals	Manage approval outcomes in mining and surface areas at a high standard that is consistent with ICHPL	Environmental Assessments, monitoring and reporting for mining areas, surface facilities and infrastructure.

	requirements and approval conditions.	- Approval applications for mining activities. - Liaise with Government and other stakeholders on approvals.
Superintendent Infrastructure Protection	Manage approval outcomes for infrastructure at a high standard that is consistent with ICHPL requirements and approval conditions.	- Assessments, monitoring and management for infrastructure in mining areas. - Report infrastructure impacts and management to Government.
Corporate Affairs Team	- Develop strategies and consistent approaches to address community consultation and media enquiries. - Implement the ICHPL Stakeholder Engagement Management Plan. - Provide access to information as required by approvals. - Respond to and manage complaints, grievances, and enquiries.	- Facilitate and implement consultation and communication strategies for all stakeholders including community and employees. - Liaise with operations personnel to implement corrective actions in response to complaints.

3 Legislation and Planning

3.1 Consent Conditions

All activities carried out at Dendrobium Mine will be in accordance with the conditions of the Consent (Condition 2A of Schedule 2), and generally in accordance with all of the necessary approvals, licences and other information described in Condition 2 of Schedule 2.

The EIS and modification applications were assessed and approved under the *Environmental Planning and Assessment Act 1979 (EP&A Act)* and associated Regulations.

In accordance with Condition 4 of Schedule 2, ICHPL will comply with any reasonable and feasible requirements of the Secretary arising from the Department's assessment of:

- a) any reports, strategies, plans, programs, reviews, audits or correspondence that are submitted in accordance with the conditions of the Consent;
- b) any reviews, reports or audits undertaken or commissioned by the Department regarding compliance with the conditions of the Consent; and
- c) the implementation of any actions or measures contained in these documents.

Appendix 1 outlines the environmental management requirements of the Consent and references where the requirements have been addressed within the EMS.

3.2 Wollongong City Council Consent

Cordeaux Colliery currently operates under Development Consent D74/134, issued by Wollongong City Council.¹

3.3 Environment Protection Licence Requirements

Environment Protection Licence No. 3241 (EPL 3241) applies to Dendrobium Mine and associated activities and EPL 611 applies to Cordeaux Colliery and associated activities. A copy of the licence can be accessed at the Environment Protection Authority (EPA) website: [here](#).

3.4 Mining Leases

Dendrobium Mine operates in accordance with the following mining leases:

- Consolidated Coal Lease (CCL) 768.
- ML 1510 (covers the KVCLF).
- ML 1566 (covers VS 2 and 3).

3.5 Water NSW Access Consent

Consent F2020/1545 has been issued to ICHPL pursuant to clause 10(4) of the *Water NSW Regulation 2020*. Consent F2020/1545 grants consent to ICHPL to traverse lands that are Special Areas for the purposes of undertaking the Permitted Activity within the Designated Area in accordance with the conditions of this Consent. It includes requirements for reporting incidents and the requirement for submission of an Annual Statement of Compliance.

3.6 Other Approvals

Key regulatory and environmental management obligations applicable to Dendrobium Mine are managed via an obligations management database. The obligations are allocated to responsible personnel. This process is detailed in the Environmental Compliance/ Conformance Assessment and Reporting Procedure.

Acts and Regulations are applicable to mining operations within the approved Dendrobium mining domains and the operations of Dendrobium Mine. These may include, but are not limited to, the:

- *Contaminated Land Management Act, 1997*;
- *EP&A Act, 1979*;
- *Environmental Protection and Biodiversity Conservation Act, 1999*;
- *Protection of the Environment Operations Act (POEO Act), 1997*;
- *POEO (General) Regulation, 2021*;
- *POEO (Clean Air) Regulation 2022*;
- *National Greenhouse and Energy Reporting Act 2007 (NGER Act)*;
- *National Greenhouse and Energy Reporting (Measurement) Determination 2008*;

¹ Options to incorporate Cordeaux Colliery in the Dendrobium Consent are currently being investigated.

- *National Greenhouse and Energy Reporting (Safeguard Mechanism) Rule 2015;*
- *Biodiversity Conservation Act, 2016;*
- *Heritage Act, 1977;*
- *Mining Act, 1992;*
- *Mining Regulation, 2016;*
- *Coal Mine Subsidence Compensation Act, 2017;*
- *National Parks and Wildlife Act, 1974;*
- *Biosecurity Act, 2015;*
- *Rail Safety National Law (NSW) No. 82;*
- *Dangerous Goods (Road and Rail Transport) Act, 2008;*
- *Roads Act, 1993;*
- *Water NSW Act, 2014;*
- *Water NSW Regulation 2020;*
- *Crown Lands Management Act, 2016;*
- *Dams Safety Act, 2015;*
- *Energy and Utilities Administration Act, 1987;*
- *Fisheries Management Act, 1994;*
- *Water Act, 1912;*
- *Water Management Act, 2000;*
- *Work Health and Safety (Mines and Petroleum Sites) Act, 2013;*
- *Occupational Health and Safety Amendment (Dangerous Goods) Act, 2003; and*
- *Local Land Services Amendment Act, 2016; and*
- *Corporations Act 2001.*

Relevant licences and approvals required under applicable Acts will be obtained as required.

3.7 Guidelines and Standards

This EMS has been developed to be consistent with the principles of the following:

- ISO 14001:2015 Environmental Management Systems; and
- GM³ Sustainability Policy.

Other relevant guidelines include:

- Community Consultative Committee Guidelines: State Significant Projects (2023), published by the Department (available [here](#));
- Independent Audit Post Approval Requirements ([link](#));
- Guideline: Pollution Incident Response Management Plans (2022), published by EPA;
- Special Areas Strategic Plan of Management (2015); and

- State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011 (SEPP 2011).

More detail on applicable guidelines has been included in each management plan.

4 Environmental Management

Environmental management strategies, plans, and programs for Dendrobium Mine have been developed to comply with legislative, corporate and ISO 14001 certification standards. These strategies, plans and programs are subject to regular auditing and review and are used to provide site personnel and management with specific environmental management guidelines relative to the operation with which they are involved.

An overview of the Environmental Management Framework for Dendrobium Mine and Cordeaux Colliery is shown in Figure 1.

