COASTAL PLANNING - BACK TO THE FUTURE?

C Lappin

Shellharbour City Council, Shellharbour NSW

Abstract

The level of uncertainty has never been as high in Local Government as it is today.

The government of the day has taken upon itself to rewrite, restructure and review virtually all legislation affecting the everyday operations of Local Government. The review processes have involved endless briefings, consultations, green papers, white papers, draft policies, draft strategies and draft reforms which have been delivered in a seemingly uncoordinated manner. The greatest implication for Local Government, in what has been an attempt to comprehensively review key planning legislation is the level of uncertainty in the future application of the planning system.

A perfect example of this appetite for change by the current State Government are the Coastal Reforms and the way they have been partially introduced. The implications for Local Councils in the long term appear not to have been thought through. The term 'back to the future comes to mind'.

The removal of the sea level rise benchmarks through the coastal reforms process came at a particularly difficult time for Shellharbour Council. Having undertaken our Coastal Hazard Study, and almost completed the Coastal Zone Management Study, using the Sea Level Rise benchmarks, the Council was informed that the State Government would no longer endorse the benchmarks. Where does that leave Council?

Do we proceed with the preparation of the Management Plan and subsequent public consultation phase with the studies based on questionable benchmarks, do we put everything on hold until the stage two reforms are released (this is an unknown timeframe) or do we act on certain aspects of the studies that only impact Council or public lands and not private properties.

This paper will look at the implications of all of these options and also examine the decisions made by some other Local Councils who are in a similar situation.

Science, Politics and Policy

It would appear that a guaranteed way to lower the credibility of science is to bring it in to politics. It would also appear that a guaranteed way to lower the credibility of politics is to bring it in to science.

The change in the state and federal government has led to a virtual complete overhaul of policy and legislation. The current Prime Minister has made no secret of his scepticism of human influenced climate change, using terms such as "crap" and "hogwash" to describe the theory. He also recently claimed that a prominent UN official was "talking through her hat" when she stated that the recent NSW bushfires were linked to the effects of Climate Change and that there was a strong likelihood that events like these would be more frequent and intense if countries like Australia did not lower their CO2 emissions. And then there was Environment Minister Greg Hunts use of Wikipedia to dispute any link between bushfire events and climate change.

The NSW government is currently undertaking a review of major legislation, including the Environmental and Planning Act, Local Government Act, and National Parks and Wildlife Act (including the creation of a standalone Aboriginal Cultural Heritage Act). These reforms will dictate the way State and Local Government operate in terms of establishing planning and assessment frameworks and outcomes. They will also set the legal framework for approvals, refusals and agreements.

Local Councils are being asked to comment and contribute to numerous plans and discussion papers. All too often these draft plans and discussion papers lack detail and contain ambiguous statements, leaving no option but to assume a number of scenarios when preparing a submission. The commitment to community consultation by the State Government is admirable but there are clear signs of consultation overload with many local Councils struggling to resource the time and staff necessary to review and prepare submissions for so many major documents that will ultimately affect how they will function.

NSW public servants in the fields of Coastal Environmental Management, Engineering/Works and Urban and Regional Planning have spent most of the last decade gradually adapting and developing logical/researched policy that embraces the long term effect of Climate Change and Sea Level Rise. Although there have always been the sceptics and deniers there has also been a general acceptance of the need to plan ahead and manage coastal hazards.

However, the realisation through policy and legislation, that future development potential could be limited on identified private land along the coast, as a result of coastal hazards associated with projected future sea level rise, led to protests and immense political pressure to relax requirements and step back from future planning and only concern ourselves with immediate risk.

In September 2012, the NSW Government, acting on an election promise, instigated reforms to the Coastal Management process, which include the withdrawal of the sea level rise benchmarks, greater provisions for protection of lands subject to erosion by landholders and clearer guidance on S149 notifications. Unfortunately, only stage one of these reforms has been released. The delay in releasing the stage 2 reforms of over 12 months has presented challenges to those working in the field of Coastal management and planning disciplines.

Councils like Shellharbour who had accepted Government grants on a dollar for dollar basis, proceeded down the accepted trail of future planning for Coastal Hazard Management, presented hazard mapping to the community, and placed notifications on 149 certificates (so future property buyers are aware of the possible risks and restrictions), now have an immense challenge of deciding their next course of action. Potentially, the most challenging draw back associated with

the reforms has been completing community consultation and how Councils are expected to maintain credibility and provide clear community governance in the absence of a complete reforms package.

