

PROPOSED SAND MINING

BY

CABLE SANDS PTY LTD

AT

MINNINUP, WESTERN AUSTRALIA

Report and Recommendations

by the

Environmental Protection Authority

July 1982

Dept of Conservation
and Environment

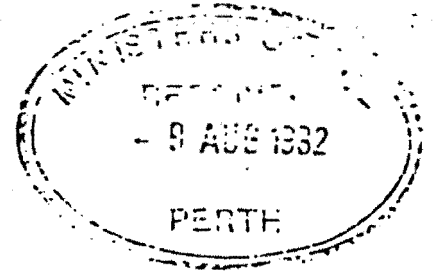
BULLETIN NO 119



ENVIRONMENTAL PROTECTION AUTHORITY

BP HOUSE,
1 MOUNT STREET, PERTH, WESTERN AUSTRALIA 6000

Telephone 322 2477



HON MINISTER FOR CONSERVATION
AND THE ENVIRONMENT

Your Ref.

Our Ref. 48/82

My Dear Minister

At its last meeting, the EPA considered a proposal by Cable Sands Pty Ltd to mine mineral sands from Wellington Locations 394 and 637 at Minninup.

A copy for the EPA's report and recommendations is attached for your information. Your approval is sought to publish the report and recommendations so it can be sent to all interested parties.

Yours sincerely


A. R. MAIN
CHAIRMAN

29 July 1982

1. BACKGROUND

Cable Sands Pty Ltd of Bunbury proposed to mine mineral sands from parts of two adjoining Wellington Locations Nos 394 and 637 near the coast at Minninup, South of Bunbury. Title to the land was issued prior to 1899 and so all minerals are the property of the owner and not the Crown. A mineral tenement under the Mines Act is not required but an Extractive Industry Licence from the Local Authority is required prior to mining. The Company has applied for such a licence from the Shire of Capel. The Company owns Location 394 and has an agreement with Laporte Australia to mine on Location 637. Laporte in turn have a lease of the "right to mine" on part of Location 637 under an agreement with the landowner.

The Town Planning Board has approved the lease between the owner of Location 637 and Laporte Aust.

The PWD has approved the proposal to mine on both properties which are within the Stirling Drainage District.

2. THE PROPOSAL

The mining will be carried out using a suction cutter dredge and floating concentrator. The beach and western side of the foredune will not be mined as they are outside the Company controlled land.

The mining procedure will involve stripping and stockpiling the topsoil from a small area at the southern end of the deposit. A pond will then be excavated in which the dredge and concentrator will be assembled. The dredge will then work its way north behind the foredune. Mined sand will be pumped to the concentrator where the heavy mineral will be removed and pumped to a drainage heap prior to trucking to Bunbury. Tailings sand will be pumped to a stacker behind the dredge for placement prior to final recontouring.

A closed water circuit is proposed in which all water is recirculated. Make up water and initial supply will come from an artesian bore which will be licenced by the PWD. The effectiveness of the closed water circuit will be checked by PWD inspectors.

Concentrates will only be trucked to Bunbury on normal working days and trucking will be restricted to daylight hours.

3. RESTORATION OF MINED AREAS

Vegetation and topsoil in front of the mining face will be collected progressively and respread on the recontoured tailings behind the dredge. This means that there will be only a small area of exposed sand at any one time either in front or behind the mining activity. Where required extra seed will be sown to establish primary stabilising vegetation. Seedling trees indigenous to the area will be planted in selected areas for added soil protection and landscape reasons.

There are a number of blowouts in the present foredune and the Company will restore these areas and stabilize them with selected vegetation as part of their rehabilitation program.

The Company has offered to make land available from Location 394 for a public road and car park which would provide public access to the beach. This offer will require the Local Authority's approval.

At the completion of mining, the dredge and other equipment will be removed and the final dredge pond will be filled in; the stockpiled topsoil respread and seeded with suitable species.

4. ENVIRONMENTAL CONSIDERATIONS

The mining and rehabilitation of sensitive coastal sand dunes can have a number of adverse environmental impacts if not carefully planned and well managed. The inevitable destruction of vegetation can lead to sand drifts moving inland and covering other areas. Loss or damage of the fore dune can lead to increased marine erosion and changes in coastline shape and position.

In this case the foredune will be left substantially intact, and previously damaged sections will be restored. Special care will be required to ensure that no vehicles or equipment are allowed onto the foredune except in those areas to be restored and every effort must be made to prevent any damage to existing foredune vegetation. The proposed mining plan should ensure that there are only small areas of exposed sand at any given time. The use of existing topsoil and vegetation on the recontoured tailings should ensure that the surface is quickly stabilised, first by the mulch formed by the dead vegetation and secondly by plant growth from seeds in the topsoil or dropped by the drying vegetation. A significant number of plants will probably survive the move from the mining path to the tailings and regrow from roots, tubers, cuttings or whole plants.

Wherever possible topsoil stripping and respreading should be carried out in the wetter months or limited irrigation may be required to prevent serious soil moisture loss and sand drift in the dry summer months. Cable Sands Pty Ltd has been mining mineral sands in the region for many years and has developed considerable expertise in the rehabilitation of mined land. In preparing the plans for this area they have considered the advice of local Department of Agriculture officers and the Mines Department rehabilitation inspector. Liaison with these Departments will continue throughout the operation.

The proposed water circuit will be of the closed type so that there will be no interference with existing water sources or drainage works. The mineral deposits are free of clay minerals and so there will not be problems with turbid water or slime disposal. Make up water is of good quality and no chemicals are added in the process so that any small losses to nearby ground water will not cause contamination or loss of quality. The mining excavation will not extend below sea level and the dredge pond level will be even higher so that there will be no risk of salt water intrusion.

