



APPIN MINE WASTE MANAGEMENT PLAN

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DOCUMENT REVISION LOG

Persons authorising this Plan

Name	Title	Date
Chris Schultz	Superintendent Environment	November 2022

Document Revisions

Revision	Description of Changes	Date
ICH Document – ICHMP0234		
1.0	Original Document	August 2012
2.0	Update following Triennial Independent Audit	October 2014
3.0	Minor changes including: <ul style="list-style-type: none"> • Change from BHP Billiton to South32 • Reference to 2017 Audit • Roles and responsibilities • Inclusion of reporting requirements for the Underground Coal wash trial • Disposal route changed for sewage and bathhouse disposal at Appin East 	25 May 2017
Conversion to APN Document – APNMP0110		
1.0	Review of content and format.	November 2020
2.0	Review following approval of MOD 3, inclusive of DPE feedback	November 2022

Persons involved in the review of this Plan

Name	Title	Company	Exp (yrs)	Date
Chris Schultz	Superintendent Environment	South32 IMC	26	November 2022
Hubert Mhangami	Specialist Environment	South32 IMC	8	July 2022
Polly Barlow	Specialist Environment	South32 IMC	4	July 2022
Simon McVeigh	Approvals Principal – Major Projects AMVA	South32 IMC	15	July 2022

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1. INTRODUCTION

Appin Mine incorporates the underground mining operations, which extract coal from the Bulli Seam, and associated surface activities, including the West Cliff Coal Preparation Plant (WCCPP) and Coal Wash Emplacement Area (CWEA). Appin Mine is located approximately 25 kilometres (km) north-west of Wollongong in New South Wales (see Plan 1). Appin Mine is owned and operated by Endeavour Coal Pty Ltd, a subsidiary of Illawarra Coal Holdings Pty Ltd (ICHPL), which is a wholly owned subsidiary of South32 Limited. Appin Mine, Cordeaux Colliery and Dendrobium Mine (and associated facilities) collectively operate as South32 Illawarra Metallurgical Coal (IMC).

ICHPL received Project Approval 08_0150 (the Project Approval)¹ from the Planning Assessment Commission of NSW under delegation of the Minister for Planning and Infrastructure on 22 December 2011 for current and proposed mining of the Bulli Seam Operations (BSO) for the next 30 years, and production of up to 10.5 million tonnes per annum of run of mine (ROM) coal. This approval incorporates underground mining, transport and coal wash emplacement activities undertaken 24 hours a day, seven days per week.

This Waste Management Plan (WMP) has been prepared to detail the waste management strategies and measures for Appin Mine. This plan has been prepared to satisfy Condition 29 of Schedule 4 of the Project Approval for the Waste Management Plan.

1.1 Plan Objectives

The objectives of this WMP are to:

- provide the framework for the responsible management of waste products associated with Appin Mine;
- describe the measures to minimise the waste (including coal wash) generated by or received by Appin Mine;
- comply with legal and other requirements associated with the management and disposal of waste; and
- comply with South32 and other relevant standards and requirements.

1.2 Scope

The scope of the WMP applies to all existing and future activities related to Appin Mine regarding waste at:

- Appin East, Appin West and Appin North Pit Top areas;
- Existing Ventilation Shafts 1 (downcast), 2 (upcast), 3 (downcast) and 6 (upcast);
- AMVA Project site (including Ventilation Shafts 7 (downcast) and 8 (upcast));²

¹ Project Approval modifications approved in April 2015 (MOD 1), October 2016 (MOD 2) and April 2022 (MOD 3).

² Construction at the Ventilation Shaft 7/8 site commenced in FY22 and is expected to be completed in FY25.

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- Douglas North Substation;
- WCCPP; and
- CWEA.

Refer to Plan 1 for locations of the above.

1.3 Environmental Management System

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

1.4 Consultation

No consultation is required to be undertaken as part of the review of the WMP. Comments from any relevant regulatory agencies will be incorporated into the WMP as required.

2. ROLES AND RESPONSIBILITIES

Roles and responsibilities associated with environmental management at Appin Mine are defined in the Environmental Management Strategy. Table 1 outlines the roles and responsibilities associated with the implementation and periodic review of the WMP.

Table 1: Roles and Responsibilities

Role	Responsibilities
Superintendent Environment	Implement and periodically review the WMP. Liaise with government regulators and IMC senior leadership team in relation to waste related issues, including reporting.
Specialist Environment	Advise, coach and mentor IMC operations with respect to meeting the standards and requirements of the WMP. Monitor and review compliance against these requirements. Inspect waste management facilities on a regular basis. Organise quarterly inspections of sewage management systems (SMSs) and submit service reports to Wollondilly Shire Council (WSC).
Manager Approvals Manager Projects General Manager Appin Mine	Provide the necessary resources and systems to ensure that requirements of the WMP are met.

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Contract Service Provider Managers and supervisors Operations Personnel	Comply with South32 project delivery and operational requirements.
All personnel	Manage waste in a responsible manner.
Contract Service Provider	Transport and disposal of waste in accordance with legal requirements.

3. LEGISLATION AND PLANNING

3.1 Project Approval Conditions and Statement of Commitments

Potential waste management impacts associated with Appin Mine were evaluated during the preparation of the BSO Project Environmental Assessment (EA) 2009 and the Modification Report for the Appin Mine Ventilation and Access (AMVA) Project. The EA and Modification Report were assessed and approved under the *Environmental Planning and Assessment Act 1979 (EP&A Act)* and associated Regulations.

All activities carried out at Appin Mine will be in accordance with the conditions of the Project Approval, in accordance with any written directions of the Planning Secretary and generally in accordance with the Environmental Assessment (EA), Statement of Commitments and Preferred Project Report.

Appendix 1 outlines the waste management requirements of the Project Approval and cross references where the requirements have been addressed within the WMP.

