



MINISTER FOR THE ENVIRONMENT;
LABOUR RELATIONS

Statement No.

000558

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

**NAMMULDI-SILVERGRASS IRON ORE PROJECT, 55 KILOMETRES NORTH-WEST
OF TOM PRICE**

Proposal: The mining of Marra Mamba iron ore deposits at the Nammuldi (including some detrital ore) and Silvergrass areas, and basic processing of the mined material into a saleable iron ore product with a production rate up to 20 million tonnes per annum. This includes transport infrastructure to connect the mining areas to an existing rail network to transport ore to the port of Dampier.

The proposal details are documented in schedule 1 of this statement.

Proponent: Hamersley Iron Pty. Limited
Proponent Address: 152-158 St George's Terrace, PERTH WA 6837
Assessment Number: 1247
Report of the Environmental Protection Authority: Bulletin 997

The proposal to which the above report of the Environmental Protection Authority relates may be implemented subject to the following conditions and procedures:

Procedures

1 Implementation

- 1-1 Subject to these conditions and procedures, the proponent shall implement the proposal as documented in schedule 1 of this statement.
- 1-2 Where the proponent seeks to change any aspect of the proposal as documented in schedule 1 of this statement in any way that the Minister for the Environment determines, on advice of the Environmental Protection Authority, is substantial, the proponent shall refer the matter to the Environmental Protection Authority.

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- 1-3 Where the proponent seeks to change any aspect of the proposal as documented in schedule 1 of this statement in any way that the Minister for the Environment determines, on advice of the Environmental Protection Authority, is not substantial, those changes may be effected.

2 Proponent Commitments

- 2-1 The proponent shall implement the consolidated environmental management commitments documented in schedule 2 of this statement.
- 2-2 The proponent shall implement subsequent environmental management commitments which the proponent makes as part of the fulfilment of conditions and procedures in this statement.

3 Proponent

- 3-1 The proponent for the time being nominated by the Minister for the Environment under section 38(6) or (7) of the Environmental Protection Act 1986 is responsible for the implementation of the proposal until such time as the Minister for the Environment has exercised the Minister's power under section 38(7) of the Act to revoke the nomination of that proponent and nominate another person in respect of the proposal.
- 3-2 Any request for the exercise of that power of the Minister referred to in condition 3-1 shall be accompanied by a copy of this statement endorsed with an undertaking by the proposed replacement proponent to carry out the proposal in accordance with the conditions and procedures set out in the statement.
- 3-3 The proponent shall notify the Department of Environmental Protection of any change of proponent contact name and address within 30 days of such change.

4 Commencement

- 4-1 The proponent shall provide evidence to the Minister for the Environment within five years of the date of this statement that the proposal has been substantially commenced.
- 4-2 Where the proposal has not been substantially commenced within five years of the date of this statement, the approval to implement the proposal as granted in this statement shall lapse and be void. The Minister for the Environment will determine any question as to whether the proposal has been substantially commenced.
- 4-3 The proponent shall make application to the Minister for the Environment for any extension of approval for the substantial commencement of the proposal beyond five years from the date of this statement at least six months prior to the expiration of the five year period referred to in conditions 4-1 and 4-2.

4-4 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 for the substantial commencement of the proposal.

5 Compliance Auditing

5-1 The proponent shall submit periodic Compliance Reports, in accordance with an audit program prepared in consultation between the proponent and the Department of Environmental Protection.

5-2 Unless otherwise specified, the Chief Executive Officer of the Department of Environmental Protection is responsible for assessing compliance with the conditions, procedures and commitments contained in this statement and for issuing formal, written advice that the requirements have been met.

5-3 Where compliance with any condition, procedure or commitment is in dispute, the matter will be determined by the Minister for the Environment.

