

Application for mining lease, Shark Bay

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

**Environmental Protection Authority
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**Application for mining lease 09/41 for fine dune
sand, south-east of Denham, Shark Bay**

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Introduction

The Readymix Group Limited has applied for mining lease 09/41 which is located approximately 4 kilometres south-east of Denham on Peron Peninsula (Figure 1). The lease is approximately 90 metres wide and 160 metres long or 1.4 hectares and is on Peron Station, which has recently been purchased by the Western Australian Government. The northern section of Peron Station is a proposed national park. The mining lease application lies on the southern section of Peron Station. The lease occurs within the area nominated for World Heritage Listing.

Existing environment

The area occupied by the lease is part of an extensive dune and sandplain system that occupies most of the coastal plain of the Peron Peninsula. The dunes run parallel to the coast and are primarily longitudinal.

The mining lease covers a single sand dune, which is part of this extensive network of dunes, and is approximately 30-40 metres wide with a maximum height of between 4-5 metres. At the northern and southern extremities the dune is about 1-2 metres high. The vegetation is typically salt-tolerant, low shrub-lands such as saltbush and bluebush though the dune is sparsely covered.

Project description

An existing track from the main highway to the sand dune is the proposed method of access. If necessary the company plans to upgrade the track.

The area proposed for sand extraction is shown on Figure 2. The company estimates that the area contains 7000 - 8000 tonnes of sand. As indicated in Figure 2 it is proposed that all extraction will be confined to the eastern slope or leeward side of the dune.

The proposed method of operation is as follows:

- Remove the top 1 metre of the dune surface and stockpile this separately for future use.
- The remainder of the dune will be worked, using a front end loader, to ground level. The sand would be loaded directly on to a truck. No equipment of any kind would be stored on-site at any time.
- It is anticipated that the annual rate of removal of sand would be about 1000-1500 tonnes. It is anticipated that about 200 tonnes would be removed every two months. The total extraction of sand will take an estimated five to seven years. Each two monthly mining operation is expected to take from a few hours to one day.
- When extraction is complete the slopes of the dune would be battered and spread with the top layer of material that was stockpiled separately (See Figure 2).

Consultation

During the assessment the Authority consulted the Shire of Denham and the Departments of Mines, Planning and Urban Development, Conservation and Land Management, and Land Administration, and received comments from the Conservation Council and the Australian Conservation Foundation.

There was general support for the proposal among the agencies consulted, but the conservation groups opposed mining in an area nominated for World Heritage Listing.

