



WESTERN AUSTRALIA  
MINISTER FOR THE ENVIRONMENT

Ass #	599
Bull #	643
State #	286

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

**MARANDOO IRON ORE MINE AND CENTRAL PILBARA RAILWAY (599)**

**HAMERSLEY IRON PTY LIMITED**

This proposal may proceed but shall 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 project, the proponent shall fulfil the commitments (which are not inconsistent with the conditions or procedures contained in this statement) made in the Environmental Review and Management Programme which are listed in Environmental Protection Authority Bulletin 643 as Appendix 1 and in its Statement of Mutual Understanding entered into with the Department of Conservation and Land Management. (A copy of the commitments is attached.)

**2 Implementation**

The implementation of the Marandoo Project will proceed under the provisions of the Environmental Protection Act and in accordance with the Iron Ore (Hamersley Range) Agreement Act as amended, hereafter called "the Agreement". Reporting requirements or compliance with these environmental conditions shall be achieved through the requirements for environmental management proposals or reports under the Agreement by the Minister for State Development referring such proposals and reports to 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 in project proposals pursuant to the Agreement ("the proposals"). Where, in the course of that detailed implementation, the proponent seeks to change those designs, specifications, plans or other technical material in any way that in the opinion of the Minister for State Development with the concurrence of the Minister for the Environment on the advice of the Environmental Protection Authority is not significant, those changes may be effected.

**3 Environmental Management Programme**

An overall Environmental Management Programme shall be submitted, describing in sufficient detail all aspects of the Central Pilbara Railway and Marandoo Iron Ore Mine and the integration of the proponent's commitments and the requirements of the conditions in this statement.

Published on  
- 6 OCT 1992

- 3-1 The proponent shall submit the Environmental Management Programme in accordance with the Agreement to the Minister for State Development and to the Minister for the Environment for their approval prior to the commencement of construction.
- 3-2 The proponent shall prepare and submit the Environmental Management Programme required by condition 3-1 in consultation with the Department of Conservation and Land Management. This Programme shall contain, but not necessarily be limited to the following elements:
- 1 Protection of significant flora and fauna (condition 4);
  - 2 Workforce management (condition 5);
  - 3 Central Pilbara Railway (condition 6);
  - 4 Drainage management (condition 7);
  - 5 Management of groundwater abstraction (condition 8);
  - 6 Management of weeds (condition 9);
  - 7 Management of fire (condition 10);
  - 8 Rehabilitation of the project area and decommissioning (conditions 11 and 15); and
  - 9 Management of waste disposal sites (condition 13).
- 3-3 Subsequent revisions of the Environmental Management Programme required by condition 3-1 will be prepared and submitted in consultation with the Department of Conservation and Land Management where appropriate and may form part of the annual and triennial reports pursuant to the Agreement.
- 3-4 Each element of the Environmental Management Programme required by condition 3-1 shall where appropriate address: potential source of environmental impact; commitments; objectives; procedures; and reporting including monitoring.
- 3-5 The proponent shall implement the various elements of the Environmental Management Programme required by conditions 3-1 to 3-4 to the satisfaction of the Minister for State Development and the Minister for the Environment.
- 3-6 In the event that monitoring shows unacceptable environmental impacts, the proponent shall in accordance with the Agreement prepare and subsequently implement a plan to mitigate these impacts to the satisfaction of the Minister for State Development and the Minister for the Environment.

#### **4 Protection of Flora and Fauna**

Rare, priority and geographically restricted species of flora and fauna in the project area shall be treated with special consideration.

- 4-1 The proponent shall provide details of the results of all surveys carried out on areas likely to be disturbed through construction and operational activity, to the satisfaction of the Minister for State Development and the Minister for the Environment on the advice of the Department of Conservation and Land Management, prior to those areas being disturbed.
- 4-2 Significant species of flora or fauna found in the surveys referred to in condition 4-1, shall be managed in accordance with the proponent's commitments and the Environmental Management Programme referred to in condition 3.

#### **5 Workforce Management**

The proponent is responsible for the management of the constructional and operational workforce to ensure that environmental impacts on the Karijini National Park are minimised.

- 5-1 The proponent shall manage the workforce and assist the Department of Conservation and Land Management to ensure that environmental impacts on the Karijini National Park resulting from constructional, operational and recreational activities are minimised.