Documents as listed in Condition 2 of Schedule 2 will be made available on the IMC website: <https://www.south32.net/our-business/australia/illawarra-metallurgical-coal/documents>.

3.2 Environment Protection Licence Requirements

Environment Protection Licence No. 2504 (EPL 2504) applies to Appin Mine and associated activities. A copy of the licence can be accessed at the Environment Protection Authority (EPA) website:

<http://www.epa.nsw.gov.au/prpoeoapp/>.

Condition L4.1 of EPL 2504 states:

The licensee must not cause, permit or allow any waste to be received at the premises, except the wastes expressly referred to in the column titled "Waste" and meeting the definition, if any, in the column titled "Description" in the table below.

Any waste received at the premises must only be used for the activities referred to in relation to that waste in the column titled "Activity" in the table below.

Any waste received at the premises is subject to those limits or conditions, if any, referred to in relation to that waste contained in the column titled "Other Limits" in the Table below.

This condition does not limit any other conditions in this licence.

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Code	Waste	Description	Activity	Other Limits
NA	Coal Washery Reject	-	-	NA
NA	Virgin excavated natural material	-	-	NA
NA	Drilling mud and/or muddy waters from drilling operations	-	-	NA
NA	Liquid waste from water and waste water treatment plants	-	-	NA

Emplacement of coal wash is managed in accordance with the approved Coal Wash Emplacement Area Management Plan (CWEAMP).

EPL 2504 allows treated effluent application to land via spray irrigation to dedicated areas on-site at Appin West and Appin North.

3.3 Wollondilly Shire Council Approval Requirements

The SMSs at Appin West and Appin North are operated under the following Approvals to Operate an Onsite Sewage Management System, issued by WSC:

- Appin West – Application No. 3524
- Appin North – Application No. 3733

IMC will comply with the requirements of these approvals.

3.4 Relevant Legislation

Key regulatory and WMP obligations applicable to Appin 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.

Legislation applicable to waste management includes but is not limited to:

- *Protection of the Environment Operations Act 1997 (POEO Act);*
- *Protection of the Environment Operations (Waste) Regulation 2014;*
- *Waste Avoidance and Resource Recovery Act 2001;* and
- *National Environment Protection (Movement of Controlled Waste between States and Territories) Measure 1998.*

See <https://www.epa.nsw.gov.au/your-environment/waste/waste-overview/waste-regulations> for more details.

3.5 Guidelines and Standards

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

- ISO 14001:2015 Environmental Management Systems;

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- South32 Sustainability Policy; and
- South32 Environment Standard.

Other relevant guidelines for waste management may include but not be limited to:

- EPA 'Waste Management Guidelines' and relevant 'Fact Sheets'.
- See <https://www.epa.nsw.gov.au/your-environment/waste/waste-overview> for more details of waste disposal, avoidance, resource recovery, classification and transportation.

4. ENVIRONMENTAL ASSESSMENT

Waste management was included in the EA for the BSO Project and Modification Report for the AMVA Project. The EA and Modification Report is available via the South32 IMC regulatory website link below.

<https://www.south32.net/our-business/australia/illawarra-metallurgical-coal/documents>.

Baseline assessment is not relevant to waste management, as waste is only generated as a result of operational activities.

5. WASTE MANAGEMENT

5.1 Waste Hierarchy

The waste hierarchy is a set of priorities for the efficient use of resources that underpins the objectives of the *Waste Avoidance and Resource Recovery Act 2001*.

The waste hierarchy is:

- a) avoidance including action to reduce the amount of waste generated by households, industry and all levels of government;
- b) resource recovery including re-use, recycling, reprocessing and energy recovery, consistent with the most efficient use of the recovered resources; and
- c) disposal including management of all disposal options in the most environmentally responsible manner.

The waste hierarchy is illustrated in Figure 1³.

³ Source: <https://www.epa.nsw.gov.au/your-environment/recycling-and-reuse/warr-strategy/the-waste-hierarchy>

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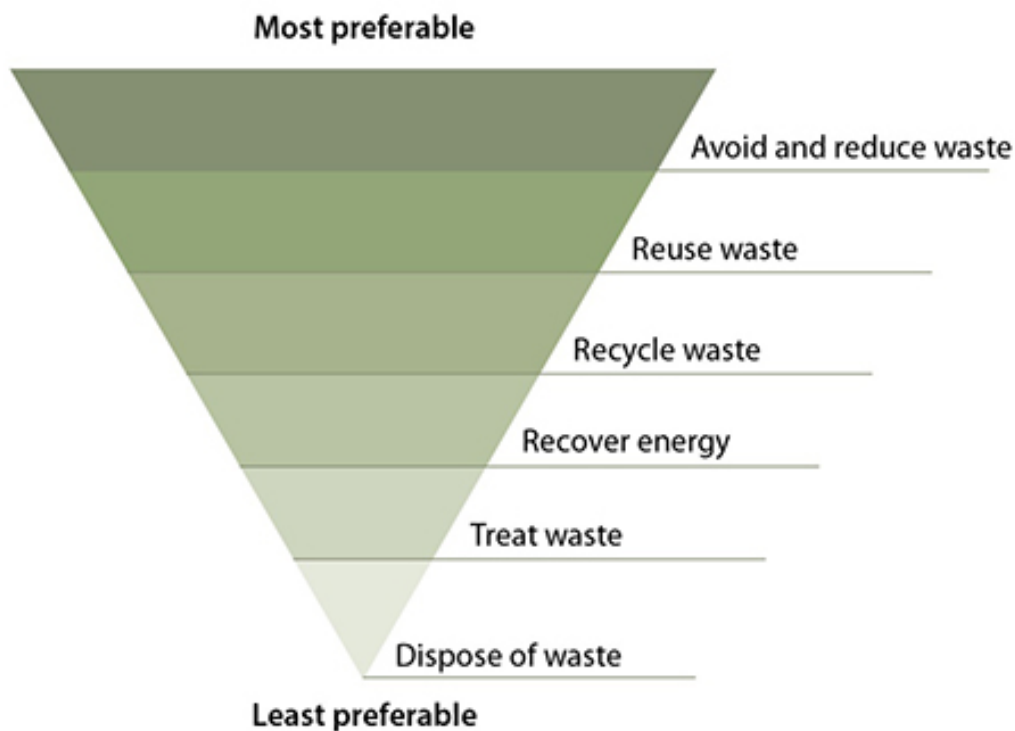


Figure 1: Waste Hierarchy

5.2 Waste Classification and Tracking

Waste is classified in accordance with the EPA waste classification guidelines. Dependent on the nature of the waste, particular hazardous waste types may be stored in secure localities to mitigate the risk of a waste management incident.

