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JOINT VENTURE DEVELOPMENT OF CHANNAR MINING AREA

HAMERSLEY RANGE, WESTERN AUSTRALIA
CHANNAR MINING PTY. LTD.

Report and Recommendations of the Environmental Protection Authority

Environmental Protection Authority
Perth, Western Australia
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i SUMMARY AND RECOMMENDATIONS

Channar Mining Pty Ltd has submitted a proposal to mine iron ore in the Channar Mining Area Hamersley Ranges of Western Australia.

The proposal involves the establishment of primary and secondary crushers adjacent to the mine site to crush the ore. The crushed ore will then be transported by conveyor to Paraburdoo for further treatment. The initial output will be 3 million tonnes per annum (Mt/a) increasing to 10 Mt/a by the ninth year. The expected lifetime of the mine is 22 years and the total tonnage of saleable ore is 200 million tonnes.

The mine will employ 500 people during the construction phase and approximately 252 people at the 10 Mt/a stage. The permanent workforce will be housed in Paraburdoo. There will however, be no net increase of people in Paraburdoo as the increase will be offset by a reduction in Hamersley Iron Pty Limited personnel.

The Environmental Protection Authority determined that the project's potential for environmental impact required it to be formally assessed under Part IV of the Environmental Protection Act 1986. The Authority decided a Public Environmental Report would be required to assess the proposal and a public review period was set at eight weeks.

Upon assessment of the Public Environmental Report with the submissions to the Authority, the Authority concluded that the proposal is environmentally acceptable subject to the following recommendations:

RECOMMENDATION 1

The Environmental Protection Authority recommends that the proponent abides by the environmental commitments in the Public Environmental Report (Appendix A) including:

- **stabilisation of disturbed areas as soon as possible;**
- **stockpiling of topsoil for rehabilitation works; and**
- **continuous monitoring of rehabilitation and environmental protection measures.**

RECOMMENDATION 2

The Environmental Protection Authority recommends that the proponent liaise with the Department of Conservation and Land Management on the management of increased pressure on the Hamersley Range National Park and other local features due to increase in population during construction.

RECOMMENDATION 3

The Environmental Protection Authority recommends that the proponent refer to the Authority any future proposals to increase the mining rate beyond 10 million tonnes per year.

1. BACKGROUND

Channar Mining Pty Ltd wishes to establish an operation for mining iron ore in the Channar Mining Area of the Hamersley Range in Western Australia. The project is situated 25 km east of Paraburdoo (see Figure 1).

Channar Mining Pty Ltd is the operator for the Joint Venture Development of Channar Mining Area. The Joint Venturers are Channar Mining Pty Ltd, a subsidiary of Hamersley Holding Limited and an Australian subsidiary of China Metallurgical Import and Export Corporation.

Channar Mining Area will be developed as a separate mine under a new State Agreement between the Joint Venturers and the State Government of Western Australia.

The Authority discussed the proposal and decided that a Public Environmental Report would be required to assess the project under Part IV of the Environmental Protection Act 1986.

2. PROJECT DESCRIPTION

The proposed Joint Venture Development of Channar Mining Area plans to mine 200 million tonnes of iron ore over a period of 22 years.

The development area covers five separate deposits over 12 km. The mine plan has an initial production 3 million tonnes per year (Mt/a) of saleable ore products increasing to 10 Mt/a by the ninth year. The ore will be mined using similar practices to those at Paraburdoo; drilling and blasting followed by loader/truck operations. A primary and secondary crusher will be located adjacent to the Channar deposit. The ore will be transported to Paraburdoo by conveyor. Surplus capacity at the Paraburdoo plant, as well as rail, power and other infrastructure of the Hamersley Iron operation will be utilised.

Waste material not used in developing access to other pits will be dumped. The dumps will be formed over the limits of the working pits. Large waste dumps are not envisaged.

The construction workforce of approximately 500 will be located in two new construction camps; a large camp at Turee Creek and a smaller camp at Paraburdoo.

The project will require 1 300 million litres per annum (Ml/a) of water, principally for dust control. This will be supplied from a borefield near Turee Creek. The power to Channar will be supplied from 220 kv switchyard at Paraburdoo through a transmission line to be constructed within a proposed transport corridor. The proposed transport corridor includes the conveyor and access road.

The mining operation will be on a continuous shift basis over 24 hours per day and seven days per week. The total workforce for Channar for 10 Mt/a production would be 252. This workforce will be housed in Paraburdoo. There will be no net increase in the population of Paraburdoo as the increase will be off-set by a reduction in Hamersley Iron Pty Limited personnel.

3. EXISTING ENVIRONMENT

The project is situated in the southern Hamersley Range. The climate is arid with an average rainfall of 286 mm. Rainfall is highly variable as it is influenced by cyclonic activity.

Stream flow events are of short duration and seldom exceed two per year. There is potable groundwater in the area.