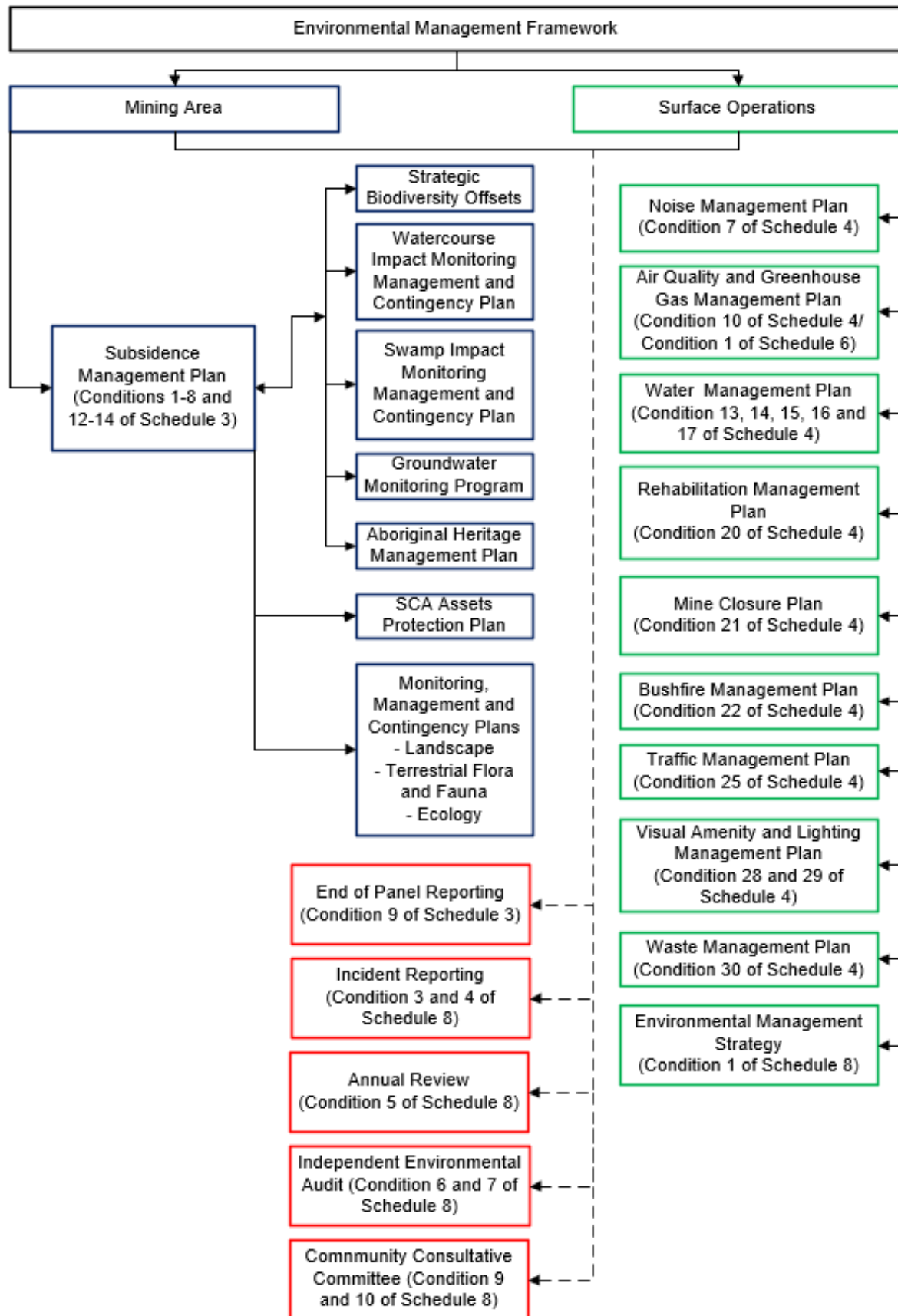


Figure 1: Environmental Management Framework

Plans and monitoring programs identified in Figure 1 outline the environmental monitoring and management practices for the mining areas, surface facilities and extended site and other components under the Consent and EPL 3241. Copies of the approved Environmental

Management Plans/Monitoring Programs are available on the GM³ website, accessible via this [link](#).

The Source-Pathway-Receptor model (Figure 2) will be utilised for the identification of relevant environmental hazards and risks, that will be detailed in the relevant management plan.

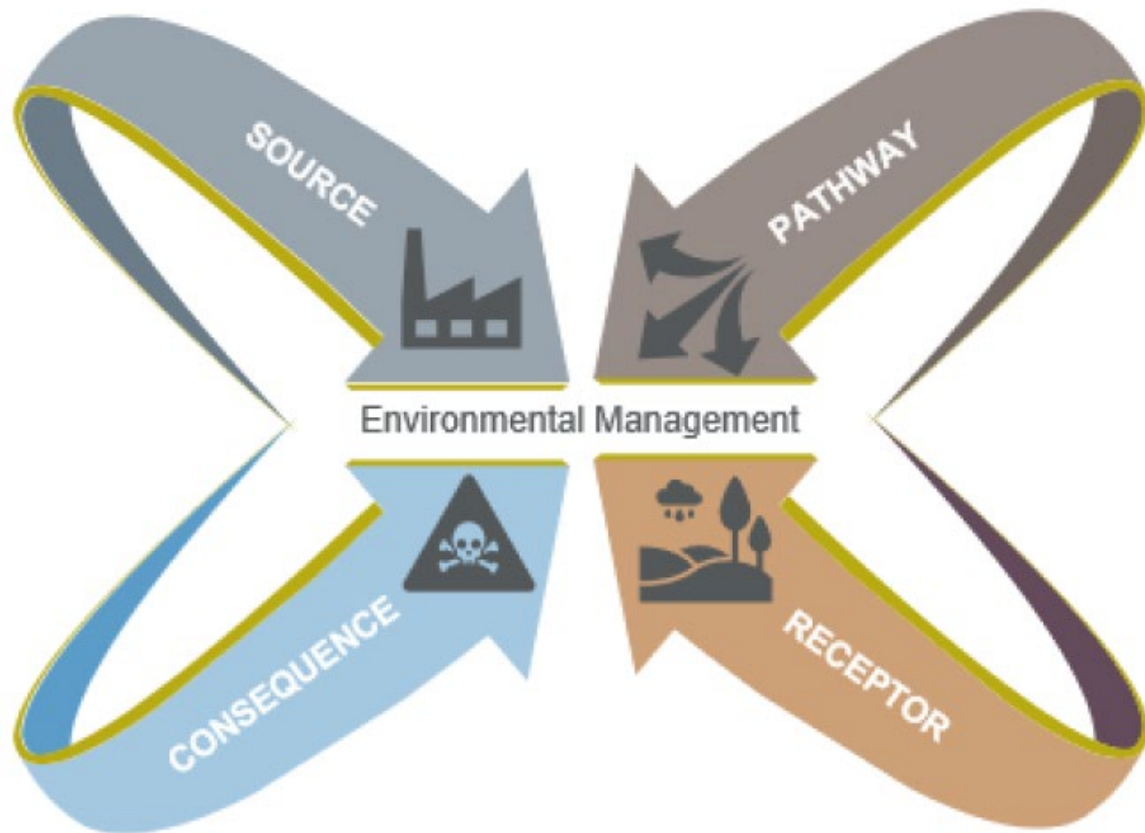


Figure 2: Source-Pathway-Receptor Model

Cumulative impacts will be addressed where required under the relevant management plan.

Current and proposed monitoring locations under the conditions of the Consent and EPL 3241² for the Dendrobium surface and underground mining domains are provided in Plan 2 and Plan 4. Cordeaux Colliery surface monitoring locations are shown in Plan 3.

5 Communications

5.1 Internal and External Communications

Internal and external communications are performed in accordance with the ICHPL Stakeholder Engagement Management Plan (SEMP). The plan is consistent with the relevant GM³ policies as well as ISO 14001 requirements. The plan identifies key stakeholders and appropriate communication and consultation processes.

Key stakeholders include:

- local communities in the vicinity of Dendrobium Mine operations;
- local and state government agencies and authorities;

² No monitoring is required under EPL 611.

- employees and contractors;
- local and regional business groups;
- community groups;
- residents potentially impacted by Dendrobium Mine operations;
- indigenous community – Tharawal Aboriginal Land Council and Illawarra Local Aboriginal Land Council;
- local schools and volunteer groups; and
- broader regional community.

Community information is provided through, but not limited to, the following mechanisms:

- community information sheets and letter box drops;
- media releases and other media activities;
- direct engagement with community members including affected landholders (i.e., door knock, letters, one-on-one meetings);
- briefings with local government, business and community groups;
- bi-monthly meetings with regulatory and non-regulatory community groups;
- general community surveys and reports;
- internal GM³ publications for employees;
- start of shift briefings and toolbox talks – delivered to employees and contractors as required;
- quarterly newsletters distributed to the community;
- social media;
- GM³ website (<https://gm-3.com.au/> and <https://community.gm-3.com.au/>);
- Annual Review (Condition 5 of Schedule 8 of the Consent); and
- information drop-in sessions.

GM³ coordinates the following stakeholder committees and working groups:

- Dendrobium Community Consultative Committee (CCC); and
- Dendrobium Community Enhancement Committee (DCEC).

ICHPL's community consultation and communication is guided by the SEMP. The SEMP details the strategies used by GM³ with regard to social and community management and stakeholder engagement in the areas in which ICHPL operates. GM³ acknowledges that commitment to a systematic approach is required to achieve sound social performance and best practice community relations. Such a system provides consistency so that stakeholder engagement is addressed through the allocation of appropriate resources, assignment of responsibilities and ongoing evaluation of practices, procedures and processes.

To verify these mechanisms are working effectively and that stakeholder engagement strategies are meeting both GM³ and stakeholder requirements, evaluation methods are also employed. Such evaluation is informed primarily by community and stakeholder surveys, but also community enquiries / feedback / complaints, community committees, information forums or other similar communications and engagement mechanisms.