Waste is tracked in accordance with legal requirements. The types of waste that must be tracked are listed in the *Protection of the Environment Operations (Waste) Regulation 2014* and are based on the list in the *National Environment Protection (Movement of Controlled Waste between States and Territories) Measure 1998*.

All trackable waste is managed by contract service providers authorised and licenced to transport and dispose of the waste products.

Resource recovery orders are in place for a range of wastes. A listing of the current orders and exemptions is available at: <https://www.epa.nsw.gov.au/your-environment/recycling-and-reuse/resource-recovery-framework/current-orders-and-exemption>.

Waste generated by the project will be appropriately stored, handled and disposed of.

5.3 Waste Management Processes

Waste generated by the project is collected and segregated into appropriate waste types to enable the proper facilitation of waste classification, storage, transport, disposal and tracking. The wastes generated by Appin Mine and treatment/disposal options are listed in Table 2.

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Table 2: Waste Streams - Appin Mine

Waste	Treatment/Disposal
General waste	<ul style="list-style-type: none"> Sorted on site at designated facilities. Removed off-site to an approved landfill or resource recovery facility.
Green waste	<ul style="list-style-type: none"> Native vegetation transported to CWEA. Other vegetation removed offsite or utilised on-site as mulch. Green waste containing weeds will be removed from site.
Waste oils and grease	<ul style="list-style-type: none"> Stored and collected for recycling/treatment by a licenced contractor.
Borehole and exploration hole drill fines	<ul style="list-style-type: none"> Analysed and disposed of at the CWEA if suitable. Transported to an external licensed facility if not suitable for CWEA disposal.
Drilling process muds / waters ⁴	<ul style="list-style-type: none"> Analysed and disposed of at the drill mud ponds at the CWEA if suitable. Dewatered drill muds relocated to CWEA. Transported to an external facility licenced to receive the waste if not suitable for disposal in drill mud ponds. Disposal option is dependent on results of analysis.
Spoil from Ventilation Shaft construction	<ul style="list-style-type: none"> Used on site as engineered fill or for construction of bunds.
Waste waters	<ul style="list-style-type: none"> Treated on site and discharged via licence discharge points when quality allows. Disposal off-site at a licenced facility if required.
Virgin excavated natural material (VENM)	<ul style="list-style-type: none"> Use on site or at CWEA for rehabilitation.
Concrete, waste soil and coal materials	<ul style="list-style-type: none"> Use/disposal at CWEA.

⁴ Including but not limited to drill muds from ventilation shaft drilling activities.



Sewage effluent and bathhouse waste	<ul style="list-style-type: none"> Transferred via an approved line into the Sydney Water sewer system (Appin East). Treated on site and spray irrigated where permitted in accordance with EPL 2504 (Appin North, Appin West and Ventilation Shaft 7/8⁵) and WSC Approvals to Operate an Onsite Sewage Management System. Treated on site and removed off-site by a licenced contractor if spray irrigation system is not functional. Removed off-site (from construction areas) by a licenced contractor.
Oily waters	<ul style="list-style-type: none"> Stored and collected for offsite recycling/treatment by a licenced contractor. Bunds that may contain waste oils/oily water are pumped out by a licenced waste contractor (as required).
Oil filters	<ul style="list-style-type: none"> Stored in appropriately labelled drums on site. Drums are collected and transported to a waste disposal facility by a licenced waste contractor.
Waste paper, cardboard, timber and commingle	<ul style="list-style-type: none"> Stored in recycling receptacles and recycled off site.
Scrap steel and other metals	<ul style="list-style-type: none"> Stored in recycling receptacles and recycled off site.
Batteries	<ul style="list-style-type: none"> Treated/recycled/disposed off site.
Tyres	<ul style="list-style-type: none"> Collected for repair if possible or disposal off-site.
Conveyor belt	<ul style="list-style-type: none"> Collected and removed from site by waste contractor as required.
Hazardous wastes e.g. diesel particulate filters	<ul style="list-style-type: none"> Treated off site and disposed at an approved facility.
Hazardous substances and materials e.g. chemicals	<ul style="list-style-type: none"> Stored in a designated area on site for pickup. Removed from the site by licenced contractors and taken to licenced waste management facilities.

⁵ During operational phase. A new licence discharge point will be required prior to operation.



Asbestos	<ul style="list-style-type: none"> Removal from site by a licenced asbestos contractor. Disposal in a licenced facility.
Non-hazardous mineral waste	<ul style="list-style-type: none"> Coal wash emplaced on site at the CWEA. Used as engineered fill is possible.
Brine from water treatment plants	<ul style="list-style-type: none"> Transported to Marley Place at Unanderra by tanker truck. Mixed with mine water from Dendrobium Mine and discharged into Allans Creek.
Biosolids from water treatment plant	<ul style="list-style-type: none"> Disposed of in the drill mud ponds at the CWEA.
Weak acid cation (WAC) ion exchange resins from the water treatment plant	<ul style="list-style-type: none"> Transported off site for treatment/recycling.
Electronic waste	<ul style="list-style-type: none"> Stored in recycling receptacles and recycled off site.
Radioactive substances	<ul style="list-style-type: none"> Depleted or redundant radioactive substances from radiation gauges are disposed as per EPA protocols in accordance with legal requirements.