## **6 Central Pilbara Railway**

The proponent may proceed to construct and operate the Central Pilbara Railway (from Marandoo to Homestead Junction) but shall do so in such a manner that reasonably minimises environmental impacts.

- 6-1 Prior to the construction of the Central Pilbara Railway the proponent shall prepare and subsequently implement in consultation with the Department of Conservation and Land Management an Environmental Management Programme for this railway describing how the management measures for the railway will meet the requirements of this condition.

## **7 Drainage Management**

The important vegetation communities in the area, in particular the coolibah and mulga woodlands, shall where possible be protected from drainage impacts associated with the development and operation of the project.

- 7-1 Prior to the commencement of construction, the proponent shall submit and subsequently implement a drainage management plan, setting out the measures to meet the requirements of this condition in consultation with the Department of Conservation and Land Management. This plan shall include a monitoring component to permit determination of its effectiveness.

## **8 Management of Groundwater Abstraction**

There shall be no unacceptable impact on the conservation values of the Karijini National Park resulting from groundwater abstraction associated with the project, particularly the coolibah woodlands to the east of Mt Bruce.

- 8-1 Prior to commissioning of the Marandoo borefield, the proponent shall prepare and subsequently implement a groundwater management plan describing in sufficient detail the measures to meet the requirements of this condition in consultation with the Department of Conservation and Land Management and the Water Authority of Western Australia. This plan shall include a monitoring component to permit determination of its effectiveness.

## **9 Management of Weeds**

The spread of weeds resulting from the development and operation of the project shall be minimised.

- 9-1 Prior to the commencement of construction, the proponent shall prepare and subsequently implement a weed management plan describing in sufficient detail measures to meet the requirements of this condition, in consultation with the Department of Conservation and Land Management. This plan shall prescribe monitoring and control measures and shall include a monitoring component to permit determination of its effectiveness.

## **10 Management of Fire**

The development and operation of the project shall not lead to a significantly increased fire risk within the Karijini National Park.

- 10-1 Prior to the commencement of construction, the proponent shall develop and subsequently implement a fire management plan describing in sufficient detail the

measures to meet the requirements of this condition, in consultation with the Department of Conservation and Land Management. This plan shall include a monitoring component to permit determination of its effectiveness.

- 10-2 The proponent shall develop the fire management plan required by condition 10-1 to integrate fire management in the project area with the overall fire management requirements of the Karijini National Park.

## **11 Rehabilitation**

The standard of rehabilitation of the project area shall where possible be consistent with local landscape values and if appropriate enable the return of the area to the Karijini National Park.

- 11-1 Prior to the commencement of construction and throughout the life of the development, the proponent shall prepare rehabilitation plans, in consultation with the Department of Conservation and Land Management and the Department of Minerals and Energy, to the satisfaction of the Minister for State Development and the Minister for the Environment. These plans shall include a monitoring component to permit determination of their effectiveness, and shall specify the sources of seed and species proposed for planting during rehabilitation.
- 11-2 The proponent shall subsequently implement the rehabilitation plans required by condition 11-1.
- 11-3 The proponent shall where possible only use plant material of local provenances for rehabilitation to the requirements of the Department of Conservation and Land Management.

## **12 Management of Visual Impact**

The visual impact of the proposed development shall be minimised.

- 12-1 The proponent shall where possible mitigate the visual impact of the development in consultation with the Department of Conservation and Land Management. The location, design and colour of surface facilities will be chosen as far as practicable in sympathy with the landscape.

## **13 Management of Waste Disposal Sites**

Domestic and industrial waste material from the project shall be managed to prevent scavenging by animals and pollution of groundwater.

- 13-1 Prior to the commencement of construction, the proponent shall develop and subsequently implement a plan describing in sufficient detail measures to manage the waste disposal sites to meet the requirements of this condition, in consultation with the Department of Conservation and Land Management and the Health Department of Western Australia. This plan shall include provision for minimisation of scavenging by animals including birds, and contamination of groundwater. The plan shall also include a monitoring component to permit determination of its effectiveness

## **14 Management of Community Impact**

The proponent shall consult with relevant community groups to minimise the impact of the project on the community.

- 14-1 The proponent shall establish a consultative mechanism as referred to in the proponent's commitments.

## **15 Decommissioning**

The satisfactory decommissioning of the project, removal of the plant and installations and final rehabilitation of the site and its environs is the responsibility of the proponent.