5.2 Dendrobium Community Consultative Committee

In accordance with Condition 9 of Schedule 8 of the Consent, the CCC has been established. The focus of the DCCC is on the immediate Pit Top area, mine operations, the catchment area above where mining takes place, impacts to the surface (such as subsidence issues, infrastructure placement etc), transport of materials, waste disposal, new construction activities and the overall management of the aspects of water, air, noise and waste. The scope of the discussion is to encompass, as a minimum, operational matters, environmental matters and community relations.

The CCC operates under a Terms of Reference, which is guided by the Department's Community Consultative Committee Guidelines: State Significant Projects.

The CCC is an advisory committee for ICHPL and is comprised of an independent chair and appropriate representation from ICHPL, local Councils, and the local community including environmental groups.

Proceedings and outcomes from each meeting are recorded and minutes circulated to the membership and placed on the GM³ website.

The CCC nominally meets every two (2) months. In addition to regular meetings, site visits are also offered periodically to members as a means to increase field knowledge on particular areas of interest. Extraordinary meetings can be convened if required.

5.3 Access to Information

In accordance with Condition 11 of Schedule 8 of the Consent, ICHPL will make the following information and documents (as they are obtained, approved or otherwise stipulated within the conditions of the Consent) publicly available and up to date on the GM³ website:

- (i) the documents referred to in Condition 2 of Schedule 2 of the Consent³;
- (ii) all statutory approvals for the development;
- (iii) all approved strategies, plans and programs required under the conditions of the Consent;
- (iv) the proposed staging plans for the development if construction, mining operations or decommissioning is to be staged;
- (v) minutes of CCC meetings;
- (vi) regular reporting on the environmental performance of the development in accordance with the reporting requirements in any plans or programs approved under the conditions of the Consent;
- (vii) a comprehensive summary of the monitoring results of the development, reported in accordance with any specifications in any conditions of the Consent, or any approved plans and programs;
- (viii) a summary of the current stage and progress of the development;
- (ix) contact details to enquire about the development or to make a complaint;
- (x) a complaints register, updated monthly;
- (xi) the Annual Reviews of the development;

³ Some documents are not available and reference is provided to the DPIE Major Projects Portal.

(xii) audit reports prepared as part of any Independent Environmental Audit of the development and ICHPL's response to the recommendations in the audit report; and

(xiii) any other matter required by the Planning Secretary.

The required information can be accessed [here](#).

ICHPL is responsible for keeping the above information up to date, to the satisfaction of the Planning Secretary. Where privacy of information is requested or required from external parties or considered commercial in confidence, the related strategies, plans and/or programs (or portions of these documents) will not be available to the public.

Only the latest approved versions of Management Plans will be provided on the website.

Documents showing the location or photos of Aboriginal heritage sites will have these plans/photos redacted as requested by the local Aboriginal community.

6 Complaints, Non-conformance, Non-compliance and Risk Management

6.1 Complaints and Dispute Resolution

6.1.1 Complaints

GM³ has a 24-hour, free community call line (1800 102 210) and email address (community@gm-3.com.au) which is displayed at ICHPL Projects and Mine Sites, and included in newsletters, letters and other correspondence. The call line is for all complaints and general enquiries regarding environmental or community issues associated with ICHPL's operations.

Community complaints and enquiries may also be received in person by any employee of GM³, with details to be shared with the relevant operations personnel for investigation as soon as reasonably practical. All complaints received in relation to Dendrobium Mine and Cordeaux Colliery will be managed in accordance with the Community Complaints Procedure.

Upon receipt of a community complaint, preliminary investigations will commence as soon as practicable to determine the likely cause of the complaint. The complainant will receive an acknowledgement of their complaint within 24-hours of its submission. A follow up response will be provided as soon as practicable after a detailed investigation has been completed.

A summary of all complaints received during the reporting year will be provided as part of the Annual Review. A log of complaints is also maintained on the GM³ website, accessible [here](#).

6.1.2 Dispute Resolution Process

In the event that an issue cannot be resolved between the ICHPL representative and complainant, the issue is escalated within ICHPL. The escalation of the issue is aligned with the risk associated with the nature of the complaint.

In the event that the matter remains unresolved, it may be appropriate that the matter be taken to third-party mediation (e.g. Subsidence Advisory NSW, the Department, EPA or other relevant agencies) in order to achieve an outcome.

6.2 Events, Cumulative Impacts, Non-Compliances, Corrective Actions and Preventative Actions

Events, non-compliances, non-conformances, corrective actions and preventative actions are managed in accordance with the Reporting and Investigation Standard and Environmental Compliance/Conformance Assessment and Reporting Procedure. These procedures, which relate to all ICHPL operations, detail the processes to be utilised with respect to event and hazard reporting, investigation and corrective action identification. The key elements of the process include:

- identification of events, non-conformances and/or non-compliances;
- recording of the event, non-conformance and/or non-compliance in the event management system (G360);
- investigation/evaluation of the event, non-conformance and/or non-compliance to determine specific corrective and preventative actions;
- assigning corrective and preventative actions to responsible persons in G360; and
- review of corrective actions to verify the status and effectiveness of the actions.

Corrective and preventative actions address the cumulative impacts of the mining operations as applicable.

Subsidence modelling at Dendrobium Mine uses the Incremental Profile Method. This method uses a database of past movements/measurements to calibrate the subsidence model. The model predicts subsidence movements for each longwall (incremental) as well as all other longwalls and other influences on subsidence movements, including any adjacent, overlying or underlying workings (cumulative).

Ground and surface water modelling takes into account all other mining operations and other activities which impact water resources.

Integrated mine planning considers these cumulative impacts by adopting mine design and subsidence monitoring and management programs to ensure conditions of consent and performance measures are met.

6.3 Risk Management

An Aspects and Impacts Register has been developed that is reviewed on at least an annual basis. The Aspects and Impacts Register details the processes and activities undertaken at Dendrobium and the aspects associated with these activities, including the causes, impacts and controls (both mitigating and preventative).

Examples of aspects included in the Aspects and Impacts Register are provided in Table 2.

Table 2: Aspect Groups and Aspects

Aspect Group	Aspects
Hazardous materials management	Spills
Noise management	Noise emissions
Water management	Water availability, water use, aquifer interference, discharge of contaminants, licencing
Waste management	Incorrect disposal, incorrect treatment, loss of containment
Lighting	Light nuisance

Community	Community outrage
Land management	Damage to infrastructure, failure of rehabilitation, land movement, weed invasion/spread, unauthorised clearing
Greenhouse gas management	Greenhouse gas emissions
Dust management	Dust emissions

Controls are identified in accordance with the hierarchy of controls. The controls available, ranked from the highest level of protection and reliability, include:

- Elimination.
- Substitution.
- Engineering.
- Administrative.

The hierarchy of controls applied to environment and climate change aspects is provided in Appendix 2.

Risks are documented, maintained and managed in G360.

7 Emergency Response

The Dendrobium Mine Emergency Response Control Plan and Cordeaux Colliery Crisis and Emergency Management Plan detail the actions required during an emergency and, in particular, in the early stages of an emergency. They also define the organisational structure during an emergency and the duties to be carried out by members of the Incident Management and Incident Support Teams.

From an environmental perspective, the key emergency response document is the Pollution Incident Response Management Plan (PIRMP) for EPL 3241 and PIRMP for EPL 611. ICHPL will activate the PIRMP where a pollution incident occurs that causes or threatens to cause material harm to the environment.

The PIRMP has been prepared in accordance with Part 5.7A Section 153A and 153C of the *POEO Act* and Chapter 4 Section 71, 72 and 73 of the *POEO Regulation*.

The objectives of the PIRMP (as per the EPA's Guideline: Pollution Incident Response Management Plans dated 2022) are to:

- minimise the risk of a pollution incident occurring as a result of licensed activities, by identifying risks and the actions proposed to minimise and manage those risks;
- have established clear and effective notification, action and communication procedures to ensure the right people are notified, warned and quickly provided with updates and information they may need to act appropriately, including people who may need to be involved in incident responses – including staff at the premises; the EPA; and other relevant authorities (such as Fire and Rescue NSW, NSW Health and local councils) and industrial, commercial and residential neighbours and other members of the community; and
- have appropriately trained staff and up-to-date incident management information available to ensure the potential impact of a pollution incident is minimised.

The PIRMP is tested at least once every 12 months to verify that the information contained within the plan is accurate and up to date, and that the plan is capable of being implemented in a workable and effective manner.

