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Published on 23 December 2009

Statement No. 823

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

**BALMORAL SOUTH IRON ORE PROJECT, CAPE PRESTON,
SHIRE OF ROEBOURNE**

Proposal: The construction and operation of 80 million tonne per annum iron ore mine, power station, desalination plant, processing plant, pellet plants and accommodation in the Southern Block orebody of the Cape Preston area.

The proposal is further documented in schedule 1 of this statement.

Proponent: Mineralogy Pty Ltd (ACN 010 582 680)

Proponent Address: Level 2, 9 Ouyan Street, Bundall QLD 4217
(WA Office: Level 7, 218 St George's Terrace, Perth WA 6000)

Assessment Number: 1677

Report of the Environmental Protection Authority: Report 1340

Appeal determination: 303 of 2009

The proposal referred to in the above report of the Environmental Protection Authority may be implemented. The implementation of that proposal is subject to the following conditions and procedures:

1 Proposal Implementation

1-1 The proponent shall implement the proposal as assessed by the Environmental Protection Authority and described in schedule 1 of this statement subject to the condition and procedures of this statement.

2 Proponent Nomination and Contact Details

2-1 The proponent for the time being nominated by the Minister for Environment under sections 38(6) or 38(7) of the *Environmental Protection Act 1986* is responsible for the implementation of the proposal.

- 2-2 The proponent shall notify the Chief Executive Officer of the Department of Environment and Conservation (CEO) of any change of the name and address of the proponent for the serving of notices or other correspondence within 30 days of such change.

3 Time Limit of Authorisation

- 3-1 The authorisation to implement the proposal provided for in this statement shall lapse and be void within five years after the date of this statement if the proposal to which this statement relates is not substantially commenced.
- 3-2 The proponent shall provide the CEO with written evidence which demonstrates that the proposal has substantially commenced on or before the expiration of five years from the date of this statement.

4 Compliance Reporting

- 4-1 The proponent shall prepare and maintain a compliance assessment plan to the satisfaction of the CEO.
- 4-2 The proponent shall submit to the CEO, the compliance assessment plan required by condition 4-1 at least 6 months prior to the first compliance report required by condition 4-6 or prior to ground disturbing activity, whichever is sooner. The compliance assessment plan shall indicate:
- 1 the frequency of compliance reporting;
 - 2 the approach and timing of compliance assessments;
 - 3 the retention of compliance assessments;
 - 4 reporting of potential non-compliances and corrective actions taken;
 - 5 the table of contents of compliance reports; and
 - 6 public availability of compliance reports.
- 4-3 The proponent shall assess compliance with conditions in accordance with the compliance assessment plan required by condition 4-1.
- 4-4 The proponent shall retain reports of all compliance assessments described in the compliance assessment plan required by condition 4-1 and shall make those reports available when requested by the CEO.
- 4-5 The proponent shall advise the CEO of any potential non-compliance within two business days of that non-compliance being known.

- 4-6 The proponent shall submit a compliance assessment report annually from the date of issue of this Implementation Statement addressing the previous twelve month period or other period as agreed by the CEO. The compliance assessment report shall:
- 1 be endorsed by the proponent's Managing Director or a person, approved in writing by the Department of Environment and Conservation, delegated to sign on the Managing Director's behalf;
 - 2 include a statement as to whether the proponent has complied with the conditions;
 - 3 identify all potential non-compliances and describe corrective and preventative actions taken;
 - 4 be made publicly available in accordance with the approved compliance assessment plan; and
 - 5 indicate any proposed changes to the compliance assessment plan required by condition 4-1.

5 Performance Review and Reporting

- 5-1 The proponent shall submit to the CEO Performance Review Reports at the conclusion of the first, second, third and fifth years after the commencement of productive mining and then, at such intervals as the CEO may regard as reasonable, which addresses:
- 1 the major environmental risks and impacts; the performance objectives, standards and criteria related to these; the success of risk reduction/impact mitigation measures and results of monitoring related to management of the major risks and impacts;
 - 2 the level of progress in the achievement of sound environmental performance, including industry benchmarking, and the use of best available technology where practicable; and
 - 3 improvements gained in environmental management which could be applied to this and other similar projects.

