



Department of
Transport

Coastal Protection Policy for Western Australia

A Department of Transport Operational Policy





Town Beach, Esperance 2008

Table of Contents

1. Citation	4
2. Background	4
3. Policy Context	5
3.1 <i>Managing the Coast of Western Australia</i>	5
3.2 <i>National Context</i>	5
4. Application of the Policy	6
5. Policy Purpose	6
6. Policy Aim	6
7. Policy Principles	6
8. State Role and Responsibility in Coastal Protection	7
8.1 <i>Preamble</i>	7
8.2 <i>Policy Objectives</i>	7
8.3 <i>The Department of Transport's Role in Coastal Protection</i>	7-8
9. Coastal Protection Policy Measures	8
9.1 <i>Emergency Coastal Protection Works</i>	8
9.2 <i>Permanent Coastal Protection Works</i>	9
9.3 <i>Maintenance of Coastal Protection Structures</i>	9
9.4 <i>Ownership of Coastal Protection Structures</i>	10
9.5 <i>Sand Bypassing of Maritime Developments</i>	10
9.6 <i>Data Collection and Management</i>	10
9.7 <i>Coastal Land Use Planning</i>	10
10. Policy Implementation	10
11. Definitions	11

Port Beach, Fremantle 2003



Citation

The Department of Transport (the Department) administers the maritime statutes for Western Australia. Through these statutes, the Department has the task of facilitating coastal protection works and associated matters on behalf of the State Government, as well as ensuring compliance with statutory requirements.

2. Background

Most West Australians live close (or relatively close) to the coast. They view it as an important community asset and assume a right of public access to its beaches and waters. Indeed, the vast areas of coast set aside as reserves demonstrate the strong commitment of successive governments to ensure that the coast is available for all West Australians to enjoy.

The State's coast is vital to the economic and social well-being of West Australians and has the potential to continue the current growth of the State's economy and population.

The State's agricultural, fishing, industrial and mineral related products require transport access through its sea ports; while the reefs, beaches, cliffs, estuaries and mangroves are biologically diverse and have high environmental value.

These areas are also the focus for commercial, residential, recreational and tourism activities.

Like all coastlines, the WA coast is subject to constant change through erosion and accretion. There are a number of places where development has been allowed close to the active zone where erosion or recession of the shoreline will affect public or private assets.

Most future developments in WA will have a foreshore buffer zone to absorb this erosion, but there is still a need to provide coastal protection; for example, where:

- existing development is under threat;
- older coastal stabilisation structures are deteriorating;
- management strategies require ongoing input;
- future development requires a coastal location (eg ports and harbours); and
- extreme events (eg cyclones and extreme storms) can cause infrequent damage.

In addition, changes in circumstances such as increases in population and a rise in the sea level resulting from Greenhouse effects can also leave the coast more vulnerable to erosion.

The Department of Transport has a wide coastal management role that is a direct outcome of its statutory responsibilities. In addition to the planning function, it is also responsible for providing maritime facilities and for marine safety. As a result of this latter role, the Department maintains coastal engineering skills, maritime knowledge and information and is responsible for advising government on the broader engineering aspects of coastal zone planning and management.

This policy has been developed over time in accordance with Government directives and in consultation with local governments and their representative bodies. The aim of this policy is to clarify the overall approach of the State Government in the provision of works to protect the coast.

Cottesloe Beach, Perth 2007



3. Policy Context

3.1 Managing the Coast of Western Australia

There is no specific coastal management legislation in Western Australia. Instead, the State Government involves itself in coastal management through the functions of its agencies: such as land use planning, land management, environmental protection, transport, infrastructure development, primary industry and mining.

Since the early 1970s, Western Australia has used a 'networked' approach to coastal management through a central non-statutory coordinating body (currently the Coastal Planning and Coordination Council, a committee of the Western Australian Planning Commission) backed by Cabinet-endorsed policies.

Local governments have the on-site management responsibility for large tracts of coastal land through their management of coastal reserves for recreation, including day-to-day management of beach access, litter control, public health and so on. They have also had an active role in planning the development of coastal land. Hence, local governments historically have had, and continue to have, a partnership with the State Government in managing the State's coast.