The Bund, Sump and Oily Water Separator Management Procedure provides additional detail on the management of wastes from hydrocarbon storage and treatment facilities.

The Material Acceptance Form must be completed and approved prior to the transport of any material to the CWEA for use or disposal.

No waste generated outside of the Appin Mine premises is permitted to be received for storage, treatment, processing, reprocessing or disposal at the premises, unless permitted by a licence under the *POEO Act 1997*.

No waste from offsite is permitted to be brought on to site unless prior written permission has been provided by the Department Manager and permitted by a licence under the *POEO Act 1997*.

5.4 Waste Mitigation Measures

Waste generated at Appin Mine and the WCCPP is sorted and segregated at dedicated waste management areas on site. The segregation allows for sorting into recyclable and other reusable products which effectively reduces the amount of waste requiring disposal to landfill.

In FY19, the redirection of waste from landfill to a Resource Recovery Facility located at Wetherill Park commenced. The facility processes dry non-recyclable waste. Combustible materials are turned into processed engineered fuel.

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Sorting of waste also provides for recovery of items of equipment which may be cost effectively repaired, recovered or restored for reuse.

5.5 Coal Wash Management

Coal wash is a non-hazardous mineral waste generated from the WCCPP and Dendrobium Coal Preparation Plant (DCPP) as a by-product of processing ROM coal. Coal wash is emplaced in a safe and stable manner at the CWEA, or, where possible, is beneficially reused.

Opportunities for beneficially reusing coal wash generated from the DCPP are pursued to reduce the amount of coal wash emplaced on site at the CWEA. Beneficial reuse opportunities include, but are not limited to:

- engineered fill in housing developments and road infrastructure projects;
- development of arterial and agricultural roads; and
- projects approved under an operational purpose deduction (OPD).⁶

Water from the emplacement (moisture in coal wash, rainfall and dust suppression water) that filters through the CWEA is captured in the underdrainage and contained in the on-site water storages.

Assay data for coal wash is maintained which includes substances relevant to National Pollutant Inventory (NPI) reporting and other trace elements. The geo-mechanical properties of coal wash have also been established to ensure that the product does not cause unintentional environmental consequences when emplaced or beneficially reused.

No waste rock or tailings are disposed of into rivers or marine environments.

IMC engaged a consultant to develop a conceptual underground emplacement trial. Areas of consideration for the consultant included methods of emplacement used elsewhere within the industry, technical aspects of underground emplacement within a high productivity mining setting, suitable underground storage areas, equipment suitability and estimates of capital and operating costs. IMC considers the work completed to date, including the assessment by the consultant, along with IMC's commitment to undertake best endeavours to direct coal wash to beneficial use in preference to surface emplacement, has fulfilled Condition 20 of Schedule 4 of the Project Approval. IMC received advice from DPE on 3 September 2020 that the Department also considers that South32 has met the intent of Condition 20 of Schedule 4.

5.6 Construction Waste Management

Waste management strategies will be developed for project construction activities which have the potential to generate waste products that require effective management to avoid potential harmful impacts. The waste management strategies will generally address:

- nature and type of waste generated;

⁶ Projects have been approved under OPDs at Appin North for the use of coal wash from the DCPP.

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- analysis of waste to determine appropriate treatment and disposal requirements (if required);
- emergency response protocols;
- treatment and disposal processes;
- waste transport arrangements and disposal destination;
- waste tracking in accordance with legal requirements; and
- records management.

Suitable construction waste i.e. clean fill material, may be utilised on the CWEA as a capping material where appropriate. If the construction waste has been generated within the premises as defined by EPL 2504, an OPD will not be required, however if it has been generated outside of the premises as defined in the EPL, an OPD will be required.

5.7 VENM

VENM may be required to be imported to site to use in rehabilitation e.g. capping of the CWEA. If VENM has been generated within the premises as defined by EPL 2504, an OPD will not be required, however if it has been generated outside of the premises as defined in the EPL, an OPD will be required.

Any VENM brought to site shall be managed as detailed in the Appin Mine Fill Import Management Protocol.

5.8 Potential Environmental Impacts of Waste and Incident Response

The potential environmental impacts of waste are assessed to ensure that wastes are managed appropriately to reduce the risk of adverse consequences. In principle, no hazardous wastes are permanently stored or disposed on site. All potentially harmful wastes are treated and/or disposed off-site at approved facilities.

Potential or actual pollution incidents involving wastes causing or with the potential to cause material environmental harm will be managed in accordance with the protocols detailed in the Pollution Incident Response Management Plan (PIRMP) for EPL 2504. The PIRMP details the hazard assessments for particular substances at site.

5.9 Management Strategy Effectiveness/Adaptative Management

The management strategies detailed in the WMP have been implemented to minimise the volume of disposable waste generated at the Appin Mine operations. IMC will encourage its waste contractors to utilise the most appropriate technologies and procedures required to minimise waste production and treat it in the most suitable manner.

Appin Mine will continue to research and where relevant to do so, develop and implement, waste management practices to minimise wastes required to be disposed.

Where there have been unpredicted impacts associated with waste management on site, waste management practices will be reviewed to reduce the impacts as soon as possible. The corrective measures implemented will be monitored during site inspections to verify that the corrective actions implemented have been effective.

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Monitoring results will be reviewed when received and as part of the Annual Review process to identify continual improvement opportunities. Improvement opportunities may also be identified during internal and external audits. These improvement opportunities will be discussed with relevant site personnel and raised through senior leadership team meetings as appropriate, and will be documented in the Environment Improvement Plan or actions assigned in G360.

6. MONITORING PROGRAM

Waste generation and disposal associated with the Appin operations will continue to be closely monitored to ensure that it is being managed as effectively as possible. The ways in which waste related issues are monitored at Appin include:

- Record keeping.
- Site inspections.