6 Groundwater-dependent and riparian vegetation

- 6-1 The proponent shall ensure that groundwater abstraction and dewatering required to implement the proposal does not adversely affect native vegetation to be retained in the project area or in adjacent areas.
- 6-2 To verify that the requirements of condition 6-1 are met the proponent shall:

- undertake baseline monitoring of native vegetation health and abundance in the project area and adjacent areas prior to dewatering;
- monitor groundwater levels, including in the vicinity of riparian groundwater-dependent vegetation; and
- monitor the health and cover of riparian and groundwater dependent vegetation to be retained in the proposal area and in adjacent areas.

This monitoring is to be carried out to the satisfaction of the CEO, and is to be carried out in such a way that, should a significant decline in health or cover of native vegetation be detected, it will be possible to determine whether the decline is attributable to the implementation of the proposal or to other causes.

6-3 The proponent shall submit annually the results of monitoring required by condition 6-2 and 6-3 to the CEO.

6-4 In the event that monitoring required by condition 6-2 and 6-3 indicates a decline in the health and condition of the riparian and groundwater dependent vegetation:

1. the proponent shall report such findings to the CEO within 21 days of the decline being identified;
2. provide evidence which allows determination of the cause of the decline;
3. if determined by the CEO to be a result of activities undertaken in implementing the proposal, the proponent shall submit actions to be taken to remediate the decline within 21 days of the determination being made to the CEO; and
4. the proponent shall implement actions to remediate the decline of riparian and groundwater dependent vegetation upon approval of the CEO and shall continue until such time the CEO determines that the remedial actions may cease.

6-5 The proponent shall make the monitoring reports required by conditions 6-2 and 6-4 publicly available in a manner approved by the CEO.

7 Removal of fauna from open trenches

7-1 Trapped fauna within open trenches shall be cleared and recorded by a suitably trained fauna-rescue officer no later than three hours after sunrise. The clearing and recording shall be repeated before sunset.

The open trenches shall also be cleared and recorded by a suitably trained fauna-rescue officer no more than one hour prior to backfilling of trenches.

Note: “fauna-rescue officer” means an employee of the proponent whose responsibility it is to walk the open trench to recover and record fauna found within the trench.

7-2 The fauna-rescue officer shall be experienced in the following, to the requirements of the CEO:

1. fauna identification, capture and handling (including venomous snakes);
 2. identification of tracks, scats, burrows and nests of conservation-significant species;
 3. fauna vouchering;
 4. assessing injured fauna for suitability for release, rehabilitation or euthanasia;
 5. familiarity with the ecology of the species which may be encountered in order to be able to appropriately translocate fauna encountered; and
 6. performing euthanasia.
- 7-3 Open trench lengths shall not exceed a length capable of being inspected and cleared by the fauna-clearing person within the required times as set out in condition 7-1.
- 7-4 Ramps providing egress points and/or fauna refuges providing suitable shelter from the sun and predators for trapped fauna are to be placed in the trench at intervals not exceeding 50 metres.
- 7-5 The proponent shall produce a report on fauna management within the gas pipeline lateral easement at the completion of pipeline construction.

The report shall include the following:

1. details of all fauna inspections;
2. the number of fauna cleared from trenches;
3. fauna interactions;
4. fauna mortalities; and
5. all actions taken.

The report shall be provided to the CEO no later than 14 days after the completion of pipeline installation, and shall be made publicly available in a manner approved by the CEO.

8 Mangroves

- 8-1 The proponent shall ensure that the implementation of the proposal does not result (through either direct or indirect impacts) in a loss of more than 8.5 ha of mangroves, as delineated in Figure 2, Schedule 1.