There have been four aboriginal burial sites reported and examined by the Registrar of Aboriginal Sites in the general area. Although they were not on the proposed mining area it is possible that similar burial sites or other archaeological sites may be uncovered by the mining operations.

If this should occur work in that area should cease and the Registrar of Aboriginal Sites at the WA Museum must be informed under the provisions of the Aboriginal Heritage Act. The site will then be examined by an archaeologist to assess its significance and scientific value.

The possible future provision of public access to the beach if accepted by the Shire of Capel will need to be carefully planned and constructed to prevent vehicles from gaining access to the beach proper, or the foredune. Adequate pedestrian pathways will also be required to prevent damage to foredune vegetation.

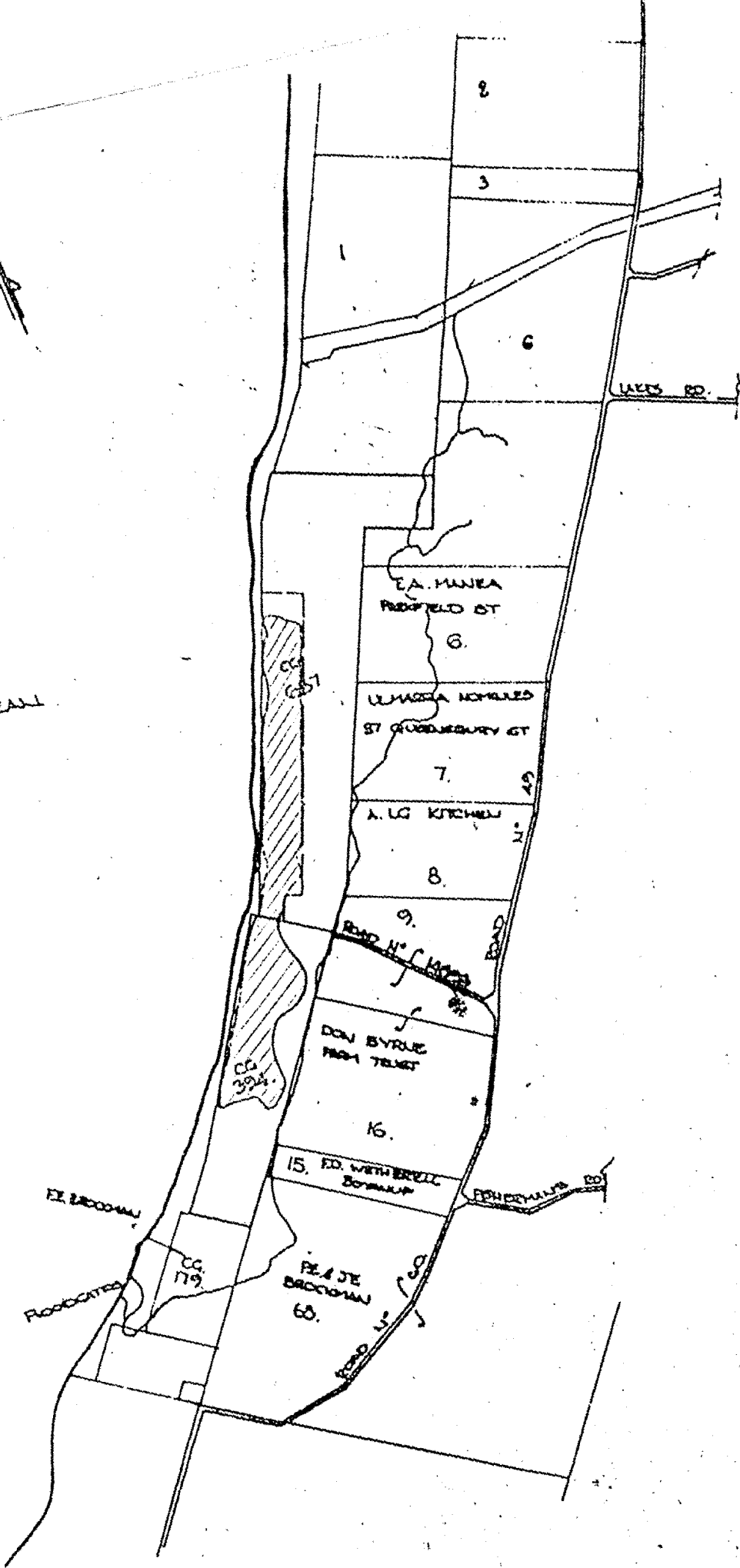
The construction of a road through the high secondary dune will need to be carried out so that sand drift and wind tunnel effects are minimised. Maximum use of tree species near the road and parking area in restoration work would be desirable.

5. RECOMMENDATIONS

The EPA has examined the proposals by Cable Sands Pty Ltd to mine mineral sands from two Locations at Minninup and rehabilitate the disturbed areas. It has found that these proposals are environmentally acceptable provided:

- (i) No disturbance of soil or vegetation is permitted seawards of the property boundary line except in those areas where restoration of previous blowouts is proposed.
- (ii) An adequate batter or suitable temporary support is provided along the western property boundary to prevent any slippage or slumping of the foredune into the excavation.
- (iii) The Company is aware of its responsibilities under the Aboriginal Heritage Act and the Soil Conservation Act.
- (iv) Further consultation on the conditions for an extractive industry licence and future public access to the beach take place with the Shire of Capel.

INDIAN
OCEAN



AREA TO BE MINED SHOWN: 