Speaking on the Sept 2012 reforms on ABC North Coast 12 Sept 2012, Executive Director of the National Seachange Taskforce Alan Stokes said the change would create a wide range of problems for councils.

"I think you'll find local councils in coastal areas up and down the state scratching their heads and saying 'what do we now do in terms of development applications that come in areas that are affected or could be affected by sea level rises in the future?"" he said.

"The councils are in a difficult position.

"If they approve a development in one of these vulnerable areas where the scientific evidence is indicating that it will at-risk in the future, and there is damage associated with sea level-rise in the future, then somewhere down the track they're going to incur that liability.

"If they refuse the development now, what inevitably happens is the property owner is going to take an action against them before the Land and Environment Court to get the decision overturned.

"I think councils really need the implications of this change to be clarified as quickly as possible because it will start impacting on people's applications for development right now."

At a recent seminar on the topic of Coastal Management, NSW public servants and Council representatives were openly disillusioned and discussed the frustrations of implementing the current coastal reforms. Some of the comments made during discussions were:

"We are worse off than we were ten years ago"

"There is a dismantling of all of the work that has been undertaken"

"There is no political will to have a co-ordinated consistent approach"

"There is politically driven denial of staff to attend seminars and conferences on coastal management and issues".

These remarks are an indication of the concern and lack of clear direction amongst experts and professionals in the field of coastal hazard management. How Local Government will manage Coastal hazards and Processes is currently in limbo. The opportunity for poor planning and future risks to life and property, as a result of coastal hazards, remains whilst ever the Government hesitates releasing its stage 2 reforms.

The Reactive Evolution of Coastal Management Legislation

In 1974 the NSW coast was subjected to an extraordinary series of storms. The damage caused to the beaches by these storms was beyond any in recorded history. Beaches disappeared, coastal sand barriers were rolled inland and dune systems were devastated and breached. Many houses and a considerable amount of infrastructure was either lost or severely damaged. The devastation to the beaches was so great that in 1976 the NSW Government introduced the Beach Improvement Program, a grant funding program aimed at re-building the public amenity of NSW beaches, and in 1979 the Coastal Protection Act came into being. The aim of the Act was to reduce future potential exposure of assets to coastal processes and to limit the degree to which coastal amenity might be compromised by asset protection measures. (Gordon 2012).

Changes to the NSW Coastal Management Framework in 2009-10 were also in response to a recognised threat, namely sea level rise and its potential impacts to Australia's coastal population. This resulted in the *Sea Level Rise Policy Statement 2009*, modifications to the NSW *Coastal Protection Act 1979* and new *Guidelines for Preparing Coastal Zone Management Plans* in 2010.

The policy statement 2009 articulated sea level rise benchmarks of 40cm above 1990 levels by 2050, rising to 90cm in 2100. The Coastal Planning Guideline (Department of Planning 2010) identifies eight criteria for consideration by proponents when selecting sites for coastal development, which relate to exposure to immediate 21 coastal risks (on-site and adjoining the site); public safety; infrastructure capacity; capacity to maintain coastal processes, and the maintenance of public beach, foreshore and waterfront access and amenity.

In 2010, the former Department of Environment, Climate Change and Water (DECCW), released two guides for incorporating the sea level rise benchmarks in coastal hazard and flood hazard assessment processes. Later that year, changes to the NSW Coastal Protection Act 1979 established provisions for property owners to undertake emergency coastal protection works under certain conditions without development approval (Coastal Protection and Other Legislation Amendment Act 2010). Under provisions commenced in February 2011, local government areas were required to include information on planning certificates (associated with individual sites) regarding any applicable planning controls relating to coastal hazards or flooding. Local government was also encouraged to provide a wider notation about exposure to projected sea level rise (Norman B, 2013).

An important innovation of NSW coastal and climate change law was the limitation of local council liability for advice or actions undertaken in good faith, under Section 733 of the NSW Local Government Act 1993, as amended.