- 15-1 At least six months prior to the decommissioning, the proponent shall prepare and implement a decommissioning and final rehabilitation plan, in consultation with the Department of Conservation and Land Management and the Department of Minerals and Energy.

## **16 Proponent**

The conditions in this statement apply to the nominated proponent.

- 16-1 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 State Development with the concurrence of 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 Ministers 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.

## **17 Time Limit on Approval**

The environmental approval for the proposal is limited.

- 17-1 If the proponent has not substantially commenced the project 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 State Development with the concurrence of 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 by way of a request for a change in the condition under Section 46 of the Environmental Protection Act. (On expiration of the five year period, further consideration of the proposal can only occur following a new referral to the Environmental Protection Authority.)

## **18 Compliance Auditing**

In order to ensure that environmental conditions and commitments are met, an audit system is required.

- 18-1 The proponent shall prepare periodic "Progress and Compliance Reports", to help verify the environmental performance of this project to the requirements of the Minister for State Development and the Minister for the Environment pursuant to the Agreement.

### **Note 1**

In satisfying the requirements of conditions 4 to 14, the proponent should take cognisance of condition 3 so that integration of the separate parts of environmental management and staging of the preparation and implementation of the Environmental Management Programme can be effected.

**Note 2**

For the purposes of this statement the following definition applies:

- 1 "Prior to the commencement of construction" means prior to any ground-disturbing activity which is directly related to construction of the mine, railway, or associated infrastructure. It includes clearing of vegetation, but does not include survey work.

**Note 3**

The proponent will be required to apply for a Works Approval and Licence for this project under the provisions of Part V of the Environmental Protection Act.



Bob Pearce, MLA  
MINISTER FOR THE ENVIRONMENT

6 OCT 1992

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# COMMITMENTS

Some of the issues dealt with in this ERMP have the potential to result in identifiable environmental impacts. The previous chapter dealt with their management so that impacts will be avoided, minimised or mitigated and the environment protected.

This chapter presents a summary of those commitments made by Hamersley which address these potential impacts. Each commitment is numbered to assist with referencing during the period of review and EPA assessment.

The commitments are also grouped according to broad commonality of their purpose towards environmental protection. They are first described and then listed in Table 15.1. It will be appreciated that a significant number of these commitments are listed largely as a matter of information for the community, to indicate that Hamersley plans to take various management actions internally on a variety of issues that may be of interest to those participating in the ERMP process. Matters such as encouraging appreciation of the Park (No. 7) and research into land units (No. 14) are clearly internal issues for Hamersley, yet because they are consistent with Hamersley's environmental policy and relevant to this ERMP, they are enunciated and listed. The "auditor" for such issues is properly Hamersley (HI), but Hamersley will routinely include such matters in its regular reports to the Department of State Development.

In other instances, the listed "auditor" may be an appropriate Government instrumentality under a regulation or statute, or by arrangement, such as with CALM in the co-operative research programme on the Pebble-mound Mouse.

## GROUP 1—SOCIAL FACTORS

### Environmental Care and Understanding

- 1 Educational and environmental induction courses for Marandoo personnel will be instigated, prior to the construction phase, to address the broad issues of conservation of flora and fauna. As a condition of employment, employees will attend an induction programme designed to create an environmental awareness. CALM will be consulted during the development of the courses.

## Recreational Care

- 2 The expertise and knowledge gained from the Channar construction camp will be applied in minimising environmental impacts of construction workers at Marandoo during their leisure hours.

## Aboriginal Heritage

- 3 Part of the induction course (see No. 1) will address Aboriginal heritage issues to increase awareness of Aboriginal cultural heritage.
- 4 The views of Aboriginal people in Onslow and Roebourne who claim traditional affiliation with the Project Area will be sought by Hamersley's Aboriginal Liaison Officer who will:
  - assist in preparation of inductions (see above)
  - advise Hamersley on any Aboriginal cultural matters.
- 5 Employees and contractors at Marandoo will be made familiar with any applicable requirements of the *Aboriginal Heritage Act 1972-1980*.

## Community Needs

- 6 Tom Price needs in terms of housing, services and facilities are already considered adequate. Any additional needs identified during the project feasibility study stage will be minimal and will be addressed at that time.
- 7 Hamersley will assist protection of the Park values by encouraging amongst its local employees an understanding and awareness of the importance of the Park.