Conditions

6 Subterranean Fauna Sampling Plan

6-1 Within twelve months following the issuing of the formal authority to decision-making authorities under section 45(7) of the Environmental Protection Act 1986, or at least three years prior to commencing dewatering operations at either the Nammuldi or Silvergrass area, the proponent shall develop a Subterranean Fauna Sampling Plan for the respective area, to the requirements of the Environmental Protection Authority on advice of the Department of Environmental Protection, the Western Australian Museum and the Department of Conservation and Land Management.

The objective of this Plan is:

- to increase scientific knowledge about subterranean fauna to assist in the conservation of subterranean fauna species.

This Plan shall address:

- 1 subterranean fauna surveys of the areas to be affected by dewatering operations to establish the conservation significance of any species within the affected areas;
- 2 characterisation of subterranean fauna habitats to be affected by dewatering and identification of similar subterranean fauna habitats outside the affected areas;

- 3 subterranean fauna surveys of similar habitats outside the areas to be affected by dewatering operations to establish the uniqueness, or otherwise, of fauna within the areas to be affected; and
 - 4 specific measures to record and preserve biological information on any species collected in the project area.
- 6-2 The proponent shall implement the approved Subterranean Fauna Sampling Plan required by condition 6-1.
- 6-3 The proponent shall make the Subterranean Fauna Sampling Plan required by condition 6-1 publicly available, to the requirements of the Environmental Protection Authority.
- 6-4 The results from the Subterranean Fauna Sampling Plan shall be submitted to the Environmental Protection Authority, the Western Australian Museum and the Department of Conservation and Land Management.
- 6-5 Should the Environmental Protection Authority consider, based on the review of the results required by condition 6-4, that its objective to maintain the abundance, species diversity and geographical distribution of subterranean fauna would be compromised, then the proponent shall develop an action plan to the requirements and timing of the Environmental Protection Authority.

7 Decommissioning Plan

- 7-1 At least six months prior to the anticipated date of decommissioning, or at a time agreed with the Department of Environmental Protection, the proponent shall prepare a Final Decommissioning Plan designed to ensure the site is left in a suitable condition, with no liability to the State, to the requirements of the Environmental Protection Authority on advice of the Department of Environmental Protection.

The Final Decommissioning Plan shall address:

- 1 removal or, if appropriate, retention of plant and infrastructure;
 - 2 rehabilitation of all disturbed areas to a standard suitable for the agreed new land use(s); and
 - 3 identification of contaminated areas, including provision of evidence of notification to relevant statutory authorities.
- 7-2 The proponent shall implement the Final Decommissioning Plan required by condition 7-1 until such time as the Minister for the Environment determines that decommissioning is complete.
- 7-3 The proponent shall make the Final Decommissioning Plan required by condition 7-1 publicly available, to the requirements of the Environmental Protection Authority.

8 Performance Review

8-1 Each six years following the commencement of construction, the proponent shall submit a Performance Review to the Department of Environmental Protection:

- to document the outcomes, beneficial or otherwise;
- to review the success of goals, objectives and targets; and
- to evaluate the environmental performance over the six years;

relevant to the following:

- 1 environmental objectives reported on in Environmental Protection Authority Bulletin 997;
- 2 proponent's consolidated environmental management commitments documented in schedule 2 of this statement and those arising from the fulfilment of conditions and procedures in this statement;
- 3 environmental management system environmental performance targets;
- 4 environmental management programs and plans; and/or
- 5 environmental performance indicators;

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

Note: The Environmental Protection Authority may recommend changes and actions to the Minister for the Environment following consideration of the Performance Review.

Note

- 1 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.


CHERYL EDWARDES (Mrs) MLA
MINISTER FOR THE ENVIRONMENT

28 NOV 2000

Schedule 1

1. The Proposal

The proposal is to develop two iron ore deposits (Nammuldi and Silvergrass) near Hamersley Iron Pty. Limited's current Brockman No. 2 iron ore mine, 65 kilometres north-west of Tom Price. The project areas are indicated on the attached figures (Figures 1 and 2).