6.1 Record Keeping

As specified under the NSW EPA Environmental Guidelines: Assessment, Classification and Management of Liquid and Non-Liquid Waste, records of waste movements relating to generating, storage and disposal of industrial, hazardous and Class A wastes are retained for three years. Waste tracking is done on behalf of Dendrobium by licenced waste contractors.

Monthly waste management reports are provided by the contracted waste management service provider. These reports detail the types and volumes of wastes transported, disposed, or recycled and waste destinations. An annual summary is also provided.

Reports are reviewed by the Specialist Environment to identify any issues or trends. Feedback is provided to the contracted waste management service provider or relevant IMC Supervisor where appropriate.

6.2 Site Inspections

Onsite waste management facilities, infrastructure, containers and storages are included in routine site inspections. Any matters identified requiring corrective action are managed through G360 (see Section 7.2).

7. COMPLAINTS AND NON-COMPLIANCE MANAGEMENT

7.1 Complaints and Dispute Resolution

IMC has a 24 hour, free community call line (1800 102 210) and email address (illawarracommunity@south32.net) which is displayed at IMC 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 IMC's operations.

Community complaints and enquiries may also be received in person by any employee of IMC, with details to be immediately shared with the Community Team for investigation. All

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waste complaints received in relation to Appin Mine will be managed in accordance with the Handling Community Complaints, Enquiries and Disputes Procedure.

Upon receipt of a community complaint, preliminary investigations will commence as soon as practicable to determine the likely cause of the complaint. An initial response will be provided to the complainant within 24 hours of the complaint being made, with a follow up response being provided as soon as practicable once a more detailed investigation is complete.

Where waste related issues are raised by an affected landowner or community member and the affected landowner or community member requests feedback in relation the issue raised, the landowner or community member will be provided with the investigation results and proposed course of corrective action.

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 IMC website at:

<https://www.south32.net/our-business/australia/illawarra-metallurgical-coal/documents>.

7.2 Events, Non-Compliance, Corrective Action and Preventative Action

Events, non-compliances, 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 IMC 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 ensure the status and effectiveness of the actions.

Non-compliances with the WMP will be reported to all relevant agencies as detailed in Section 8.

8. REPORTING AND REVIEW

8.1 Reporting

8.1.1 Annual Review

IMC will report on the performance of the WMP in the Annual Review.

The Annual Review will include:

- complaints and management/mitigation measures undertaken;
- a summary of waste volumes generated and recycled;

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- identification of trends;
- identify any non-compliance over the past financial year, and describe what actions were (or are being) taken to achieve compliance;
- details of initiatives to minimise and recycle waste during the reporting period, including coal wash;
- review of the performance of management/mitigation measures and the monitoring program as applicable, including outcomes of investigations into waste minimisation; and
- describe what measures will be implemented over the next financial year to improve the environmental performance of the project.

The Annual Review is prepared in accordance with the requirement of Condition 4 of Schedule 6 of the Project Approval and is submitted to relevant agencies in September each year. Annual Reviews are made available to the general public via the IMC website.

8.1.2 Internal Sustainability Reporting

Waste data is collated annually and reported to Head Office for aggregation.

8.1.3 NPI Reporting

NPI reporting is undertaken annually. The NPI report is required to be submitted by 30 September of each year.

8.1.4 OPD Reporting

Reporting against the OPDs is required on a monthly basis for the period of the works. These reports are submitted to waste.levydata@epa.nsw.gov.au.

8.1.5 Quarterly Service Report Submission

Submission to Council of the quarterly service reports by an approved Service Agent indicating compliance with the conditions of approval to install and operate the system. Further where the approved agent detects any non compliance with the approvals, that this shall be included in the report indicating what action, if any, has been taken by the operator of the system to bring it into conformity with the approval. The report is to be submitted by the operator (land owner and/or occupant as the case may be) of the waste water treatment system.

8.2 Review of WMP

In accordance with Condition 5 of Schedule 6 of the Project Approval, the WMP will be reviewed, and if necessary revised, within three months, of:

- the submission of an Annual Review;
- the submission of an incident report;
- the submission of an Independent Environmental Audit report; and

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- any modification to the conditions of the Project Approval (unless the conditions require otherwise); or
- a direction of the Planning Secretary under Condition 4 of Schedule 2.

Outcomes from each review will be documented in the Management Plan Review Log (unless the WMP is being updated as part of the review). The WMP will only be resubmitted to DPE for approval where a material change to site operations or environmental management has occurred, or in accordance with the review period on WMP. Administrative or descriptive changes do not constitute a material change.

Where a review triggers a revision of the WMP, the WMP will be revised and submitted to the Planning Secretary for approval. Once approved, the WMP will be uploaded the IMC website.

The approved WMP will be implemented.

8.3 Audits

8.3.1 *Independent Environmental Audit*

In accordance with Condition 9 of Schedule 6 of the Project Approval, an Independent Environmental Audit (IEA) shall be commissioned every three years, that will include a review of the WMP. 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 six weeks of completion of the audit, in accordance with Condition 10 of Schedule 6.

IEAs have been conducted in 2013, 2016/17 and 2019, with the next IEA to be conducted in 2022. Recommendations from the IEA will be incorporated into the WMP where appropriate.

8.3.2 *ISO 14001*

As part of the ISO 14001 certification, IMC 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 years.

Internal Governance Reviews of the WMP are nominally undertaken on a two-yearly basis.

8.3.3 *Waste Facilities*

Periodic audits of the waste management contractor processes and inspections of offsite receival facilities will be undertaken.

