



Ass # 463
Bull # 703
State # 355

WESTERN AUSTRALIA

MINISTER FOR THE ENVIRONMENT

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

FASCINE DEVELOPMENT, CARNARVON (463)

SHIRE OF CARNARVON

This proposal may be implemented subject to the following conditions:

1 Proponent Commitments

The proponent has made a number of environmental management commitments in order to protect the environment.

- 1-1 In implementing the proposal, the proponent shall fulfil the commitments made in the Public Environmental Review and in response to issues raised following public submissions, as modified on 22 February 1994; provided that the commitments are not inconsistent with the conditions or procedures contained in this statement. (A copy of the commitments as modified on 22 February 1994 is attached.)

2 Implementation

Changes to the proposal which are not substantial may be carried out with the approval of the Minister for the Environment.

- 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 Proponent

These conditions legally apply to the nominated proponent.

- 3-1 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.

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4 Management of Environmentally Sensitive Areas

- 4-1 The proponent shall protect vegetation in areas which have environmental value.
- 4-2 Prior to construction, the proponent shall prepare an Environmental Management Programme to achieve the objective of condition 4-1, to the requirements of the Minister for the Environment.

This Programme shall be prepared in consultation with the Department of Conservation and Land Management on advice of the Royal Australasian Ornithologists Union for:

- the proposed conservation areas identified on Whitlock Island, Babbage Island and adjacent Oyster Creek; and
- the areas included within Stages 2 and 4 (Whitlock Island) and Stages 6, 7, and 8 (Babbage Island) until such time as their development proceeds, and with provision for management of potential impacts of subsequent development associated with the above stages on adjacent conservation areas (See Figure 4 attached).

This Programme shall include, but not necessarily be limited to, consideration of the following:

- 1 areas to be retained for conservation, including Oyster Creek, during and following construction;
 - 2 4WD activity ;
 - 3 public access to adjacent areas of Whitlock and Babbage Islands;
 - 4 domestic animal, exotic weed and rubbish management;
 - 5 location of construction material stockpiles ;
 - 6 areas for placement of dredge spoil;
 - 7 monitoring of samphire and mangrove areas for waterbird protection; and
 - 8 responsibility for works and on-going management.
- 4-3 The proponent shall implement the Environmental Management Programme required by condition 4-2 to achieve the objective of condition 4-1.

5 Water Quality

- 5-1 The proponent shall maintain acceptable water quality within the canal waterways.
- 5-2 The proponent shall undertake regular monitoring of the depth of canal waterways as part of the commitment to prepare a Water Quality Monitoring Programme, to the requirements of the Department of Transport.

6 Stormwater

- 6-1 The proponent shall ensure that nutrient-rich fresh stormwater run-off does not discharge directly onto or adjacent to existing native vegetation areas, such as samphire and mangrove communities.
- 6-2 Prior to construction, the proponent shall submit to the Environmental Protection Authority design details of stormwater drains to demonstrate how the objectives of condition 6-1 will be achieved.

6-3 The proponent shall construct the stormwater drains to achieve the objectives of condition 6-1.

7 Time Limit on Approval

The environmental approval for the proposal is limited.

7-1 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.)

8 Compliance Auditing

In order to ensure that environmental conditions and commitments are met, an audit system is required.

8-1 The proponent shall prepare periodic "Progress and Compliance Reports", to help verify the environmental performance of this project, in consultation with the Environmental Protection Authority.

Procedure

1 The Environmental Protection Authority is responsible for verifying compliance with the conditions contained in this statement, with the exception of conditions stating that the proponent shall meet the requirements of either the Minister for the Environment or any other government agency.

2 If the Environmental Protection Authority, other government agency or proponent is in dispute concerning compliance with the conditions contained in this statement, that dispute will be determined by the Minister for the Environment.