- 8-2 To verify that the requirements of 8-1 are met, the proponent shall monitor the abundance, canopy cover, and growth rates of mangroves located within the management unit as shown in Figure 2, Schedule 1.
- 8-3 Monitoring to be carried out to the satisfaction of the CEO and shall be carried out in such a way that, if a decline in mangrove canopy cover, growth rates or abundance is detected, it will be possible to determine whether the decline is likely to have been caused by the implementation of the proposal or is likely to have been caused by other factors.
- 8-4 Monitoring shall be carried out not less than once each year and shall commence before commencement of ground disturbing activities and shall continue until such time as the CEO determines that monitoring may cease.
- 8-5 The proponent shall submit annually the results of monitoring required by conditions 8-2 to 8-4 to the CEO.
- 8-6 In the event that monitoring required by condition 8-2 to 8-4 indicates a decline in the abundance, canopy cover, or growth rates of mangroves outside the 8.5 ha:
1. the proponent shall report such findings to the CEO within 21 days of the decline being identified;
 2. provide evidence which allows determination of the cause of the decline;
 3. if determined by the CEO that the decline is likely to be a result of activities undertaken in implementing the proposal, the proponent shall submit actions to be taken to remediate the decline within 21 days of the determination being made to the CEO; and
 4. the proponent shall undertake actions to remediate the decline of mangroves upon approval of the CEO and shall continue to undertake such actions until such time as the CEO determines that the remedial actions may cease.
- 8-7 The proponent shall make the monitoring reports required by condition 8-5 and 8-6 publicly available in a manner approved by the CEO.

9 Marine Wastewater Outfall

- 9-1 The proponent must locate the waste water outfall in the port area within a Moderate Ecological Protection Area which is confined to 250 metres from all points of the port structures.
- 9-2 The proponent shall ensure that the Moderate Ecological Protection Area is maintained in the port area, except for a Low Ecological Protection Area at the wastewater outfall. The boundary of the Low Ecological Protection Area must not exceed 70 metres from all points of the diffuser structure. At the outer boundary of the Moderate Ecological Protection Area a high level of ecological protection shall be maintained.

- 9-3 The proponent shall ensure that within the Low Ecological Protection Area the 95th percentile of bioaccumulating toxicant concentrations meets ANZECC and ARMCANZ 2000 *National Water Quality Management Strategy* 80% species protection guideline levels, and within the Moderate Ecological Protection Area the 95th percentile of toxicants meets ANZECC and ARMCANZ 2000 *National Water Quality Management Strategy* 90% species protection levels.
- 9-4 The proponent shall ensure that the following conditions are met at the boundary between the Low Ecological Protection Area and the Moderate Ecological Protection Area:
1. The median salinity resulting from discharge at the wastewater diffuser either, (1) does not exceed the 95th percentile of the natural salinity range over the same period; or, (2) does not exceed the median salinity at a suitable reference site by more than 1.2 parts per thousand.
 2. The 95th percentile of toxicant concentrations meets the 90% species protection levels specified in ANZECC and ARMCANZ 2000 *National Water Quality Management Strategy*.
 3. The results of Whole Effluent Toxicity testing undertaken using a minimum of five species as per ANZECC and ARMCANZ (2000) protocols demonstrate that sufficient dilution is occurring such that a moderate level of ecological protection (90% species protection) is met for at least 95% of wastewater flow and oceanographic conditions.
 4. The ambient dissolved oxygen in bottom water samples is not below 80% saturation for more than six weeks and never below 60% saturation.
 5. The median temperature in any season does not exceed the 95th percentile of the natural temperature range over the same period.
- 9-5 The proponent shall verify diffuser performance in terms of achieving the required number of dilutions to meet the requirements of 9-2 to 9-4, under a range of flow rates, meteorological and sea state conditions for a period of at least 12 months immediately following commissioning, by use of continuous loggers or at least weekly sampling.
- 9-6 The proponent shall use procedures contained in EPA 2005 *Manual of Operating Procedures for Environmental Monitoring Against the Cockburn Sound Environmental Quality Criteria* EPA Report 21 for monitoring carried out to meet the requirements of 9-2 to 9-5.
- 9-7 Within 18 months of commissioning the proponent shall submit a report containing the results of the monitoring required by 9-2 to 9-5 and a discussion of the operating limitations necessary to ensure ongoing compliance with 9-2 to 9-4 to the CEO.
- 9-8 In the event that the monitoring required by 9-5 indicates that the requirements of 10-2 to 10-4 are not being met or are not likely to be met, the proponent shall immediately