The PIRMPs for EPL 3241 and 611 are available in the GM³ website at [link](#).

8 Reporting and Review

Any condition of this consent that requires the carrying out of monitoring or an environmental audit, whether directly or by way of a plan, strategy or program, is taken to be a condition requiring monitoring or an environmental audit under Division 9.4 of Part 9 of the *EP&A Act*. This includes conditions in respect of incident notification, reporting and response, non-compliance notification, compliance report and independent audit. The conditions of the Consent may impose additional requirements to those of Division 9.4.

8.1 Reporting

8.1.1 Annual Review

ICHPL reports on the performance of Dendrobium Mine and Cordeaux Colliery in the Annual Review.

The Annual Review is prepared in accordance with the requirement of Condition 5 of Schedule 8 of the Consent and is submitted to relevant agencies (including the Department, NSW Resources Regulator, EPA, DCCC, DCCEEW, WCC, WSC, CCC, BCS, WaterNSW, DS NSW, DCCEEW Water, NRAR) in September each year. Annual Reviews are made available to the regulatory agencies and general public via the GM³ website.

The Annual Review will include:

- monitoring results including comparison to relevant statutory requirements, limits or performance measures/criteria, requirements of any plan or program required under the Consent, monitoring results of previous years and relevant predictions in the documents listed in Condition 2 of Schedule 2;
- identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies;
- identification of trends;
- complaints and management/mitigation measures undertaken;
- management/mitigation measures undertaken in the event of any confirmed non-compliances, environmental impacts or failures of controls to rectify the non-compliance and avoid reoccurrence;
- review of the performance of management/mitigation measures and the monitoring program;
- describe the measures that will be implemented over the next financial year to improve the environmental performance of the development; and
- describe the development carried out in the previous financial year and proposed to be carried out in the current financial year.

8.1.2 Annual Return

Results provided in the 14-day Report will be summarised and submitted to the EPA in the Annual Return for EPL 3241.

Any non-compliances at the Cordeaux Colliery Pit Top will be reported in the Annual Return for EPL 611.

8.1.3 Public Reporting of Results (via website)

A summary of the monitoring results, including details of exceedances and non-compliances, is provided on the GM³ website in the 14-day Report [here](#).

8.1.4 Annual Statement of Compliance

In accordance with Condition 4.3.1 of Consent F2020/1545, ICHPL must provide WaterNSW with a signed Annual Statement of Compliance indicating its compliance or otherwise with the conditions in Consent F2020/1545 for each 12-month period, with reports due annually by 30 September. The Consent Holder must sign and endorse the Annual Statement of Compliance and submit it to Water NSW via email to environmental.assessments@waterNSW.com.au within 60 days of the end of each reporting period. The Annual Statement of Compliance is also included as an Appendix in the Annual Review.

8.1.5 Annual Rehabilitation Report

ICHPL will prepare an annual Rehabilitation Report and forward program for the mining area in accordance with the mining lease conditions (refer to [link](#)).

8.2 Incident and Exceedance Notifications

8.2.1 Notification of Incidents

In accordance with Condition 3 and 4 of Schedule 8 of the Consent, the Department and any other relevant agencies will be notified immediately⁴ by ICHPL after becoming aware of an incident⁵. The notification will be in writing and submitted to compliance@planning.nsw.gov.au and the Major Projects Portal ([link](#)) and identify the development and set out the location and nature of the incident.

Where the incident has caused or has the potential to cause material environmental harm, the PIRMP will be activated, and notifications as listed in the PIRMP completed as required.

Within seven days of notifying the Department and other relevant agencies of such an incident, the Applicant must provide the Department and these agencies with a written report that:

- (a) describes the date, time, and nature of the incident;
- (b) identifies the cause (or likely cause) of the incident;
- (c) describes what action has been taken to date; and
- (d) describes the proposed measures to address the incident.

Non-compliances with the Aboriginal Cultural Heritage Management Plan or an Aboriginal Heritage Impact Permit require reporting to the EPA Environment Line (131 555).

⁴ Notification within 24 hours is required under the Consent. Notification is required immediately after the person becomes aware of the incident under EPL 3241.

⁵ An incident is defined as an occurrence or set of circumstances that causes or threatens to cause material harm and which may or may not be or cause a non-compliance.

8.2.2 Notification of Criteria Exceedances – Government Authorities

In the event that an exceedance of criteria is confirmed as detailed in the relevant management plan, a notification is to be made in accordance with Condition 1 of Schedule 7 of the Consent via the Major Projects Portal ([link](#)).

This notification is to be made as soon as practicable and no longer than seven (7) days after obtaining monitoring results showing any exceedance of relevant criteria. The EPA is also to be notified of the exceedance of limits in the relevant EPL by email.

8.2.3 Notification of Incidents and Non-compliances – Water NSW

Incidents in the Metropolitan Special Area must be reported to Water NSW in accordance with Conditions 4.1 and 4.2 of Consent F2020/1545 by contacting the Water NSW Incident Notification Number (1800 061 069). If a non-compliance with any of the conditions of Consent F2020/1545 is recorded, a comprehensive written report is required to be provided within 14 days of having become aware of the non-compliance. The incident report is to include the information required by Condition 4.2.1.

8.2.4 Notification of Incidents and Non-compliances – Resources Regulator

Incident/non-compliance reporting requirements under Condition 18 of Schedule 8A of the *Mining Regulation 2016* are outlined in the Environmental Compliance/Conformance Assessment and Reporting Procedure (IMCP0186).

8.2.5 Notification of Criteria Exceedances – Landowners

Where project related issues are raised by an affected landowner or community member and the affected landowner or community member requests feedback in relation to the issue raised, the landowner or community member will be provided with the investigation results as requested.

Condition 1 of Schedule 7 of the Consent requires the notification of affected landowners if an exceedance of impact assessment criteria in Schedule 4 is recorded. ICHPL will notify exceedances of impact assessment criteria where an exceedance has been confirmed as required by the protocol in the relevant management plan. Where an exceedance of criteria has been confirmed, the affected landowner(s) and/or tenants will be notified in writing of the exceedance and regular monitoring results will be provided to each affected landowner until compliance with criteria is achieved. The notifications will be provided to the landowners as identified in the relevant management plan prior to the exceedance being made publicly available in the 14 day report.

Additional targeted monitoring and analysis at the affected landowners' premises may be required to verify criteria exceedances attributable to Dendrobium Mine.

The CCC will also be advised of exceedances of criteria at the next available meeting.

8.3 Review of EMS

In accordance with Condition 2A of Schedule 8 of the Consent, strategies, plans and programs required under the Consent⁶ will be reviewed, and if necessary revised, within three (3) months, of:

⁶ This does not include documents submitted under an Extraction Plan, unless the Extraction Plan is modified, and a review of documents included in the Extraction Plan is requested by the Planning Secretary.

- a) the submission of an incident report;
- b) the submission of an Annual Review;
- c) the submission of an Independent Environmental Audit report; or
- d) the approval of any modification of the conditions of the Consent (unless the conditions require otherwise).

Outcomes from each review will be documented in the Management Plan Review Log (unless the EMS or other management plan is being updated as part of the review). Documents required under the Consent will only be resubmitted to the Department for approval where a material change to site operations or environmental management has occurred, or in accordance with the review period on the respective document. Administrative or descriptive changes do not constitute a material change.

Where a review triggers a revision of a management plan, the plan will be revised and submitted to the Planning Secretary for approval. The approved management plan will be implemented.

8.4 Audits

8.4.1 Independent Environmental Audit

In accordance with Condition 6 of Schedule 8 of the Consent, an Independent Environmental Audit (IEA) shall be commissioned every three (3) years, that will include a review of the EMS. The report, together with the response to any recommendations contained in the audit report, and a timetable for the implementation of the recommendations, is required to be submitted to the Secretary within three (3) months of commencing the IEA⁷, in accordance with Condition 7 of Schedule 8.

IEAs have been conducted every three years since 2008, with the last IEA being conducted in 2023 and the next IEA to be conducted in 2026. Recommendations from the IEA will be incorporated into the EMS where appropriate.

The audit is to be conducted and carried out in accordance with the Department's Independent Audit Post Approval Requirements.

