

NSW Coastal Protection Act – a disaster waiting to happen

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Introduction

The potential instability of the NSW coast was highlighted in the mid 1940s with the loss of 6 houses at Collaroy. The properties involved were subsequently purchased and are now incorporated into a present day dune system with a car park on the landward side. During the late 1960s and early 1970s a series of storms produced significant damage and threat to development at various locations along the NSW and Queensland coasts. Many beaches were decimated with an associated loss of amenity and impact on tourism and other commercial activities.

At Sheltering Palms, to the immediate north of the Brunswick River entrance, the ocean broke through the centre of the village and into the North Arm of the Brunswick River; the village was destroyed. In the mid 1970s the State Government purchased all 17 properties making up the village and subsequently re-constructed a dune system to close off the break-through.

Coastal Management in NSW

The impact of the storms on the Greater Metropolitan coast, and in particular the storms in 1974, led the NSW Government to initiate the Beach Improvement Program (BIP) in 1976 to restore the public beach amenity and to improve public coastal assets. The BIP initially provided 100% funding to councils for projects but was restricted to public assets and foreshores. The grants were used as an encouragement for councils to develop and implement coastal management plans/strategies for the particular embayment involved. The plan/strategy was to focus on not only the public but also the private foreshore and, where appropriate, the adjacent headlands.

In the initial 10 years 27 projects were undertaken. Emphasis was placed on only funding major works that had a significant impact on restoring or stabilising entire embayments. The average grants were between \$350,000 and \$1,500,000 with the largest project at Maroubra costing \$4,500,000 (all figures RBA cpi adjusted). Projects varied from beach nourishment at South Cronulla to seawalls buried under dunes at Freshwater and many dune re-construction and stabilisation projects. In each case a coastal process assessment preceded the development of a management plan/strategy for the particular embayment prior to approval of the grant funds. Thirty years on all these projects have stood the test of time demonstrating that well thought out, thoroughly researched and appropriately designed and funded coastal restoration can achieve lasting results.

Over the years from the mid 1980s the grant-funding scheme became progressively ineffective. Instead of large grants for significant projects, funds were increasingly allocated to many smaller projects that were often not sustainable in the longer term and the requirement for pre-grant coastal management plans for both public and private

foreshore was removed. Grants were reduced from 100% to 50% thereby making them financially less attractive to councils.

At times the BIP was supplemented with other forms of grants or government initiatives. For example, the Regional Employment Development (RED) scheme that operated in the early 1980s to help manage the major unemployment issue of the time provided significant funds for employment intensive operations such as dune stabilisation projects. Most of the dune works undertaken by the RED scheme survive today.

The Coastal Protection Act 1979

Following both the storms of the late 1960s and 70s and the initial successes with the BIP the State initiated the NSW Coastal Protection Act 1979 (CP). The Act laid down the fundamental tenet that development should not adversely impact on the natural processes of the coast or be adversely affected by those processes. It provided a basis and an incentive for Councils to manage their coastlines and to develop Coastal Management Plans. The Act also created the Coastal Council to provide strategic advice to the Minister for Planning.

Initially the CP Act proved useful in encouraging councils to develop coastal management plans and for a period after 1979 the policy associated with BIP grants formally tied funds to the development of coastal management plans. These plans were for both the public and the private foreshore. In the early 1980s the Minister for Public Works issued two councils with Section 38 Notices. These required the councils to receive the Ministers concurrence before carrying out any development or granting any right or consent in the area of the coastal zone defined in the Section 38 Notice. An attempt to use this power to manage flood plain development at New Brighton saw an end to the political preparedness to implement Section 38 Notices.

With increasing demand for coastal development and intensification of development on sites potentially at risk the State adopted a Coastline Hazard Policy in 1988. This resulted in some changes to the Act to emphasise a balanced approach to coastal management. It also meant restructuring/rebadging the BIP with a formal offer of both financial and technical assistance to councils on a 1:1 subsidy; previously the technical assistance had been provided on an informal basis. It encouraged adoption of a State-wide system for management of the coastline and was aimed at controlling, through planning controls, the potential for loss of new development to recession. It also aspired to a reduction of the impact of hazards on existing development through the construction of effective protection works and/or re-purchase of properties at risk and the on-going improvement of the public beach amenity. It soon became apparent that guidelines were required to achieve the desired outcomes so in 1990 the Coastline Management Manual was released. The Manual provided detailed and practical guidelines on the process and considerations for the development of risk based coastal management plans/strategies.

