



MINISTER FOR THE ENVIRONMENT;
EMPLOYMENT AND TRAINING

Ass # 1033

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State # 453

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**STATEMENT THAT A PROPOSAL MAY BE IMPLEMENTED
(PURSUANT TO THE PROVISIONS OF THE
ENVIRONMENTAL PROTECTION ACT 1986)**

**BODDINGTON GOLD MINE, EXTENDED BASEMENT OPERATION
SHIRE OF BODDINGTON (1033)**

WORSLEY ALUMINA PTY LTD

This proposal may be implemented subject to the following conditions:

1 Proponent Commitments

The proponent has made a number of environmental management commitments in order to protect the environment.

- 1-1 In implementing the proposal, as reported on in Environmental Protection Authority Bulletin 850, the proponent shall fulfil the commitments made in the Consultative Environmental Review documentation and subsequently during the environmental assessment process conducted by the Environmental Protection Authority; provided that the commitments are not inconsistent with the conditions or procedures contained in this statement. In the event of any inconsistency, the conditions and procedures shall prevail to the extent of the inconsistency.

A copy of the environmental management commitments as modified on 15 May 1997 is attached.

2 Implementation

Changes to the proposal which are not substantial may be carried out with the approval of the Minister for the Environment.

- 2-1 Subject to these conditions, the manner of detailed implementation of the proposal shall conform in substance with that set out in any designs, specifications, plans or other technical material submitted by the proponent to the Environmental Protection Authority with the proposal.

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- 2-2 Where, in the course of the detailed implementation referred to in condition 2-1, the proponent seeks to change the designs, specifications, plans or other technical material submitted to the Environmental Protection Authority in any way that the Minister for the Environment determines, on the advice of the Environmental Protection Authority, is not substantial, those changes may be effected.

3 Proponent

These conditions legally apply to the nominated proponent.

- 3-1 No transfer of ownership, control or management of the project which would give rise to a need for the replacement of the proponent shall take place until the Minister for the Environment has advised the proponent that approval has been given for the nomination of a replacement proponent. Any request for the exercise of that power of the Minister shall be accompanied by a copy of this statement endorsed with an undertaking by the proposed replacement proponent to carry out the project in accordance with the conditions and procedures set out in the statement.

4 Environmental Management System

- 4-1 The proponent shall exercise all care and diligence in managing the proposal to ensure the protection of the environment.
- 4-2 The proponent shall prepare and implement an environmental management plan and environmental management procedures in order to implement the proposal, and shall manage the relevant environmental factors to ensure that the environmental objectives (Section 3, Environmental Protection Authority Bulletin 850) are met.
- 4-3 The proponent shall incorporate the environmental management commitments in the environmental management plan to enable review of performance by the proposed Boddington Gold Mine Liaison Group (See condition 1 and procedure 3).
- 4-4 In preparation of the plan referred to in conditions 4-2 and 4-3, the proponent shall adopt quality assurance principles and environmental management principles consistent with Australian standards AS/NZS ISO 14000 series, with appropriate monitoring, auditing and reporting to ensure compliance with these conditions and the on-going protection of the environment.
- 4-5 If through the implementation of the environmental management procedures referred to in condition 4-2, the proponent identifies a relevant environmental factor not reported on in Environmental Protection Authority Bulletin 850, the proponent shall immediately report to the Minister for the Environment on that factor, providing a proposed objective and the suggested means for managing the factor to achieve the objective.

5 Hotham River

Diversion of water from the Hotham River may have an adverse impact on the Hotham/Murray River system as well as on downstream users.

- 5-1 The proponent shall only pump water from the Hotham River when the river flow is in excess of 342 kilolitres per hour as measured at Marradong River bridge gauging station.

- 5-2 When pumping from the Hotham River, the proponent shall not cause the remaining river flow to be reduced below the level of 342 kilolitres per hour as measured at Marradong River bridge gauging station.

Note: Water is extracted from the Hotham River in accordance with licence conditions set by the Water and Rivers Commission under the provisions of the Rights in Water and Irrigation Act 1914.

6 System Six Recommendation Area C42

- 6-1 Prior to construction of the additional residue disposal area (the proposed F1 Residue Disposal Area), the proponent shall undertake a study to define in detail the conservation value of that portion of System Six Recommendation Area C42 affected by the project.