8.4.2 ISO 14001

As part of ISO 14001 certification, ICHPL maintains an environmental auditing and governance program across all of its operational sites. The program, which includes the use of competent internal and accredited external auditors, is an integral part of maintaining certification under the ISO 14001 standard.

External surveillance audits are undertaken on an annual basis, with recertification audits undertaken every three (3) years.

Internal Governance Reviews of the EMS are nominally undertaken on a two (2) yearly basis.

A summary of the audit and governance program, directly relevant to the environmental management at Dendrobium Mine, is provided in Table 3.

⁷ The date of commencing the IEA is defined as the first day of the site inspection.

Table 3: Audit Program - Dendrobium Mine

Process Audit Type	Frequency
Internal (Environmental) – Management Plan Governance Checks	Frequency determined on risk-based approach.
Internal (Environmental) - EPL Monitoring data trend and compliance check	Monthly
External (Environmental) – ISO 14001 Surveillance	Every 12 months
External (Environmental) – ISO 14001 Recertification	Every three (3) years
External (Environmental) – IEA under Consent	Every three (3) years

9 Summary of Commitments

Commitment	Section in EMS
ICHPL will provide personnel and resources to implement the EMS.	Section 2
ICHPL will comply with the conditions of the Consent, EPL 3241 and relevant legislation.	Section 3
ICHPL will develop and implement management plans and other documents as listed in the Environmental Management Framework.	Section 4
ICHPL will undertake internal and external communications as detailed in the SEMP.	Section 5
ICHPL will provide documents on the GM ³ website as required.	Section 5.3
ICHPL will report and investigate complaints, incidents and exceedances of limits as required, and identify and implement corrective actions.	Section 6
ICHPL will maintain a community call line and email address for the receipt of complaints and enquiries.	Section 6.1.1
ICHPL will respond to emergencies as detailed in the relevant emergency response plan.	Section 7
ICHPL will activate the PIRMP where a pollution incident occurs that causes or threatens to cause material harm to the environment.	Section 7
ICHPL will test the PIRMP every 12 months.	Section 7
ICHPL will undertake reporting and notifications as required.	Section 8
ICHPL will review the EMS as required.	Section 8.3
ICHPL will undertake audits as required.	Section 8.4

10 Acronyms

Term	Definition
CCC	Community Consultative Committee
CCL	Consolidated Coal Lease
DCPP	Dendrobium Coal Preparation Plant
Department	Department of Planning, Housing and Infrastructure (DPHI), previously • Department of Planning, Industry and Environment • Department of Planning and Environment
EIS	Environmental Impact Statement
EMS	Environmental Management Strategy
EPA	Environment Protection Authority
<i>EP&A Act</i>	<i>Environmental Planning and Assessment Act</i>
EPBC	Environmental Protection and Biodiversity Conservation
EPL	Environment Protection Licence
G360	ICHPL event reporting system
ICHPL	Illawarra Coal Holdings Pty Ltd
IEA	Independent Environmental Audit
KVCLF	Kemira Valley Coal Loading Facility
KVRL	Kemira Valley Rail Line
ML	Mining Lease
MSA	Metropolitan Special Area
NSW	New South Wales
PIRMP	Pollution Incident Response Management Plan
PKCT	Port Kembla Coal Terminal
PKSW	Port Kembla Steel Works
<i>POEO Act</i>	<i>Protection of the Environment Operations Act</i>
RoM	Run of Mine
SEMP	Stakeholder Engagement Management Plan

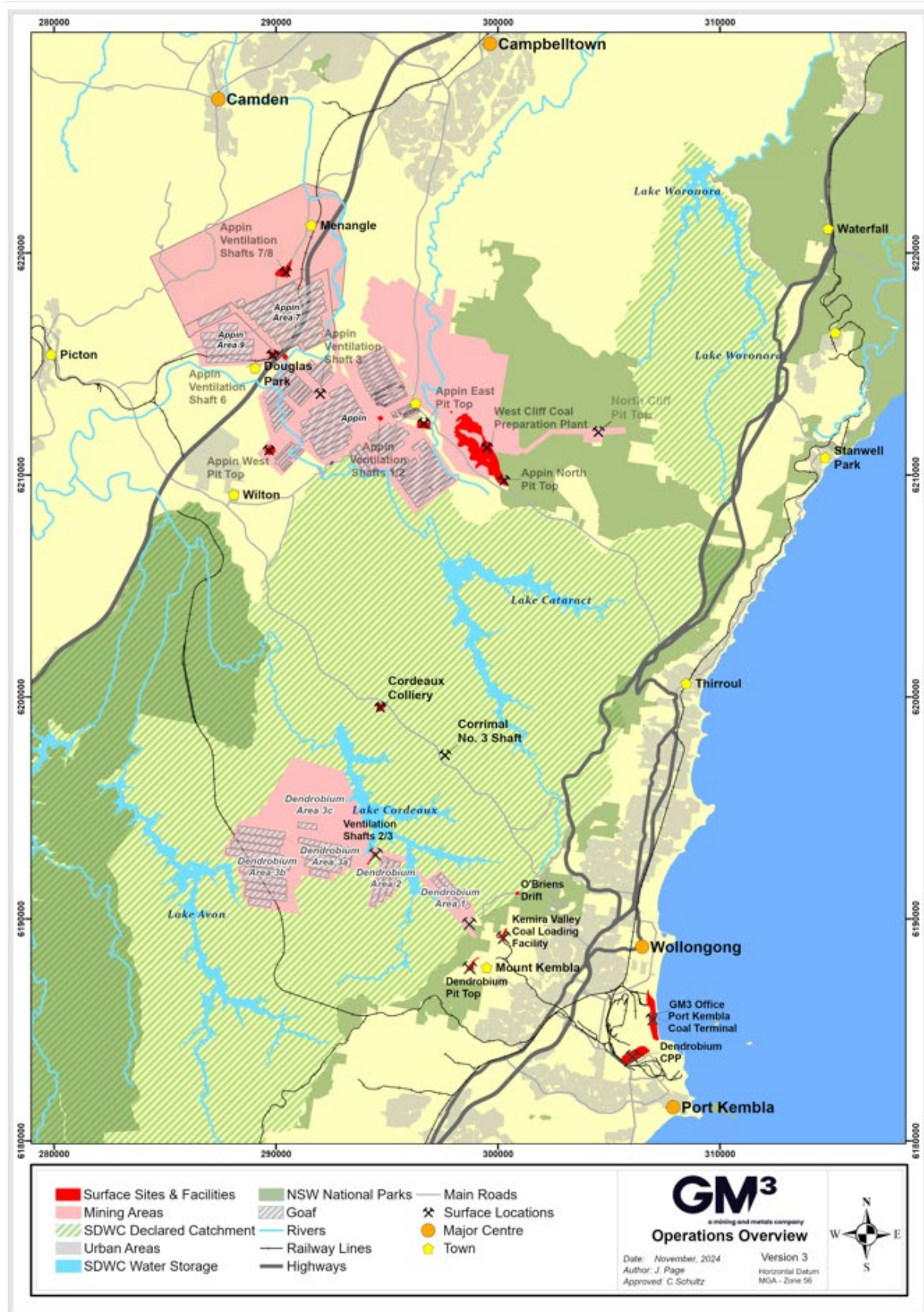
VS	Ventilation Shaft
----	-------------------