Kevin Minson MLA
MINISTER FOR THE ENVIRONMENT

13 MAY 1994

**PROPONENT'S ENVIRONMENTAL
COMMITMENTS**

as modified on 22 February 1994

**FASCINE DEVELOPMENT, CARNARVON
(463)**

SHIRE OF CARNARVON

The proponent has made the following environmental commitments:

CARNARVON FASCINE
PROPONENT'S COMMITMENTS

INTRODUCTION

The following commitments are made by the Proponent with respect to the proposed development of the Fascine, and Babbage and Whitlock Islands, at Carnarvon.

To illustrate the timing applicable to each task the commitments have been divided into pre-construction, construction and post-construction (operational) tasks, as appropriate.

1 COMMITMENTS TO BE MET PRIOR TO CONSTRUCTION

1.1 Zoning

The Shire will initiate a re-zoning of appropriate parts of the land to Canal Zone to comply with the requirements set out in State Planning Commission Policy No. DC 1.8, Procedures for the Approval of Artificial Waterways and Canal Estates.

1.2 Waterways Manager

The Shire of Carnarvon will be the designated Waterways Manager.

1.3 Conservation areas

The southern and western portions of Whitlock Island and the adjacent part of Babbage incorporating mangrove, wet samphire and dune habitats will be set aside as areas for conservation.

1.4 Aboriginal Heritage

The Proponent is aware of its responsibilities under the Aboriginal Heritage Act and undertakes to obtain the necessary clearances required under that Act before commencing work on site.

1.5 European Historical Sites

The historic tramway and bridge will be restored to a condition suitable for use by pedestrians and cyclists.

1.6 Flooding

A minimum fill level of 3.4 m has been adopted for the development. This figure has been accepted by the Water Authority of Western Australia as providing a high degree of flood protection.

1.7 Sewerage

All parts of the development will be connected to deep sewerage.

1.8 Canal Circulation and Flushing

Flushing predictions made in the PER will be confirmed for the finally accepted design, to the satisfaction of the EPA on advice from DMH.

1.9 Marina

The current lease between the Council and the Carnarvon Yacht Club contains a condition requiring the provision of foreshore access around the club area. This condition will apply also to the proposed marina development.

Agreement will be reached between the Shire of Carnarvon, as proponent, the Carnarvon Yacht Club, as lessee of the proposed marina, and the DMH regarding any additional maintenance dredging which may be required as a result of the siting of the marina.

1.10 Preparation of Environmental Management Plan (Construction)

An Environmental Management Plan will be prepared by the Proponent to the satisfaction of the EPA identifying those impacts which will occur during the construction period and the proposed method of managing those impacts. Impacts which will be addressed include:

- public safety during construction;
- construction dust and noise management;
- dredging management; and

- protection of conservation and foreshore areas during all phases of construction through adoption of the following measures;
 - definition, by survey, of the boundary between conservation (non-development) and development lands and provision of temporary fencing where required to control vehicular access to conservation areas and ensure that development does not encroach on land set aside for conservation;
 - construction of a bund system for the containment of dredge spoil within future development areas;
 - regular monitoring of the stability of the bund walls to ensure that they are not breached;
 - the containment of dewatering and dredging fluids for such time as is necessary to produce a quality suitable for discharge back into the fascine;
 - monitoring of the quality of the contained water to confirm that the water quality is acceptable prior to discharge;
 - management of the placement of 'dry' fill to ensure that it is contained within the development area;
 - containment of the impacts of servicing the development to the developed area or, where this is not possible, to identified service corridors which can be rehabilitated on the completion of construction works; and
 - temporary stabilisation of fill with vegetation or an inert seal, e.g. 'Hydromulch' or similar, to control dust and sand movement.

2 COMMITMENTS TO BE MET DURING THE CONSTRUCTION PERIOD

2.1 Construction Related Activities

2.1.1 Public Access to Fascine and Foreshore Areas

Public access to construction areas will be restricted for safety reasons during the construction period to the satisfaction of the Shire of Carnarvon.