It is also worth noting that the new Standard Instrument Local Environmental Plan (LEP) for New South Wales (which must be followed by local governments when preparing their own plans), includes a standard clause that must be adopted by all coastal councils. This clause (5.5), which reflects NSW Coastal Policy, states that development consent should not be granted for development of land wholly or partially within the Coastal Zone unless the consent authority has reviewed the effect and impact of coastal processes and coastal hazards, including sea level rise, both on and arising from the proposed development (clause 5.5). Climate change impacts are partially covered in the standard objectives pertaining to

flooding, which aim "to allow development on land that is compatible with the land's flood hazard, taking into account projected changes as a result of climate change" (clause number varies by LEP). These were considered significant steps forward in supporting local planning responses to climate change.

A way to address this clause of the LEP and avoid the ad hoc submission of individual assessments by developers is to prepare a (State Government endorsed) City Wide Coastal Zone Management Plan that would be used as a reference when preparing and assessing development applications for proposals in the Coastal Zone.

Community engagement and feedback about processes and threats, risks, risk management opportunities, and the potential trade-offs between investment in coastal management and Council's other responsibilities is critical. To be effective, the Coastal Zone Management Plans must also be well aligned with Councils other planning tools and other regional strategies (Eurobodalla Shire Council 2013).

The State Government guidelines and benchmarks provided councils with a level of comfort when undertaking the preparation of the plans and gave direction to the public engagement that was occurring right along the coast. There was some sense of consistency with the hazard mapping and the 149 certificate notifications to affected property owners.

For NSW, climate change related sea level rise and an increased frequency and intensity of storms has the potential to impact virtually all public owned assets in low lying coastal areas.

However, there were still a number of Councils who had not committed to the preparation of a Coastal Zone Management Plan either due to lack of funding/resources or avoidance of the consequences.

Smaller local government areas in particular face barriers to action associated with their limited financial and human resources. In some cases, pressure from affluent property owners, or community "pushback" arising from climate change scepticism resulted in eroding local political support. This has obvious implications for the implementation of climate adaptation strategies over time.

In 2011 the NSW coalition Government formed a Ministerial Taskforce to develop changes to the Coastal Protection Act and associated policy and guideline documents, as promised in their election platform. After seven meetings and advice from the NSW Chief Scientist and Engineer and a Panel of coastal science, engineering and planning experts, the Taskforce announced a range of changes in September 2012. These changes are summarised below.

Stage 1 of the reforms includes:

• The previous NSW State-wide sea level rise benchmarks (40cm above 1990 levels by 2050 and 90cm above 1990 levels by 2100) are no longer NSW Government policy. The Government proposes to establish a specialist technical advice centre (most likely within a university), and Councils will be responsible for selecting a medium to long term sea level rise scenario that is appropriate for their local situation. Depending on competent scientific opinion, Councils may choose from low or high sea level rise projections.

- The government wants to increase focus on immediate coastal hazards. A
 new guideline on coastal hazard assessment and mapping will be released
 for consultation, after review by the Expert Panel.
- New advice of appropriate wording for s149 certificates will be released in a Planning Circular
- A revised guideline for authorised officers will be released late in 2012
- The controls on construction of emergency coastal protection works (now termed temporary coastal protection works) have been eased, to reduce 'red tap' and make it easier for private landholders to install large sand bag structures to protect their land. These structures can also be built on public land for up to two years (with a certificate).
- The government has commissioned WRL (University of NSW) to provide advice on sand bag sea wall design and offsite erosion impacts. Sea wall codes will be revised and updated as necessary.
- Separately, the NSW Government is introducing reforms to the Environmental Planning and Assessment Act, including changes to the framework of State Environmental Planning Policies (SEPPs), such as Infrastructure SEPP, SEPP 71 (coast) and the NSW Coastal Policy. Details are continuing to evolve.
- SES will release new guidelines to clarity the roles of SES and local Councils in coastal emergencies.
- Councils have been given additional time to prepare CZMPs, taking into account the new policy and statutory reforms. (Office of Environment and Heritage 2013).

As Verity Rollason and Phil Haines in their paper titled Challenges and potential solutions for implementing recent coastal management reforms presented to the 21st NSW Coastal Conference in Kiama 2012 concisely state "Over the last 35 years, as the framework of coastal management in NSW has been implemented and changed, the issues faced by local communities and their local councils have remained largely the same, driven by uncertainty, conflicts in land rights, and the inability to effectively fund practical solutions" (Rollason 2012). It is unlikely that these fundamental issues will be addressed by the current reforms. This may explain why there is a sense of back to the future as planning and policy for Coastal Zone Management struggles to find an acceptable balance between these issues.