11 References

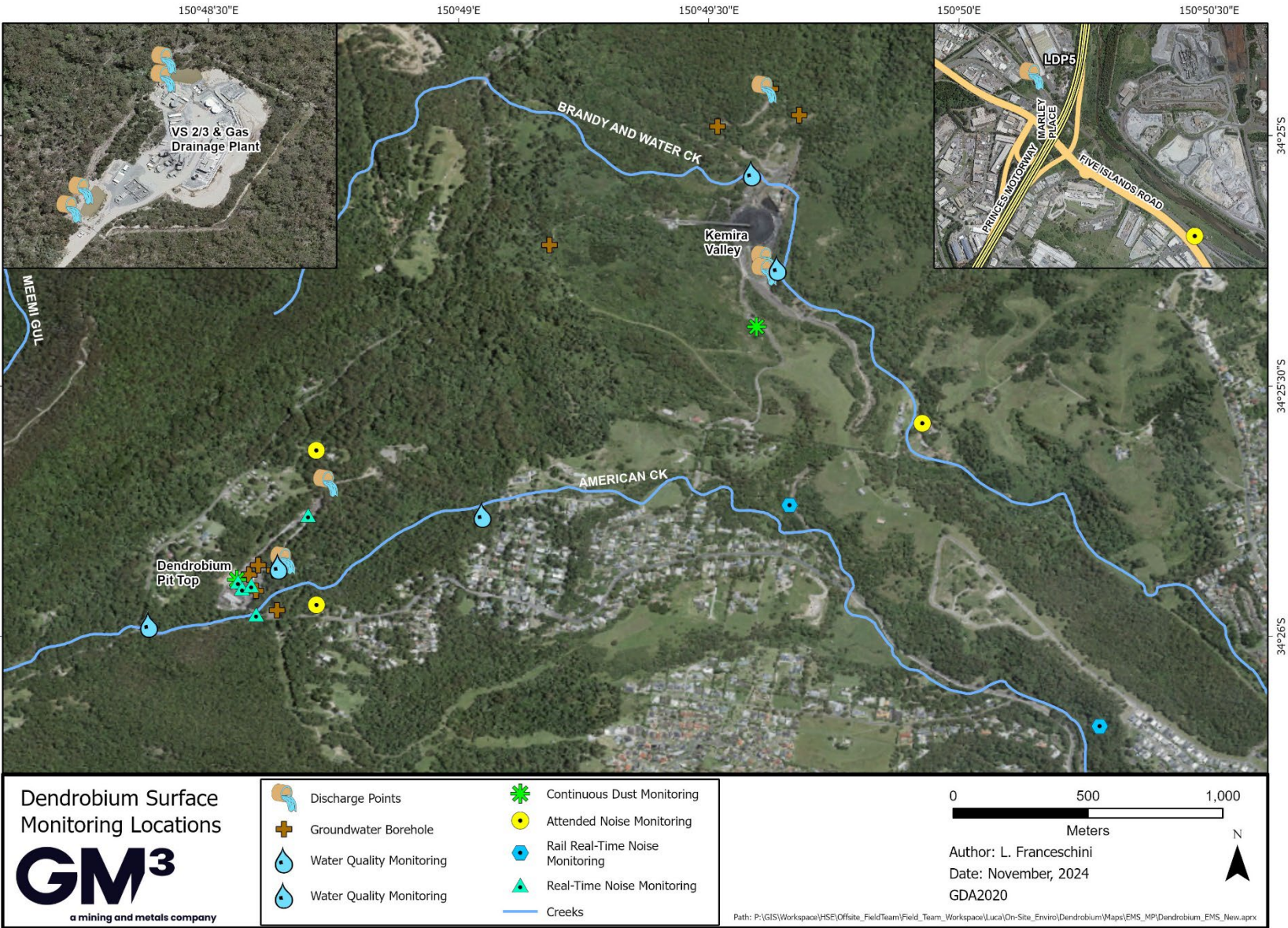
- DA 60-03-2001, as modified
- EPL 3241
- EPL 611
- Dendrobium Project EIS
- Community Complaints Procedure (IMCP0112)
- Reporting and Investigation Standard (IMCSTD0069)
- Environmental Compliance/Conformance Assessment and Reporting Procedure (IMCP0186)
- ISO 14001:2015 Environmental Management Systems Standard
- Dendrobium Mine Emergency Response Control Plan (DENMP0088)
- Cordeaux Colliery Crisis and Emergency Management Plan (ICAMP0149)
- Noise Management Plan (DENMP0041)
- Air Quality and Greenhouse Gas Management Plan (DENMP0037)
- Water Management Plan (DENMP0065)
- Dendrobium Mine and Cordeaux Colliery Rehabilitation Management Plan (DENMP0107)
- Bushfire Management Plan (DENMP0034)
- Traffic Management Plan (DENMP0043)
- Visual Amenity and Lighting Management Plan (DENMP0035)
- Waste Management Plan (DENMP0018)
- Stakeholder Engagement Management Plan (IMCMP0016)
- Pollution Incident Response Management Plan for EPL 3241 (DENMP0103)
- Pollution Incident Response Management Plan for EPL 611 (ICAMP0160)
- Independent Audit Post Approval Requirements ([link](#))

12 Plans

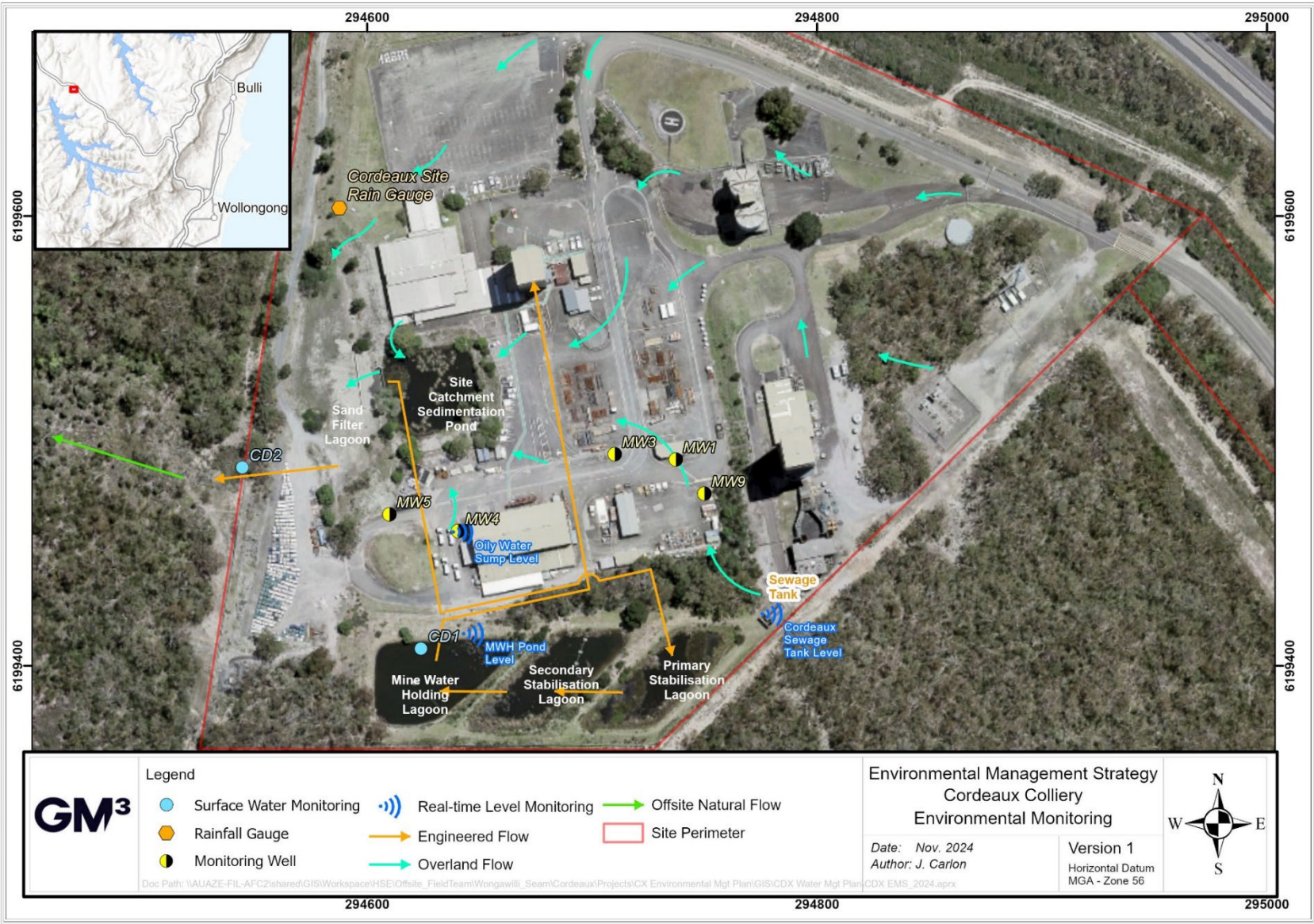
Plan 1: Dendrobium Mine and Cordeaux Colliery Locality Plan