## Employment

- 8 Hamersley will continue to give careful consideration to the employment needs of women, Aboriginal people and young people.
- 9 Hamersley will continue to support opportunities for Aboriginal employment through its Ieramugadu programme.
- 10 Hamersley will develop a programme through its Aboriginal Liaison Officer presently stationed at Onslow, to explore, trial and implement practicable and effective training and employment projects, in close co-operation with responsive individuals and groups of Aboriginal people.

## GROUP 2—ENVIRONMENTAL RESEARCH AND MANAGEMENT

### Protected and Rare Species

- 11 Hamersley will support research with CALM on the range, distribution and taxonomy of the Pebble-mound Mouse, as outlined in this ERMP.
- 12 Special attention will be given to the occurrence of any Bilby habitats in future fauna surveys.
- 13 Hamersley will include in its induction programme (see No. 1), information to assist in protection of rare and significant species of fauna and flora.



- 14 Hamersley will continue to progress its regional land-unit work, and to continue to research its environmental predictive capabilities for future mines.
- 15 Hamersley will, as far as practicable, avoid damage to significant vegetation communities in the Project Area and where appropriate will consult with experienced botanists to achieve this aim. Where mining operations will remove a particular community locally, Hamersley will consult with CALM prior to taking appropriate action.

### Rehabilitation

- 16 Construction activities will be conducted so as to minimise any necessary disturbance to the environment. Areas disturbed for construction purposes will be rehabilitated as soon as practicable after they are no longer required for the project.
- 17 Rehabilitation of disturbed areas will be undertaken in accordance with the guidelines set out in the ERMP. Monitoring of rehabilitated areas will be undertaken and the findings reported. Remedial work will be undertaken if required.
- 18 Final landforms will be designed to be safe and stable.
- 19 At the end of the construction period, the construction camp will be removed and the servicing areas and evaporation ponds will be ripped and revegetated.
- 20 A fire management policy for the Marandoo Project Area which is compatible with the management objectives for the Park will be developed in consultation with CALM.
- 21 Hamersley will wherever possible use seed derived from local sources during rehabilitation works. If local seed is not available Hamersley will consult with CALM prior to determining alternatives.

### Protection Against Weeds

- 22 Measures to prevent and restrict the introduction and spread of weeds will be investigated and managed after consultation with CALM.

### Protection of Fauna and Interruption of Habitats

- 23 Possession of pets and firearms by project personnel will not be permitted in the Project Area. The induction courses will provide information on the conservation of fauna and their habitats.

### Pollution Control and Monitoring

- 24 Appropriate dust suppression measures, including water sprays and dust collector systems, will be implemented to ensure that acceptable ambient and occupational dust levels are achieved, as required by the *Mines Regulation Act Regulations 1976*.
- 25 Dust monitoring programmes will be established to assess ambient dust levels for environmental purposes and respirable dust levels and fibre sampling for occupational health and safety purposes. The monitoring programmes will be developed and conducted in accordance with the *Mines Regulation Act Regulations 1976*.
- 26 Monitoring of occupational noise levels will be undertaken in accordance with the *Mines Regulation Act Regulations 1976*.

- 27 Hamersley will develop a "closed" system for the treatment of contaminated waters from service areas.
- 28 Toxic wastes will be removed from Marandoo and disposed of at existing approved sites.
- 29 Used oil will be collected, stored in bunded above-ground tanks and transported to Dampier for use in the power station.
- 30 Sewage effluent will be dealt with in accordance with the requirements of the *Health Act 1911*.
- 31 Licences will be obtained under the *Poisons Act 1964* for relevant materials.
- 32 Waste disposal will be in accordance with an EPA licence.

### Water Conservation and Management

- 33 Hamersley will undertake further detailed hydrological, geological and mining engineering studies during 1992-1993 to provide inputs into the study of end-use options.
- 34 Hamersley will continue to refine computer simulation of the groundwater systems.
- 35 Hamersley in conjunction with CALM will monitor Bandjima Pool and Mindi Spring to develop a more complete understanding of their hydrology.
- 36 Selected monitoring bores will be established to assess groundwater levels and quality on a routine basis.
- 37 Where practicable and as appropriate, surface water samples will be collected from major discharge points of the open water system to test for contamination.
- 38 Hamersley will continue its weather observations at Marandoo, to maintain a regional meteorological data base.
- 39 Design and location of the borefield for the long-term operation will take into account the need to limit vegetation impacts to an acceptable level. Monitoring of groundwater and vegetation will be undertaken and appropriate remedial action taken as required.