The State has a whole-of-government Coastal Zone Management Policy, which provides the framework for setting strategies and plans for the coast. The WA Planning Commission (WAPC) has developed a State Coastal Planning Policy (Statement of Planning Policy No 2.6), which includes provisions to guide and direct planning for the sustainable use of the coast.

This Coastal Protection Policy is consistent with the broader whole-of-government policy and the more specific WAPC State Coastal Planning Policy.

3.2 National Context

During the 1990s, most Australian States had major examinations of their coastal management programs. Victoria has implemented change through its *Coastal Management Act 1995*, which created a Coastal and Bay Management Council.

Tasmania has developed a State Coastal Policy under its Sustainable Development Advisory Committee.

Queensland has proclaimed its new *Coastal Protection and Management Act 1995* and is working to produce a State Coastal Plan.

The outcomes of these reviews are very different, and reflect the administrative, political and, to some extent, cultural differences between States. Nevertheless, there are some common themes in these reforms including:

- adoption of a state-wide coastal strategy, policy or legislation;
- inclusion of coastal management objectives based on sustainable development principles;
- creation of a central coordinating body, generally with an advisory function; and
- implementation of the strategies/policies/legislation and objectives through a range of statutory and non-statutory planning instruments or regulations at regional and/or local level.

Historically, Commonwealth Government policies and legislation relating to coastal zone management have been indirect; though the Commonwealth has recently expressed an interest in taking a more direct role.

Constitutional powers cover:

- navigation aids for interstate and international shipping;
- fisheries and marine protected area planning in Australian waters beyond the three nautical mile limit; and
- external affairs, including international conventions and agreements.

The reports of the Inter-governmental Panel on Climate Change show a need to plan for a rising sea level and changing weather conditions, with coastal protection as one of the options available to combat the threat to community assets.

4. Application of the Policy

The Coastal Protection Policy applies to the coastline immediately adjacent to the ocean of Western Australia. It excludes estuarine and riverine waters that are under the management control of the Department of Environment and Conservation and the Department of Water. Authority for expenditure to assist local governments carry out coastal protection work is currently only through ministerial direction under Section 5(1)(k) of the *Marine and Harbours Act 1981*, being ancillary functions relating to marine affairs within the State, not inconsistent with this Act.

Data collection is generally authorised as background to specific projects related to facilities or marine safety under the *Marine and Harbours Act* and the *Marine Navigation Aids Act 1973*.

Control of the form, location and quality of coastal structures that influence erosion is exercised (for limited structure types) under the *Jetties Act 1926*.

5. Policy Purpose

The purpose of this policy is to articulate clearly the roles and responsibilities of the State Government in providing engineering works and associated support services – in essence, how, when and where areas of the coast are to be protected from ocean forces. Also clarified is the role of coastal protection within the State Government's broader approach to coastal management, and how this relates to the Department of Transport.

6. Policy Aim

The aims of this Coastal Protection Policy are to:

- ensure the provision of the appropriate level of advice and assistance to coastal managers investigating and recommending coastal protection solutions;
- ensure that valuable coastal assets, whether natural or constructed, are protected from the unwanted impacts of ocean forces ;
- ensure the adoption of the most appropriate and cost-effective interventions to protect coastal property at risk of damage from sea erosion;
- provide support to broader coastal management policies of the State: and
- formalise the approval of the Minister to undertake the task in accordance with Section 5(1)(k) of the *Marine and Harbours Act 1981*.



Watermans Bay, Perth 2011

7. Policy Principles

The specific principles that guide this Coastal Protection Policy are to:

- minimise the need to interfere with natural coastal processes;
- undertake coastal protection works only if the benefits outweigh the cost;
- ensure that the direct beneficiaries of coastal development carry all consequential costs;
- ensure that the coast continues to be available for the benefit of the whole community;
- ensure that local coastal managers receive proper guidance and assistance to solve their coastal protection problems;
- establish that coastal protection is a partnership between the State and local coastal managers, with the lead taken by the local coastal managers; and
- ensure that the most appropriate coastal protection technologies are considered.