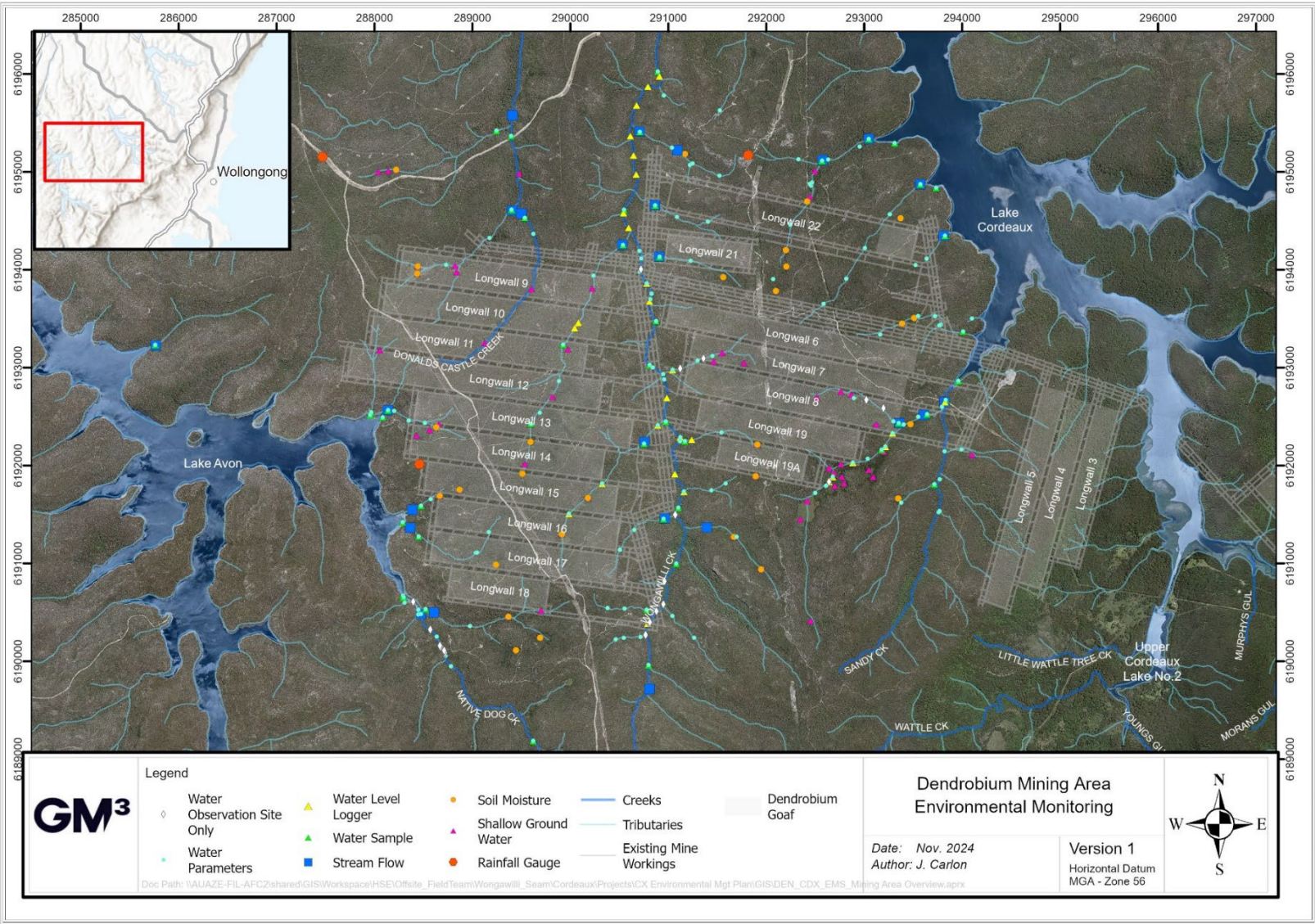
Plan 2: Dendrobium Surface Monitoring Locations



Plan 3: Cordeaux Colliery Surface Monitoring Locations



Plan 4: Dendrobium Mining Areas Monitoring Locations



13 Appendices

Appendix 1: Consent Conditions - EMS

Condition	Requirement	Section
Condition 2 of Schedule 2	Terms of Consent The Applicant must carry out the development generally in accordance with the: (a) Development Application (DA 60-03-2001), EIS and associated submissions to the Dendrobium Underground Coal Mine Project Commission of Inquiry, and in particular its: • Primary Submission (the Dendrobium Project, dated 30 July 2001); • Submission in Reply (the Dendrobium Project, undated); and • Environmental Effects of Subsidence Associated with the Dendrobium Project, prepared by National Environmental Consulting Services and dated August 2001; (b) Modification Application dated 12 February 2002 and supporting information dated 27 January 2002; (c) Modification Application and supporting information dated 24 May 2002 and additional supporting information dated 14 June 2002; (d) Modification Application and Statement of Environmental Effects for the Dendrobium Coal Sizer, prepared by Olsen Environmental Consulting and dated March 2005; (e) Application for Further Approval of West Cliff Emplacement Area Stage 3, Vol 2 (including Appendices), prepared by Cardno Forbes Rigby and dated July 2007, associated Response to Submissions dated 1 November 2007 and associated Statement of Commitments dated 28 November 2007 (see Appendix 3); (f) Modification Application – Modification of Area 3 Footprint and Review of Conditions of Consent dated 27 November 2007, EA and associated Statement of Commitments (see Appendix 4); and (g) Modification 7, Modification 8 and Modification 9.	Section 3.1
Condition 2A of Schedule 2	The Applicant must carry out the development in accordance with the conditions of this consent.	Section 3.1
Condition 2A of Schedule 2	The Applicant must carry out the development generally in accordance with the development layout shown in Appendix 2.	Section 3.1
Condition 1 of Schedule 8	The Applicant must prepare an Environmental Management Strategy of the development to the satisfaction of the Secretary. This strategy must be submitted to the Secretary for approval by 30 April 2009, and (a) provide the strategic framework for environmental management of the development;	Figure 1
	(b) identify the statutory requirements that apply to the development;	Section 3