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9. SUMMARY OF COMMITMENTS

Commitment	Section in WMP
IMC will provide personnel and resources to implement the WMP.	Section 2
IMC will comply with the conditions of the Project Approval, EPL, Approvals to Operate an Onsite Sewage System and relevant legislation.	Section 3
IMC will manage waste to meet the waste hierarchy where possible.	Section 5.1 and 5.4
IMC will classify waste in accordance with the EPA waste classification guidelines and ensure waste is tracked in accordance with legal requirements.	Section 5.2
Waste will be disposed of, treated, recycled or reused as detailed in the WMP.	Section 5.3
Waste generated by the project will be appropriately stored, handled and disposed of.	Section 5.2
Beneficial use opportunities for coal wash from the DCPD will be investigated and implemented where practicable.	Section 5.5
IMC will develop strategies for the management of construction wastes from projects where required.	Section 5.6
Pollution events causing or with the potential to cause material environmental harm will be managed in accordance with the PIRMP.	Section 5.7
The Specialist Environment will review monthly waste reports and the annual summary provided by the contracted waste management provider to identify any issues or trends.	Section 6
Regular site inspections will be undertaken to assess waste management facilities to identify issues and improvement opportunities.	Section 6
Periodic audits of the waste management contractor processes and inspections of offsite receival facilities will be undertaken.	Section 6
IMC will report and investigate complaints and incidents as required, and identify and implement corrective actions.	Section 7
IMC will undertake reporting as required.	Section 8.1
IMC will review the WMP as required.	Section 8.2
IMC will undertake audits as required.	Section 8.3

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10. ACRONYMS

Term	Definition
AMVA	Appin Mine Ventilation and Access Project
BSO	Bulli Seam Operations
CWEA	Coal Wash Emplacement Area
CWEAMP	Coal Wash Emplacement Area Management Plan
DCPP	Dendrobium Coal Preparation Plant
DoPI	Department of Planning and Infrastructure (now DPE)
DPE	Department of Planning and Environment
EA	Environmental Assessment
EMS	Environmental Management System
EPA	Environment Protection Authority
<i>EP&A Act</i>	<i>Environmental Planning and Assessment Act</i>
EPL	Environment Protection Licence
G360	IMC event reporting system
ICHPL	Illawarra Coal Holdings Pty Ltd
IEA	Independent Environmental Audit
IMC	Illawarra Metallurgical Coal
NPI	National Pollutant Inventory
OPD	Operational Purpose Deduction
PIRMP	Pollution Incident Response Management Plan
<i>POEO Act</i>	<i>Protection of the Environment Operations Act</i>
RoM	Run of Mine
SMS	Sewage Management System, including sewage treatment plant and effluent/wastewater irrigation areas.
VENM	Virgin excavated natural material
WAC	Weak acid cation

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WCCPP	West Cliff Coal Preparation Plant
WMP	Waste Management Plan
WSC	Wollondilly Shire Council

11. REFERENCES

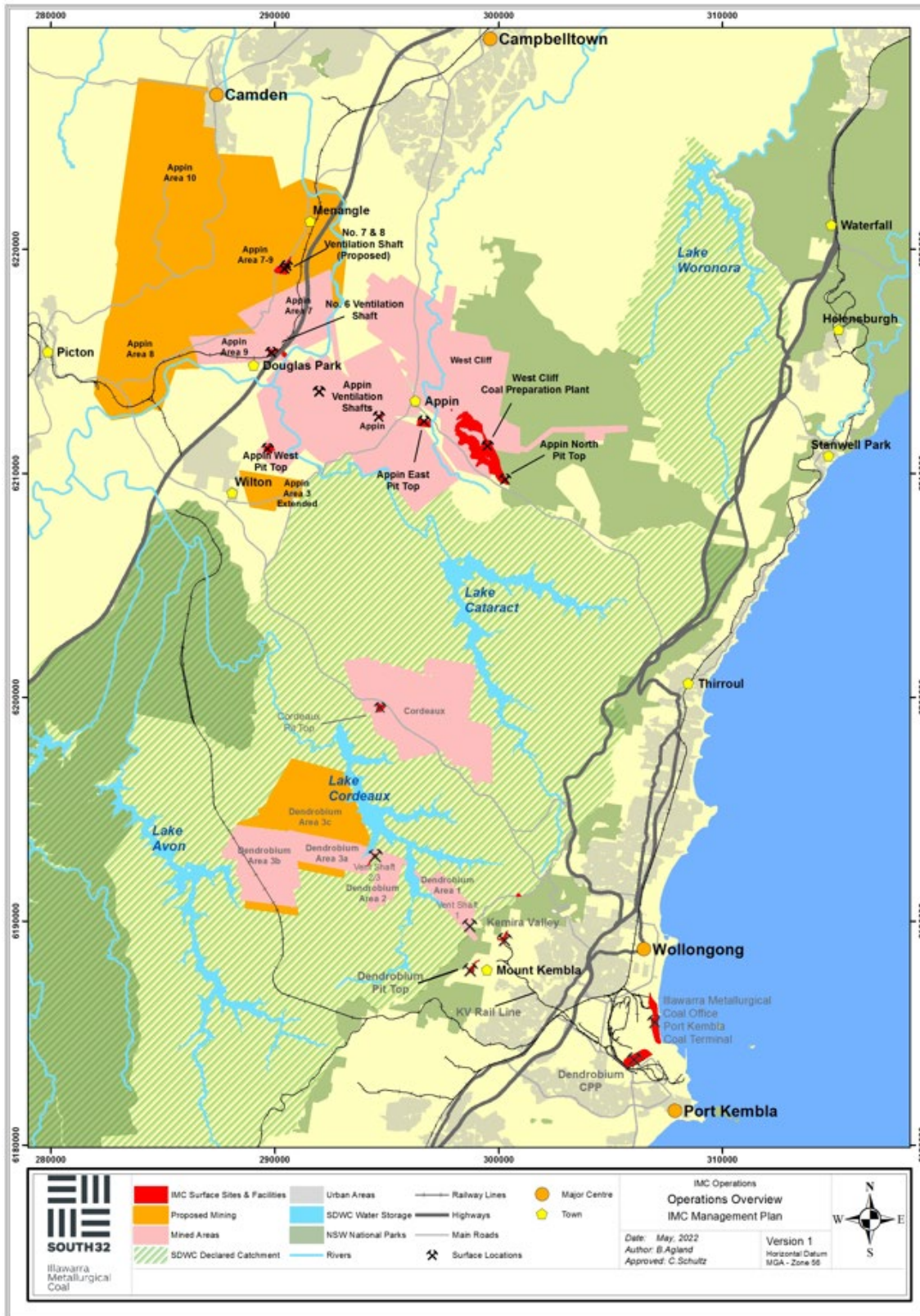
- Project Approval 08_0150, as modified
- EPL 2504
- BSO Project Environmental Assessment
- AMVA Modification Report ([link](#))
- Handling Community Complaints, Enquiries and Disputes Procedure (IMCP0112)
- Reporting and Investigation Standard (IMCSTD0069)
- Environmental Compliance/Conformance Assessment and Reporting Procedure (IMCP0186)
- ISO 14001:2015 Environmental Management Systems Standard
- Bund, Sump and Oily Water Separator Management Procedure (IMCP0184)
- Material Acceptance Form (WCPF0663)
- Appin Mine Fill Import Management Protocol (APNMP0123)
- Pollution Incident Response Management Plan for EPL 2504 (APNMP0124)
- Coal Wash Emplacement Area Management Plan (WCPMP0019)
- Traffic Management Plan (APNMP0128)