The dominant soil types are lithosols, red clays and red brown earths. The highly flocculating clay aggregates of some soils are naturally unstable and prone to erosion.

Vegetation on the ridges and slopes in dominated by a low tree steppe of scattered Eucalyptus species with an under storey of humrocks of Triodia purgas and T Wiseana. The valleys and flats are dominated by a mixture of low tree steppe of Eucalyptus species; an understorey Triodia species and shrublands of snake wood, low woodlands by Mulga and sparse shrublands of wattles and cheropods. The minor waterways and creeks support a woodland of Coolabah, which major creeks support River Red Gum and sand paperbark.

Several surveys on fauna have been conducted in the area. The inventory of mammals for the Channar area contains no species restricted to the initial mining area or its environs. All have been recorded in the Pilbara or Arid zone. There are three species of mammals that deserve special attention. These are:

. Long tailed Dunnart;

. Pebble-mound mouse; and

. Lesser stick-nest rat.

Recent research suggests that the long tailed Dunnart has a wider distribution than originally thought, and it's rarity is more a product of difficulty in sampling than of small population.

The pebble-mound mouse is found in five locations around the mine site. Although the population at the mine site itself will diminish there is no reason to believe other areas will be affected.

The lesser stick-nest Rat has been listed as probably extinct. Some abandoned nests were found in the Channer Area. It is assumed that they were abandoned 5 to 15 years before.

4. PUBLIC AND GOVERNMENT SUBMISSIONS

Five submissions from State Government agencies were received during the public review period.

The predominant concern was the lack of detail on fauna surveys. The surveys were conducted but the information was not presented. These survey results have now been supplied.

Submissions also commented on:

. the conveyor system and its effects on fauna and water movements;

- increased pressure due to the construction on Hamersley Range National Park, workforce and springs;

- the drawdown of groundwater in the area and its effects on vegetation;

- the slopes of waste dumps;

- the possibility of recycling sewage waters;

- the possibility of a waste inventory; and

- the major construction camp being kept in Paraburdoo.

There were also several submissions on matters outside the scope of the Public Environment Report. These have been forwarded to the proponent.

Information and comments provided in the submissions have been used to assist in the evaluation and assessment of this proposal.

5. ENVIRONMENTAL IMPACT ASSESSMENT

The major environmental impact of the proposal is the disturbance of flora and fauna. The Public Environmental Report lacks detail on the fauna and flora surveys that have been conducted in the area. The proponent has now supplied copies of these surveys and these will be forwarded to the relevant authorities.

The Environmental Protection Authority has noted the Joint Ventures commitment to protect and conserve all species of rare flora and fauna not in the immediate vicinity of the mine site.

The conveyor will restrict fauna and water movement. However the conveyor does not travel near significant permanent water holes where fauna generally gather and culverts will be strategically placed to allow the flow of water and movement of fauna.

During the construction period there will be increased pressure of the Hamersley Ranges National Park and other local features. The proponent will be monitoring the impact of the construction workforce and has a set of environmental rules which will apply to these areas. Also an induction programme will be conducted for during construction and operation to promote environmental awareness amongst employees.

RECOMMENDATION

The Authority recommends that the proponent liaise with the Department of Conservation and Land Management on the control of the increased pressure on the Hamersley Range National Park and other local features, due to increased population.

The project requires 1 300 Ml of water, mainly for dust control. This water will be supplied from a borefield in Turee Creek. It is believed that the drawing of groundwater from a depth of approximately 150 m will not affect local vegetation which relies on soil moisture. However, this will be monitored in accordance with the conditions set out in the Water Exploration Licence.

Waste dumps will be formed with overburden not required for access roads. The final batters will be of a suitable slope to encourage revegetation in accordance with prevailing conditions and in consultation with the appropriate governmental authorities.

6. CONCLUSIONS

The Environmental Protection Authority has concluded that proposal and potential environmental impact from it are acceptable and manageable. The Authority has noted that the mining operation will have a major impact on the flora and fauna in the immediate vicinity of the mine. Overall it considers that conservation has been balanced with development and that, with proper management areas other than the mine site will not be adversely affected.

APPENDIX A

MAJOR ENVIRONMENTAL COMMITMENTS

The Joint Venturers programme for the management of the environment will include the following:

1. The Joint Venturers will submit an environmental management programme for the protection and management of the environment to the State with its mining proposals in accordance with the proposed State Agreement.

2. The Joint Venturers will in accordance with the proposed State Agreement carry out a continuous programme to ascertain the effectiveness of measures taken for protection and rehabilitation of the environment and submit reports to the Minister responsible for the proposed State Agreement when reasonably required by the Minister.

3. Areas disturbed in project construction and operations will be stabilised as soon as practicable and appropriate erosion control works erected wherever necessary.

4. Dust control measures and workplace monitoring will be carried out in accordance with the Mines Regulations Act during operations.

5. An induction programme will be conducted during construction and operations to promote environmental awareness among employees and contractors.

