



Ass # 361
Bull # 549
State # 237

WESTERN AUSTRALIA
MINISTER FOR THE ENVIRONMENT

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

ESTUARY DEEPENING, COX BAY, FALCON (361)

MEIYU AUSTRALIA PTY LTD

This proposal may be implemented subject to the following conditions:

1. Proponent Commitments

The proponent is to meet the commitments.

- 1-1 In implementing the proposal, the proponent shall fulfil the commitments (which are not inconsistent with the conditions or procedures contained in this statement) made by the proponent and included as Appendix 1 in Environmental Protection Authority Bulletin 549. (A copy of the commitments is attached).

2. Implementation

Minor variations to the proposal are permitted.

- 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 to the Environmental Protection Authority with the proposal. 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 the Minister for the Environment determines on the advice of the Environmental Protection Authority, is not substantial, those changes may be effected.

3. Estuary Deepening

The deepening of Cox Bay is to be permitted, and shallow areas for the waterbirds are to be constructed with the dredge material.

- 3-1 During construction, the proponent shall deepen part of the Estuary at Cox Bay as shown in the attached Plans, to the satisfaction of the Environmental Protection Authority on advice of the Peel Inlet Management Authority.
- 3-2 Prior to the commencement of any site works, the proponent shall prepare a plan and cross sections for the shallows, which shall be in the same location as the previously proposed island, to the satisfaction of the Minister for the Environment on advice of the Peel Inlet Management Authority.
- 3-3 Prior to the commencement of any site works, the proponent shall prepare a construction management plan detailing the method of construction of the shallows, which shall require the placement of sediments in the same order as the sediments on the existing shallows site, to the satisfaction of the Minister for the Environment on advice of the Peel Inlet Management Authority.

Published on

7 APR 1992

4. Foreshore Reserve

The wetlands, the vegetation and the bandicoots on the foreshore are to be protected during and after filling of the foreshore.

- 4-1 Prior to the placement of any fill material on the foreshore, the proponent shall prepare a plan and cross sections showing development of the foreshore. The plan shall be to the satisfaction of the Minister for the Environment on advice of the Environmental Protection Authority and the Peel Inlet Management Authority. The plan and cross sections shall, amongst other things, show how:

(1) the two salt water wetlands and the one freshwater wetland and their fringing vegetation will be retained, in a way which is consistent with maintaining all existing wetland functions, and rehabilitating those areas in need of restoration;

(2) the widening of the beach will be carried out in a way which ensures the retention of estuarine vegetation adjacent to the wetlands; and

(3) all large trees on the foreshore will be retained, and the fill material placed in a way which ensures their survival.

- 4-2 Subsequent to condition 4-1, other areas of the foreshore may be filled in, and any fill surplus to requirements for the shallows, the foreshore and the beach may be disposed of on the Estuary Gardens site, to the satisfaction of the Environmental Protection Authority on advice of the Peel Inlet Management Authority.

5. Environmental Management

A comprehensive Environmental Management Programme for the development should be prepared, in stages as required, as well as a project agreement with the ultimate managing authority.

- 5-1 Prior to preparation of the development plan required by condition 4-1, the proponent shall prepare (in consultation with the Department of Conservation and Land Management) and subsequently implement a management plan for conserving the bandicoot population, to the satisfaction of the Minister for the Environment on advice of the Department of Conservation and Land Management. On-going management of the bandicoot population is to be included in the Environmental Management Programme.
- 5-2 Prior to the commencement of any site works, the proponent shall prepare a plan to control mosquitoes which is consistent with the preservation of wetland values and functions, to the satisfaction of the Minister for the Environment on advice of the Environmental Protection Authority.
- 5-3 Prior to commencement of construction, the proponent shall prepare a comprehensive Environmental Management Programme, to the satisfaction of the Minister for the Environment on advice of the Environmental Protection Authority and the Peel Inlet Management Authority. The programme shall incorporate the proponent's commitments to environmental management.
- 5-4 Prior to commencement of construction, the proponent shall finalize a project agreement with the ultimate managing authority or authorities on the responsibility for the on-going environmental management of the project in accordance with the Environmental Management Programme, to the satisfaction of the Minister for the Environment on advice of the Environmental Protection Authority.

6. Transfer

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 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 Minister 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.

7. Time Limit on Approval

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 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.)

Bob Pearce, MLA
MINISTER FOR THE ENVIRONMENT

6 APR 1992

COMMITMENTS

1 BANK GUARANTEE

- 1.1 A bond of \$20,000 will be lodged with the State for completion of the proposed project as described in this PER. The total amount to be refunded to the proponent upon completion of the earthworks for the project, initial vegetation planting of the foreshore and islands, and shoreline stabilisation works.