report such findings to the CEO along with a description of the management actions to be taken to meet the requirements of 9-2 to 9-4.

10 Surface Water and Groundwater

- 10-1 The proponent shall ensure that run-off and/or seepage from the waste disposal facilities do not cause the quality of surface water or groundwater within or leaving the proposal area to exceed ANZECC/ARMCANZ* default criteria for a slightly to moderately disturbed ecosystem, taking into consideration natural background water quality, so that existing and potential uses, including ecosystem maintenance, are protected.

* Australian and New Zealand Environment and Conservation Council and Agriculture and Resource Management Council of Australia and New Zealand 2000, *Australian Water Quality Guidelines for Fresh and Marine Waters* and its updates.

- 10-2 The proponent shall monitor the quality of any run-off and/or seepage from the waste disposal facilities entering surface water and groundwater on or in proximity to the proposal area to ensure that requirements of condition 10-1 are met. This monitoring is to be carried out using methods consistent with Australian and New Zealand Environment and Conservation Council and Agriculture and Resource Management Council of Australia and New Zealand 2000, *Australian Guidelines for Water Quality Monitoring and Reporting* (and its updates) and to the satisfaction of the CEO.

- 10-2A The proponent shall ensure that groundwater abstraction and dewatering required for the implementation of the proposal does not adversely affect groundwater levels in the Fortescue River alluvials or the Du Boulay Creek.

- 10-2B The proponent shall monitor groundwater levels in the vicinity of the mining pits, Du Boulay Creek and Fortescue River for the purpose of complying with 10-2A, with the monitoring program being to the satisfaction of the CEO on the advice of the Department of Water.

- 10-3 The proponent shall commence the water quality monitoring required by 10-2 and 10-2B before ground disturbing activities in order to collect baseline data.

- 10-4 The proponent shall submit annually the results of monitoring required by condition 10-2 and 10-2B to the CEO.

- 10-5 In the event that monitoring required by condition 10-2 indicates that the requirements of conditions 10-1 are not being met:

1. the proponent shall report such findings to the CEO within 21 days of the decline in water quality standards being identified;
2. provide evidence which allows determination of the cause of the decline in water quality standards;

3. if determined by the CEO to be a result of activities undertaken in implementing the proposal, the proponent shall submit actions to be taken to remediate the decline in water quality standards within 21 days of the determination being made to the CEO; and
 4. the proponent shall implement actions to remediate the decline in water quality standards upon approval of the CEO and shall continue to implement such actions until such time the CEO determines that the remedial actions may cease.
- 10-6 The proponent shall make the monitoring reports required by condition 10-2 publicly available in a manner approved by the CEO.

11 Stack Emissions

- 11-1 The proponent shall characterise the emissions from the pellet plant stack during commissioning to the satisfaction of the CEO.
- 11-2 The characterisation required by condition 11-1 shall include all constituents including minor emissions such as Polyaromatic hydrocarbons, Volatile organic compounds and dioxins/furans.
- 11-3 The proponent shall submit annually the results of monitoring required by condition 11-2 to the CEO.

12 Greenhouse Gas Abatement

- 12-1 Prior to commencement of the Commonwealth Government's Emissions Trading Scheme, the proponent shall prepare and submit to the Minister for Environment a Greenhouse Gas Abatement Report which meets the objectives set out in condition 12-2, as determined by the Minister for Environment.
- 12-2 The objectives of the Greenhouse Gas Abatement Report required by condition 12-1 are to:
1. Demonstrate that maximising energy efficiency and opportunities for future energy recovery have been given due consideration in the design of proposal;
 2. Ensure that the "greenhouse gas" intensity ("greenhouse gas" per tonne of pellets produced) is equivalent to, or better than benchmarked best practice; and
 3. Achieve continuous improvement in "greenhouse gas" intensity through an annual review, and if practicable, adoption of advances in technology and process management.

