

POLICY NO. DC 6.1

COUNTRY COASTAL PLANNING POLICY

BACKGROUND NOTES

1. Many State departments play a role in the administration of the coastal zone. With increased emphasis on coastal management in the last decade, attempts have been made to draw on the expertise of specialists in the following activities:
 - Subdivision and development control
 - Management of coastal waters and estuaries
 - Reservation and management of Crown land
 - Sale and leasing of Crown land
 - Coastal engineering and port administration
 - Soil conservation
 - Provision of access
 - Mining and resource development administration
 - Tourism and recreation administration
2. Coastal erosion problems have for many years focused attention on the need for coastal management. The urgency of such problems led in 1974 to the establishment of a Cabinet Sub-committee on Beach Erosion, together with an Advisory Committee of senior departmental representatives, who authorised the establishment of a research organisation within the Public Works Department. Major erosion repair initiatives at Mandurah and Busselton and a range of minor repair or control activities were handled in succeeding years, until it became apparent that Environmental Protection Authority (E.P.A.) initiatives from 1975 onwards could lead to a broader concept of coastal management.
3. In 1977 the E.P.A. published its "Guidelines for an Environmental Protection Policy on the Coastal Zone of Western Australia". The guidelines were intended to lead to the preparation and implementation of a statutory Environmental Protection Policy. The potentially far reaching consequences of the proposals contained in the guidelines aroused considerable interest and concern. In 1978 following a period of submissions and debate, the situation was referred by the E.P.A. to the Conservation and Environment Council for review.
4. The Council recommended the formation of an interim steering committee. The Coastal Planning Steering Committee together with a specially appointed Coastal Adviser carried out a comprehensive review of coastal planning and management in Western Australia. The study adopted broad terms of reference and thoroughly examined all aspects related to the coast, and led to the formation in September 1982 of the Coastal Management Coordinating Committee.
5. The Committee presently comprises representatives of the following State agencies:
 - State Planning Commission
 - Department of Marine and Harbours
 - Department of Agriculture
 - Environmental Protection Authority
 - Department of Land Administration
 - Department of Local Government
 - Department of Conservation and Land Management
 - Western Australian Tourism Commission
6. The Committee advises Government through the State Planning Commission on coastal planning and management issues, acts as a steering committee for the preparation of coastal plans and coordinates departmental activities on the coast through exchange of information and views. The Commission has adopted general principles for coastal development. These objectives and associated policy guidelines follow.

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CONTENTS:

1. Introduction
2. Objectives
3. Policy Requirements
 - 3.1 General Development Principles
 - 3.2 Land Use Priorities
 - 3.3 Coastal Land Tenure
 - 3.4 Ecology of the Coastline
 - 3.5 Visual Amenity
 - 3.6 Land Preservation
 - 3.7 Soil Protection
 - 3.8 Water Quality
 - 3.9 Pedestrian Access
 - 3.10 Roads and Parking
4. Procedure
 - 4.1 Foreshore Management

1. INTRODUCTION

- 1.1 Management problems along the coast arise from the inherent fragility and sensitivity of some coastal environments, from land use pressure and conflicts and from simple mistreatment and ill-advised development.
- 1.2 The goal of coastal planning and management is to achieve a balance between the protection of environmental quality and provision for the social and economic needs of the community.
- 1.3 The State's concern with coastal planning and management is not one of purely environmental management. Substantial financial costs are incurred when environmental processes are ignored and it is the State Government's responsibility to reduce these costs, and the ultimate burden on the taxpayer, through wise use of land.
- 1.4 This policy is designed to provide a uniform approach to land use planning, development and subdivision of coastal areas of the State, outside the Perth metropolitan Region.
- 1.5 The policy is intended to assist local government, developers and planning consultants by providing a set of general guidelines which set out the Commission's approach.
- 1.6 The policy is intended primarily to deal with new development and subdivision and may not always be applicable to areas previously developed and subdivided.
- 1.7 For the purposes of this policy, the coast is defined to include the coastal waters to a depth of 30 metres, reefs, estuaries, tidal rivers and land which is presently subject to coastal processes such as mobile sand dunes, areas inundated by storm surge and vegetated foreshore areas exposed to onshore winds. In addition to the above the coast includes a fringe of stable land suitable for coast-related activities .
- 1.8 While the policy establishes general guidelines it needs to be emphasised that the application of generalizations in coastal planning can lead to serious difficulties. Consequently each case should be considered on its merits.
- 1.9 The policy is not intended to place onerous development conditions on remote settlements in the State but favours a flexible, common sense application.