8. State Role and Responsibility in Coastal Protection

8.1 Preamble

In preparing this policy, it is recognised that there is no specific statute allocating any responsibility to the State to provide protection against sea erosion. The State has no general obligation to protect private property from sea erosion, and no general obligation to protect state lands from erosion.

Generally, the State Government will fully fund the protection of its own assets, providing the cost is justified. Foreshore lands vested in local government are controlled and developed by the respective local authorities and, generally, any foreshore protection provided is to protect those local government assets. These may be built assets, the useable beach, an area of environmental importance, and so forth. As a rule, the State Government has not provided erosion protection for private property.

The State Government, through its various agencies, provides advice and assistance in relation to coastal protection because it recognises that:

- In many cases, the need for protection arises because development has been allowed too close to an eroding shore. In some cases, these decisions were made prior to local government authorities acquiring a voice in the development approval process.
- Individual local authorities cannot maintain an expertise in coastal engineering, nor collect and maintain the necessary data. In this regard, providing specialist technical assistance has been seen as a community service obligation of the State Government.
- The costs of coastal protection works can be high and historically the Government has been prepared to subsidise the local government authority in this area.
- In some cases, although they are primarily local community assets, beaches and foreshores are enjoyed by the wider community.

It should be recognised that the advice and assistance provided by the Department and its predecessors has been authorised through ministerial directive rather than as a result of legislated powers.

8.2 Policy Objectives

The State Government has a continuing role in coastal protection and its objectives in this regard are to ensure:

- the protection of broad public interest;
- equity across the State in providing expertise and funding;
- the consistent application of coastal protection principles state-wide;
- the adequate monitoring and understanding of local coastal processes;
- repair and prevention of the adverse impacts resulting from construction of coastal works in which State bodies have played a significant role; and
- adequate resources for coastal protection from all spheres of government, private individuals and the private sector.

8.3 The Department of Transport's Role in Coastal Protection

The Department's coastal protection capability is linked to its statutory responsibilities for the provision of maritime facilities and for marine safety. These require the acquisition, analysis and presentation of data measuring the physical characteristics of the maritime zone. This allows maritime works and planning decisions to be based on adequate local information, thereby ensuring better designed coastal facilities, the protection of property and improved personal safety.

Both the coastal management databases and the expertise, which have been developed through the Department's statutory role, provide information that is useful for other managers, developers and users of Western Australian coastal resources. The provision of information includes guidance on accommodating physical processes to ensure that development is set back from coastal processes. This information assists the WAPC and local governments in decision-making on the coast.

This role of a broad information provider and standard setter to the Western Australian community has increased in recent years along with demand for use of the coast.

The Department coordinates the provision of coastal works to protect coastal land and property from erosion by the ocean. This role is fulfilled by working in partnership with those local managers who are responsible for day-to-day care and control of coastal resources. The Department provides expertise, advice and information to local land managers on coastal protection matters and, where appropriate, is the State Government conduit for financial assistance for coastal protection works.

The Department's role includes being the direct provider of specialist coastal protection advice, as well as ensuring that the State's concerns are dealt with adequately by other public or private technical experts in relation to approval of coastal development or coastal protection works.

According to the level of risk to coastal assets, the Department's input will range from providing advice in areas of low risk, maintaining a 'watching brief' over coastal areas which have a higher level of risk but little immediate threat and through to intervention in areas of high risk. For assets with high risk, the Department will give priority to their protection works being part of the funding program for that financial year. Those coastal assets assessed to have a level of risk that may require works within five years will be included in the Department's forward planning program.

9. Coastal Protection Policy Measures

The policy measures are grouped into six main policy areas.

9.1 Emergency Coastal Protection Works

Emergency coastal protection works are works necessary to protect coastal assets at immediate risk of damage from coastal erosion. The State Government, through the Department of Transport, will provide the following assistance for emergency coastal protection works:

- 9.1.1 funding for up to 50 per cent of the cost of planning, investigation, design and construction of emergency coastal protection works — subject to funds being available and the local coastal manager accepting responsibility for providing the remaining 50 per cent**;
- 9.1.2 access by the local coastal manager to data held by the Department; and
- 9.1.3 technical advice and assistance from the Department's staff to the local coastal manager.