The main components of the project are:

- open-cut mines at Nammuldi (Marra Mamba, detritals) and Silvergrass (Marra Mamba);
- dewatering to access ore below the water table;
- an ore transport link from Silvergrass to Nammuldi;
- a wet or possibly dry processing plant at Nammuldi;
- crushing facilities at Silvergrass and at the eastern Nammuldi pits;
- tailings disposal (if wet processing occurs) into available mine void/s, plus a new tailings storage facility; and
- associated support infrastructure.

The rate of production of saleable ore will commence at 2-3 million tonnes per annum and could increase to about 20 million tonnes per annum.

Both deposits will involve mining below the water table, with approximately 80% of the mineable Marra Mamba ore being below the watertable. A substantial dewatering operation will be required during mining. To manage long-term impacts associated with mining below the water table, the proponent will backfill the mine pits with waste rock to at least 1 metre above the mean pre-mine water table level.

The key characteristics of the proposal are summarised in Table 1.

Table 1 - Key Characteristics Table

Component	Project characteristic	Description
General	Area to be cleared	Around 2,000 hectares
Mine and mining	Pits and ore type	Nammuldi - Pits A, B, C/D, E and F (all Marra Mamba) and detritals near Pit F. Silvergrass - Range Pit, Valley Pit, Flats Pit - all Marra Mamba
	Area (mines and waste dumps)	About 1685 hectares: made up of mines 685 hectares, waste dumps 900 hectares (some waste will be returned to mine pits), haul roads 100 hectares
	Ore reserve	About 280 million tonnes (230 million tonnes of Marra Mamba and 50 million tonnes of detritals)
	Mining rates	Initially 2-3 million tonnes/annum and could increase to 20 million tonnes/annum
	Estimated mine life	15-20 years
	Ore below water table	About 80%
	Stripping ratio	3:1 (waste:ore) overall
	Waste rock disposal	About 750 million tonnes of waste rock to be generated. Some waste will be used to backfill voids to above pre-mine mean water table level, some used in construction works and the remainder left as out-of-pit waste dumps
	Pit voids	Voids to be backfilled to one metre above the mean pre-mine water table using waste ore and overburden. Pits will be backfilled to 575-581mRL at Nammuldi and 548-550mRL at Silvergrass
	Waste dumps	Waste dumps will be 40 metres high. Maximum batter slope of 20° during rehabilitation.
	Proportion of waste to be backfilled	About 30%
Dewatering	General	Dewatering required to access below water table ore from most pits
	Arrangement	In-pit dewatering bores to achieve the bulk of dewatering, associated with in-pit sumps in the later stages of mining
	Combined rates	Maximum rate approximately 18 million litres /day
	Total volumes	Nammuldi about 31,000 million litres, Silvergrass about 30,000 million litres
	Discharge strategy	At Nammuldi, discharge will initially be into drainage lines, then to recharge via mined pit (if suitable pit available and it is feasible). At Silvergrass, discharge will be to Caves Creek
Processing and tailings	Plant	Wet or dry processing at Nammuldi, dry crushing plant at Silvergrass and a dry crushing plant around Pit E/F at Nammuldi.
	Tailings (if wet processing)	About 2 million tonnes/annum (dry), made up of clays and fine iron fraction – defined as high plasticity silt. Discharge into Brockman pits 1 & 3 and Nammuldi Pit B, plus a central thickened discharge facility
	Stockpiles	Product stockpiles at Nammuldi, crushed ore stockpile at Silvergrass
Infrastructure	Power	New extension off Dampier-Tom Price line
	Water	Dewatering will supply water for potable, processing and dust control purposes; decant water from tailings storage will supplement processing requirements
Transport	Ore from Silvergrass	Railway, haul road or conveyor
	Product transport	By rail to Dampier on existing rail network
Workforce	Workforce (approx.)	For construction, about 400. Operations 150-190 on fly-in fly-out basis.
	Accommodation	Nammuldi Camp for construction, new Village for Nammuldi workforce

Figures (attached)

