INTERIM SEA LEVEL RISE ADAPTATION - Policy

Reason for Policy: Eurobodalla Shire Council, as a coastal local government authority, needs to recognise and manage exposure of our Shire to the potential impacts of sea level rise. The challenge is to develop long term planning strategies that reduce our exposure to risk while recognising and maintaining the social, economic and environmental value of our built and natural environments including beaches.

Planning for sea level rise requires long term management solutions. The current approach to managing the coastline in NSW is the development of comprehensive Coastline Management Plans that draw upon extensive consultation with the local community, Government agencies and experts within the field of identifying and managing coastal hazards. Council will need to work in partnership with all levels of Government to share the costs of undertaking the detailed studies that will lead to identifying longer term management options via the completion of Coastline Management Plans.

This Policy initiates the process of providing long term management options for our coastline and provides guidance on how sea level rise will be considered in the assessment of development applications in Eurobodalla Shire until such time as Coastline Management Plans are completed.

Introduction: This policy will provide a framework that allows Council to make a strategic response to the projected impacts of sea level rise in the Eurobodalla. The intent of this Policy is to provide Council with guidance on how the Sea Level Rise threat will be considered and managed.

Policy Details

This policy covers:
1. Policy Name
2. Objectives
3. Land to which this policy applies
4. Planning Period
5. Sea Level Rise planning Benchmark
6. Risk Categories
7. Planning Levels
8. Application of this Policy
9. Adopted Building Life
10. Adaptation Options
11. Planned Retreat
12. Engineered Property Protection
13. Planning Controls
   11.1 Immediate Risk Sites
   11.2 High Risk Sites
   11.3 Medium Risk Sites
   11.4 Low Risk Sites
14. Exclusions
15. Special Circumstances
16. Review Period and Life of Interim Policy
1. Policy Name

This policy will be referred to as the *Interim Sea Level Rise Adaptation Policy*.

2. Objectives

This policy will provide a framework that allows Council to make a strategic response to the projected impacts of sea level rise in the Eurobodalla. The intent of this Policy is to provide Council with guidance on how the Sea Level Rise threat will be considered and managed.

This Policy will serve as an interim measure until the full scope of hazards and risk associated with sea level rise have been identified through the preparation of a Coastline Management Plan. This interim Policy aims to:

- Provide a precautionary risk based approach to managing the impacts of sea level rise;
- Provide strategic options for an adaptive response to sea level rise;
- Outline the limits of Investigation Areas within the coastal zone in accordance with the *NSW Draft Planning Guideline: Adapting to Sea Level Rise*;
- Promote appropriate development within Investigation Areas;
- Apply the NSW Sea Level Rise planning bench marks for merit based assessment of development applications;
- Facilitate economic and residential use of the coast and foreshore over the maximum period allowable under conditions of sea level rise; and
- Provide an interim reference during the development of a comprehensive coastline management study and plan in accordance with the process outlined in the *NSW Coastline Management Manual 1990*.

3. Land to which this Policy applies

Coastal Risk Areas will be lands identified as:

- At risk within an existing coastal hazard study or plan prepared in accordance with the *Coastline Management Manual 1990*; and
- Flood liable within an existing flood plain management study or plan prepared in accordance with the *Floodplain Development Manual 2005*.

For lands where a comprehensive study does not exist, this policy will apply to lands within the coastal zone indentified by Council as Investigation Areas. An Investigation Area is an interim guide to indicate land likely to be subject to coastline hazards now or in the future as a consequence of sea level rise and will be taken as:

- lands within 100 metres landward of a 1% Annual Exceedance Probability (AEP) high tide event (1.435AHD) and/or at an elevation less than or equal to 5m above the Australian Height Datum (AHD).

Lands to which this Policy applies may be identified within the maps attached to Appendix (A) – Eurobodalla Investigation Areas.
4. Planning Period

A one hundred year planning period will be used for all development, operational and strategic decisions that may be impacted by sea level rise. Considering the impacts of sea level rise up to the projected one hundred year hazard line is consistent with the following Draft State policies:

- NSW Draft Planning Guideline: Adapting to Sea Level Rise;
- Draft Coastal Risk Management Guide; and
- Draft Flood Risk Management Guide.

5. Sea Level Rise Planning Benchmark

The policy adopts the Sea Level Rise planning benchmarks adopted within the NSW Sea Level Rise Policy Statement issued in October 2009 (Department of Environment, Climate Change & Water):

- 40cm rise by 2050; and
- 90cm rise by 2100.

This policy is consistent with the most credible information currently available for regional and global sea level rise projections for the two planning periods. This policy is precautionary in considering the uncertainty associated with sea level rise projections and future green house gas emissions.

6. Risk Categories

Risk Categories for sea level rise will be defined according to the immediacy of the risk:

- High Risk – immediate to elevated risk from coastal hazards within the planning period to 2050;
- Medium Risk – at risk from coastal hazards within the planning period between 2051 and 2100;
- Low Risk – not considered at risk from coastal hazards within the planning period to 2100 under current sea level rise projections.