2.1.2 Temporary Protection of Foreshores and Conservation Areas

The conservation areas, which include the mangroves at the mouth of the Fascine and the adjacent wet samphire areas, will be protected from development impacts by the construction of temporary fences where required. Bund walling will be constructed as necessary to protect these areas from overspill of dredge spoil or dewatering fluids.

2.1.3 Dust and Noise

Construction traffic will be confined to routes designated by the Shire of Carnarvon.

Hours of operation will be determined by the Shire of Carnarvon.

Dust suppression during construction will be by surface spraying or screen fencing. Cleared areas not immediately built-on, will be surface stabilised with a biodegradable emulsion or vegetation cover, to the satisfaction of the EPA.

2.1.4 Spoil Disposal

Dredge spoil will be contained within bunds which will aid the settlement and compaction process.

2.1.5 Water Quality

Water quality within the Fascine during dredging will be protected by containing the spoil within banded settling ponds to settle out suspended solids before the water is returned to the Fascine.

2.1.6 Dewatering and Groundwater

De-watering fluids will be held in settling ponds, as necessary, to reduce the levels of suspended solids to meet EPA water quality criteria, before being discharged into the Fascine. An alternative option that may be considered is the discharge of dewatering fluids to the dry river bed of the Gascoyne River, adjacent to the development site.

2.1.7 Soil Stabilisation

Areas which have been cleared and/or filled to provide a surface suitable for construction, but will remain exposed following the initial construction phase (i.e. earthworks and servicing), will be stabilised to prevent the development of a dust nuisance to nearby residents. Areas which will remain exposed for only a short time may be stabilised with a bio-degradable stabiliser, while those not expected to be developed within the first growing season will be seeded to bind the soil surface.

2.1.8 Reporting

The construction monitoring report will be submitted following the completion of construction or, in the event of a protracted or staged construction programme, annually until the completion of construction.

The following items will be reported:

- management actions undertaken during the construction period;
- the results of construction impacts monitoring; and
- actions taken to remedy any unforeseen impacts detected during the construction period.

2.2 Preparation of Post-construction Environmental Management Plans

Plans for the management of the Fascine waterways, and the Babbage and Whitlock Islands foreshore and conservation reserves will be completed by the Shire of Carnarvon to the satisfaction of the EPA prior to the completion of construction of the first stage of development.

2.2.1 Fascine Waterways Management Plan

The Shire of Carnarvon, as Proponent for the project, will be responsible for the development and implementation of the Fascine Waterways management plan.

The objectives of the Fascine management plan are to ensure that the water quality is acceptable for the desired purposes, that the navigability of the waterways is maintained, and that the desired aesthetic standards are met to ensure that an environment which is attractive to residents and tourists is maintained.

- **Fascine Water Quality**

Water within the Fascine will be required to meet relevant health and environmental criteria for direct contact recreation.

All of the proposed development will be sewered to ensure that bacterial and nutrient contamination are minimised. A monitoring programme will be designed and implemented by the Proponent to confirm that these standards are being met.

- **Maintenance of Navigable Waterway and Sediment Movement**

Sediment accumulation over time may eventually reduce the depth of the entrance channel and waterway such that navigability is affected. This will be monitored by bathymetric survey at a frequency to be determined by DMH. In the event that the depth is found to be insufficient, maintenance dredging will be undertaken by the Waterways Manager.

- **Navigation Aids**

The Waterways Manager will be responsible for the installation and maintenance of navigation aids within and leading to the waterway.

- **Drainage**

All private lot drainage will be contained on site. Drainage from roads and other public areas will be discharged into infiltration basins within the development area. Allowance will be made for discharge to the Fascine in the event of extreme storm events.

- **Public Access to Development**

Public access will be provided to all parts of the waterway, and to all designated open space within and adjacent to the development. South of the tramway bridge all foreshores will be accessible to the public. North of the tramway public foreshores will be located at both ends of the tramway bridge, at the western end of the proposed causeway bridge and at the northern end of

the waterway adjacent to the South Arm levee. The frontages of canal lots will be private.