Figure 1 - Regional setting and Hamersley Iron's operations

Figure 2 - Proposal layout

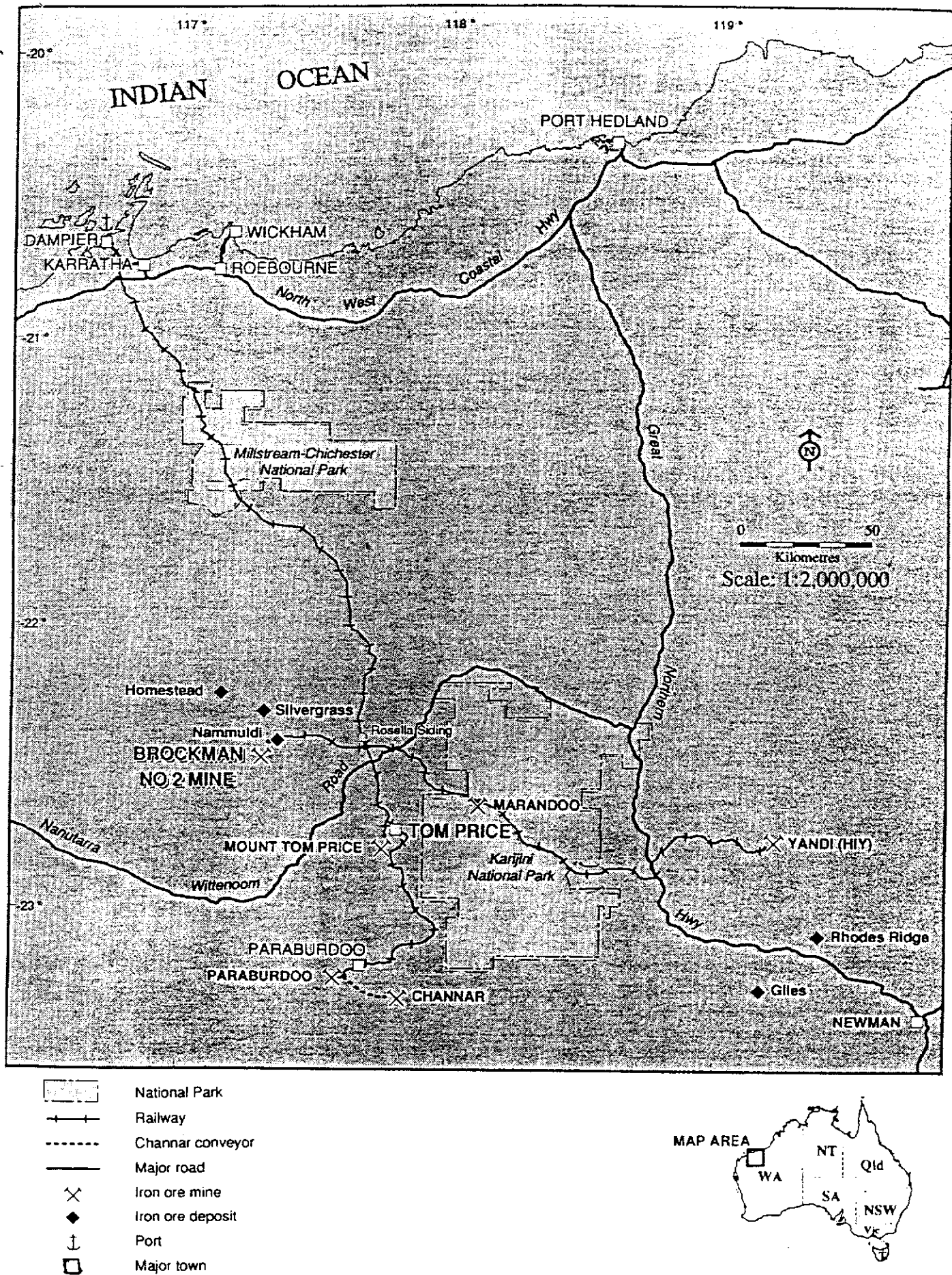


Figure 1. Regional setting and Hamersley operations (Source: Hamersley Iron Pty Ltd, 2000).