The study shall specify proposed arrangements for the replacement of the relevant portion of C42 land with land of comparable conservation value such that the values of the proposed Conservation Park are not compromised by the project.

The arrangements shall be to the requirements of the Environmental Protection Authority on advice of the Department of Environmental Protection, the National Parks and Nature Conservation Authority, the Lands and Forest Commission and the Department of Conservation and Land Management.

7 Greenhouse Gas Emissions

- 7-1 From the commencement of operation of the project and thereafter every three years, the proponent shall address, in the reports to be prepared under commitment 5, the following matters relating to greenhouse gas emissions:

- 1 calculation of the greenhouse gas emissions associated with the proposal (using the generally accepted methods);
- 2 indication of the measures adopted to limit greenhouse gas emissions for the project; and
- 3 estimation of the greenhouse gas efficiency of this project (per unit of product and/or other agreed performance indicators) and comparison with the efficiencies of other comparable industries based on publicly available information,

to the requirements of the Environmental Protection Authority on advice of the Department of Environmental Protection.

- 7-2 The proponent shall consider entry (whether on a project-specific basis, company-wide arrangement or within an industrial grouping, as appropriate) into the Commonwealth Government's "Greenhouse Challenge" voluntary cooperative agreement programme.

Note:

- 1 The "Greenhouse Challenge" voluntary cooperative agreement programme presently includes, an inventory of emissions; opportunities for abating greenhouse gas emissions in the organisation; a greenhouse gas mitigation action plan; regular monitoring and reporting of performance; and independent performance verification.

- 2 If participation in the "Greenhouse Challenge" voluntary cooperative agreement programme meets the requirements of the Environmental Protection Authority, the reporting that is required by this agreement will satisfy condition 7-1.

8 Rehabilitation and Decommissioning

- 8-1 Within the first five years following the commencement of mining, and prior to any decommissioning of the site, the proponent shall prepare a report which indicates rehabilitation and decommissioning objectives and performance for the site, to the requirements of the Environmental Protection Authority on advice of the Department of Environmental Protection, the Department of Conservation and Land Management and the Department of Minerals and Energy.

After preparation of the initial report, the proponent shall revise the above-mentioned report every five years.

- 8-2 At least five years prior to decommissioning, or at such later time considered appropriate by the Minister for the Environment on advice of the Department of Environmental Protection, the proponent shall prepare a decommissioning and rehabilitation plan which:

- 1 provides for the long-term management of the mined-out pits, the residue disposal areas, process water ponds, non-mineralised rock stockpiles, water supply dams, processing plant site and associated infrastructure;
- 2 outlines long-term management measures of ground and surface waters affected by the project that ensure waters discharged from the project site will not adversely affect the existing beneficial uses and ecosystems of the South Dandalup catchment, the Hotham River and the Thirty-Four Mile Brook in the vicinity of the Boddington Gold Mine project.
- 3 provides for the development of a 'walk away' solution for the decommissioned mine pits, the residue disposal areas, the process water ponds, the non-mineralised rock stockpiles, the water supply dams, processing plant site and associated infrastructure; and
- 4 takes into consideration the findings arising from the report prepared according to the requirements of condition 8-1,

to the requirements of the Minister for the Environment on advice of the Boddington Gold Mine Environmental Management Liaison Group and the Environmental Protection Authority.

Note: A 'walk-away' solution means that the site shall either no longer require management at the time the proponent ceases mining operations, or if further management is deemed necessary, the proponent shall make adequate provision so that the required management is undertaken with no liability to the State.

- 8-3 The proponent shall implement the decommissioning and rehabilitation plan required by condition 8-2.

9 Time Limit on Approval

The environmental approval for the substantial commencement of the proposal is limited.

- 9-1 If the proponent has not substantially commenced the proposal within five years of the date of this statement, then the approval to implement the proposal as granted in this statement shall lapse and be void. The Minister for the Environment shall determine any question as to whether the project has been substantially commenced.

Any application to extend the period of five years referred to in this condition shall be made before the expiration of that period to the Minister for the Environment.