### GROUP 3—AESTHETICS AND VALUES OF THE PARK

- 40 Under the Statement of Mutual Understanding, Hamersley will work with CALM to refine and implement an agreed end-use plan for the mine site after decommissioning.
- 41 The location, design and colour of surface facilities will be chosen as far as practicable in sympathy with the landscapes.
- 42 Hamersley will sign its roads as far as practicable in sympathy with CALM's management practices.

**Attachment to Marandoo Statement 286**

**Change to description of Proposal**

**Proposal:** Marandoo Iron Ore Mine and Central Pilbara Railway

**Proponent:** Pilbara Iron (on behalf of Hamersley Iron Pty Limited)

**Change:** Two rail sidings & Fibre Optic Cable

**Features of currently approved Proposal:**

<b>Element</b>	<b>Quantities/Description</b>

**Features of approved change to Proposal:**

<b>Element</b>	<b>Quantities/Description</b>
Railway	Eagle Siding – located from approx 284.8km mark to 287.5km on the existing Rosella to Yandi line.  Juna Downs Siding – located from approx 359.75km to 363.1km on the existing Rosella to Yandi line.
Fibre Optic Cable	Located from approx 284.8km mark to 287.5km on the existing Rosella to Yandi line.  Located from approx 359.75km to 363.1km on the existing Rosella to Yandi line.

Approval Date: 29/11/06

## Attachment to Statement 286

## Change to description of Proposal

**Proposal:** Marandoo Iron Ore Mine and Central Pilbara Railway

**Proponent:** Pilbara Iron (on behalf of Hamersley Iron Pty Limited)

**Change:** Additional rail siding – Dove

## Features of currently approved Proposal:

Element	Quantities/Description
Railway with sidings	Single standard gauge railway line.
Vegetation disturbance from railway construction	Unspecified in original approval.

## Features of approved change to Proposal:

Element	Quantities/Description
Additional rail siding	Dove Siding, consisting of a passing track and back track, located between 50.6 kilometres and 53.6 kilometres on the existing Dampier to Tom Price line.
Vegetation disturbance from railway construction	Average width of disturbance of 14 metres. Additional 7 hectares of permanent clearing.
Borrow source 1 *	Whundo Mine waste rock overburden dumps, approximately 6 kilometres south of Dove Siding.
Borrow source 2 *	Green Pool Siding Borrow Pit, at approximately 63 kilometres on the Pannawonica to Cape Lambert Railway.
Borrow source 3 *	Fox Radio Hill Site, approximately 4 kilometres north of Dove Siding.
Borrow source 4 *	Seven Mile Landfill, Karratha.
* - No increase in area of disturbance of borrow pits.	

Approved: 24 MAY 2007

## Attachment 3 to Statement 286

### Change to Proposal

**Proposal:** Marandoo Iron Ore Mine and Central Pilbara Railway

**Proponent:** Pilbara Iron (on behalf of Hamersley Iron Pty. Limited)

**Change:** An extension of two existing waste dumps to merge into one.

#### Features of previously approved Proposal:

Element	Quantities/Description
Waste dump	Four areas for overburden. Unspecified in original approval, but indicated in Plate 1, page 13, of the Environmental Review and Management Programme (February 1992).

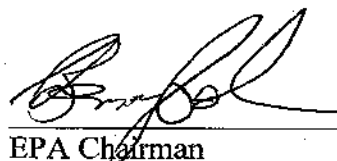
#### Features of changed Proposal:

Element	Quantities/Description
Waste dump	One additional area of approximately 12 hectares for overburden, adjacent to and between two existing approved areas for overburden (See Figure 1 attached).

**Figure 1 (attached)** – Marandoo waste dump extension (15 August 2007).

Note: Waste dump boundary is shown in yellow (Triangular area of approximately 12 ha to east of red line is subject to this approval); and Karijini National Park boundary is shown in blue.