2 COMMITMENTS BY THE PROPONENT IN RELATION TO THE ADJACENT DEVELOPMENT ON PART LOCATION 1147

- 2.1 The development will be connected to a reticulated sewerage system.
- 2.2 Stormwater will be retained within the development area to a 1 in 10 year storm extent in compensating basin/s, with retention times of three to four days, and with no direct outfall to Peel Inlet or the proposed foreshore reserve with the exception of 1 in 100 year flood events.
- 2.3 Existing trees will be retained where feasible over the site.
- 2.4 A nutrient management programme will be developed and implemented over the development area.
- 2.5 Public access to the estuary will be provided through the development at two locations, which will include public car parking areas, in accordance with EPA recommendations.
- 2.6 The public car parking areas will directly adjoin the proposed foreshore reserve.
- 2.7 Physical and visual separation between the development and the foreshore reserve will be achieved by means of a retaining wall constructed to a level of 2.0 m AHD along the development boundary.

3 EXCAVATED BAY AREA MANAGEMENT

- 3.1 All works carried out within the boundaries of the Shire of Murray will be carried out to the specifications and satisfaction of Council.
- 3.2 Construction will be confined to daylight hours only.
- 3.3 The depth of excavation will range from 0.25 m to 0.45 m, as defined in the PER.

- 3.4 Excavation and island construction will take place within bund walling to minimise the generation of turbid plumes during construction.
- 3.5 Public access to the foreshore south of the Falcon boat launching facility will be denied only during the construction phase for safety reasons, with appropriate fencing and signage, as required by the City of Mandurah.
- 3.6 All exposed soil surfaces will be stabilised as necessary, to prevent the formation of a dust nuisance.
- 3.7 Deposition of the dredge spoil for filling of the foreshore and renourishment of the beaches will take place to the satisfaction of the Waterways Commission and Peel Inlet Management Authority.
- 3.8 The bay will grade into the deeper basin of Peel Inlet to ensure that it does not become a sink for detritus.
- 3.9 Water quality in the embayment and Cox Bay, and sedimentation processes in the embayment and local area will be monitored by the proponent to the satisfaction of the Waterways Commission and Peel Inlet Management Authority and reported annually.

Note: Following completion of the project debris and algal wrack accumulating within the embayment will continue to be removed by the Peel Inlet Management Authority.

4 ISLAND MANAGEMENT

- 4.1 Spoil used in the construction of the island and beaches will be tested to ensure the sand fraction is adequate for beach stability and to minimise the generation of turbid plumes.
- 4.2 Stone revetments at the northern and southern end of the island will be designed to meet Department of Marine and Harbour's standards.
- 4.3 The island armouring will be designed to cope with realignment of the shoreline due to storm events or longshore transport.
- 4.4 The island will be fully planted with native vegetation, supplemented with seeding and hydromulching as required, to the satisfaction of the Peel Inlet Management Authority and Waterways Commission.

5 FORESHORE MANAGEMENT

- 5.1 Foreshore filling will take place to the satisfaction of the Waterways Commission. All vegetation to be retained on the foreshore will be identified and marked prior to the commencement of filling. Specifically, this will include all mature trees.
- 5.2 As an alternative to filling, the Proponent is prepared to redevelop the northern wetland into a permanent wetland feature subject to agreement with the EPA and PIMA on design requirements and the maintenance of adequate water quality.
- 5.3 Foreshore protection and stabilisation work will be undertaken to the satisfaction of the Waterways Commission prior to the establishment of suitable public access areas.
- 5.4 The shoreline will be constructed to a stable profile and stability will be monitored to the satisfaction of the Waterways Commission.
- 5.5 Beaches will be graded to ensure that the resultant slopes comply with all requirements for safe access by the public.
- 5.6 The foreshore conservation areas will be rehabilitated with native vegetation to the satisfaction of the Waterways Commission.
- 5.7 The use of water for irrigation will be limited to 7,500 kL/ha/a on grassed areas and 5,000 kL/ha/a on areas planted with shrubs.
- 5.8 The proponent will construct a new boat ramp and car and trailer park adjacent to the existing Falcon boat ramp, subject to agreement with the relevant authorities.
- 5.9 A dual-use pathway will be constructed along the length of the foreshore around the embayment on an alignment acceptable to the Waterways Commission and the City of Mandurah.
- 5.10 Two jetty/groyne structures for public recreational purposes will be constructed by the proponent subject to approval of the relevant authorities and granting of jetty licences.