2. OBJECTIVES

- To encourage orderly and balanced development on and adjacent to the coast consistent with the protection of coastal resources.
- To protect, conserve and enhance, as appropriate, coastal resources.
- To permit public access to the coast consistent with the protection of coastal resources

3. POLICY REQUIREMENTS

3.1 GENERAL DEVELOPMENT PRINCIPLES

The Commission has adopted the following general principles for development on the coast.

- 3.1.1 Development should be concentrated in nodes, preferably at existing settlements. Linear expansion of towns along the coast should be avoided.
- 3.1.2 Development should be separated from the coast by a foreshore reserve.
- 3.1.3 Development should provide for public access to the foreshore.
- 3.1.4 Development should not reduce the visual amenity of the foreshore.
- 3.1.5 Development should not cast shadows on the beach, or increase wind velocities by means of the venturi effect.
- 3.1.6 Development should provide, at each stage, water, sewerage and drainage to the requirements of the relevant authority and compatible with the overall service planning for the locality.
- 3.1.7 Development should not result in discharges such as sewerage, drainage, fertilisers or toxic chemicals, nor in changes to water circulation patterns which would have an adverse impact on the ecology or public use of the foreshore areas.
- 3.1.8 Development such as marinas or residential Canal Estates should be considered as special cases which require specific and detailed studies. The Department of Marine and Harbours should be consulted and the Government's Recommendations for the Development of Canal Estates should be followed where applicable.
- 3.1.9 Development of mines and related mineral land uses an important element of coastal is an important land use. The location of a mineral deposits is fixed, and is beyond the capability of planning to alter. Social, environmental and economic factors dictate whether minerals will be mined or not. The rehabilitation of mine areas should comply with the requirements of the Department of Mines and the Environmental Protection Authority.

3.2 LAND USE PRIORITIES

Some uses are beyond the ability of planners to alter. Unique natural and scenic areas with potential to attract tourists, and mineral deposits with potential for economic gain occur on the coast. Such areas are developed or conserved in response to social and economic forces. The Commission has adopted the following principles for the allocation of coastal land

- 3.2.1 To give priority to coastal dependent developments over non-coastal dependent developments, i.e. uses of land and water that by their very nature require coastal sites .
- 3.2.2 Urban and built developments will normally be ordered as follows:
 - Essential services, e.g. ports, harbours and marine industries.

- Service facilities dictated by topographic constraints, e.g. drains, wastewater treatment plants and water supply tanks.
- Public recreation and amenity.
- Private residential.
- General industrial and commercial.

3.3 COASTAL LAND TENURE

Water, wind and wave erosion is occurring along sections of the Western Australian coast. Without sound coastal planning some coastal properties will be eroded over time and buildings and other developments on these may be at risk in the short, medium and long term.

- 3.3.1 Fortunately much of the coastline is in public ownership. This situation should continue, and Crown land should remain as reserves or be leased, rather than being sold.

