

# Eroding our Values, Accreting our Liability: Equity in planned retreat options for Tweed coastal residents?

Mike Svikis<sup>1</sup> and Jane Lofthouse<sup>2</sup>

<sup>1</sup> GHD PO Box 372 Ballina NSW

<sup>2</sup> Tweed Shire Council PO Box 816 Murwillumbah NSW

## Abstract

With the threat of coastal erosion and inundation on public and private property being realised and compounded through sea level rise, how should government equitably manage the impact of this on coastal landowners, without unfairly penalising the general community?

Tweed Shire Council, in the far north coast of NSW, has, in accordance with the NSW Government's Coastal Management Program, developed and adopted a Coastal Zone Management Plan (2005) which included the Tweed Coastline Hazard Definition Study. With the introduction of the Sea Level Rise benchmarks by the NSW Government in 2010, an increased number of properties were impacted, and by greater percentages, with the landward translation of the 2050 and 2100 Hazard Lines.

Council has resolved to limit the types and intensity of development within hazard zones through adoption of a Development Control Plan (DCP). For properties identified by the Hazard Definition Study as being within the 50 Year Hazard Zone, the DCP recommended investigating long-term planned retreat with redevelopment set back behind the 50 Year Hazard Line.

This paper discusses issues including impacts on property values, development options and certainty; the cost of coastal risk management advice and the option of temporary and permanent erosion control measures. It also discusses the inequity in local government allowing "front line" properties to bear the full impact of planned retreat without financial support. This appears to be in stark contrast to past practices of the NSW government such as the Coastal Land Protection Scheme and locality based buy back or land swap schemes such as undertaken historically at places such as Palmers Island, Brooms Head or Sheltering Palms.

## Background

Tweed Shire Council on the far-north coast of New South Wales, developed a Coastline Management Plan for its 37 kilometres of coast in accordance with the NSW Government's *Coastline Management Manual* (1990).

Stage one of this process was the *Tweed Coastline Hazard Definition Study*, completed in 2001, which identified the Immediate, 2050 and 2100 year coastal erosion hazard zones.

Subsequently, the *Coastline Management Study and Management Plan* were developed and adopted by Council in 2005, to address the hazards identified. Some of the strategies and actions adopted included restrictions on 4WD access to some beaches; improved coastal vegetation management; foreshore protection at Kingscliff through terminal structures and sand nourishment; and a Development Control Plan for Coastal Erosion Hazard.

The only built assets impacted by the Immediate Hazard Zone are public assets - a Council-managed Holiday Park and the Surf Club at Kingscliff Beach. A total of 77 private properties were variously impacted by 2050 and 2100 Hazard Zones. Given the level of publicity around Tweed's neighbour and its fight with beachfront landholders over protection of private property, Tweed Council was keen to ensure that, whilst no private property was yet exposed to imminent erosion risk that planning controls were in place and awareness was raised about future eventualities.

In 2010, the NSW Government developed and published the *NSW Sea Level Rise Policy Statement* (2010a) and the *NSW Coastal Planning Guideline: Adapting to Sea Level Rise* (2010b).

The policy set a Sea Level Rise (SLR) benchmark of 40cm by 2050 and 90cm by 2100. The SLR figures used in the 2001 assessment of coastal erosion hazard for Tweed Shire Council were 20cm for the 50 year and 40cm for the 100 year timeframes. To bring the hazard zones in line with NSW Government policy, Council commissioned an update of the hazard lines (Carley and Mole, 2010) to increase that component that was attributable to SLR from the 2001 Study. This was done using the Bruun Rule to develop updated 2050 and 2100 hazard lines.

The planning guidelines expressed how this new policy was to be used to consider coastal erosion hazard, particularly that attributed to SLR, in relation to development and planning controls.

With the movement of the hazard lines landward, the number of affected private properties increased from 77 to 185. Although all of the properties in estates developed less than 20 years ago have been subject to existing coastal hazard zoning based on hazard lines established in the late 1980's. Those hazard zones were not, however, applied to existing developed areas along the Tweed coast.

## **Development Control Plan**

One of the high priority actions from the *Tweed Shire Coastline Management Plan* (Tweed Shire Council, 2005) was the making of a Development Control Plan for Coastal Hazards. This project was commenced in 2010 following the update of the Tweed Shire Erosion Hazard Lines.