Notes:

- proponents of development may need to engage a suitably qualified coastal engineer to determine the risk category applied to a site
- It is recommended that proponents of development within an Investigation Area have a pre-development application meeting with Council Staff to identify matters for consideration prior to developing detailed plans
- These criteria may not apply to cliff top development
- These risk categories refer to Sea Level Rise only. Any potential coastal development must consider the full range of climate change impacts plus the full range of coastal hazards identified within Section 3.4.2 of the NSW Coastline Management Manual 1990
- The hazard categories outlined within a relevant Flood Plain Management Plan/Study must be considered in view of the Sea Level Rise Planning benchmark
- Immediate risk is taken as any lands currently threatened by a 1% design storm event.

7. Planning Levels

Planning levels will vary throughout the Shire according to the location of a property in relation to the coast or tidal area. Coastal properties will need to account for total coastal inundation plus sea level rise when determining planning levels.

Areas adjacent to estuaries and coastal lakes may not be influenced by coastal hazards such as ocean swell waves. Planning levels will be determined by the proponent doing a study that considers the adopted NSW Sea Level Rise Planning benchmarks.
8. Application of this Policy

Implementing this interim Policy will ensure Council considers and incorporates projected sea level rise into:

- assessment and management of flood risk and coastal hazards;
- determining development applications;
- determining location and design life of essential assets and infrastructure;
- land use planning strategies to minimise or eliminate the risk of sea level rise on new and existing developments;
- planning and design of mitigation works to manage coastal hazards;
- management of natural assets such as coastal and estuarine habitats, lake entrances, beaches and dunes.

This policy will be applied with full consideration of the following New South Wales State legislation and Policies:

- Environmental Planning & Assessment Act 1979;
- NSW Local Government Act 1993;
- Conveyancing Act 1919;
- NSW Coastal Protection Act 1979;
- Crown Lands Act 1989;
- NSW Coastal Policy 1997;
- NSW Estuary Policy;
- State Environmental Planning Policy 71 – Coastal Protection;
- NSW Flood Prone Land Policy 2005;
- NSW Sea Level Rise Policy Statement 2009;
- NSW Coastal Design Guidelines 2009;
- Draft Coastal Risk Management Guide 2009; and

9. Adopted Building Life

Council will adopt a 100 year designed building life for assessment of new residential developments and all green fields sub-divisions in areas of coastal and floodplain settlements.

A 50 year designed building life will apply to new commercial developments (excluding subdivisions) and public facilities in coastal and floodplain settlements.
10. Adaptation Options

10.1 Planned Retreat

Council will promote a policy of planned retreat to minimise the risk presented by coastal hazards and sea level rise. Planned retreat will implement a staged avoidance of permanent development in sites identified as at risk within the planning period to 2100. New developments within the coastal zone will be assessed on merit with proponents needing to identify that the development:

- will not create any risk to the community within the specified building life;
- will manage risk from any coastal hazard, including sea level rise within specified building life;
- will not necessitate property protection and/or mitigation works within specified building life;
- will not create significant adverse economic, social or environmental cost to the community; or
- can be relocated or removed at no cost to the community upon reaching a pre-determined trigger set as a measure of vulnerability to coastal hazards.

A section 88b instrument (positive covenant) may be required to be created, at full cost of proponent, to make any prospective purchaser aware of any pre-determined coastal hazard triggers outlined in a Coastline Management Study or Plan or other information provided in support of a proposed development, and confirming any actions required to be undertaken when such trigger is reached.

10.2 Engineered Property Protection Works

The owners of existing or proposed private developments identified as at risk from coastal hazards and the impacts of sea level rise may seek to investigate engineered property protection works. Property owners investigating this option need to consider:

- Any works on private lands will be subject to approval under the Environmental Planning & Assessment Act 1979;
- works will need to comply with the NSW Coastal Policy 1997 and the NSW Coastal Protection Act 1979;
- protection works must not be carried out or impact on public lands or public access;
- Engineered property protections works on private lands will be at the property owner’s expense;
- property owners must maintain the structure to an appropriate engineering standard for the life of the asset;
- Council will not accept any costs or responsibility for the construction, maintenance or renewal of private property protection works;
- Such works are extremely expensive; and
- Compliance with the required policy and therefore approval is difficult to achieve due to the complex nature of environmental issues and coastal processes.

Works to protect private property from coastal hazards and sea level rise will only be considered if the owner can demonstrate compliance with State policy and legislation and that the development will not adversely affect:

- coastal processes and significant ecosystems;
- adjoining properties;
- the local built and natural environment;
- amenity and values of adjoining beaches and foreshores; and
- immediate and long-term public access to beaches and foreshores.
11. Planning Controls

11.1 Immediate Risk Sites
(a) no new residential, commercial or industrial development.

11.2 High Risk Sites
(a) no new sub-divisions;
(b) no net increase of residential densities in high risk areas
(c) Proponents will need to provide a report from a suitably qualified coastal engineer and structural engineer to support any claims for development
(d) No new subdivisions
(e) No net increase of residential densities in high risk areas;
(f) Time limited development such as tourist camping and cabin accommodation considered on merit;
(g) Time limited residential development such as modular and/or relocatable homes (moveable dwellings) considered on merit;
(h) Proponents must demonstrate retreat strategy for sit through appropriate building design, methods for removal of buildings and infrastructure, site remediation and commitment to meeting costs;
(i) Council will not meet the costs for implementing any retreat plans for private developments within high risk sites
(j) Maintenance of existing buildings will be permitted in accordance with the definitions outlined in Appendix A