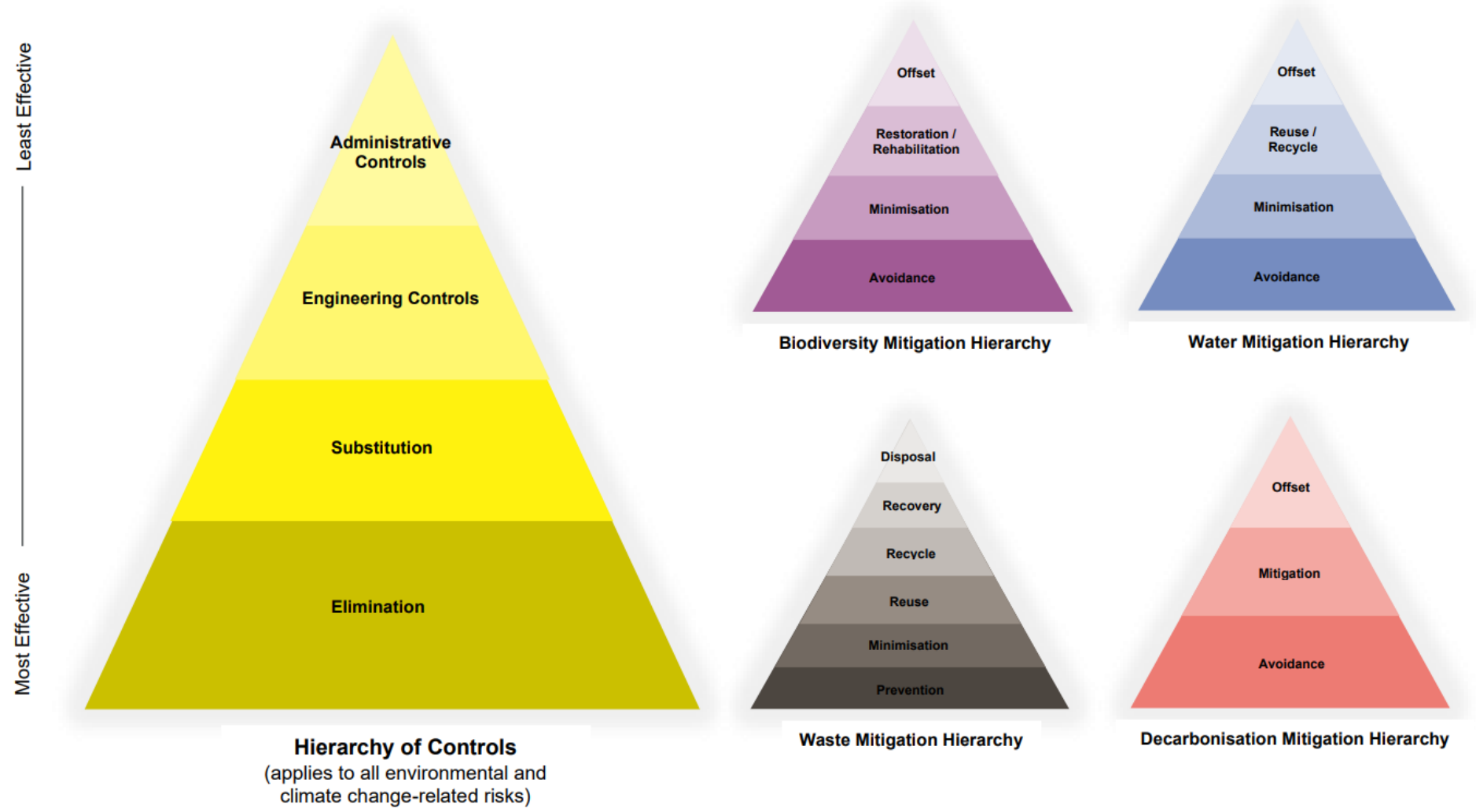
	(c) describe in general how the environmental performance of the development would be monitored and managed for the: • mining area; • surface facilities; • other site components; and • extended site;	Section 4
	(d) describe the procedures that would be implemented to: • keep the local community and relevant agencies informed about the operation and environmental performance of the development; • receive, handle, respond to, and record complaints; • resolve any disputes that may arise during the course of the development; • respond to any non-compliance; • manage cumulative impacts; and • respond to emergencies;	Section 5 Section 6 Section 7
	(e) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development; and	Section 2
	(f) include: • reference to any strategies, plans and programs approved under the conditions of this consent; and • a clear plan depicting all of the monitoring to be carried out under the conditions of this consent.	Section 11 Plan 2, Plan 3, Plan 4.
Condition 3 of Schedule 8	Within 24 hours of detecting the occurrence of an incident that causes (or may cause) material harm to the environment, the Applicant must notify the Department and other relevant agencies of the incident.	Section 8.2
Condition 4 of Schedule 8	Within 7 days of notifying the Department and other relevant agencies of such an incident, the Applicant must provide the Department and these agencies with a written report that: (a) describes the date, time, and nature of the incident; (b) identifies the cause (or likely cause) of the incident; (c) describes what action has been taken to date; and (d) describes the proposed measures to address the incident.	Section 8.2
Condition 5 of Schedule 8	Annual Review By the end of September each year (or other such timing as may be agreed by the Secretary), and for at least 3 years following the cessation of mining at the development, the Applicant must submit an Annual Review to the Secretary, CCC and all relevant agencies reviewing the environmental performance of the development to the satisfaction of the Secretary. This report must relate to the previous financial year and: (a) identify the standards and performance measures that apply to the development;	Section 8.1.1

	(b) describe the development (including any rehabilitation) that was carried out in the previous financial year; (c) describe the development (including any rehabilitation) that is proposed to be carried out over the current financial year; (d) include a summary of the complaints received during the past year, and compare this to the complaints received in previous years; (e) include a summary of the monitoring results for the development during the past year; (f) a comprehensive review of the monitoring results and complaints records of the development over the previous financial year, including a comparison of these results against the: (i) relevant statutory requirements, limits or performance measures/criteria; (ii) requirements of any plan or program required under this consent; (iii) monitoring results of previous years; and (iv) relevant predictions in the documents listed in condition 2 of Schedule 2. (g) identify any non-compliance or incident which occurred in the previous financial year, and describe what actions were (or are being) taken to rectify the non-compliance and avoid reoccurrence; (h) evaluate and report on: (i) the effectiveness of the noise and air quality management systems; and (ii) compliance with the performance measures, criteria and operating conditions in this consent; (i) identify any trends in the monitoring data over the life of the development; (j) identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and (k) describe what measures will be implemented over the next financial year to improve the environmental performance of the development. Copies of the Annual Review must be submitted to the affected Councils and made available to the CCC and any interested person upon request.	
Condition 6 of Schedule 8	Independent Environmental Audit By 31 December 2011, and every 3 years thereafter, unless the Secretary directs otherwise, the Applicant must commission and pay the full cost of an Independent Environmental Audit of the development. This audit must: (a) be conducted by suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary; (b) include consultation with the relevant agencies and the CCC; (c) assess the environmental performance of the development and assess whether it is complying with the relevant requirements in this consent and any relevant EPL or mining lease (including any strategy, plan or program required under these approvals); (d) review the adequacy of strategies, plans or programs required under these approvals;	Section 8.4.1

	(e) recommend measures or actions to improve the environmental performance of the development, and/or any strategy, plan or program required under these approvals; and (f) be conducted and reported to the satisfaction of the Secretary. Note: This audit team must be led by a suitably qualified auditor and include experts in the fields of a) mine subsidence impacts and remediation and b) stream hydrology and water quality.	
Condition 7 of Schedule 8	Within three months of commencing an Independent Environmental Audit, or within another timeframe agreed by the Secretary, the Applicant must submit a copy of the audit report to the Secretary, and any other NSW agency that requests it, together with its response to any recommendations contained in the audit report, and a timetable for the implementation of the recommendations. The recommendations must be implemented to the satisfaction of the Secretary. Note: The audit team must be led by a suitably qualified auditor and include experts in any fields specified by the Secretary.	Section 8.4.1
Condition 8 of Schedule 8	Any condition of this consent that requires the carrying out of monitoring or an environmental audit, whether directly or by way of a plan, strategy or program, is taken to be a condition requiring monitoring or an environmental audit under Division 9.4 of Part 9 of the EP&A Act. This includes conditions in respect of incident notification, reporting and response, non-compliance notification, compliance report and independent audit.	Section 8
Condition 11 of Schedule 8	Access to Information Before the commencement of Modification 8 until the completion of all rehabilitation required under this consent, the Applicant must: • make the following information and documents (as they are obtained, approved or as otherwise stipulated within the conditions of this consent) publicly available on its website: • the documents referred to in condition 2 of Schedule 2 of this consent; • all current statutory approvals for the development; • all approved strategies, plans and programs required under the conditions of this consent; • minutes of CCC meetings; • regular reporting on the environmental performance of the development in accordance with the reporting requirements in any plans or programs approved under the conditions of this consent; • a comprehensive summary of the monitoring results of the development, reported in accordance with the specifications in any conditions of this consent, or any approved plans and programs; • a summary of the current stage and progress of the development; • contact details to enquire about the development or to make a complaint; • a complaints register, updated monthly; • the Annual Reviews of the development;	Section 5.3

	• audit reports prepared as part of any Independent Environmental Audit of the development and the Applicant’s response to the recommendations • any other matter required by the Secretary; and keep such information up to date, to the satisfaction of the Secretary.	
--	--	--

Appendix 2: Mitigation Hierarchy



Appendix 3: Agency Consultation

Agency Comments	ICHPL Response
Department	
<u>Comment received 1 August 2023</u> Section 5.3 of the plan has been amended to include a limit on the duration that the documents required under Schedule 8 condition 11 are made publicly available on the IMC website. The condition requires that documents are made publicly available from before the commencement of Mod 8 until the completion of all rehabilitation required under the consent. Action Amend the plan to remove the limitation on the duration that the documents required under Schedule 8 condition 11 are made publicly available on the IMC website.	Limitations have been removed.
Section 8 of the plan has been amended to refer to Division 9.4 of the EP&A Act. Action Consider providing additional clarification in this section noting that the conditions of development consent may impose additional requirements to those of Division 9.4.	Additional clarification provided.

Appendix 4: Management Plan Approval

To be included when approved.