6 REPORTING SCHEDULE

The following components of project management will be reported upon:

- (i) estuary management programme; and
- (ii) foreshore monitoring programme.

Monitoring reports will include the results of all aspects of the monitoring programme as follows:

6.1 Estuary Management Plan

- water quality and the extent of turbidity during construction;
- crustacean and benthic invertebrate recolonisation of the dredged area and shallow water areas surrounding the island; and
- the bathymetry of the dredged area.

6.2 Foreshore Management Programme

- beach profiling and shoreline stability including the islands;
- vegetation surveys of the foreshore; and
- groundwater monitoring. Three piezometers will be installed within the foreshore for this purpose in accordance with PIMA requirements.

6.3 Timing

The results of the monitoring programme will be reported on an annual basis. At the end of the two year monitoring period, a final report will be prepared showing the results of the complete programme.

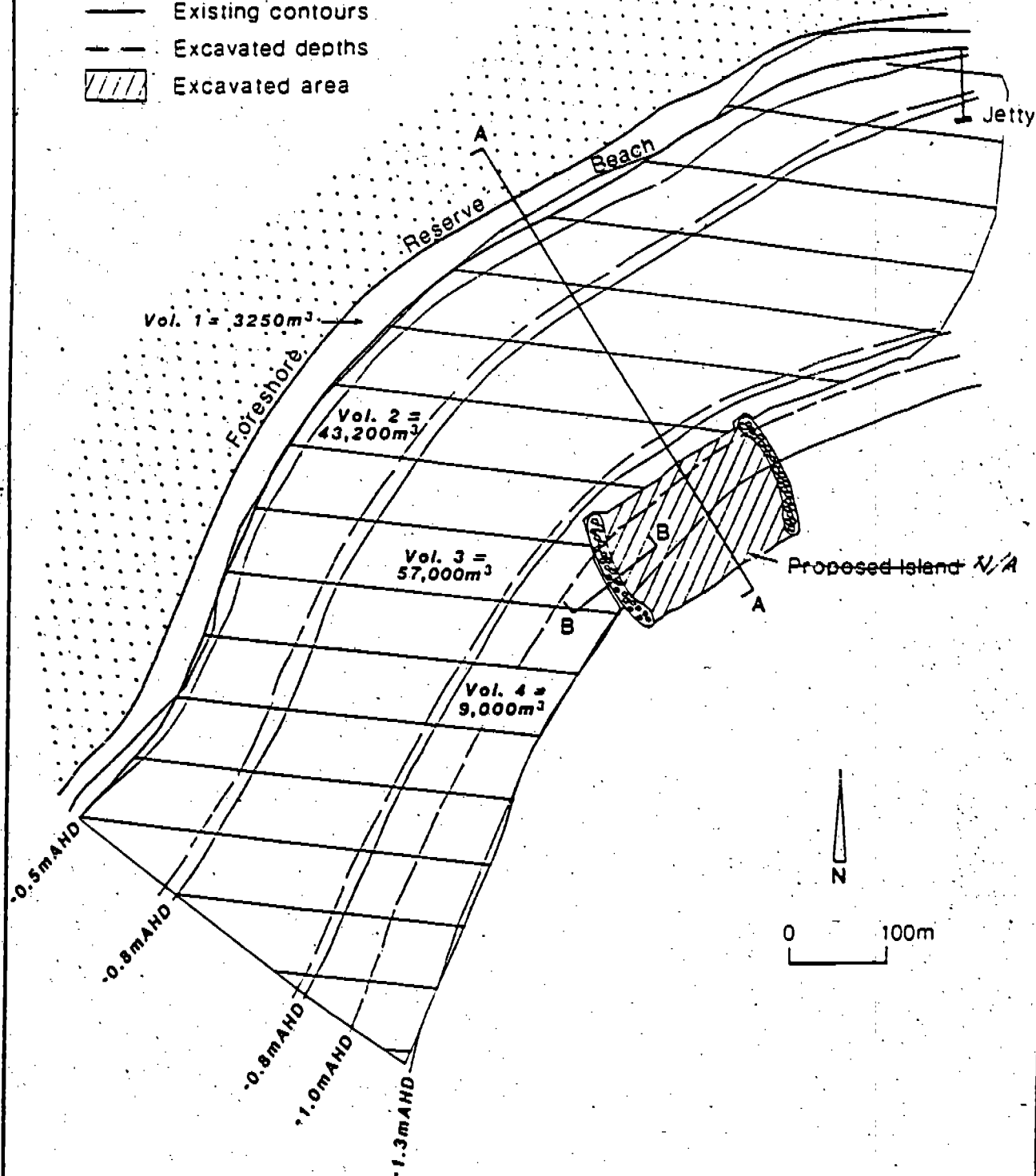
6.4 Reporting authorities

Results of the water quality monitoring, and the benthos and crustacean surveys will be reported to the EPA, Waterways Commission and PIMA. The results of construction monitoring including the bathymetry of the embayment, and sedimentation within the embayment will be reported to the Shire of Murray, City of Mandurah, EPA, Waterways Commission and PIMA.