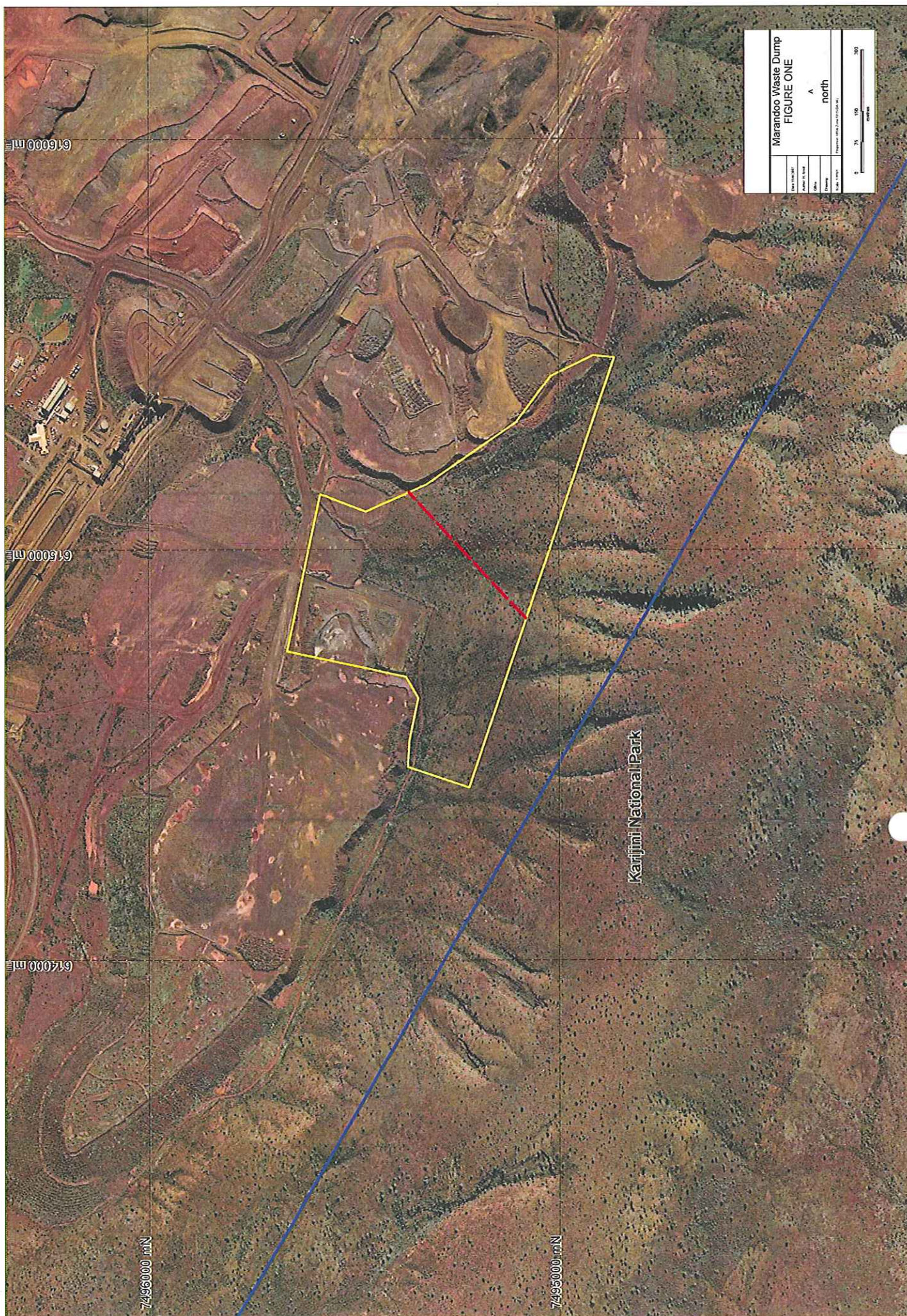
Approved under delegation  
from the Minister for the Environment:

  
EPA Chairman

Approval Date:

29.08.07







## Attachment 4 to Statement 286

### Change to Proposal

**Proposal:** Marandoo Iron Ore Mine and Central Pilbara Railway

**Proponent:** Pilbara Iron (on behalf of Hamersley Iron Pty. Limited)

**Change:**

#### Components of original Proposal as implemented:

Component	Quantities/Description
Area of Mine Tail Pit	Mining to be carried out within a defined area of 4km by 2km