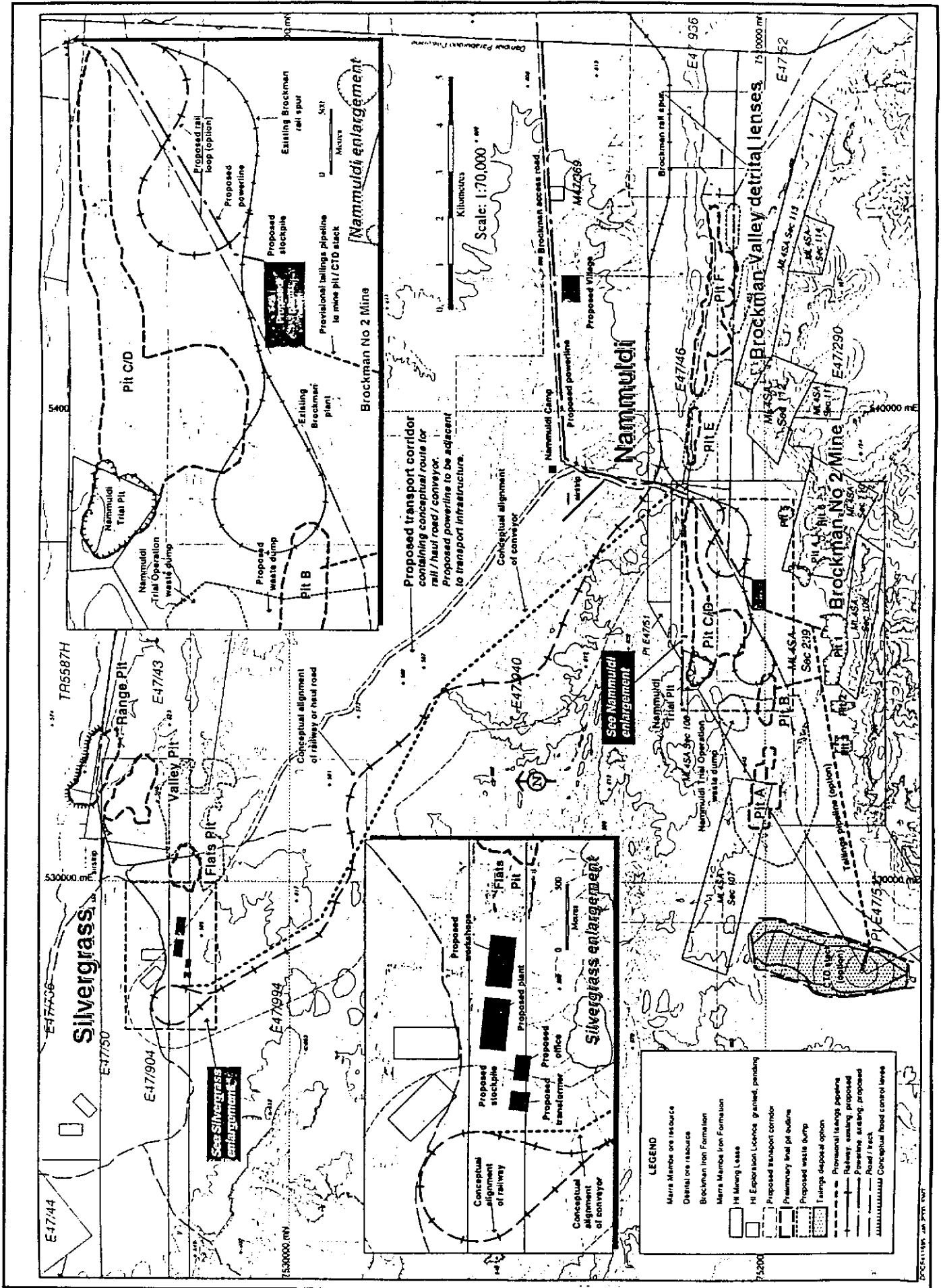


Figure 2. Proposal layout (Source: Hamersley Iron Pty Ltd, 2000).