13 Rehabilitation

- 13-1 The proponent shall undertake rehabilitation to achieve the following outcomes:

1. The waste dump(s) and tailings storage facilities shall be non-polluting and shall be constructed so that their final shape, stability, surface drainage, resistance to erosion and ability to support local native vegetation are comparable to natural landforms in the area.
 2. Waste dumps, tailings storage facilities and other areas disturbed through implementation of the proposal (excluding mine pits), shall be progressively rehabilitated with vegetation composed of native plant species of local provenance, to the satisfaction of the CEO and Director Environment, Department of Mines and Petroleum.
 3. The percentage cover of living vegetation in all rehabilitation areas shall be comparable with that of similar natural landforms in the area.
 4. No new species of weeds (including both declared weeds and environmental weeds) shall be introduced into the area as a result of the implementation of the proposal.
 5. The coverage of weeds (including both declared weeds and environmental weeds) within the rehabilitation areas shall be no greater than 10 %.
- 13-2 Rehabilitation activities shall continue as necessary until such time as the requirements of condition 13-1 are met, and are demonstrated by inspections and reports to be met, for a minimum of five years to the satisfaction of the CEO and Director Environment, Department of Mines and Petroleum.

14 Conceptual Closure Strategy

- 14-1 Prior to commencing ground-disturbing activity, the proponent shall submit a detailed and project-specific Conceptual Closure Strategy to the requirements of the CEO and Director Environment, Department of Mines and Petroleum.
- 14-2 The Conceptual Closure Strategy shall include detailed results of geochemical and geophysical characterisation of materials, in particular the potential for acid drainage, metalliferous drainage, and of the occurrence of dispersive materials and asbestiform minerals. Testing for materials with potential to cause acid and/or metalliferous drainage shall include static and kinetic testing carried out using techniques and timeframes consistent with national and international standards (Leading Practice Sustainable Development Program for the Mining Industry – Managing Acid and Metalliferous Drainage 2009 – Department of Industry, Tourism and Resources; The Global Acid Rock Drainage Guide 2009 – International Network for Acid Prevention).
- 14-3 The Conceptual Closure Strategy shall provide detailed technical information on proposed management measures to prevent pollution, environmental harm or human health impacts during implementation of the proposal and after mine completion and closure.

- 14-4 The Conceptual Closure Strategy shall include maps and diagrams showing the proposed placement, dimensions, design and proposed methods of construction and closure of waste disposal facilities and mine pits.
- 14-5 The Conceptual Closure Strategy shall demonstrate that waste dumps and tailings storage facilities will be located, designed and constructed to ensure that they are non-polluting and so that their final shape, height, stability, surface drainage, resistance to erosion and ability to support native vegetation are comparable to natural landforms in the area.
- 14-6 The Conceptual Closure Strategy shall provide the results of additional detailed groundwater modelling to verify that a lake will not form in the pit void(s) following completion and closure.
- 14-7 The Conceptual Closure Strategy shall provide detailed technical information demonstrating that sufficient quantities of suitable materials are available on site for the implementation and closure (including unplanned or temporary closure) of the proposal.
- 14-8 The Conceptual Closure Strategy shall include specific practicable procedures to ensure the protection of the environment in the event of unplanned or temporary mine closure.
- 14-9 The proponent shall implement the proposal consistent with the Conceptual Closure Strategy referred to in conditions 14-1 to 14-8.

[Condition 15 deleted as outcome of appeal]

16 Final Closure and Decommissioning Plan

16-1 At least 5 years prior to mine completion, the proponent shall prepare and submit a Final Closure and Decommissioning Plan to the requirement of the CEO and Director Environment, Department of Mines and Petroleum.

