

# **Exploration licence application, Ashburton River**

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**K M Pownall and C R Ladyman**

**Report and recommendations of the  
Environmental Protection Authority**

**Environmental Protection Authority  
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## Background

K.M.Pownall and C.R.Ladyman have submitted a proposal to explore for minerals in the bed of the Ashburton River on Minderoo Station near Onslow (figure 1). It is proposed to use a small dredge and drilling rig to sample alluvial material deposited in the river bed.

The associated application for exploration licence 08/121 was referred to the Environmental Protection Authority by the Department of Mines in view of the environmental implications of exploration in the bed of the Ashburton River.

## The proposal

The proposed method of operation involves floating a suction cutter dredge in a pond which is isolated from the river or permanent pools by earth retaining banks. The alluvium will be pumped into the dredge in a slurry form where it will be separated into ore and waste material. The waste material will be deposited back into the pond at the rear of the dredge as the operation proceeds. Once the dredging is complete in one area a new pond is constructed at the next location and the process repeated.

Access is required to the river for personnel and to move the dredge to and from the river bed. A small truck or tractor mounted drill rig will also be used and will require access. The proponent intends to utilise existing tracks and river bank crossings wherever possible but some new crossings would be required. These would be constructed ideally at locations where the river bank is shallow.

## Existing environment

Exploration licence application 08/121 covers a section of the Ashburton River on Minderoo Station which lies to the south of the town of Onslow. This section of the Ashburton River contains two major river pools, Wyloo Pool and Mungaroo Pool. These permanent pools are a source of food and water for local fauna, and water for station stock during the dry season when the river is not flowing. Fish and other riverine fauna inhabit these pools which are regarded as important refuges for such faunal species during the lengthy periods when the river does not flow.

Historical land use practices have led to the degradation of the vegetation along the river, and resulted in erosion of the river bank and damage to the river environment. The need for active management to prevent further damage has been recognised and steps have been taken to modify land use practices to correct past mistakes.