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12. PLANS

Plan 1: Appin Mine Locality Plan



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13. APPENDICES

Appendix 1: Project Approval Conditions: Waste Management

Condition	Requirement	Section
Condition 1 of Schedule 2	Obligation to minimise harm to the environment In addition to meeting the specific performance criteria established under this approval, the Proponent shall implement all reasonable and feasible measures to prevent and/or minimise any harm to the environment that may result from the construction, operation, or rehabilitation of the project.	Section 5
Condition 2 of Schedule 2	Terms of Approval The Proponent must carry out the project: (a) generally in accordance with the EA, Statement of Commitments and PPR; (b) in accordance with the conditions of this approval; and (c) in accordance with any written directions of the Planning Secretary.	Section 3.1
Condition 4 of Schedule 2	Consistent with the requirements of this approval, the Planning Secretary may make written directions to the Proponent in relation to: (a) the content of any strategy, study, system, plan, program, review, audit, notification, report or correspondence submitted under or otherwise made in relation to this approval, including those that are required to be, and have been, approved by the Planning Secretary; and (b) the implementation of any actions or measures contained in any such document referred to in condition 4(a).	Section 3.1
Condition 20 of Schedule 4	The Proponent shall prepare and undertake an Underground Coal Wash Emplacement Trial for the project to the satisfaction of the Secretary. The design of the trial must: (a) be undertaken in consultation with OEH; (b) be submitted to the Secretary for approval by the end of December 2012; (c) contain a two year program to undertake both pilot scale and demonstration scale trials of underground coal wash disposal; (d) include commitments for ongoing development and/or implementation of underground emplacement options following this two-year trial; and	Section 5.5
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	(e) include 6 monthly progress reporting to the Department and OEH.	
Condition 28 of Schedule 4	<p>The Proponent shall:</p> <ul style="list-style-type: none"> a) minimise the waste (including coal reject) generated by the project; b) ensure that the waste generated by the project is appropriately stored, handled and disposed of; and c) manage on-site sewage treatment and disposal in accordance with the requirements of EPA and WSC; <p>to the satisfaction of the Secretary.</p>	Sections 5.1, 5.3, 5.4, 5.5, 5.6 and 8.1.5
Condition 29 of Schedule 4	The Proponent shall prepare and implement a Waste Management Plan for the project to the satisfaction of the Planning Secretary. This plan must be submitted to the Planning Secretary by 30 September 2012.	This document
Condition 2 of Schedule 6	<p>Management Plan Requirements</p> <p>The Proponent shall ensure that the management plans required under this approval are prepared in accordance with any relevant guidelines, and include:</p> <ul style="list-style-type: none"> (a) detailed baseline data; (b) a description of: <ul style="list-style-type: none"> • the relevant statutory requirements (including any relevant approval, licence or lease conditions); • any relevant limits or performance measures/criteria; • the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the project or any management measures; (c) a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria; (d) a program to monitor and report on the: <ul style="list-style-type: none"> • impacts and environmental performance of the project; • effectiveness of any management measures (see c above); (e) a contingency plan to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible; (f) a program to investigate and implement ways to improve the environmental performance of the project over time; (g) a protocol for managing and reporting any: <ul style="list-style-type: none"> • incident; • complaints; 	<p>Section 4</p> <p>Section 3</p> <p>Section 6</p> <p>Section 5</p> <p>Section 5</p> <p>Section 8</p> <p>Section 5.9</p> <p>Section 5.9</p> <p>Section 7</p>

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	<ul style="list-style-type: none"> • non-compliances with statutory requirements; and • exceedances of the impact assessment criteria and/or performance criteria; and • a protocol for periodic review of the plan. 	Section 8.2
Condition 3 of Schedule 6	<p>Adaptive Management</p> <p>The Proponent must assess and manage project-related risks to ensure that there are no exceedances of the criteria and/or performance measures in Schedules 3 and 4. Any exceedance of these criteria and/or performance measures constitutes a breach of this approval and may be subject to penalty or offence provisions under the EP&A Act or EP&A Regulation.</p> <p>Where any exceedance of the criteria and/or performance measures has occurred, the Proponent must, at the earliest opportunity:</p> <ol style="list-style-type: none"> take all reasonable and feasible steps to ensure the exceedance ceases and does not recur; consider all reasonable and feasible options for remediation (where relevant) and submit a report to the Department describing these options and any preferred remediation measures or other course of action; and implement remediation measures as directed by the Planning Secretary <p>to the satisfaction of the Planning Secretary.</p>	Section 5.9
Condition 4 of Schedule 6	<p>Annual Review</p> <p>By 30 September 2012, and annually thereafter, the Proponent shall review the environmental performance of the project to the satisfaction of the Planning Secretary. This review must:</p> <ol style="list-style-type: none"> describe the development (including any rehabilitation) that was carried out in the past financial year, and the development that is proposed to be carried out over the next year; include a comprehensive review of the monitoring results and complaints records of the project over the past financial year, which includes a comparison of these results against the: <ul style="list-style-type: none"> • relevant statutory requirements, limits or performance measures/criteria; • requirements of any plan or program required under this approval; • monitoring results of previous years; and • relevant predictions in the EA; 	Section 8.1.1