Shellharbour Coastal Zone Management Plan - So Far

The draft Shellharbour Coastal Zone Management Plan was prepared in two stages. The first stage involved the mapping of areas identified to be at risk from coastal processes and hazards now and into the future. The sea level rise values used for this assessment were those prescribed by the State policy framework in place at the time, which was for a rise in sea level of 40 cm to 2050 and 90 cm to 2100 above the 1990 mean sea level. Council resolved to endorse the findings of the first stage, and use them as the basis for preparing the second stage, involving the identification of management options to address the risks from coastal processes and hazards. Council also resolved to notate the Section 149 Planning Certificates of potentially affected properties; and to use the hazard Information in

planning and development decisions on a case by case basis until the Draft Shellharbour Coastal Zone Management Plan was prepared and finalised. All finalised Coastal Zone Management Plans need to be certified by the State, before they can be adopted and implemented. By the time the Draft Shellharbour Coastal Zone Management Study was drafted and ready to be developed into a draft Coastal Zone Management Plan and exhibited, the State Government had already started a review of the policy framework for coastal management in the State. Council therefore deferred making the decision on the Draft Shellharbour Coastal Zone Management Plan until there was clearer direction from the State on the way forward.

In September 2012, the NSW Government announced that the policy framework for coastal management in the State was being reformed, and that no Coastal Zone Management Plans would be certified until the reform process was complete. The first stage of the reform addressed three areas of community concern. These are:

- 1. Sea level rise benchmarks the State is no longer recommending state-wide sea level rise benchmarks to be used for planning purposes. Councils now have the flexibility to use projections that are considered more appropriate for their local conditions. The legal liability arising from the use of projections that vary from the previous state-wide benchmarks has been of concern to councils. The NSW Government has advised that councils can minimise their legal liability if the Projections utilised are widely accepted by competent scientific opinion. The NSW Government is also considering setting up an expert advice centre to provide independent advice to councils on this matter.
- Emergency coastal protection works the requirements under which short term protection using sand bags (now called temporary protection works) can be installed by property owners to address coastal erosion issues on their properties have been relaxed. The locations where these works are allowed have also been expanded to include additional areas where residences are currently threatened by erosion. Shellharbour is not on this list; therefore there are no implications for Shellharbour from this reform.
- 3. Section 149 Notations – placing coastal hazard notations on Section 149 Planning Certificates was previously required under both the Coastal Protection Act (1979) and the Environmental Planning and Assessment Act (1979). The requirements arising from the Coastal Protection Act (1979) have now been removed, but the obligations under the Environmental Planning and Assessment Act still remain. The NSW Government has advised councils it will be providing guidance in the future on the coastal hazard notations to be placed on Section 149 Planning Certificates. At Shellharbour, following Council's resolution, a coastal hazard notation was placed on Section 149 Planning Certificates of potentially affected properties. These notations were placed under the Environmental Planning and Assessment Act (1979), and have not been removed. The NSW Government is expected to make further changes to the policy framework for coastal management as part of the second stage of the reform process. These changes are intended to align with other reforms currently underway with the Environmental Planning and Assessment Act (1979) and the Local Government Act (1993). No timeframe for these changes has been announced.

The NSW Government will not consider any further Coastal Zone Management Plans for certification until they have completed the reform process, and as this process has not yet been completed, there is no immediate need for Council to progress or make a decision on the future of the Draft Shellharbour Coastal Zone Management Plan. What need to be considered though are the implications of the recent reforms on other recommended Council actions contained in the Draft Shellharbour Coastal Zone Management Study.

In line with Council's resolution, the coastal hazard risk information being used by Council for planning and development decisions at the moment is based on a study that has used sea level rise benchmarks which have now been revoked by the State Government. However, Council is still obliged to consider and manage the current and future risks from coastal processes and hazards. In making these decisions, and to do this, sea level rise projections are necessary. Whilst there is now flexibility for councils to use other sea level rise values, legal liability considerations require these values to be widely accepted by competent scientific opinion. In the future, this information could likely come from an expert advice centre, which the NSW Government may set up. In the interim, the question for Council is what sea level rise benchmarks should apply until a pathway for determining more appropriate benchmarks can be identified by the NSW Government.