3.4 ECOLOGY OF THE COASTLINE

Many coastal environments are inherently fragile and sensitive, and are subject to more change than most other terrestrial areas. Scientists have predicted that atmospheric temperature will rise owing to the build up of gases in the atmosphere, i.e. the greenhouse effect. State departments will monitor such changes and will take whatever action is necessary. The Commission considers the following guidelines should be observed:

- 3.4.1 Permanent structures should be located on stable landforms. (i.e. landforms not under existing or potential erosion threat) and should be subject to adequate management .
- 3.4.2 Development should not substantially alter existing natural drainage patterns, nearshore sediment transport patterns, and water quality.
- 3.4.3 Coastal waters support primary food production upon which fish and other marine fauna and flora depend. Their habitats, and particularly areas of high biological productivity, should be protected.
- 3.4.4 Disturbance to vegetation should be minimised and regeneration of appropriate stabilising cover around new developments should be required.
- 3.4.5 Natural regeneration and the use of indigenous species should be encouraged.
- 3.4.6 Places of unique landscape, scientific and cultural significance should be conserved and managed, including geomorphological, ecological, anthropological and historical sites.
- 3.4.7 Beaches which provide nesting for marine reptiles, mammals and sea birds should be protected.
- 3.4.8 Off-road-vehicles should, where possible, be kept from degrading vegetation in coastal dunes.

3.5 VISUAL AMENITY

Some human impacts blend with the natural coastal landscape, e.g. Busselton jetty, or create an attractive developed landscape, e.g. Yanchep marina.

Adherence to the following general guidelines will improve the appearance of coastal development:

- 3.5.1 Views of the coast should be either protected or enhanced. Particular attention should be given to areas viewed from major coastal viewpoints, scenic routes and pathways, public recreation areas and the water.
- 3.5.2 The coast's distinctive visual elements should be protected or enhanced. The forms, lines, colours and textures of the landscape should be analysed, focusing on landform, water, vegetation and the land use. Development should harmonise with the landscape elements in siting and design, particularly in regard to scale, height, colours and materials.
- 3.5.3 Development should take into account the varying ability of portions of the coast to visually absorb changes.
- 3.5.4 Development should be set back from visually prominent sites such as headlands, ridgelines, cliffs, beaches and other locations which are the focus of attention, unless such a location is essential (e.g. ports, lighthouses).
- 3.5.5 To avoid intrusive development, the following should be considered
- No building within 500 metres of the coast, shall exceed 12 metres in height unless it is approved by the State Planning Commission. For the purpose of this policy 'height' means:
'the vertical measurement taken between the mean point of the natural ground level within the area occupied by a structure and the highest point of the roof vertically above that point on the ground, excluding minor vertical projections such as chimneys and vent pipes.'
 - Services along the beachfront should be underground, where appropriate.
 - Signs should be limited in number and not dominate or block coastal views. They should be of a simple, easy to read design, and make use of materials and colours which blend with the setting.
 - Major industrial and commercial facilities should only be located on the coast where necessary, and their location and design should be compatible, with natural landforms, vegetation and surrounding land uses. Such uses should generally be located within existing commercial or industrial landscapes rather than in rural or natural settings.
 - Alterations to natural landforms, e.g. cutting, filling, grading, excavating or

other vegetation removal should be minimised, and the landscape later restored to its former appearance (unless the change creates a feature worthy of retention, such as use of quarries for recreation).

- vi) Service facilities such as water tanks, drainage outfalls, etc., whose position is dictated by physical constraints should be designed and constructed in such a manner as to minimise any undesirable impact on the landform.
- vii) Isolated structures, such as toilet blocks, should be unobtrusively located and designed.
- viii) Settlements and other groups of structures should be sited and designed in accordance with the above general principles and in addition should present a unified, cohesive appearance.
- ix) Settlements and other structures should be located where similar development already exists. Ribbon development should be avoided, to prevent total alteration of the landscape.
- x) Roads and car parks should blend with their setting. Cut and fill should be minimised, natural contours followed and vegetation removal minimised. Scenic routes at lookouts, and car parks should receive particularly detailed attention. The views from roads should also be considered and scenic roads designed to offer a variety of viewing experiences.

3.6 LAND PRESERVATION

Permanent development and subdivisions should be set back from the coast because of the susceptibility of coastal landforms and soils to wind, wave and water erosion, to allow space for public amenity, and to protect features of natural, scientific, visual and cultural significance.