## Environmental assessment

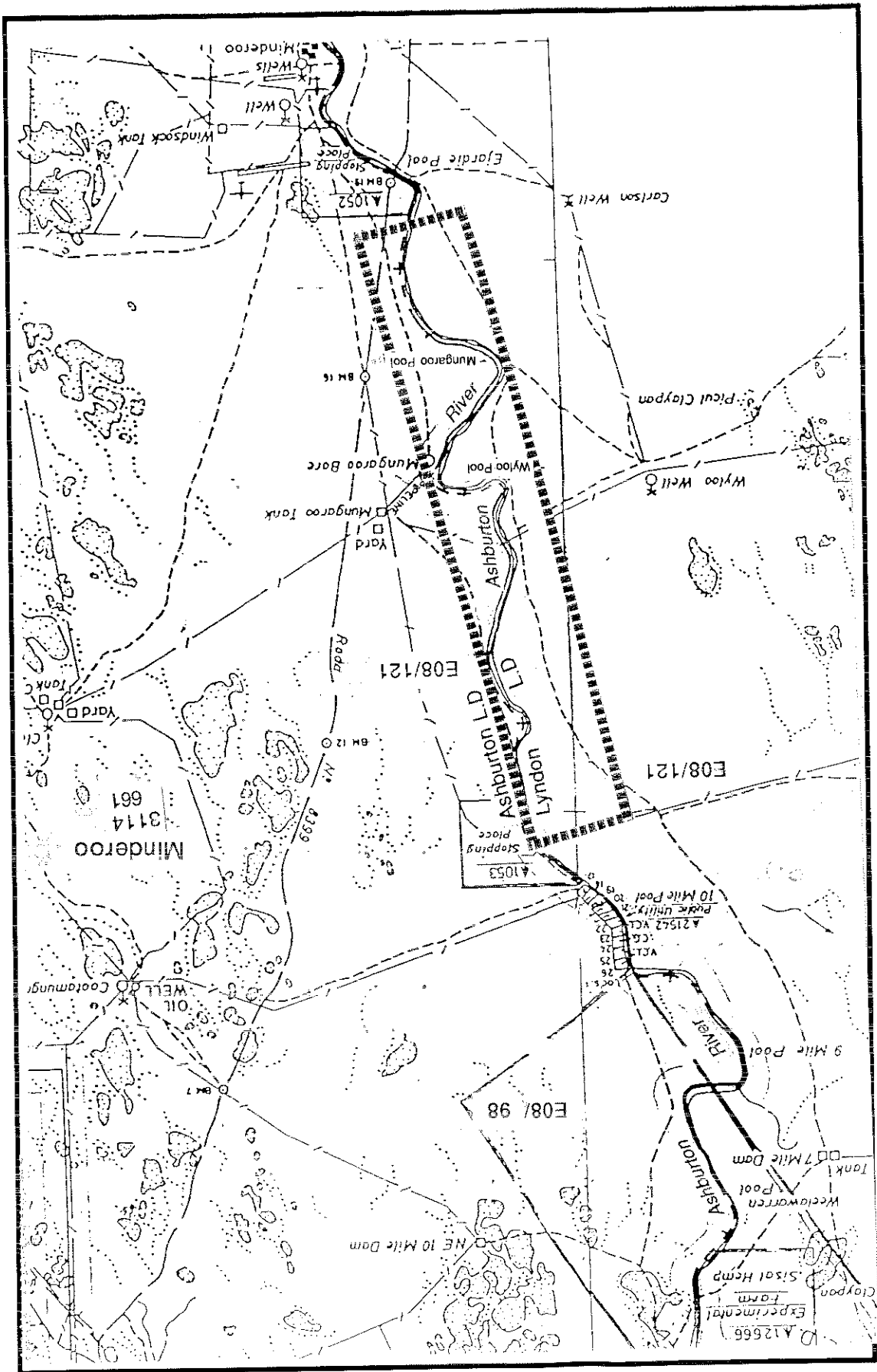
The Environmental Protection Authority identified a number of issues associated with this proposal as being environmentally significant. The major environmental issues considered during the assessment of the proposal were:

- impact on the ecology of the permanent pools should dredging occur in them;
- potential for erosion from vehicle movement and disturbance of trees;
- disturbance to river banks from construction of access ways; and
- rehabilitation of access ways at the end of the exploration programme.

The proponent has addressed a number of these issues in the environmental report provided for this application and has made a number of commitments to manage environmental impacts (Appendix 1).

The Department of Mines is intending to impose conditions on the exploration licence to cover the environmental impacts mentioned above. The specific conditions that will be recommended for imposition on licence 08/121 by the Minister for Mines are as set out in Appendix 2.

Figure 1: E08/121 Location map.



## **Recommendation 1**

The Environmental Protection Authority concludes that the proposal to explore for minerals in the bed of the Ashburton river at Minderoo, as modified during the process of interaction between the proponent, the Environmental Protection Authority, the public and the government agencies that were consulted, is environmentally acceptable.

In reaching this conclusion, the Environmental Protection Authority identified the main environmental factors requiring detailed consideration as:

- impact on the ecology of the permanent pools;
- potential for erosion from vehicle movement and disturbance to trees;
- disturbance to river banks from construction of access ways; and
- rehabilitation of access ways at the end of the exploration programme.

The Environmental Protection Authority concludes that the environmental factors mentioned above have been addressed adequately by either environmental management commitments given by the proponent, conditions recommended by the Department of Mines, or by the Environmental Protection Authority's recommendations in this report.

Accordingly, the Environmental Protection Authority recommends that the proposal as described in the Consultative Environmental Review could proceed subject to:

- the Environmental Protection Authority's recommendations in this Assessment Report;
- the recommended conditions from the Department of Mines being imposed on exploration licence 08/121; and
- the proponent's commitments to environmental management (Appendix 1).