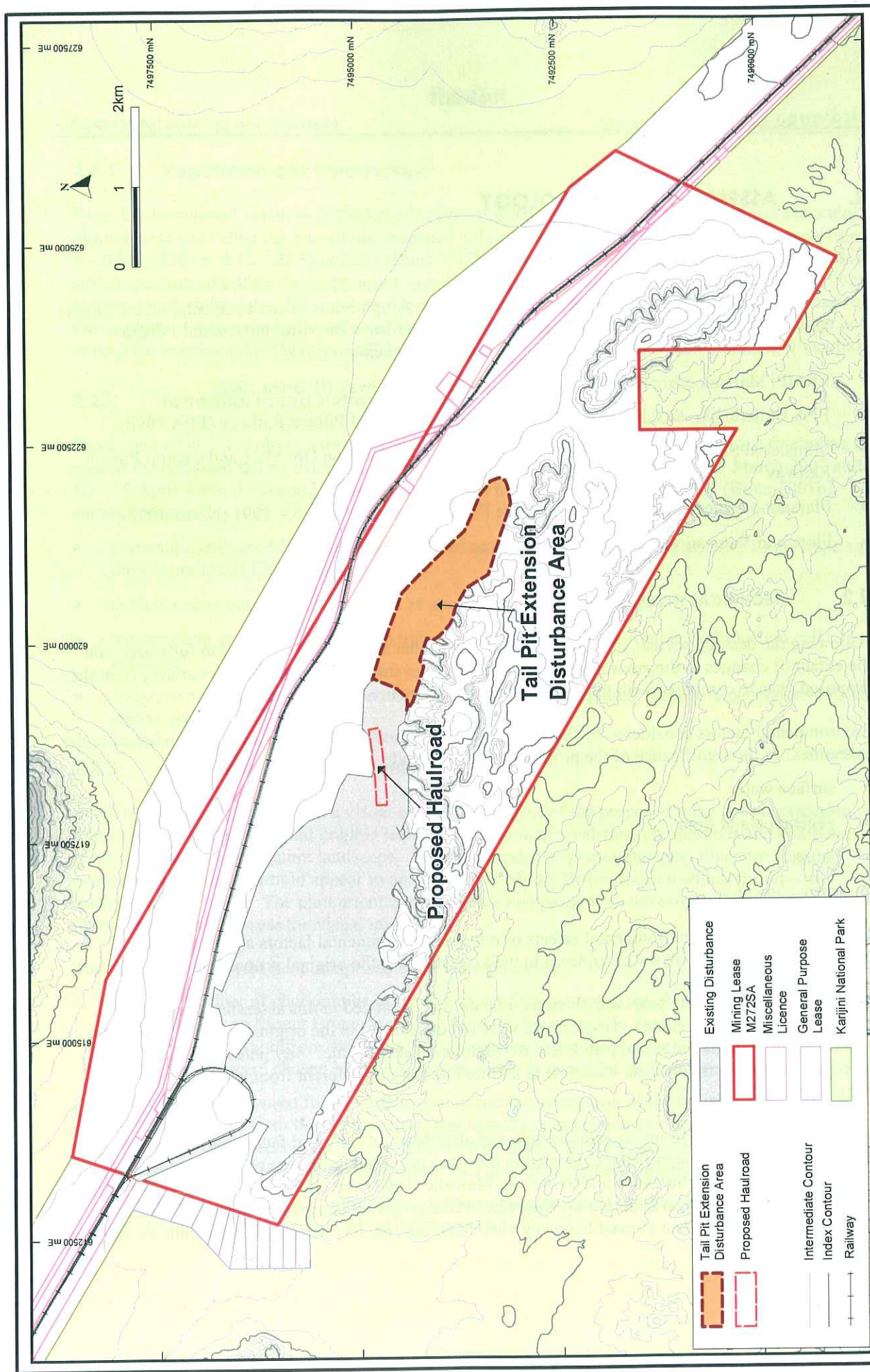
#### Components of changed Proposal:

Component	Quantities/Description
Area of Mine Tail Pit	Extension of Mine Tail Pit eastwards over an area of 157ha, as shown in Figure 1

Figure 1. Layout map revised

**Approved under delegation  
from Minister for the Environment:**

**Approval Date:** 15-4-08



**Figure 3 Marandoo Conceptual Mine Layout**