



BYRON SHIRE COUNCIL

Planned Retreat in Byron Shire



What is “Planned Retreat”?

Planned retreat is a coastal hazards management approach that acknowledges coastal processes and hazards as ongoing natural dynamics. The long-term recession of parts of the Byron Shire coastline is a dominant factor in planning for the use of coastal areas.

It is an approach that aims to allow natural processes to take place without building large engineering structures to attempt to counteract those processes. On an eroding coastline this will require the retreat of development and infrastructure as the erosion escarpment (most landward limit of erosion) moves landward.

Planned retreat allows the temporary use and occupation of coastal lands until coastline hazards threaten life and property; that is, once the erosion escarpment encroaches within 20 or 50 metres from a development (depending on the type of development) the development will be required to be relocated further back from the escarpment, or removed where relocation is not possible.

In essence, planned retreat is a precautionary approach to managing coastal development that comprises a programme of actions aimed at maintaining a 20-metre development-free buffer along the coastline. This is designed to accommodate natural coastal processes and reduces the level of risk associated with coastal erosion and inundation to persons, development and infrastructure along the coastline.

Planned retreat requires that for approved development:

- if development is built as a relocatable design, it must be relocated/removed when the erosion escarpment encroaches to within 20m of the structure (or 50m where applicable)
- for development built as a non-relocatable structure, it must be removed when the erosion escarpment encroaches to within 50m of the structure
- under the draft Coastal Zone Management Plan, existing development which currently has a 50m trigger distance specified in the development consent, may be granted a 20m trigger subject to similar provisions as new development in the same locality, such as relocatability. These planning provisions are based on the recognised and projected risk to coastal development over a 100-year planning period.

A full copy of the Draft CZMP is available at Council’s Community Access Points and on Council’s website: www.byron.nsw.gov.au



What is the purpose of planned retreat?

The objective of planned retreat is to address the following issues facing the coastline of Byron Shire in relation to development and infrastructure:

- Management of coastline hazards (coastal erosion, coastal inundation, etc.)
- retention of public access to the beach
- retention of beach amenity
- environmental sustainability

Where it applies, the planned retreat management strategy requires that, in approving development the consent only remains valid while a beach erosion escarpment does not encroach within a set distance from a development. Once the development consent has lapsed, the development must be moved back or removed in accordance with consent conditions to maintain a 20m development-free buffer.



Importantly, the objectives of maintaining a development free 20m buffer along the coastline are as follows:

- ensures residents of the coastal fringe are removed from the immediate risk posed by future coastal erosion in a timely manner
- enables vital natural processes to occur including the growth and health of coastal vegetation
- enables the maintenance of dunal habitat which is extremely important for coastal fauna and flora (biodiversity)
- enables the maintenance of natural dunal processes including erosion and growth which are paramount to the retention of a natural dune and beach system
- enables maintenance and improvement of visual beach amenity

When was planned retreat adopted by Byron Shire Council?

Planned retreat was suggested as a possible management strategy in **1978** by the NSW State Government Public Works Department (PWD) in the **Byron to Hastings Point Erosion Study** (PWD, 1978).

The study was a State Government engineering assessment of the coastal processes and erosion rates that had been observed over time. The erosion study proposed a number of management strategies for dealing with coastal erosion; one of which was referred to as “A Policy of Relocation.”

Following this study, Byron Shire Council developed and adopted the Byron Local Environment Plan, 1988 and Development Control Plan 1, 1988 which included Part J for development on Coastal Lands.

Part J of Byron Shire Council’s Development Control Plan 1 (1988), and the more recent Development Control Plan (2002), are the basis of planned retreat. A public hearing was held prior to the adoption of the 1988 planning instruments. Community members and scientists alike had the opportunity to address that public hearing and their submissions were taken into consideration prior to the adoption of the planning instruments.





What options has Byron Shire Council considered for managing coastline hazards?

The **Coastline Management Study** (WBM, 2004) investigated a range of coastal management approaches for dealing with the immediate and long-term coastline hazard threat to the Shire's coastal development and infrastructure. Management strategies investigated include:

- Terminal protection (rock/concrete sea walls)
- Rock/concrete groynes and artificial headlands
- Offshore breakwaters and submerged reefs
- Beach nourishment
- Beach scraping, and
- Planned retreat

This was a thorough assessment of the possible options, however, it did not fully cost out all possible management options nor did it fully assess the environmental impacts of all possible management options.