GHD was engaged to develop the DCP to draft stage and conduct effective community consultation. The intention was to ensure affected landholders and the general community were aware of the draft document and had sufficient opportunity to understand and comment on the implications of the proposed development controls.

As detailed in the Government's *NSW Coastal Planning Guideline: Adapting to Sea Level Rise* (NSW Government 2010b) the development controls were grouped into 3 "Hazard Zones":

- **Immediate Hazard Zone** – that land between the Immediate Hazard Line and the waterline. No habitable development permitted. Development relating to uses that are required in the Immediate Hazard Zone and are temporary in nature (e.g. lifesaving observation structures, access structures) may be considered.
- **2050 Hazard Zone** – that land between the Immediate Hazard and the 2050 Hazard Lines. Permissible development to be subject to a Coastal Risk Management Report and where development is granted consent, it is granted on the proviso that if the erosion escarpment comes within 20 metres of any building then the use of the building will cease. It is proposed that Section 88E of the

*Conveyancing Act, 1919* be used to effect this. If the use of the building does cease then the owner of the land will be responsible for the removal of any or all of those buildings (if relocatable, possibly to a location further than 20 metres from the erosion escarpment).

- **2100 Hazard Zone** – that land between the 2050 and 2100 Hazard Lines. Permissible development to be subject to a Coastal Risk Management Report. The main considerations in this zone are that development is positioned to avoid the risk of damage from coastal processes and avoid the need for physical structures to protect that development.

The Draft DCP – Coastal Hazards was exhibited for 60 days and two open house workshops were held to give ample opportunity for community and landholder consultation.

## **Submissions**

Submissions to the draft DCP were wide ranging and often (as would be expected) property specific. More than 90% came from landowners within the coastal zone and most of these were the landowners affected by the 2050 hazard controls rather than the less restrictive 2100 hazard controls. No private landowners are affected by the immediate impact hazard controls.

Three key concerns emerged from submissions:

### **1. Depreciation of property values, development options and certainty**

The concern was that the DCP effectively removes certainty of title and expected use rights associated with land ownership. It undermines the concept of freehold land and the value attached to it. Impacted landowners have effectively lost certain rights to develop the land in accordance with the LEP zoning. Land values will fall as the community becomes aware of that loss of development rights.

### **2. Cost of coastal risk management advice and adaptation**

The DCP makes development of affected land more complicated and it seems excessive to have to provide expensive reports for development and expensive design changes when the coastal hazards won't affect my property for decades (if at all).

### **3. Temporary and permanent erosion control measures**

This issue can generally be summarised as "Why is planned retreat being implemented when permanent hard engineering solutions such as rock walls or soft engineering solutions such as sand nourishment have not been tried?"

These three key concerns need to be examined more closely.

1. In NSW a DCP cannot prohibit something that is permitted in a LEP. The DCP does not take away property rights or land uses from the land it affects. Rather it is the local Council's policy expression for development and environmental outcomes in a specific location (Broyd, 2011). A DCP spells out how Council will deal with your application and what supporting information you will need. If anything it creates certainty by telling you what Council sees are the big issues. Even the issue of reduced property valuation after implementing a coastal hazard DCP is questionable. In neighbouring Byron Shire a coastal hazards DCP endorsing planned retreat has been in place since 1988. Despite this, property values of dwellings in the immediate impact zone have risen up to four fold with evidence that

some have doubled in value between 2003 and 2009 (Svikis, 2009). The dwellings' most at risk in Byron Shire are still some of the highest value residential properties in the Shire. Property in the coastal hazard zone (despite its potential hazard) will probably always be in high demand because it has unique characteristics (eg ocean views, short walk to beach, cool coastal breezes) and a high current utility value. Current buyers are more likely to be influenced by interest rates and the Australian economy than a 50 year plus prediction of coastal erosion. It would be appropriate that the DCP does send a signal to prospective purchasers that these properties are affected by a natural hazard that should be considered when considering what a property is worth. However, this is only one of many factors that make up the value of land (Roberts, 2009) and until the hazard becomes more immediate it may not be the dominant influence on valuations.