Where the proponent demonstrates to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority that the environmental parameters of the proposal have not changed significantly, then the Minister may grant an extension not exceeding five years.

10 Compliance Auditing

To help determine environmental performance and compliance with the conditions, periodic reports on the implementation of the proposal are required.

- 10-1 The proponent shall submit periodic Performance and Compliance Reports, in accordance with an audit programme prepared by the Department of Environmental Protection in consultation with the proponent.

11 Notification of Commencement of Operation

Due to the complexity of the mining activities taking place as part of the Boddington Gold Mine project, and to facilitate the administration of these environmental conditions, the proponent should notify the Minister for the Environment of the commencement of operations.

- 11-1 The proponent shall notify the Minister for the Environment at least one month prior to commencing the Extended Basement Operation.

Procedure

- 1 Unless otherwise specified, the Department of Environmental Protection is responsible for assessing compliance with the conditions contained in this statement and for issuing formal clearance of conditions.
- 2 Where compliance with any condition is in dispute, the matter will be determined by the Minister for the Environment.
- 3 Boddington Gold Mine Environmental Management Liaison Group
 - 1 The proposed Boddington Gold Mine Liaison Group will comprise of representatives of state government agencies whose areas of responsibility are affected by the mining and processing operations of the proponent, and will include representatives of the Department of Environmental Protection, the Department of Minerals and Energy, the Department of Resources Development, the Department of Conservation and Land Management, and the Water and Rivers Commission.

- 2 The terms of reference will be developed by the Boddington Gold Mine Liaison Group to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority and the Department of Minerals and Energy.
- 3 The Boddington Gold Mine Liaison Group will review the proponent's compliance with environmental conditions and commitments (in particular conditions 4, 6, 7 and 8) and will provide advice on compliance to the Minister for the Environment, the State Mining Engineer and each agency responsible for assessing compliance with the environmental conditions and commitments.

Note

- 1 The Environmental Protection Authority reported on the proposal in Environmental Protection Authority Bulletin 850.
- 2 The proponent is required to apply for a Works Approval and Licence for this project under the provisions of Part V of the Environmental Protection Act.
- 3 This statement does not remove the requirements for the proponent to obtain other statutory approvals.


CHERYL EDWARDES (Mrs) MLA
MINISTER FOR THE ENVIRONMENT

30 JUN 1997

Proponent's Environmental Management Commitments

15 May 1997

**BODDINGTON GOLD MINE
EXTENDED BASEMENT OPERATION
SHIRE OF BODDINGTON (1033)**

WORSLEY ALUMINA PTY LTD

BODDINGTON GOLD MINE Extended Basement Operation: Assessment Number 1033

WORSLEY ALUMINA PTY LTD

SUMMARY OF TOPICS, OBJECTIVES, COMMITMENTS AND KEY AGENCIES

Factor/Section	Environmental Objective	Management Commitments	Phase	Key Agency
Key Environmental Factors Environmental Management Approach Section 4.2	- To ensure construction, operational and decommissioning phases of the EBO are managed to reduce unnecessary impacts. - To ensure unavoidable impacts are managed to an acceptable level.	1. Formalize the establishment of a Government expert panel (BGM Liaison Group) for the BGM project. 2. Review and modify as necessary the environmental management system to be in accordance with the principles of recognized national standards. 3. Implement best practice environmental management where "best practice" implies the use of the best practicable equipment, processes, systems or techniques relevant to BGM operations. 4. Undertake regular internal environmental audits of key processes. 5a Prepare and submit to the BGM Liaison Group annual environmental reports which will incorporate environmental management plans and include details of environmental management measures and commitments, rehabilitation plans, internal auditing plans, compliance reports and research for the BGM project. 5b Prepare and submit plans to the BGM Liaison Group through the annual environmental reporting process which incorporate plans and measures to reduce as far as practicable the out-of-pit placement of non-mineralised rock for the BGM project.	Ongoing	BGM Liaison Group
Flora and Fauna Conservation Section 4.3	- To ensure no significant loss of priority flora and regionally significant vegetation associations. - To ensure that declared rare flora are protected. - To ensure that there is no significant loss of habitats for threatened and priority fauna.	6. Avoid wherever practicable the clearing of significant vegetation types, in areas where priority flora species are known to occur (eg heathlands, shrublands and woodlands) and in significant habitats for threatened fauna. 7. Prevent, as far as practicable, the effect of water-logging of vegetation in the vicinity of residue disposal areas. 8. Carry out regular monitoring of the abundance and distribution of flora and fauna in rehabilitation and forest areas adjacent to mined and residue disposal areas in consultation with CALM. 9. Encourage recruitment of local rare or priority flora and threatened fauna into rehabilitated areas. 10. Research will be conducted into priority species which occur naturally on the BGM site but which have not been recorded in rehabilitation, with the aim of establishing these species in suitable rehabilitation areas.	Operation	BGM Liaison Group