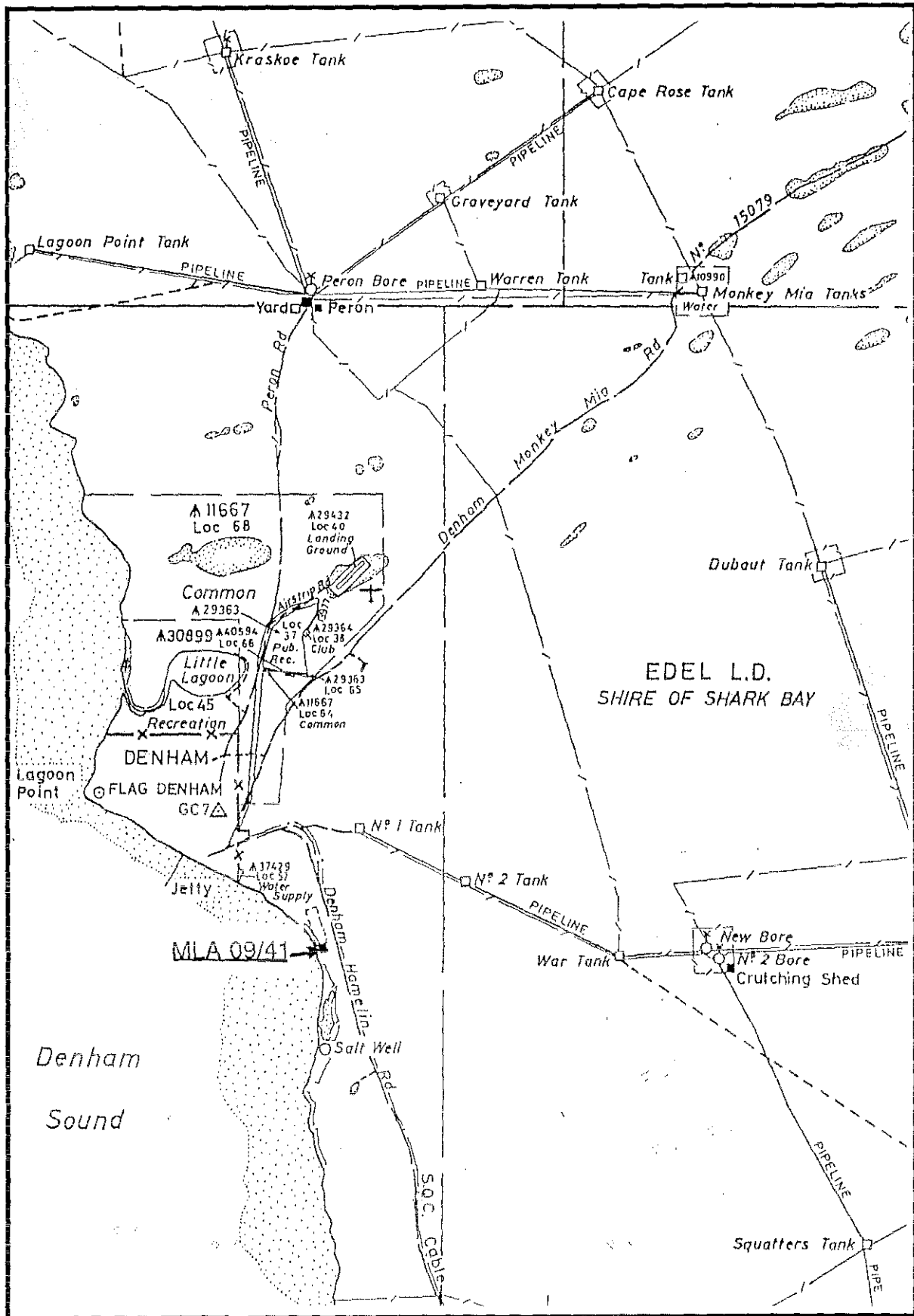


Figure 1: Location of mining lease application 09/41

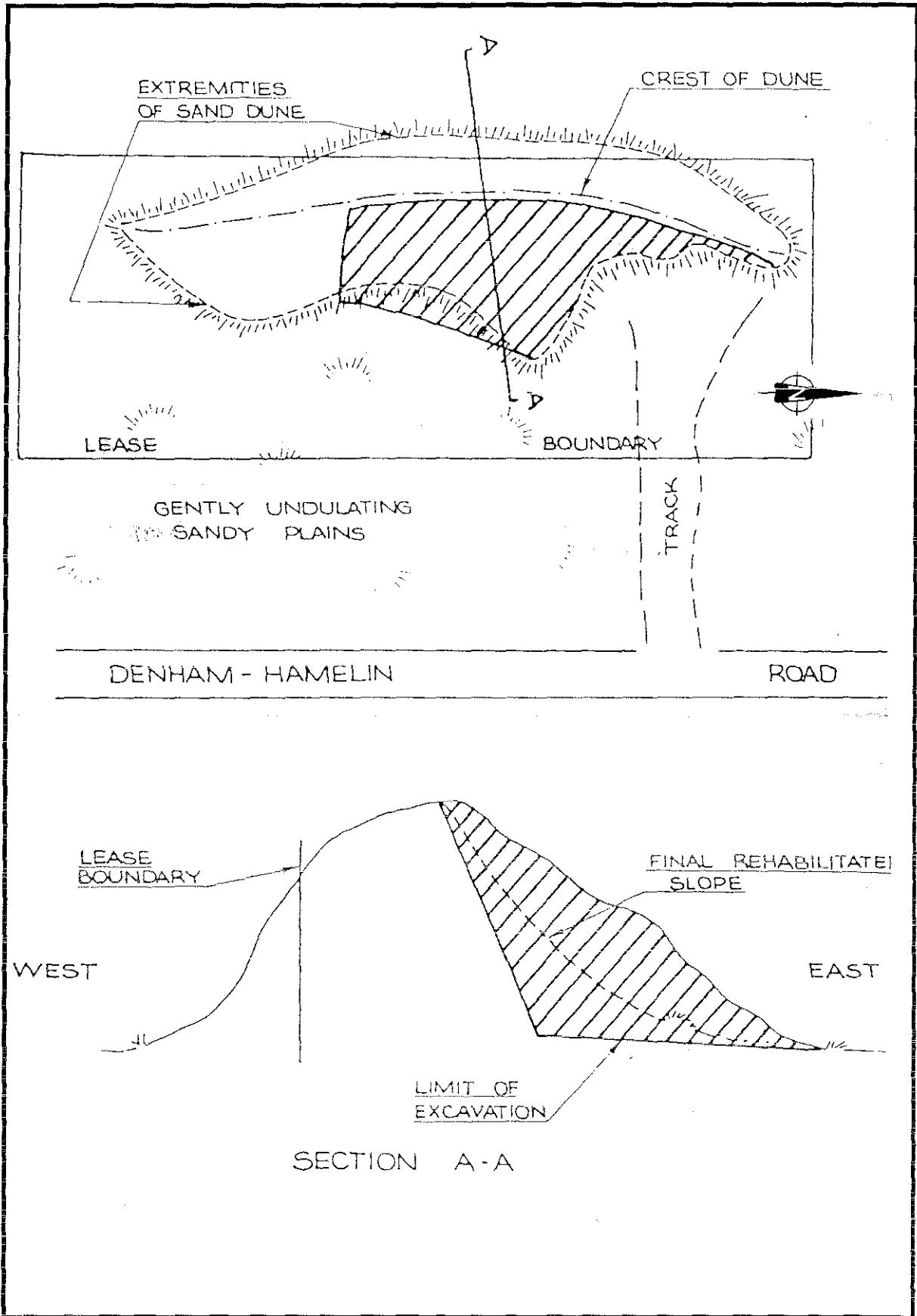


Figure 2: Area proposed for sand excavation

Assessment and recommendations

The proposal is within the area nominated for World Heritage Listing, however World Heritage Listing is not intended to necessarily exclude mining, and the proposal is outside the boundary of the proposed national park. It is of small scale and minimal impact.

The mining plan to protect the seaward and upwind portions of the dune is desirable as the deposit is in a coastal area where it is subject to the full effect of southerly summer winds without the ameliorating effect of distance from the coast or screening by taller denser vegetation.

The mine plan is environmentally acceptable provided rehabilitation of the dune is carried out quickly and effectively. Rehabilitation should occur in consultation with the Department of Conservation and Land Management and should be progressive in order to avoid prolonged exposure of the disturbed dune surface to erosive factors such as wind and rain.

Rather than remove the top metre as a topsoil stockpile, it is recommended that the top 20 centimetres of sand should be stripped first and retained separately to the remaining 80 centimetres as this top layer contains most of the stored seed. As each section of the dune is worked out it should be covered with the stockpiled sand with the material from the top 20 centimetres on top; the dune should be progressively reshaped and rehabilitated. This will ensure minimal physical impact to the dune and minimise any visual impact. Local species should be used for rehabilitation.

Recommendation 1

The Environmental Protection Authority has concluded that the proposal by Readymix, as modified by the process of interaction between the proponent, the Environmental Protection Authority and the public and government agencies consulted, is environmentally acceptable, and recommends that the proposal could proceed subject to the lease conditions proposed by the Department of Mines and the Environmental Protection Authority's recommendations in this report.

Recommendation 2

The Environmental Protection Authority recommends that the proponent should develop a rehabilitation plan in consultation with the Department of Conservation and Land Management, and progressively rehabilitate the disturbed areas to the satisfaction of the Environmental Protection Authority on advice from the Department of Conservation and Land Management.

The Environmental Protection Authority acknowledges the local Shire Council's concerns about the orderly and structured development of sand mining in the area and will provide advice on any proposals put forward.

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.

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.