2. Requiring coastal risk management reports will increase the cost of development in the coastal zone. Similarly, engineering designs for footings to allow buildings to be moved when threatened will add to costs. Deep pile footings to allow buildings to be safe right up to the point of demolition (or protection) will be expensive. Clearly the market should be factoring these costs into development of these sites. Timing is an issue given that in a harsh coastal environment buildings may only last 50 to 60 years. It is important that the risk of a coastal hazard affecting a lot be linked to the level of information and adaptation features that are imposed. The Tweed DCP takes a risk based approach with controls being less onerous the further landward you proceed.
3. In some cases permanent protection may well be the best option. If the assets to be protected are of high value and the permanent solution is affordable then it may be the right one. Particularly if it can be undertaken in conjunction with a soft solution such as sand nourishment to restore and maintain the beach in front of the hard solution. This is Council's intention at the current Kingscliff erosion site where public assets such as a surf club and caravan park are under immediate threat. However, until this option can be put in place, Council has been installing temporary control structures to slow erosion and it has implemented the planned retreat of caravan park facilities to avoid losing them. An important point to be made is that where protection (hard or soft) is not the best option and private land holders are affected then can we do more to soften the impact of a planned retreat policy in a DCP? Broyd (2011) suggests that Australians have a high level of resistance to interventionist government in Australia probably related to property being such a private and sacrosanct asset. We should explore options that coupled with planned retreat will be more implementable and receive less resistance. This is a key consideration of this paper.

## **Discussion**

So what could Council have done differently? One submission raised an interesting proposition. If a property is purchased in good faith without knowledge of a hazard (that they did not cause themselves any more than any other individual) is it good public policy to impose a regime that may allow that property to disappear into the ocean without any form of compensation or offset and without trying to implement a permanent protection solution? Should that person be required to pay large costs on loans or for Council rates without a long term security over their investment? Have we always approached this sort of situation in this way? Lord and Gordon (2011) point out that 'No individual or single community is responsible for climate change/variability and therefore no individual or community should be expected to bear the full burden for the consequent impacts'.

With other natural hazards there has been a different approach. Areas that are worst affected by flood hazards have been the subject of voluntary purchase schemes that allow for market value to be paid by Councils to a land owner and then their dwelling is demolished and the land returned to an open flood way, often as public parkland. This has been the approach with dwelling acquisitions in South Murwillumbah. But it is also State government funded (generally at a ratio of 2:1 State:Local Government), and the value of properties that are severely flood affected are usually considerably lower than those on the beach front. Land affected by flooding and river erosion in the Clarence Valley village of Palmers Island was also subject to a publicly (State) funded buy back scheme to ensure people were not living in a hazardous location and were fairly compensated for losing their dwelling or block of land.

On the NSW coast we have had the Coastal Lands Protection Scheme (CLPS) since 1973 to buy back coastal land in order to increase public access to the coast (Thom, 2007). The main criteria for acquisition under the Scheme are:

**Public access:** to promote public access to the coastal foreshore.

**Scenic quality:** to maintain the scenic quality of the NSW coast.

**Ecological values:** to protect ecological sites of regional, state and/or national significance.

Since the Scheme commenced approximately 15,427 hectares at a total cost of \$70.8 million have been acquired (as at June 2009) (NSW DOPI web site, 2011).

Although it is not a hazards based scheme, it has certainly been used to buy coastal land affected by coastal hazards including the small village north of Brunswick Heads known as Sheltering Palms and land at the most northern tip of Belongil Spit in Byron Bay. Land to be acquired is identified in LEP's and zoned to limit its use for development. Acquisition is generally voluntary (though some has been by compulsory acquisition) so it can be disjointed. Care and control of the land (once acquired) is typically invested in the Office of Environment and Heritage (eg National Parks and Wildlife Service) or as a Crown reserve.

As public land is typically eroded and lost before private land in a coastal hazards situation it is likely that without some sort of public acquisition option then access to the coast will be lost in some locations. So even without changing the terms of the existing CLPS there is an argument to say it should be used for acquiring lands affected or likely to be affected by coastal hazards, if only to preserve public access.

Such a scheme should be voluntary, but it could still yield significant outcomes in getting land back into public ownership to avoid it being inappropriately developed. Assuming that this avoids the need for expensive permanent protection and beach nourishment, then the savings from not doing these works can be made available for use in acquisition. To be successful it must be funded by State or Commonwealth government and not left solely to Councils with their limited revenue raising options. An equal and open partnership between the three spheres of government is required (Lord and Gordon, 2011).