For emergency coastal protection works to be eligible for assistance, the following conditions shall be met:

- 9.1.4 assets must be at immediate risk from erosion;
- 9.1.5 local coastal managers shall be responsible for initiating and managing emergency coastal protection works;
- 9.1.6 the local coastal managers shall accept ownership of the protection works;
- 9.1.7 prior approval for the works be given by the Department, and such approval will require compliance with industry best practice;
- 9.1.8 the value of the assets at risk shall be equal to or greater than the cost of the works***;
- 9.1.9 the works must be designed primarily to halt the immediate erosion threat; and
- 9.1.10 the works must have minimal negative impacts and be capable of rapid deployment.

*(**Note: Funding assistance is limited to the immediate cost of the works, and does not include incidental costs such as Council on-costs, landscaping repairs, fencing etc.)*

*(***Note: In considering the value of the assets, monetary value is only one consideration, and the worth of less tangible benefits may also be considered, eg amenity, safety, usage, etc.)*

9.2 Permanent Coastal Protection Works

Permanent coastal protection works are works undertaken to provide long-term erosion protection for areas at risk from sea erosion. Works include sand nourishment with or without holding structures. The State Government, through the Department, will provide the following assistance for permanent coastal protection works:

- 9.2.1 up to 50 per cent of the funding for planning, investigation, design and construction of public coastal protection works — subject to funds being allocated through the normal State budgetary process and the local coastal manager being formally committed to providing the remaining 50 per cent**;
- 9.2.2 funding assistance for up to 50 per cent of the cost of necessary data collection, where this is additional to the Department's routine data collection program;
- 9.2.3 access by the local coastal manager to data held by the Department; and

9.2.4 technical advice and assistance from the Department's staff to the local coastal manager.

For coastal protection works to be eligible for assistance, the following conditions shall be met:

9.2.5 local coastal managers shall be the proponents of permanent coastal protection works;

9.2.6 the local coastal managers shall accept ownership of the protection works;

9.2.7 there shall be approvals from all relevant statutory authorities;

9.2.8 prior approval for funding be given by the Department, and such approval shall be dependent on the works being professionally designed in accordance with industry best practice, fit for the purpose and cost-effective to the State. In addition, the impacts of the works on others shall be minimised;

9.2.9 the value of the assets at risk shall be equal to or greater than the cost of the works***; and

9.2.10 the works must have minimal negative impacts.

*(**Note: Funding assistance is limited to the immediate cost of the works, and does not include incidental costs such as Council on-costs, landscaping repairs, fencing etc.)*

*(***Note: In considering the value of the assets, monetary value is only one consideration, and the worth of less tangible benefits may also be considered, eg amenity, safety, usage, etc.)*

9.3 Maintenance of Coastal Protection Structures

Permanent coastal protection structures will require some degree of maintenance to ensure that they continue to perform effectively. The State Government, through the Department, will provide the following assistance for the maintenance of permanent coastal protection works:

9.3.1 up to 50 per cent of the funding for planning, investigation, design and works required for the reasonable maintenance of permanent coastal protection structures — subject to funds being allocated through the normal State budgetary process and the local coastal manager being formally committed to providing the remaining 50** per cent;

9.3.2 funding assistance for up to 50 per cent of the cost of necessary data collection where this is additional to the Department's routine data collection program;

9.3.3 access by the local coastal manager to data held by the Department; and

9.3.4 technical advice and assistance from the Department's staff to the local coastal manager.

For coastal protection works to be eligible for maintenance assistance, the following conditions shall be met:

9.3.5 local coastal managers shall be the proponents of the maintenance works;

9.3.6 the local coastal managers shall be the owners of the protection works;

9.3.7 there shall be approvals from all relevant statutory authorities;

9.3.8 prior approval for funding be given by the Department, and such approval shall be dependent on the works being professionally designed in accordance with industry best practice, fit for the purpose and cost-effective to the State. In addition, the impacts of the works on others shall be minimised;

9.3.9 the value of the assets at risk shall be equal to or greater than the cost of the works***; and

9.3.10 the works must have minimal negative impacts.