State Government departments and independent experts completed thorough technical review of the Coastline Management Study throughout its development. A copy of the Coastline Management Study is available for viewing on Council's website:

www.byron.nsw.gov.au/coastal-zone-management

Confirming the coastline management strategy for the draft Coastal Zone Management Plan.

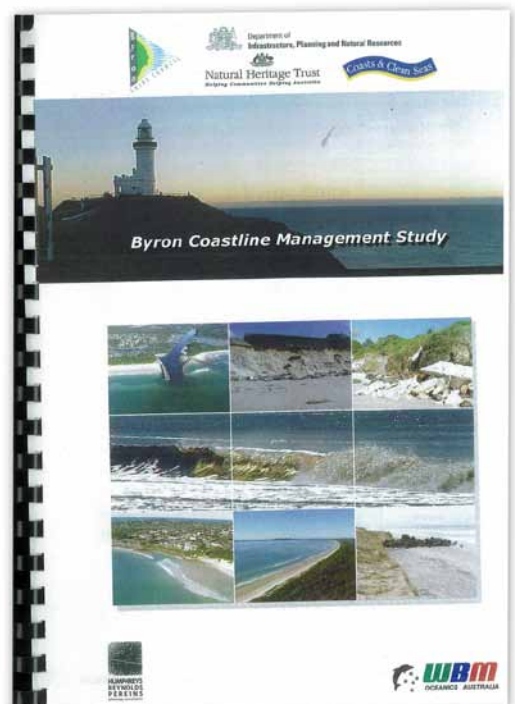
A "hard engineering solution" to the erosion problem, such as building rock walls, may require sand nourishment. Without adding additional sand, hard engineering works can result in the loss of the beach; that is, the ocean lapping against the rock wall.

In 2006 Council commissioned the **Scoping Study on the Feasibility to Access the Cape Byron Sand Lobe for Sand Extraction for Beach Nourishment** (Patterson Britton, 2006). This highly regarded document revealed the complexities of sand nourishment.

The study revealed that the initial cost of sand nourishment was over \$50 million. The cost was due to the sand deposit being located in over 20m of water off the coast of Cape Byron. It would have required an international dredge from Denmark to access the deep deposit as no suitable dredge exists in the southern hemisphere.

In addition, the sand deposit is located in the Cape Byron Marine Park and sucking and pumping millions of cubic meters of sand every year could result in a large cost to the marine park environment.

Even after undertaking a sand nourishment program, there would be have been no guarantees that the sand would not wash away in the next major storm event. After considering the various recommended options in the **Coastline Management Study** (WBM, 2004), and the complexities revealed in the **Sand Lobe Scoping Study** (Patterson Britton, 2006), Byron Shire Council resolved to abandon any further investigation into sand nourishment and reconfirmed their commitment to planned retreat for certain Byron Shire beaches. A copy of the sand lobe scoping study is available for viewing on Council's website: www.byron.nsw.gov.au/coastal-zone-management





Have houses or buildings already been relocated or removed in Byron Shire due to coastal processes or planned retreat?

Yes they have. In 1974 storms caused significant damaged to the village of Sheltering Palms north of Brunswick Heads. By 1977 the houses were abandoned.

At the Belongil Spit in the 1970s, houses and the road along on the beach front were also lost as a result of coastal erosion and storms.

In 2004 and 2006 the Land and Environment Court upheld Council's decision not to allow property to be rebuilt in the same location at Belongil due to the proximity to the coastal escarpment. On both occasions, the buildings had been damaged by causes other than coastal processes.

Please refer to the "Preface" of the draft Coastal Zone Management Plan currently on exhibition for a more complete history of coastal erosion and coastal planning in the Byron Shire.

Copies of the draft Plan may be found at Council's Community Access Points or online at: www.byron.nsw.gov.au/coastal-zone-management



Byron Shire Council supporting documents:

Development Control Plan (DCP) Part J www.byron.nsw.gov.au/development-control-plans

Coastline Values Study (BSC, 2000)

Coastline Hazard Definition Study (WBM, 2000). www.byron.nsw.gov.au/publications?C

Coastline Management Study (WBM, 2004) www.byron.nsw.gov.au/publications?C

Cape Byron Sand Lobe Investigation Study (Patterson Britton, 2006) www.byron.nsw.gov.au/coastal-and-estuary-management

Proposal and Environmental Assessment of Beach Scraping at New Brighton and South Golden Beach www.byron.nsw.gov.au/beach-scraping

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Byron Shire will be a thriving and vibrant community where residents and visitors can live, work and play in a sustainable environment.