Another example of moving private landholders away from the coast was achieved in the mid 1960's in the village of Brooms Head (Plater, 1990). In this case the NSW Crown Lands Department wanted to move 33 privately owned holiday shacks that occupied leases on coastal Crown land. The land had immediate coast frontage and was required for a mix of day visitor use and a coastal caravan park. (We know now that it is also within an area projected to be affected by coastal erosion). Crown land on the landward side of the reserve was subdivided into 66 freehold lots and these were offered for sale at reasonable prices to those landholders willing to give up their Crown lease and remove their holiday shack immediately. Many owners took up the offer and

the Crown reserve was recovered for public use without too much fuss. Those who chose not to move were given notice that the shack would be demolished and the lease terminated when the current occupant died. Only six owners decided to stay. Clearly, the incentive of a voluntary land swap was effective, even though it created costs for the leaseholders. Crown land in NSW is still available in some locations landward of the coastal zone. It could be used as part of a wider scheme to get people to move back from the coast as part of a State endorsed planned retreat strategy for locations where protection is impractical or prohibitively expensive.

## **Conclusion**

There is a place for planned retreat of privately owned lands in the coastal zone and it is an important planning tool to include in a DCP. Importantly, when it is used there is a significant case that individuals will over time be adversely affected by risks that are beyond their control. There is a case that such owners have a claim on the wider society for additional costs imposed if retreat is to occur (Attwater et al, 2008). Especially if their land will be required over time to maintain public access to the coast or to accommodate natural beach processes. It is important that planning controls send signals as early as possible about coastal hazards so that the market can start to factor in any changes. The Byron experience suggests that it may take a long time. However, given that acquisition may in time be appropriate and coastal land ownership is always changing it is important that new owners are aware of the hazard characteristics of property they are considering acquiring.

The solution may well be an adequately funded Coastal Lands Protection Scheme (call it what you will). This gives owners affected by planning controls that require planned retreat the option of voluntary acquisition of their land by the State for public use (eg access) and to accommodate natural coastal processes.

It is also time for the NSW Land and Property Management Authority to enter the discussion. It needs to consider where it stands on both the potential loss of coastal Crown land and the use of vacant Crown land outside the immediate coastal zone as part of a compensation package or land swap that works in conjunction with the planned retreat process. Clearly a broader view needs to be taken by State and Commonwealth governments if local planning instruments are to succeed in managing the coast and individual landowners are not to unreasonably bear the cost of coastal hazards.

Local government is not resourced to achieve the best planning outcomes for land affected by coastal hazards. State (and Commonwealth) governments need to work with and support local planning controls (and affected land owners) and consider funding both land acquisition and local land swaps to soften the impacts of planned retreat and avoid the proliferation of hard engineering solutions along our coastline.

## **References**

Attwater, C. Witte, E. 2008. Bearing the cost – setting price signals and cost sharing to ensure a soft landing. Paper presented to the IPWEA national conference on climate change response, Coffs Harbour.

Broyd, D. 2011. Where To Planning? City Futures Research Centre Occasional Paper, UNSW.

Carley, J. and Mole, M. 2010. Update of Tweed Shire Coastal Hazard Lines. Water Research Laboratory, Technical Report 2010/11, Manly Vale.

Lord, D and Gordon, A, 2011. Local Government Adapting to Climate Change – where the rubber hits the road. Conference paper, Perth.

NSW Government, 1990. Coastline Management Manual.

Plater, J. et al. 1990. Brooms Head Revisited. A story of a north coast village.

Roberts, B. 2009 Course notes from PIA Economic of Development planning practice course.

Svikis, M. 2009. Unpublished paper to PIA Economic of Development planning practice course.

Thom, B. 2007. Lessons From the NSW Coast. Keynote address presented at the Inaugural Queensland Coastal Conference 2007, Bundaberg, 19th September, 2007.

Tweed Shire Council, 2001. Tweed Coastline Hazard Definition Study. Prepared for TSC by WBM Oceanics Australia.

Tweed Shire Council, 2005. Tweed Shire Coastline Management Plan. Prepared for TSC by Umwelt (Australia) PTY LTD.

NSW Government, 2010a. NSW Sea Level Rise Policy Statement. Department of Environment, Climate Change and Water NSW, Sydney South.

NSW Government, 2010b. NSW Coastal Planning Guideline: Adapting to Sea Level Rise. Department of Planning NSW, Sydney.

Tweed Shire Council, 2011. Coastal Hazards - Tweed Development Control Plan, Section B25.