**Proponent's Consolidated Environmental Management
Commitments**

4 September 2000

**NAMMULDI-SILVERGRASS IRON ORE PROJECT,
55 KILOMETRES NORTH-WEST OF TOM PRICE
(1247)**

HAMERSLEY IRON PTY. LIMITED

Schedule 2

Proponent's Consolidated Environmental Management Commitments (1247)

Commitment	Objective	Action	Phase	To the requirements (advice from)	Evidence
Commitment 1: Environmental Management Plan (EMP)					
The proponent will prepare and implement an EMP for the Project that will outline the: <ul style="list-style-type: none"> • environmental performance objectives for relevant environmental factors; • management of environmental impacts from construction and operation; • monitoring of key environmental aspects; • reporting and auditing procedures <p>The EMP will be prepared in consultation with relevant Government agencies and will be subjected to a targeted public review.</p>	Manage environmental impacts of the Project	Develop and implement EMP to manage the Project	Prior to construction	DEP (DME, WRC, CALM)	EMP developed
Commitment 2: Environmental Management System (EMS)					
The proponent will develop and subsequently implement an Environmental Management System for the Project that incorporates the following elements: <ul style="list-style-type: none"> • environmental policy and associated corporate commitment • mechanisms and processes to ensure <ul style="list-style-type: none"> - planning to meet environmental requirements - implementation and operation of actions to meet environmental requirements - measurement and evaluation of environmental performance - review and improvement of environmental outcomes 	Manage environmental impacts of the Project and fulfil requirements of all Project commitments and conditions	Develop and implement the EMS	Prior to commissioning (the EMP will be used during construction)	DEP	EMS developed and implemented
Commitment 3: Annual Environmental Reporting					
The proponent will include the Project in its consolidated annual and triennial environmental reporting to Government once construction commences	Report on the environmental performance of the Project and its compliance status with environmental requirements	Prepare and submit annual environmental report	By 30 March each year	DRD (DEP, DME, WRC, CALM)	Submission of AER each year

Commitment	Objective	Action	Phase	To the requirements of (advice from)	Evidence
<p>Commitment 4: Closure Plan</p> <p>The proponent will prepare a detailed closure plan for the Project. The plan will address closure actions to be taken toward:</p> <ul style="list-style-type: none"> • mine voids • waste dumps • tailings storage facilities • transport linkage between Silvergrass and Nammuldi • processing plants • associated infrastructure <p>and will provide the basis for the development of an eventual 'walk-away' closure strategy for the Project. As part of this closure plan, final backfill levels in pit voids will be assessed, taking account of mean water table levels and capillary rise relationships.</p>	Prepare a detailed closure plan for the decommissioning and rehabilitation of the Project	Develop plan	Within two years of Project commissioning	DEP (DME, WRC)	Closure plan approved by the DEP
<p>Commitment 5: Additional surveys – biological</p> <p>The proponent will undertake additional biological (flora, vegetation and fauna) surveys of those areas not already surveyed where Project infrastructure is planned, such as the tailings storage facility (central thickened discharge area), the Village and the power line from the Dampier - Tom Price line. If relevant, appropriate actions will be taken during design to avoid significant areas.</p>	Identify, assess and avoid environmental impacts of development in areas not already surveyed	Undertake additional required biological surveys	Prior to construction	DEP (CALM)	Additional biological surveys and incorporation into design
<p>Commitment 6: Riverine vegetation monitoring</p> <p>The proponent will develop and implement a riverine monitoring program to determine the extent of any impacts on vegetation that may occur as a result of dewatering the Silvergrass mine pits and from mine dewatering discharges into Caves Creek. It will also assess, and where appropriate implement, feasible options (such as periodic irrigation/flooding) to reduce significant impacts.</p>	Assess and reduce the extent of any impacts on vegetation along Caves Creek through remedial actions	Monitor status of riverine vegetation	All	DEP (CALM, WRC)	Completion of monitoring and undertaking remedial actions
<p>Commitment 7: Rare Fauna</p> <p>The proponent will prepare and implement a management plan for the Ghost Bat (<i>Macrodermas gigas</i>) as part of the EMP, required by commitment 1, plus any fauna species that are present in the Project area which may be listed in future revisions of the Western Australian Rare and Endangered List or the Commonwealth Critically Endangered List.</p>	Manage Ghost Bat and future listed Rare/Endangered fauna species	Prepare and implement management plans	Prior to construction/A s required	DEP (CALM)	Plans approved and implemented