A survey conducted by the NSW Office of Environment and Heritage in January 2013, indicates that the majority of coastal councils in the state are continuing to use the previous state-wide sea level rise benchmarks. The NSW Chief Scientist, in a review of these benchmarks, found that the science behind their derivation is adequate, although some regional variations in the projections could occur. In the absence of other scientific opinion to the contrary, those benchmarks remain the best legally defensible projections available for use by councils at the current time. Therefore, Council's decision to use the coastal hazard information derived from the consideration of the previous state-wide sea level rise benchmarks for planning and development decisions can continue to be justified.

Currently, a notation is placed by Council on Section 149 (2) Planning Certificates under the heading 'Any Other Risk' for affected properties identified in the Shellharbour Coastal Hazards Study.

Following its resolution to endorse the hazard extents established by the hazard study (carried out as the first stage for preparing the Draft Shellharbour Coastal Zone Management Plan), and to use those hazard extents for planning and development decisions, Council was obliged to place this notation. This was under Clause 7 of Schedule 4 of the Environmental Planning and Assessment Regulation (2000). Nothing in the recent reforms relating to Section 149 notations changes Council's obligation under this clause. The text of the notation also does not contravene any direction from NSW Planning and Infrastructure. Therefore, there is a continuing need for this notation on Section 149 Planning Certificates of properties within the identified hazard extents. This notation should remain until further guidance is provided by the State Government.

Where to from here?

Other coastal councils within the Southern Councils Group are continuing to use the previous state-wide sea level rise benchmarks for the time being. This approach is consistent with legal advice prepared by DLA Piper that was provided by State wide Mutual (the insurer of which the majority of NSW local governments are members/owners) to NSW coastal councils, recommending that councils:

"not move away from the benchmarks, until further advice is given by OEH as to a new approach for sea level rise planning".

This is so that councils can limit potential liability by demonstrating "good faith" under section 733(3) of the *Local Govt Act* and that their actions are "reasonable and in accordance with the practice of other councils" under section 43 and 44 of the *Civil Liabilities Act*. The conclusions of the legal advice are:

"The key amendments to the CPA Act are:

- a. Coastal erosion protection works are able to be installed by private property owners on private land without the need for authorisation by a local authority. Local authority certification would still be required for works on public land.
- b. Installation of works does not required an imminent erosion event but rather can be installed for the purpose of prevent an actual or likely impact of wave erosion on land.
- c. The works can remain for up to two years without a development consent being obtained. However, local authorities will retain powers to order removal where the works cause an adverse impact on neighbouring public or private land.
- d. Private property owners who install the works are responsible for maintenance of the works.
- e. Detail on the nature of the works is to be provided in the form of a Code of Practice, including locations where the works will be permissible. However, the works will remain limited to sand or sand-filled geobags.

Arguably the reforms also have the effect of suspending coastal planning currently being undertaken by Councils.

The rejection of sea level rise benchmarks and the removal of coastal risk land categorisation in CZMPs creates a level of uncertainty as to how local Council should proceed in drafting and implementing planning policies. Although the Government has foreshadowed a new approach to dealing with the risk, including by provision of assistance in gathering relevant scientific data on coastal erosion and climate change, the statements so far suggest this is some way off.

In respect of sea level rise benchmarks:

a. Until the pending guidance is provided by the OEH, we recommend local Councils continue applying the sea level rise benchmarks as set out in the NSW Sea Level Rise Policy Statement. As a matter of practice, this means Council should apply planning controls which have been adopted on the basis of the benchmarks. Similarly, Councils should give consideration to the benchmarks when assessing developments where the benchmarks have not yet been incorporated into the relevant planning

- instrument. In doing so, Council should be able to avail themselves of defences under the Civil Liability Act 2001 and Local Government Act 1993 in response to liability claims.
- b. We consider that in the absence of compelling data supporting a benchmark significantly less than those set out in the Policy Statement, Councils will likely limit statutory defences otherwise available to them in any liability claim concerning the issue of the appropriateness of the benchmark selected

If a Council has obtained its own independent advice to support the selection of a benchmark different from that in the Policy Statement, it could rely upon that advice and adopt the benchmark set out in it. However, the benchmark would then need to be reconsidered when the OEH has published its recommendations" (Statewide Mutual (2013).