Factor/Section	Environmental Objective	Management Commitments	Phase	Key Agency
Thirty-Four Mile Brook Catchment Management Section 4.4	- To ensure that the Thirty-Four Mile Brook catchment under the control of the BGM project is managed to avoid adverse impacts on the Hotham River and Thirty-Four Mile Brook outside the BGM Project Area. - To ensure that the discharge of waste water from BGM operations does not adversely affect the existing beneficial uses and ecosystems of the Hotham River and Thirty-Four Mile Brook in the vicinity of the BGM project.	11. Continue to implement BGM operations in a catchment context.	Ongoing	BGM Liaison Group
Water Resource Protection (Quality) Section 4.5		12. Implement the strategy for the discharge of excess water via a pipeline and/or Thirty-Four Mile Brook to the Hotham River, in accordance with requirements of the Department of Environmental Protection. 13. Review the existing monitoring programme for monitoring groundwater, surface waters (including D1 and D4 water supply reservoirs) and sediments in consultation with the Department of Environmental Protection and the Water and Rivers Commission. 14. Maintain weak acid dissociable levels of cyanide in D1 reservoir decant water below 50 mg/L. 15. Clean up and rehabilitate any spills in accordance with Department of Environmental Protection licence conditions. 16. Prevent the migration of diffuse seepage to the South Dandalup catchment by engineering design and back-up by monitoring/pumping bores to maintain groundwater levels on the perimeter of the residue disposal areas.	Operation	DEP & WRC
Water Resource Protection (Quantity) Section 4.6	- To ensure the impact of groundwater extraction on the environment in the vicinity of the BGM Project Area is minimized. - To ensure that water supplies supporting human usage are not adversely affected by groundwater abstraction.	17. Design and implement a monitoring programme to determine the impact of dewatering operations on the three identified wetlands, in consultation with CALM. 18. Design and implement a basement aquifer monitoring programme to better characterize this aquifer in the vicinity of the BGM Project Area, in consultation with the BGM Liaison Group. 19. Trial, and if effective continue, annual surveys of fringing vegetation on the Hotham River and Thirty-Four Mile Brook in the vicinity of the BGM Project Area. 20. Undertake studies to determine acceptable conditions for the release of excess water to Thirty-Four Mile Brook. 21. Participate in catchment management activities that are aimed at protecting or enhancing the ecological values of Hotham River and Thirty-Four Mile Brook in the vicinity of the BGM Project Area.	Operation	DEP & WRC
Residue Management Section 4.7	- To design, construct and operate residue disposal areas and containment systems in a manner that minimizes the discharge of potential contaminants to the environment. - To maximize, as far as practicable, the recovery of decant water from residue disposal areas.	22. Continue to monitor the potential in-pit disposal of residue in the BGM Project Area, in consultation with the BGM Liaison Group. 23. Submit design and supporting environmental documentation for an expansion of residue disposal capacity from 170 Mt to 310 Mt in the existing residue disposal areas to the State for review via the BGM Liaison Group. 24. Install additional bores on the northern and western perimeter of the residue disposal areas, in consultation with the Water and Rivers Commission and the Department of Environmental Protection.	Operation	DEP & BGM Liaison Group