Commitment	Objective	Action	Phase	To the requirements of (advice from)	Evidence
Commitment 8: Caves Creek stream flow The proponent will monitor stream flows in Caves Creek and make the data available to the Water and Rivers Commission and utilise the data in project design	Improve understanding of Caves Creek flow regime for detailed design purposes	Establish monitoring facilities and utilise data	Pre-construction Ongoing	DEP (WRC)	Data obtained and utilised in project design
Commitment 9: Groundwater monitoring and modelling The proponent will prepare and implement a groundwater monitoring plan (including monitoring water levels in Palm Springs) and incorporate the outcomes to improve the groundwater modelling predictions	Improve confidence in the predictive modelling and dewatering strategy	Prepare plans, collect data and revisit model	Ongoing	DEP (WRC)	Refined numerical modelling
Commitment 10: Recharge options The proponent will investigate the feasibility of groundwater recharge options at Nammuldi for handling water generated from mine dewatering that will otherwise be discharged via surface drainage	Optimise recharge to local and regional aquifers	Conduct recharge feasibility studies	Ongoing	DEP (WRC)	Completion of studies
Commitment 11: Additional surveys – Aboriginal sites The proponent will involve the Maliwartu Aboriginal Corporation in additional archaeological and ethnographic surveys to identify sites, and their significance, within the Project area that are likely to be disturbed in accordance with a heritage survey protocol as agreed with the Maliwartu Aboriginal Corporation	Identify any heritage sites in those areas not already surveyed	Undertake additional surveys	Prior to construction	AAD	Additional surveys conducted
Commitment 12: Mechanism for future Aboriginal site surveys Additional Aboriginal site surveys will be undertaken in accordance with a heritage survey protocol as agreed with the Maliwartu Aboriginal Corporation	Agree on a survey protocol	Establish survey protocol	Prior to construction	Advice from the proponent & the MBC	Agreed protocol in place
Commitment 13: Consultation on Section 18 application The proponent will consult with the Maliwartu Aboriginal Corporation and Eastern Gurama Elders on Aboriginal sites in the Project area before any Section 18 application is developed in keeping with an agreed protocol	Consult with the Maliwartu Aboriginal Corporation on sites	Conduct meaningful consultation	Prior to construction	Advice from the proponent & the MBC	Project design minimises impact on sites

Commitment	Objective	Action	Phase	To the requirements of (advice from)	Evidence
<p>Commitment 14: Aboriginal social and cultural issues associated with the environment</p> <p>The proponent will consult with the Maliwartu Aboriginal Corporation (and the Native Title Claimants it represents) to identify and assess any social and cultural aspects of the physical and biological environment impacted. This will be addressed through the establishment of a Land Use Agreement.</p>	<p>Obtain agreement with the Native Title Claimants</p>	<p>Negotiate Land Use Agreement</p>	<p>Prior to construction</p>	<p>Advice from the proponent & the MBC</p>	<p>Registration with NNTT</p>

List of abbreviations:

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|------|--|
| AAD | Aboriginal Affairs Department |
| CALM | Department of Conservation and Land Management |
| DEP | Department of Environmental Protection |
| DME | Department of Minerals and Energy |
| DRD | Department of Resources Development |
| EMP | Environmental Management Plan |
| EMS | Environmental Management System |
| NNTT | National Native Title Tribunal |
| WRC | Water and Rivers Commission |
| MBC | Maliwartu Aboriginal Corporation |