*(**Note: Funding assistance is limited to the cost of the maintenance of structures required for coastal protection, and does not include incidental costs such and Council on-costs, landscaping repairs, fencing etc.)*

*(***Note: in considering the value of the assets, monetary value is only one consideration, and the worth of less tangible benefits may also be considered, eg amenity, safety, usage, etc.)*



Town Beach, Busselton 2008

9.4 Ownership of Coastal Protection Structures

In relation to the ownership of coastal protection structures, the following shall apply:

- 9.4.1 local coastal managers shall have ownership of all future coastal protection structures and shall be responsible for their ongoing repair and maintenance; and
- 9.4.2 the ownership of existing coastal protection structures for which ownership is unclear will be negotiated between the State and local coastal managers. It is expected that ownership will be allocated to the public body representative of those gaining the most benefit from the structures.

9.5 Sand Bypassing of Maritime Developments

The natural supply of littoral sand is a resource shared by all West Australians. Accordingly, those benefiting from future works or developments that change the natural supply of that sand along the coast shall compensate for the change to that supply by:

- 9.5.1 the operators of ports or boat harbours or the waterway managers of canal estates being responsible for funding and carrying out artificial sand bypassing of the interrupted supply;
- 9.5.2 the party that best represents the majority of beneficiaries of other navigable ocean entrances being responsible for the funding of sand bypassing; and
- 9.5.3 the sand bypassing works at least replicating the natural net annual cycle, unless an alternative regime can be shown to provide greater benefit to downdrift interests.

For existing developments where the natural littoral drift of sand has been interrupted and where there has been no formal requirement for bypassing, negotiations will be held with the parties who best represent the majority of beneficiaries of those developments to seek a contribution to any sand bypassing which is now needed to preserve the downdrift coastlines.

9.6 Data Collection and Management

- 9.6.1 the State, through the Department, will collect and manage long-term data on ocean and coastal conditions to support sound coastal protection and coastal planning practices; and

- 9.6.2 this data (as referred to in 9.6.1) will be available to local coastal managers who provide public coast protection works or who are receiving funding from the State for either permanent or emergency coastal protection works.

9.7 Coastal Land Use Planning

The Department will provide technical advice to the coastal planners to ensure that:

- 9.7.1 future developments on the coast have adequate erosion protection for a 100-year planning period; and
- 9.7.2 impacts of future developments on the coast, which depend on a coastal location, are considered and managed.

10. Policy Implementation

It is expected that this policy will be implemented primarily and directly by the Department of Transport, but others may implement some aspects on advice from the Department. The following actions will be undertaken by the Department to implement this policy:

- investigation, design and construction of coastal protection works at selected sites where protection works have been made necessary by past public construction;
- control and standard setting for coastal protection works, through a works approval/licensing process and the publication of technical standards;
- collection, archiving, management and analysis of local information required for effective coastal management and protection (eg coastal processes, wave and tide data);
- facilitation of the collection of good quality coastal data by other parties;
- contributing to remediation of threatened coastal land where the State played a role in contributing to coastal erosion risk; and
- being a financial contributor on behalf of the State for its involvement with the construction/operation of coastal protection works.

11. Definitions

Since the terminology used in this paper can be interpreted in a number of different ways, the following definitions are adopted for the purposes of this departmental policy:

Coastal management: The direction of day-to-day activities, occurring on coastal land and nearshore waters, that have the potential to modify the physical or biological condition of the coast.

Coastal engineering: The applied science assessing the reaction of different coastal features to the forces of ocean and tidal waters.

Coastal protection: Works, either permanent or regularly repeated, which protect coastal assets from damage by sea erosion.

Local coastal manager: The corporate body with management of the land abutting tidal waters.

Ownership: Ownership (of maritime structures) implies responsibility for use, care and maintenance, rather than simple proprietorship of land.

Emergency works: Work, temporary or permanent, that solves an immediate coastal erosion problem.



Kwinana Beach, Perth 2007



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