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	<p>(c) identify any non-compliance over the past financial year, and describe what actions were (or are being) taken to ensure compliance;</p> <p>(d) identify any trends in the monitoring data over the life of the project;</p> <p>(e) identify any discrepancies between the predicted and actual impacts of the project, and analyse the potential cause of any significant discrepancies; and</p> <p>(f) describe what measures will be implemented over the current financial year to improve the environmental performance of the project.</p>			
Condition 5 of Schedule 6	<p>Revision of Strategies, Plans and Programs</p> <p>Within 3 months of:</p> <p>(a) the submission of an annual review under Condition 4 above;</p> <p>(b) the submission of an incident report under Condition 7 below;</p> <p>(c) the submission of an audit report under Condition 9 below; and</p> <p>(d) any modification to the conditions of this approval, (unless the conditions require otherwise); or</p> <p>(e) a direction of the Planning Secretary under Condition 4 of Schedule 2; the Proponent shall review, and if necessary revise, the strategies, plans, and programs required under this approval to the satisfaction of the Planning Secretary.</p>	Section 8.2		
Condition 7 of Schedule 6	<p>Incident Notification, Reporting and Response</p> <p>The Planning Secretary must be notified in writing via the Major Projects website immediately after the Proponent becomes aware of an incident. The notification must identify the project (including the development application number and the name of the development if it has one) and set out the location and nature of the incident. Subsequent notification requirements must be given, and reports submitted in accordance with the requirements set out in Appendix 7.</p>	Section 7.2		
Condition 7A of Schedule 6	<p>Non-compliance Notification</p> <p>The Secretary must be notified in writing via the Major Projects website within seven days after the Proponent becomes aware of any non-compliance. A non-compliance notification must identify the project and the application number for it, set out the condition of approval that the project is non-compliant with, the</p>	Section 7.2		
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	<p>way in which it does not comply and the reasons for the non-compliance (if known) and what actions have been, or will be, undertaken to address the non-compliance.</p> <p><i>Note: A non-compliance which has been notified as an incident does not need to also be notified as a noncompliance.</i></p>	
Condition 8 of Schedule 6	<p>Regular Reporting</p> <p>The Proponent shall provide regular reporting on the environmental performance of the project on its website, in accordance with the reporting arrangements in any plans or programs approved under the conditions of this approval.</p>	Section 8.1
Condition 9 of Schedule 6	<p>Independent Environmental Audit</p> <p>By the end of December 2013, and every 3 years thereafter, unless the Planning Secretary directs otherwise, the Proponent shall commission and pay the full cost of an Independent Environmental Audit of the project. This audit must:</p> <ul style="list-style-type: none"> (a) be conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Planning Secretary; (b) include consultation with the relevant agencies; (c) assess the environmental performance of the project and assess whether it is complying with the requirements in this approval and any relevant EPL or Mining Lease (including any assessment, plan or program required under these approvals); (d) review the adequacy of strategies, plans or programs required under the abovementioned approvals; and (e) recommend appropriate measures or actions to improve the environmental performance of the project, and/or any assessment, plan or program required under the abovementioned approvals. <p><i>Note: This audit team must be led by a suitably qualified auditor and include experts in any field specified by the Planning Secretary</i></p>	Section 8.3.1
Condition 10 of Schedule 6	<p>Within 6 weeks of the completion of this audit, or as otherwise agreed by the Planning Secretary, the Proponent shall submit a copy of the audit report to the Planning Secretary, together with its response to any recommendations contained in the audit report.</p>	Section 8.3.1
Condition 11 of Schedule 6	<p>Access to Information</p> <p>From 30 June 2012, the Proponent shall:</p>	Section 3.1
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	<p>(a) make copies of the following publicly available on its website:</p> <ul style="list-style-type: none"> • the documents referred to in Condition 2 of Schedule 2; • all current statutory approvals for the project; • all approved strategies, plans and programs required under the conditions of this approval; • a comprehensive summary of the monitoring results of the project, reported in accordance with the specifications in any conditions of this approval, or any approved plans and programs; • a complaints register, updated on a monthly basis; • minutes of CCC meetings; • the annual reviews of the project; • any independent environmental audit of the project, and the Proponent's response to the recommendations in any audit; • any other matter required by the Planning Secretary; and • (b) keep this information up-to-date, to the satisfaction of the Planning Secretary 	
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Appendix 2: Agency Feedback

Agency Comments	IMC Response
DPE	
<p><u>Response received 15 November 2022</u></p> <p>28 (b) ensure that the waste generated by the project is appropriately stored, handled and disposed of</p> <p><i>Include a commitment to that the waste generated by the project is appropriately stored, handled and disposed of</i></p>	<p>Commitment included in Section 5.2</p>
<p>28 (c) manage on-site sewage treatment and disposal in accordance with the requirements of EPA and WSC;</p> <p>to the satisfaction of the Planning Secretary.</p> <p><i>Include details of the WSC requirements or include a statement if none were identified.</i></p>	<p>Roles and responsibilities (Section 2) updated.</p> <p>WSC approvals included in Section 3.3.</p> <p>Approvals to Operate SMS included in Section 5.3.</p> <p>Reporting requirements included in Section 8.1.5.</p>



Appendix 3: Management Plan Approval

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