16-2 The Final Closure and Decommissioning Plan shall be prepared consistent with:

- ANZMEC/MCA 2000, *Strategic Framework for Mine Closure Planning* and
- Department of Industry Tourism and Resources 2006 *Mine Closure and Completion* (Leading Practice Sustainable Development Program for the Mining Industry), Commonwealth Government, Canberra;

and shall provide detailed technical information on the following:

- Final closure of all areas disturbed through implementation of the proposal so that they are safe, stable and non-polluting;
- Decommissioning of all plant and equipment;

- Disposal of waste materials;
 - Final Rehabilitation of waste dumps; tailings storage facilities and other areas (outside the mine pit(s));
 - Management and monitoring following mine completion; and
 - Inventory of all contaminated sites and proposed management.
- 16-3 The proponent shall close, decommission and rehabilitate the proposal consistent with the approved Final Closure and Decommissioning Plan.
- 16-4 The proponent shall make the Final Closure and Decommissioning Plan required by 16-1 and 16-2 publicly available in a manner acceptable to the CEO.

Procedures

1. Where a condition states “on advice of the Environmental Protection Authority”, the Environmental Protection Authority will provide that advice to the Department of Environment and Conservation for the preparation of written notice to the proponent.
2. The Environmental Protection Authority may seek advice from other agencies or organisations, as required, in order to provide its advice to the Department of Environment and Conservation.
3. The Minister for Environment will determine any dispute between the proponent and the Environmental Protection Authority or the Department of Environment and Conservation over the fulfilment of the requirements of the conditions.
4. The proponent is required to apply for a Works Approval Licence for this project under the provisions of Part V of the *Environmental Protection Act 1986*.

Hon Donna Faragher JP MLC
MINISTER FOR ENVIRONMENT; YOUTH

The Proposal (Assessment No. 1677)

General Description

The proposal is to develop and operate an 80 million tonne per annum iron ore mine, power station, desalination plant, processing plant, pellet plants and accommodation, located in the Cape Preston region, 80 km south-west of Karratha.

The proposal is described in the following document – *Balmoral South Iron Project Public Environmental Review, February 2009*.

Summary Description

A summary of the key proposal characteristics is presented in Table 1.

Table 1: Summary of key proposal characteristics

Element	Description
General	
Project Life	Project Development - Approximately 3 years Operation - Approximately 28 years
Mining and Processing	
Ore resources	Up to 2 billion tonnes
Ore mining rate	Up to 80 Mtpa
Pit depth (ultimate)	300 m
Overburden and waste	Approximately 80 Mtpa
Materials handling	Conventional drill, blast, load and haul
Dewatering rate	Up to 4 GLpa
Dewatering disposal	Used in the process water stream and for dust suppression
Concentrator production	Approximately 24 Mtpa
Pelletising production	Approximately 14 Mtpa
Infrastructure	
Power	Up to 600 MW installed capacity gas fired combined cycle power station
Conveyor/slurry pipeline	Approximately 30 km in length between process plant site and Cape Preston stockyard
Gas supply	Up to 34, 000 Tjpa
Water supply	40 GLpa desalination plant and 4 GLpa pit dewatering
Port stockyard	2 Mt storage capacity
Disturbance Areas	
Areas of disturbance	Total disturbance during project not more than 5,297 ha comprising: <ul style="list-style-type: none"> • Pit – not more than 355 ha • Waste Disposal Facilities – not more than 2,450 ha • Eastern corridor – not more than 1450 ha • Central corridor – not more than 150 ha • Western corridor – not more than 160 ha • Desalination plant – not more than 15 ha • Stockpiles – not more than 85 ha • Process plant – not more than 130 ha • Accommodation village – not more than 90 ha • Other infrastructure – not more than 460 ha

Figures:

Figure 1: Project footprint and layout of key components

Figure 2: Mangrove Management Unit

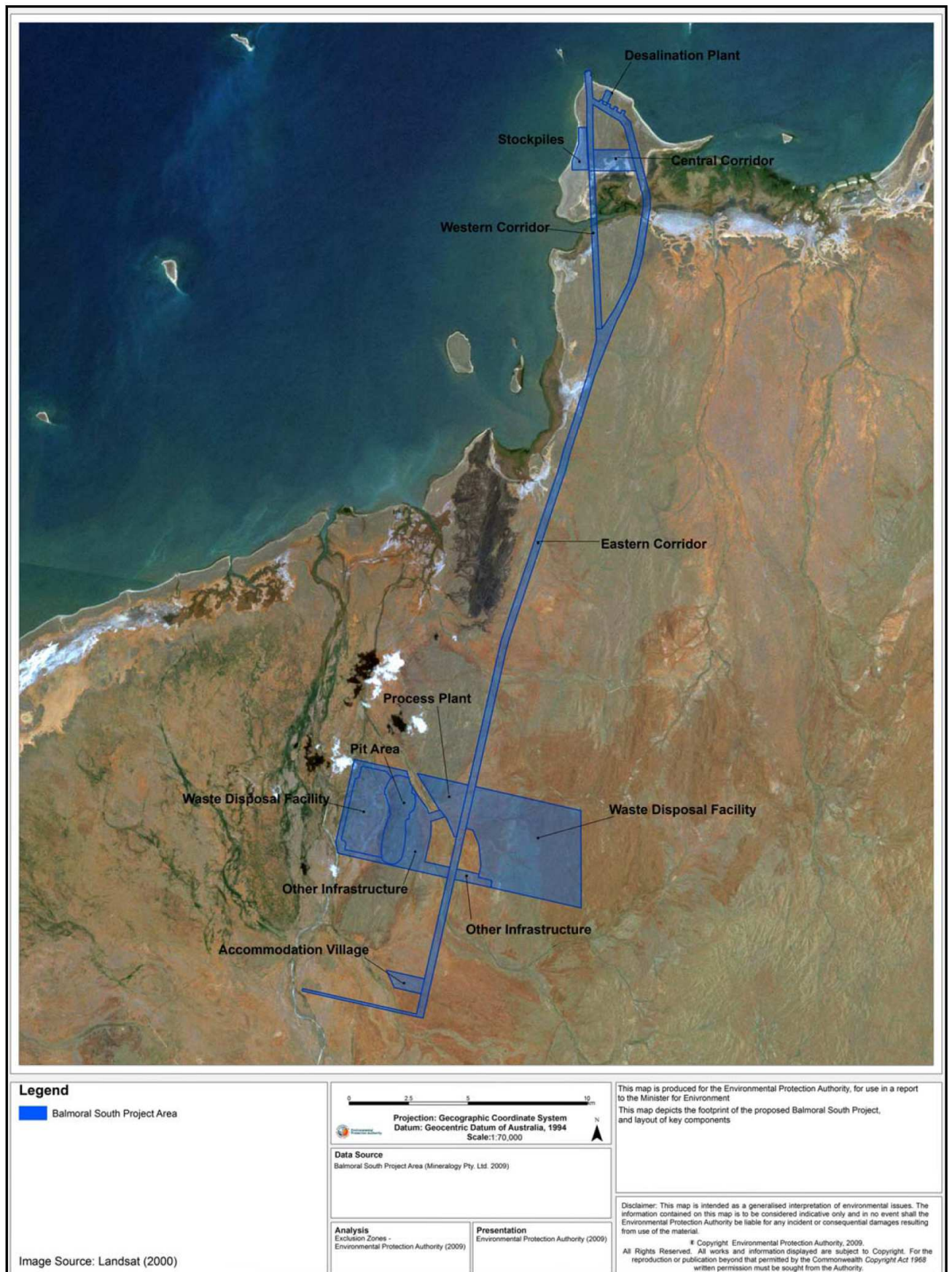