11.3 Medium Risk Sites
(a) infill, new residential and commercial development assessed on merit
(b) Proponents will need to provide a report from a suitably qualified coastal engineer and structural engineer to support any claims for development
(c) Maintenance of existing buildings will be permitted in accordance with the definitions outlined in Appendix (A)
(d) Renovation of existing buildings will be permitted in accordance with the definitions outlined in Appendix (A).

11.4 Low Risk Sites
(a) standard building codes apply
(b) any development allowable within applicable zoning outlined in the planning controls.

Note: All risk categories are assessed against a 1% Annual Exceedance Probability coastal inundation and flood events and the relevant sea level rise projection.
12. Exclusions

The following areas will be assessed on merit due to protection from coastal erosion by current mitigation measures:

- The areas of Beach Road, Batemans Bay identified in Map (1); and
- The areas in Map (2) identified as “The Flat” within the Narooma Structure Plan.

Clause 11.2(c) will apply to any development proposals provided Exemption under this Clause.

13. Special Circumstances

Special consideration will be extended to development of infrastructure associated with Surf Life Saving and other recognised emergency service providers. This is consistent with Goal 2 of the NSW Coastal Policy that allows development seaward of public set back lines for the purpose of facilities associated with Surf Life Saving.

Clause 11.2(c) will apply to any development proposals granted Special Circumstances consideration under this Clause.

14. Review Period and Life of Interim Policy

This Interim Policy will be replaced at the completion of comprehensive Coastal Zone Management Plans. These plans will be developed as a priority; subject to availability of grant funding from State and Federal Governments.

Council will review the inclusion of a site within an Investigation Area where:

- Site specific studies have been prepared by a proponent in accordance with State Government guidelines and Sea Level Rise Policy Statement 2009;
- The study demonstrates a site is not at risk within the relevant defined planning period; and
- The study has been accepted by Council under Environmental Planning and Assessment Act 1979.

Advice relating to the acceptance of a report by Council will be noted on the Section 149(5) Certificate relating to the property.

Bench marks for sea level rise will be reviewed with each Policy statement from the NSW Government. Subsequent updates will be considered with each report from the Intergovernmental Panel on Climate Change or CSIRO's Wealth from Oceans National Research Flagship and the Antarctic Climate and Ecosystems Cooperative Research Centre (ACE CRC) sea level rise project. This will ensure that advice from Council is offered in good faith and based on the most recent and credible information therefore meeting Council's obligations under Section 733 of the Local Government Act 1993. The next IPCC Assessment report is due to be delivered in 2014.
Map (1): Beach Road Lands to be assessed on merit

Map (2): Narooma Flat Lands to be assessed on merit
Appendix A: Definitions

**Annual Exceedance Probability (AEP)** is the chance of a storm of a given or larger size occurring in any one year. The AEP is usually expressed as a percentage. For example, an AEP of 1% means there is a 1% chance (1 in 100) that a storm of that size or larger will occur in any one year.

**Australian Height Datum (AHD)** – according to Geoscience Australia, heights above mean sea level (MSL) are referenced to the Australian Height Datum (AHD).

**Cliff Top Development** is development on top of a high face of rock.

**Coastline Hazards** are those identified in the manual relating to the management of the coastline for the purpose of Section 733 of the *Local Government Act 1993* and include beach erosion, shoreline recession, coastal entrance behaviour, sand drift, coastal inundation, slope and cliff instability, storm water erosion and climate change.

**Coastal Processes** are those identified in the manual relating to the management of the coastline for the purpose of Section 733 of the *Local Government Act 1993* and include wave climate, longshore sediment transport, onshore/offshore sediment transport, vegetation, sand drift, tidal prism, storm water flows and water quality.

**Immediate hazard line** is the line identified on a Coastal Risk Planning Map which represents the estimated extent of beach erosion from a design storm event (as outlined in the *Draft Coastal Risk Management Guide 2009*).

**Maintenance of existing buildings** can include replacing worn out, defective, rotten, corroded or damaged materials within a building with the same or similar materials. Maintenance does not include replacing one type of material for another (e.g. clad timber frame with brick); changing the floor area or layout of a building; or changing the roof shape, pitch or height.

**Renovation of existing buildings** will include creating additional floor space up to an area of 30 square metres. A one-off renovation may be done at the same floor level of the existing building and must not include replacing one type of material for another (e.g. clad timber frame with brick) unless the materials are of a lighter weight construction than original building (e.g. clad timber frame/timber floor renovation of existing masonry building).
References


Department of Planning 2009, *Draft NSW Coastal Planning Guideline – Adapting to Sea Level Rise*, NSW Department of Planning, Sydney, NSW.