The management plan will define the type of access to be provided to each area, e.g. footway, cycleway, etc., the location of parking areas and the responsibility for their on-going maintenance.

- **Monitoring Programme**

Water quality in the Fascine

Water quality of the Fascine will be monitored on a regular basis for a range of physical and chemical parameters in order to confirm that appropriate water quality criteria are being met.

In the event that water quality is found to be inadequate the Shire will undertake whatever steps are necessary to achieve the required standard.

Sedimentation in the Fascine

The depth of the Fascine waterways and lateral movement of the navigation channel will be monitored by an annual hydrographic survey.

Maintenance dredging of the navigable channel/Fascine entrance will be the responsibility of the Waterways Manager. This responsibility may in part, however, be deferred to the Carnarvon Yacht Club Inc. under an agreement to develop a deeper water entrance and basin for the yacht marina. Responsibility for the maintenance of navigable channels in those parts of the Fascine developed for residential use will be the responsibility of the Shire of Carnarvon.

Canal walls

The condition of the canal wall and other retaining structures will be confirmed by annual survey undertaken by a qualified civil engineer.

The Shire will undertake to ensure that all structures are maintained by the owners to the required standard.

- **Contingency Plans**

Fuel and oil spills

The proposed waterways development will not incorporate any fuelling facilities and hence the potential for a significant fuel spill in this area is

minimal. Should the yacht club propose to incorporate fuelling facilities in their proposed marina facility, the club will be required to prepare an oil spill contingency plan to the satisfaction of the EPA on advice from the DMH.

Storm and flood damage

A storm damage contingency plan will be documented identifying responsibility for the repair of canal walls as a result of storm damage, and for maintenance dredging in the event that unforeseen sedimentation of navigation channels occurs.

2.2.2 Babbage and Whitlock Islands Foreshore and Conservation Reserve Management Plan

The Babbage and Whitlock Islands foreshore and conservation management plan will be developed and implemented by the Shire of Carnarvon.

- **Public Access**

Public access to foreshore and conservation areas will be provided in a managed form consistent with protecting the natural habitats of Babbage and Whitlock Islands. The management plan will define the location of these accessways and the method of construction appropriate to each location or habitat.

- **Environmental Management**

Non-navigable waterways - Oyster Creek

Oyster Creek will be maintained as a flushing, non-navigable waterway. To ensure that the depth and ratio of intertidal to subtidal sands is maintained the profile of the upper reaches of the stream bed will be monitored. When necessary the channel and sand banks will be re-shaped to maintain flushing.

Management of mangroves and wet samphire

The principal threat to the mangrove and intertidal samphire areas is seen as uncontrolled access. To ensure that such access does not result in the destruction of these habitats it will be necessary to define appropriate walking trails, elevated where necessary, to prevent damage to pneumatophores and interference with natural drainage patterns.

3 POST CONSTRUCTION - IMPLEMENTATION OF THE OPERATIONAL MANAGEMENT PLANS

The on-going waterway and conservation area management plans will be implemented by the Proponent at the conclusion of the construction phase.

A review of all activities carried out will be undertaken three years after the completion of the marine-based components of the development, making recommendations for any necessary amendments to the management programme. A similar review will be carried out at the end of the fifth year which will also identify the need for any ongoing monitoring.

An annual report will be submitted annually to the EPA detailing the previous year's monitoring, and recommendations for ongoing management and monitoring.

The following items will be reported:

3.1 Fascine Waterways Management Plan

- the results of the annual bathymetric survey and the need for any maintenance dredging detected by that survey;
- the results of the water quality monitoring programme and the need for any action required to improve water quality; and
- the results of the annual survey of retaining wall and other marine structures, and the need for any maintenance identified as a result of that survey.

3.2 Babbage and Whitlock Islands Foreshore and Conservation Reserve Management Plan

- the implementation of the management proposals contained within the management plan;
- the results of the monitoring of the condition of the mangrove and wet samphire communities and the bed profiles of Oyster Creek; and
- management actions recommended to remedy any adverse impacts detected.