Figure 1 - Project footprint and layout of key components

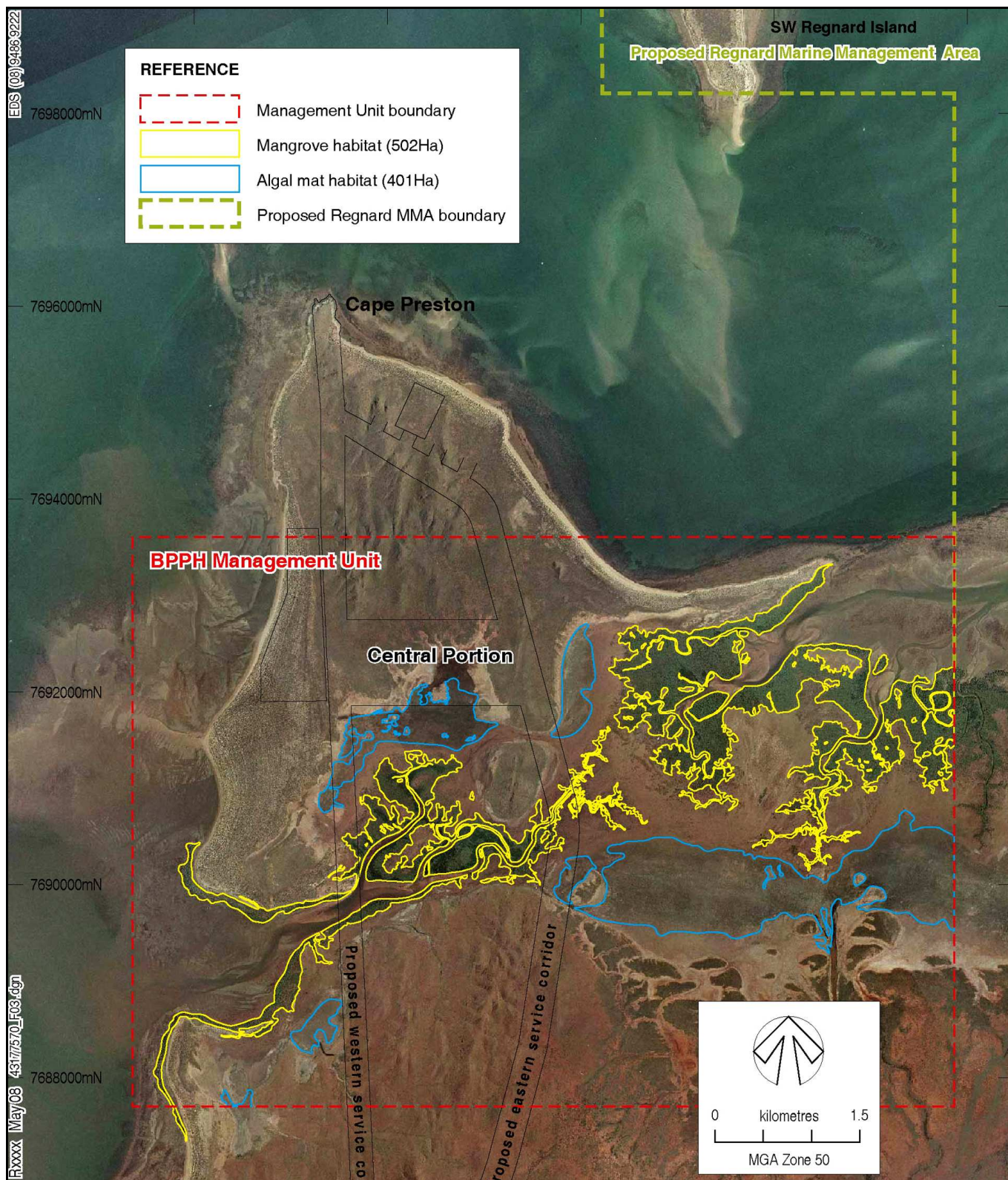


Figure 2: Mangrove Management Unit