3.6.1 On SANDY COASTS the following criteria should be used in determining appropriate setbacks:

- i) A setback of 100 metres should be regarded as a guideline for a wind erosion buffer and for public recreation purposes where landforms are stable. Setbacks will be greater where there is evidence of coastal recession and where landforms are unstable.
- ii) The line of permanent vegetation should be used as a datum for setbacks. The Commission will decide on the position of the vegetation line, in consultation with the Departments of Agriculture and Marine and Harbours and the responsible local government.
- iii) The setback should also be assessed in relation to the stability of the landforms

to wind and wave erosion, ecological considerations and public recreational requirements.

- iv) Where the coast is receding, the reserve should comprise a recession component in addition to the basic setback for wind erosion and public recreation.
- v) The recession component shall be calculated using a 100 year planning time frame, as follows:

$$\text{Recession Component} = \text{average annual net erosion rate} \times 100$$
- vi) The width of the setback shall be determined to the satisfaction of the Commission based on the advice of the Departments of Agriculture and Marine and Harbours, and the responsible local government.
- vii) The land comprising the setback should be given up and reserved under Section 20A of the Town Planning and Development Act or suitably reserved under the Land Act where Crown Land is involved. The reserved land shall be vested in the relevant local government for the purposes of foreshore management and recreation.

3.6.2 The State will not be held responsible for property losses where land capability advice has been ignored.

3.6.3 While ROCKY COASTS are far more stable than sandy coasts, they require adequate setbacks to ensure that recreation public amenity and visual resources are maintained. As a general guideline, a horizontal setback of 100 metres from the cliffline shall be required.

3.6.4 In determining ESTUARINE SETBACKS the following factors should be considered:

- i) Tidal and flooding characteristics which influence the position of the high water mark.
- ii) The changeable nature of estuary mouths
- iii) The role of fringing vegetation as a biological filter in maintaining water quality.
- iv) The need for conservation and recreation areas, i.e. wetland protection.
- v) The need for a buffer zone at the water/land interface to allow for changes in bank alignment.

Owing to the extreme variability of estuaries in form and process, the Commission shall determine the setback width, based on advice from the Departments of Marine and Harbours and Agriculture, the Waterways Commission and the responsible local government.

As a general guideline, urban and residential land uses shall be kept above the 100 year flood level; agricultural land uses requiring major structures or land fill are generally unacceptable within the 100 year flood level.

A 50 metres setback from the mean water level has been used in the past and should continue in the future for foreshore reserves, but may vary depending on the topography and special circumstances of the particular site.

3.7 SOIL PROTECTION

Soils situated on parent rock and subject to coastal influences are susceptible to degradation if the covering vegetation is removed. Similarly, unconsolidated dune sands may be quickly degraded if vegetation is disturbed or removed.

To protect coastal soils, the Commission recommends that the following principles be adopted:

- 3.7.1 Siting, design and construction of any structure should minimise disturbance to soils and vegetation.
- 3.7.2 Development should not occur on or adjacent to unstable or mobile dunes.
- 3.7.3 Where any construction is proposed on unconsolidated dunes or sandsheets, a stabilisation and rehabilitation plan shall be required to the satisfaction of the relevant authorities.
- 3.7.4 Topsoil shall be stockpiled (for as short a time as possible) and respread on bare areas.
- 3.7.5 Development may need to be prohibited during certain times of the year when wind transport rates are high.
- 3.7.6 Livestock should where possible, be kept from grazing in coastal dunes.

3.8 WATER QUALITY

Runoff and discharges degrade coastal water quality. Silt loads from any sources result in sedimentation and increased turbidity, which may be damaging to estuarine and mangrove systems.

- 3.8.1 Enclosed water bodies (bays, estuaries, lagoons and marshes) are more susceptible to damage than the open sea, and can become eutrophic if faced with excessive nutrient loads. To reduce water quality problems, the Commission considers the following management practices are required of developments which will have an effect upon coastal, river or wetland environments:
 - i) Sediment movement towards and into water bodies should not be increased above the natural existing level.
 - ii) Polluted and contaminated runoff should be treated at source.