The analyses of monitoring results for shoreline stability and vegetation surveys on the foreshore and island will be reported to the EPA, Waterways Commission, PIMA and the City of Mandurah.

REFERENCE

- Existing contours
- - - Excavated depths
- ▨ Excavated area



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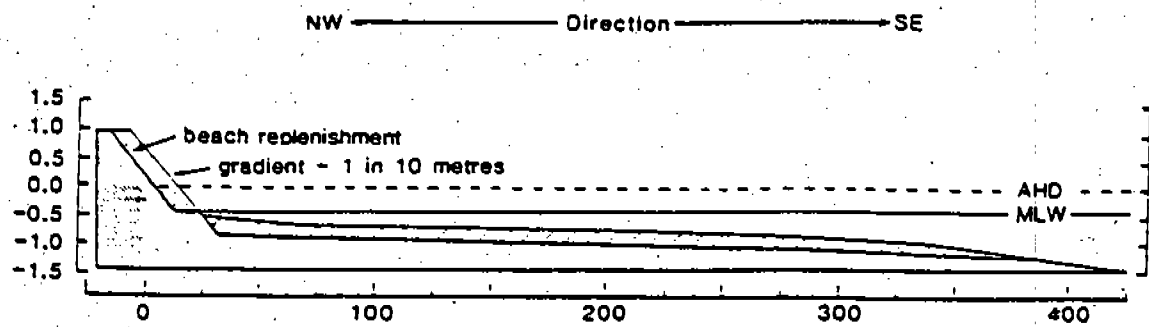
PLAN OF PROPOSED WORKS

Figure

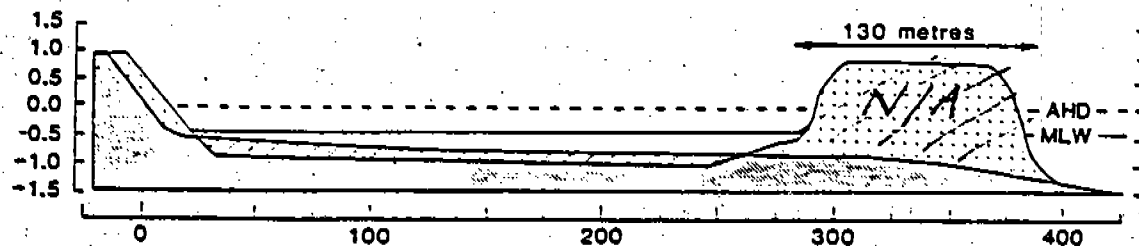
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PROFILE OF RECONSTRUCTED BEACH AND NEARSHORE AREA



PROFILE OF PROPOSED PROJECT WORKS AND ISLAND CONSTRUCTION

MLW - Mean low water level

AHD - Australian height datum



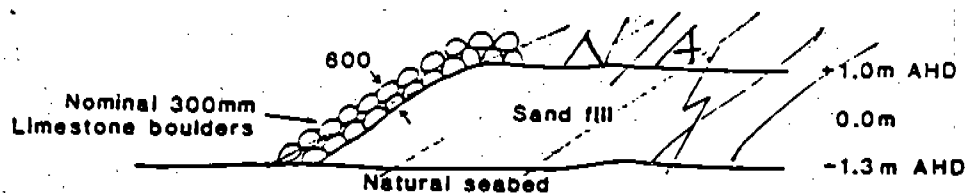
Existing wedge of sand material proposed to be removed



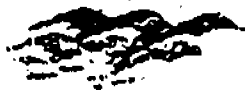
Underlying sediments (will remain in place)



Spoil material used for beach replenishment and creation of island bird sanctuary



TYPICAL WALL SECTION FOR THE ISLAND



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PROFILES OF THE PROPOSED
WORKS SITE

Figure

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