The Authority notes that during the detailed implementation of proposals, it is often necessary or desirable to make minor and non-substantial changes to the designs and specifications which have been examined as part of the Authority's assessment. The Authority believes that subsequent statutory approvals for this proposal could make provision for such changes, where it can be shown that the changes are not likely to have a significant effect on the environment.

## **Recommendation 2**

The Environmental Protection Authority recommends that any subsequent proposal to mine the river bed should be referred to the Environmental Protection Authority for environmental impact assessment prior to any mining being commenced.

## **Recommendation 3**

The Environmental Protection Authority recommends that the proponent should be responsible for final decommissioning and removal of the dredge and installations and rehabilitating the site and its environs. Accordingly, at least two months prior to final decommissioning the proponent should prepare and subsequently implement, a decommissioning and rehabilitation plan to the satisfaction of the Environmental Protection Authority upon advice from the Department of Mines.

The Authority considers that any approval for the proposal based on this assessment should be limited to five years. Accordingly, if the proposal has not been substantially commenced within five years of the date of this report, then such approval should lapse. After that time, further consideration of the proposal should only occur following a new referral to the Authority.



**Appendix 1**  
**Summary of proponent's commitments**





The applicants are committed to the following:

1. Liaison with the pastoral leaseholder to decide crossover points on the river, gate usage and access routes.
2. To maintain the peaceful access of stock to drinking.
3. Clearing up of any spills via physical removal or chemical dispersal immediately. (eg oil failure in hydraulic line on drill).
4. Minimisation of access points to the river to prevent further erosion.
5. Prevention of damage to native trees, particularly on the river banks, to prevent further erosion.
6. Ponding of dredge activity to prevent any disturbance of drinking water.
7. The maintenance of buffer zones for dredging operations and when building crossings.
8. Avoidance of camp created problems by remote accommodation.
9. Removal of any drilling wastes and elimination of holes after drilling.
10. Removal of all equipment from the river in the event of storm or water run-off, so that no pollution can occur.



## **Appendix 2**

**Department of Mines draft conditions  
for Exploration Licence 08/121**



1. Compliance with the provisions of the Aboriginal Heritage Act, 1972, to ensure that no action is taken which is likely to interfere with, or damage, any Aboriginal site.
2. All surface holes drilled for the purpose of exploration after completion, being capped, filled or otherwise made safe to protect domestic stock and indigenous fauna.
3. Retaining walls or bunds to be constructed with earth-fill and maintained around dredge ponds to prevent the escape of turbid water. (These walls are to conform to specifications relative to location near flowing or still water).
4. No disturbance of permanent water holes.
5. Buffer zones are to be delineated and maintained adjacent to river banks to prevent collapse of those banks and consequent erosion.
6. Existing tracks, dry river beds and river bank crossings to be used wherever possible.
7. New tracks and river bank crossings to be kept to a minimum; and their construction and maintenance to meet the following criteria:
  - serve the maximum number of dredge ponds as practicable;
  - away from existing erosion channels;
  - shallow bank angle (less or equal to 15 degrees);
  - away from lower-storey vegetation.
8. Dredge ponds to be progressively back-filled. Final pond can be left open provided it is left in a condition for safe access by domestic stock and indigenous fauna.
9. Earth-fill river bank crossings are to be removed before the on-set of seasonal flooding to prevent the erosion of river banks.
10. All waste material, rubbish, plastic sample bags, abandoned equipment and temporary buildings being removed from the mining tenement prior to, or at, the termination of the exploration programme.
11. The licensee making provisions to prevent spillage of fuel and discharge of pollutants generally, and for all rubbish to be removed from the licence area and all disturbed sites to be left in a clean and tidy state.
12. No soap, detergent or other foaming agent being used in any watercourse or rockhole nor any rubbish or other polluting material being deposited in any watercourse or rockhole.
13. Notification to pastoralist prior to commencement of exploration programme.