Factor/Section	Environmental Objective	Management Commitments	Phase	Key Agency
Rehabilitation and Decommissioning Section 4.8	- To ensure that rehabilitation prescriptions applied to disturbed areas on the BGM site result in a stable landform and a cover of vegetation which is compatible with the management of the adjacent State Forest. - To develop and design an integrated rehabilitation plan which includes rehabilitation objectives, definition of completion criteria and continual progress towards agreed landform, final land use and vegetation characteristics. - To use reasonable and practicable measures to reduce the out-of-pit placement of non-mineralized rock.	25. Develop rehabilitation and decommissioning plans for the BGM Project Area in consultation with the BGM Liaison Group. 26. Continue field trials for rehabilitation of residue disposal areas. 27. Undertake a research and development programme to identify alternative techniques for residue rehabilitation. 28. Undertake detailed studies to determine management options for the lake(s) in consultation with the BGM Liaison Group. 29. Undertake a comprehensive study to characterize the ecology and human dependences on Thirty-Four mile Brook in order to establish a baseline for evaluation of rehabilitation strategies. 30. Develop water release and water quality targets for the decommissioned phase of the mine in consultation with the BGM Liaison Group.	Operation Decommissioning	BGM Liaison Group
Other Environmental Factors Forest Disease Management Section 5.1	To minimize the risk of project activities introducing or spreading Jarrah Dieback disease in forest area in the BGM Project Area.	31. Continue to implement and regularly update the Forest Hygiene Policy throughout the project area. 32. Investigate rehabilitation of forested areas affected by jarrah dieback. 33. Support research which is relevant to forest disease management and BGM operations. 34. Monitor the rate of spread and the extent of forest disease infections within the area covered by the BGM operations.	Operation Decommissioning	CALM
Integration with State Forest management Section 5.2	To integrate, as far as practicable, with State Forest management.	35. Continue to compensate for or negotiate the exchange of Joint Venture-owned or other appropriate land for State Forest cleared for the EBO project. 36. Continue to implement a fire control plan in consultation with CALM, Burnings and the Shire of Boddington for the BGM Project Area. 37. Maximize salvage of forest products from clearing in BGM project area. 38. Participate in regional feral animal and weed control programmes in association with CALM.	Operation Decommissioning	CALM
Noise and Blast Management Section 5.3	To comply with statutory noise requirements at the nearest noise-sensitive premises.	39. Investigate methods to reduce noise emissions in accordance with best practice. 40. Investigate complaints regarding noise and blast vibration and take corrective action where required.	Operation	DEP
Dust Management Section 5.4	To comply with statutory requirements.	41. Monitor and investigate, as required, strategies for dust control.	Operation	DEP
Hazard Management Section 5.5	Comply with statutory requirements relating to minimizing hazards.		Operation	DME
Gaseous Emissions (including greenhouse gases) Section 5.6	- To ensure the emission of gases complies with recognized standards for the protection of human health and the environment. - To reduce as far as practicable the emission of greenhouse gases from the project site and to comply with EPA policy. - To use all reasonable and practicable measures to reduce the discharge of waste, including gases.	42. Minimize burning of forest debris. 43. Undertake greenhouse gas audits as required.	Operation	DEP

Factor/Section	Environmental Objective	Management Commitments	Phase	Key Agency
Public Safety Section 5.7	To restrict access by the general public to mine operating areas in accordance with safety requirements.		Operation	DME
Social Environmental Factors				
Community Consultation Section 6.2	To ensure the local community is adequately consulted regarding the proposed changes to the Boddington Gold Mine operation.	44. Implement a community consultation programme which includes regular meetings on-site with resident landowners in the vicinity of the Project Area.	Precommissioning Operation	N/A
Impacts on the Local Community Section 6.1	To reasonably assist the local community to manage social impacts arising from the construction and operational phases of the EBO proposal.	45. Offer the option of accommodation in the BGM village to EBO construction workforce. 46. Consult with the Shire of Boddington on matters related to the accommodation of the BGM workforce.	Precommissioning Operation	N/A
Road Traffic	To reduce as far as practicable impacts of road traffic resulting from the EBO proposal.		Precommissioning Operation	N/A
Separation Distances Section 6.8	To encourage planning authorities to maintain appropriate separation distances between BGM operations and incompatible land uses.	47. Provide advice on implications of planning proposals and schemes in the vicinity of the BGM operations to appropriate State and local government agencies.	Precommissioning Operation	N/A
Heritage Section 6.9	To comply with statutory requirements for heritage.	48. Conserve archaeological values of any sites of archaeological significance.	Operation	DAF