6. Wherever practical topsoil and suitable subsoil will be removed from larger building sites, borrow areas and other disturbed areas for use in rehabilitation works.

7. Rehabilitation methods will be determined on a site specific basis following assessment of each disturbed area.

8. All rehabilitation sites will be periodically assessed for establishment of vegetation.

9. Sewage will be treated in a packaged plant and refuse will be disposed of in sanitary landfill sites which will be selected to preclude possible contamination of groundwater or aquifer systems.

10. Mine pits and waste dumps will be suitably rehabilitated as final profiles are determined.

11. The conveyor and sealed access road will be designed to allow the flow of water at appropriate intervals.

12. The Construction camp at Channar will be removed and the area rehabilitated at the conclusion of construction. The construction camp at Paraburdoo will be rehabilitated when it is removed.

13. The Joint Venturers will comply with the provisions of the Rights in Water and Irrigation Act and the proposed State Agreement in regard to its water requirements.

14. The Joint Ventures will protect and conserve all species of rare flora and fauna not in the immediate vicinity of the mine site.

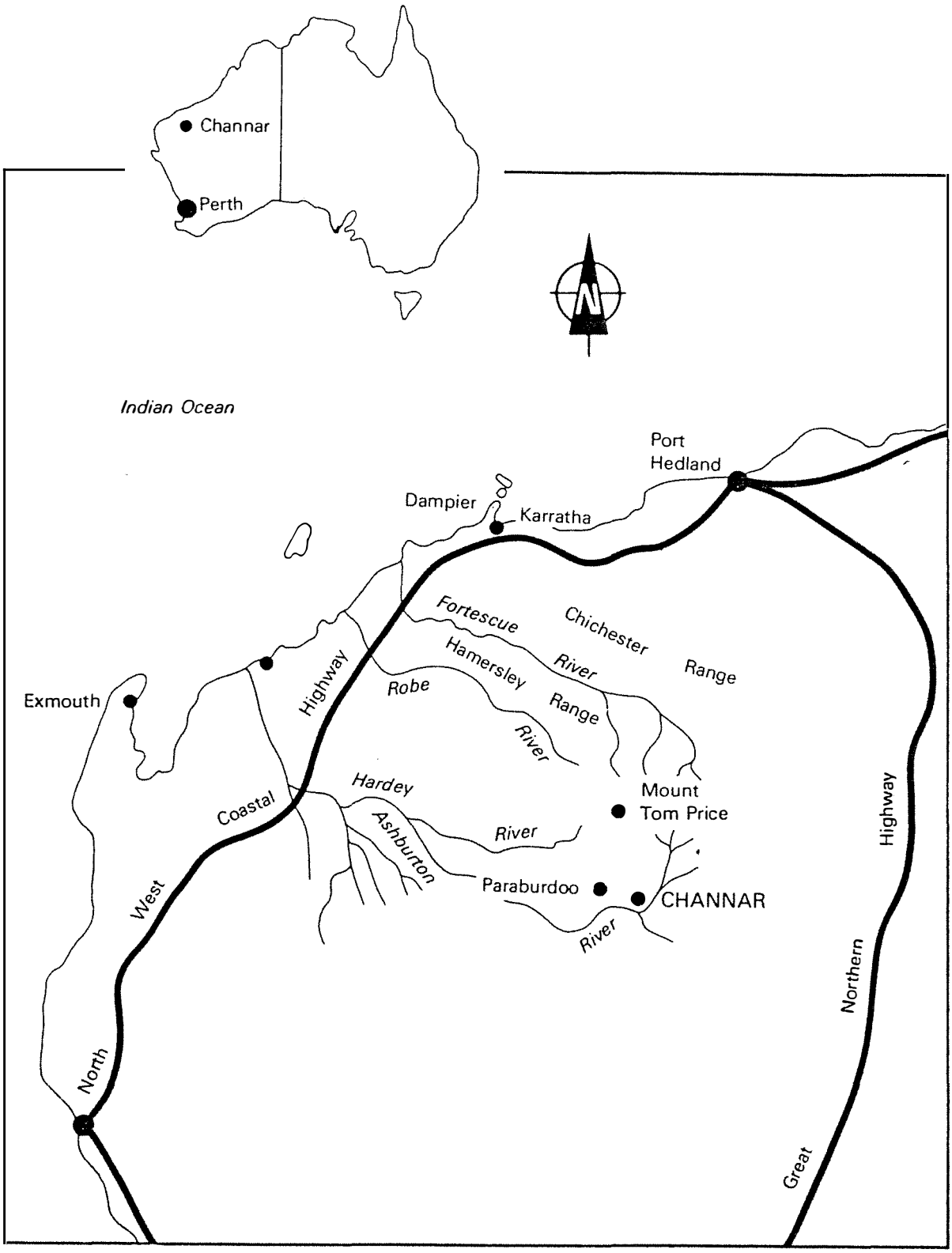

Figure 1. Locality Map