Never the less, Eurobodalla and Shoalhaven Councils have commenced investigations into determining more site specific Sea Level Rise benchmarks. It is also worth noting that in light of the recent legislative reforms, Wyong Council resolved to adopt a new interim sea level rise planning policy (setting benchmarks at the Flood level plus 500mm) and to conduct a review of its Coastal Zone Management Plan. As the State Government indicated that a technical advice centre might be set up to assist councils with the setting of benchmarks, this course of action was not recommended for Shellharbour City Council at this point in time.

As a way forward, Shellharbour Council through the Southern Council Group has also entered into a Memorandum of understanding with the University of Wollongong.

The purpose of the MOU is to foster collaboration between the Parties with the following objectives:

- Address contemporary coastal zone management and strategic environmental issues through the in the development of a collaborative research and policy approach;
- b. Improve understanding of coastal processes, coastal hazards, landslides and predicted impact of climate change-based sea level rise on participating Councils and their communities;
- Develop innovative and consistent approaches to land use planning, asset management and change and event monitoring with regards to coastal hazard management and sea level rise;
- d. Take a collective approach to the engagement of the insurance, risk and finance sectors in addressing coastal hazard management;
- e. Encourage the development of relevant academic research projects between the parties to this MOU or individual member Councils within the Southern Councils' Group that aim to provide outcomes applicable to the South Coast Region;
- f. Act as a project consortia in applying for project funding for research, subject to each party's appropriate delegations and policies; and
- g. Consider the utilisation of expertise of MOU signatories that may assist in leveraging and expanding the capability and experience of the consortia, when applying for research funding, development of project methodologies and policy development;
- h. Foster the exchange of data, academic publications and scholarly information between the parties;

i. Monitor and evaluate the implementation and success of Coastal Hazard related policy and projects across the Southern Council Group region (Southern Councils Group, 2013).

The recently released Department of Planning discussion paper- The Illawarra over the next 20 years, which is identified as the first step in the development of a new Illawarra Regional Growth Plan, is somewhat ambiguous in its discussion on Natural hazards. The discussion paper alludes to the long awaited stage two of the coastal management reforms and states "The Office of Environment and Heritage is developing tools to give local communities better access to scientific data on the changing risks and natural hazards. These tools will assist people to become more involved in looking after their own neighbourhoods and to input into strategies to minimise the impacts of a changing climate" (NSW Government 2013). This would seem to indicate an ad hoc reactive response to hazards (not only coastal hazards) is the preferred approach.

In the mean time, developments in the coastal zone are being exposed to risks from coastal processes and hazards. Councils need further guidance and direction to have the confidence to continue to make planning and development decisions while the State Government formalises its reforms and framework for Coastal Zone Management.

References:

A. D. Gordon 2012, Slip sliding away – Managing coastal geotechnical hazards, Proceedings of the 21st NSW Coastal Management Conference, November 2012, Kiama.

Eurobodalla Shire Council Website 2013 http://projects.umwelt.com.au/Eurobodalla/about-the-plan.html

John R Corkill OAM 2012, Low Tide for non-government interests in NSW coastal management, Proceedings of the 21st NSW Coastal Management Conference, November 2012, Kiama.

Norman, B, Steffen, W, Webb, R, Capon, A, Maher, W, Woodroffe, C, Rogers, K, Tanton, R, Vidyattama, Y, Lavis, J, Sinclair, H & Weir, B 2013, South East Coastal Adaptation (SECA): Coastal urban climate futures in SE Australia from Wollongong to Lakes Entrance, National Climate Change Adaptation Research Facility, Gold Coast, 130 pp

NSW Environment and Heritage 2013, Climate Change web-page available at http://www.environment.nsw.gov.au/climatechange.htm.

NSW Government 2013, The Illawarra over the next 20 years: A discussion paper.

NSW Planning and Infrastructure 2013, Coastal Protection web-page available at http://www.planning.nsw.gov.au/en-au/planningyourregion/coastalprotection.aspx.

Rollason V and Haines P 2012, Challenges and potential solutions for implementing recent coastal management reforms, Proceedings of the 21st NSW Coastal Management Conference, November 2012, Kiama.

Statewide Mutual 2013, Legal advice prepared by DLA Piper - Liability issues arising from selection of sea level rise benchmarks.

Stokes A 2012, ABC North Coast, 12 September 2012.

Southern Councils Group, NSW Public Works, University of Wollongong 2013, Memorandum of understanding, to address contemporary coastal zone management and strategic environmental issues through the development of a collaborative research and policy approach.