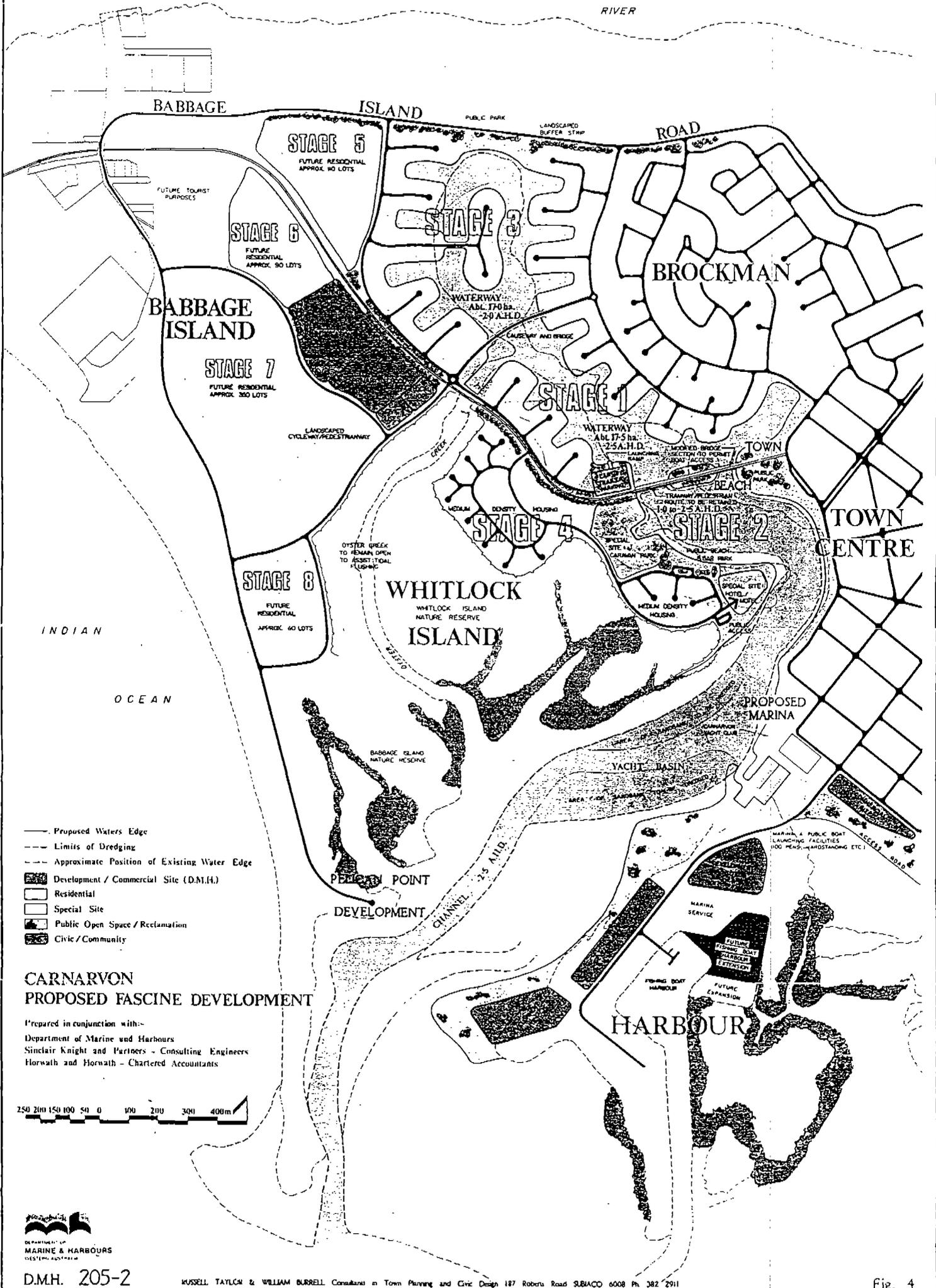


Fig. 4