- iii) Well-vegetated margins of water bodies should be maintained to act as nutrient and sediment filters.
- iv) Waste discharges into enclosed or poorly circulated water bodies shall be eliminated.
- v) Reticulated wastewater collection systems should be provided. The level of treatment to be adopted shall in each case be determined in consultation with the Water Authority of Western Australia and any other interested agencies.
- vi) Where on-site septic effluent treatment and disposal systems are proposed, account must be taken of sod depth, sod absorption rates, soil absorption ability and whether the superficial water table is in hydrologic connection with the sea and enclosed water bodies.
- vii) Waste disposal facilities such as rubbish tips or transfer stations, septic tanks, liquid and industrial waste holding areas, shall be separated from the sea.
- viii) Stormwater drainage disposal should where possible be provided on-site with no drainage outlets onto the beach. Where a beach outlet cannot be avoided the type of structure to be provided shall be determined in consultation with the appropriate authority taking into consideration not only the environmental and visual factors but also the design factors and their practical implications.
- ix) Land uses within a catchment area which could potentially pollute coastal, estuarine and water body systems, should be prohibited.

3.9 PEDESTRIAN ACCESS

While the Commission supports the principle of permitting public access to the coast it is mindful that uncontrolled access along a fragile coastline can lead to degradation and subsequent destabilisation.

Access should therefore be carefully planned, according to the following guidelines:

- 3.9.1 Fenced walkways should be provided to link coastal car parks, residential and other developments with adjacent beaches. Walkways should be spaced at least 150 m apart, unless the intensity of use or the topography require more paths.
- 3.9.2 In residential areas where private allotments back onto the foreshore reserve, a fenced walkway should also be provided along the rear of the allotments to facilitate the guiding of pedestrians and to prevent haphazard crossing of the dunes. Additionally, such a walkway acts as a firebreak.

- 3.9.3 Paths should be located to direct people away from environmentally sensitive areas.

3. 10 ROADS AND PARKING

While the Commission accepts the use of motor vehicles in gaining access to the coast, roads and car parks can have adverse environmental impacts.

Historically, in some parts of the State, the practice has been to construct roads parallel to the coast on or close to dunes. The Commission favours the principle of major roads being set back from the coast with minor spur roads and associated car parks providing access to the coast at the most suitable locations.

Inappropriate construction methods and locations may result in runoff and eroded material being deposited in rivers and estuaries, thereby causing siltation. High noise levels can reduce amenity and scenic areas can be degraded by road construction.

Road and car park construction and siting should pay particular attention to:

- 3.10.1 The provision of adequate drainage to avoid runoff.
- 3.10.2 Avoiding locations on unstable or potentially unstable land.
- 3.10.3 The siting and design of associated amenity buildings to make them unobtrusive.
- 3.10.4 Providing fencing along roads and car parks and controlled walkways to prevent random pedestrian and vehicular access through coastal landforms.
- 3.10.5 The provision of access appropriate to the type of recreational experience considered desirable (e.g. easy access for intensive use sites, little or no access for wilderness areas).

4. PROCEDURE

4.1 FORESHORE MANAGEMENT

Subdivision and development along the coast or estuaries normally results in increased recreational use of their foreshores, which may lead to significant degradation of the land.

- 4.1.1 The Commission therefore considers that a foreshore plan (for at least the land given up under Section 20A of the Town Planning and Development Act or the coastal reserve) should be prepared and implemented by the proponents, to the satisfaction of the Commission and the relevant local government and where appropriate the waterways management body.
- 4.1.2 The plan should relate to the coastal strip adjacent to the subdivision and should show the following information where it is applicable: cadastral and contour information; natural resources as appropriate (e.g. soils, vegetation, drainage, geology, geomorphology, wind directions, permanent vegetation fine, degraded areas, hydrology and groundwater); as well as including

information on existing uses and their problems and suitability.

- 4.1.3 The plan shall include management and implementation proposals (i.e. pedestrian and vehicular access, parking, erosion control, dune restoration, signposting, fencing and future reserve maintenance).
- 4.1.4 The developer shall either implement the basic management requirements or contribute to the shire doing the work.