In 1997 the State adopted a new NSW Coastal Policy that is still in effect. This was intended to be a broadening of the previous approaches to the coast that had mainly focussed on managing the threat to public and private assets. The new Policy embraced the principles of ecological sustainability and was intended to provide coordination for Government initiatives in the coastal zone. It contained much in the way of high ideals, aspirational words and goals but was short on any practical principles, guidelines or methodologies for achieving realistic outcomes. Further, as a guiding “policy” it lacked the

legal impetus to be enforced. It also failed to adequately address the contradiction of sustainably managing a naturally eroding, and therefore unsustainable coast.

The Policy elevated the Coastal Council to the roles of both “Overseer” and “Gatekeeper”. It equipped the Coastal Council with the ability to review existing LEPs to ensure compatibility with the Coastal Policy. Unfortunately the Coastal Council failed to ensure that Coastal Management Plans were incorporated into the statutory LEPs. So the Plans were relegated to Development Controls that were challengeable in the Land and Environment Court (LEC) and subject to decisions on individual developments, without consideration of the cumulative effects. This tended to produce piecemeal outcomes that exacerbate existing problems. The Coastal Council progressively became embroiled with individual development applications in the LEC thereby losing its strategic focus and energy. Eventually, with little advance on actual delivery of the coastal management outcomes aspired to by the State, the Coastal Council was disbanded in 2004.

Over the last three decades the lack of major storms, to remind the community of the fragility of coastal development, has led to a waning of interest and funding for coastal initiatives and an intensification of unwise development. The El Nino conditions that dominated the past 30 years have in the last few years been replaced by La Nina weather patterns leading to a re-emergence of the threat to public and private assets. Along with this shift there has been a growing concern regarding the potential impacts of climate change. In October 2009 the State released its Sea Level Rise Policy (SLRP) Statement; an initiative that only addressed one aspect of the potential impacts of climate change. Issues such as impacts from changes to storminess, water level set-up and beach alignment were overlooked regardless of the more comprehensive approach advocated by Gordon (1988) and in 1991 and 2002 by Engineers Australia (NCCOE, 1991).

By 2008 the State, belatedly realising that there had been a significant increase in the number and value of properties potentially at risk and that it had failed to effectively address the historical problem areas, commenced work on modifying the CP Act to shift liability to councils and individual owners. While it had been the State’s failure to support and encourage council initiatives and to ensure coastal plans/strategies were included in statutory planning instruments that had significantly contributed to the predicament, the State sought to deny the existence of the many coastal management plans/strategies that had been developed by councils and implemented over a period of more than 30 years (Gordon, 2010).

The 2010 changes to the Act

In October 2010 the State passed the Bill that came into force in January 2011 and which made changes to the CP Act 1979 that, at face value, appear subtle but in fact produced a significant shift in responsibilities and liability for coastal developments. Of significance is the shift of responsibility of the Minister’s role from the “approval” of Coastal Management Plans to simply “certifying” that the process undertaken is in accord with the Act.

The changes failed to address or provide a mechanism to resolve conflict between public and private rights in the coastal zone. Rob Stokes, MP, in his address to the Parliament during debate on the Bill, outlined the problems with the proposed changes and described them as being “like lawyer’s pornography” (Hansard, 2010). Subsequently environmental lawyers Lipman and Stokes (2011) provided a detailed analysis of the issues and potential legal minefield surrounding the Act, as passed by Parliament in 2010.

Further complications have arisen as a result of the documents supporting the revised legislation. The situation now created in an emergency means that the only actions that can be legally undertaken are either unachievable (under the coastal engineering criteria specified) or are likely to result in ineffective engineering and non-viable outcomes. This again raises issues of liability.

The changes allow council to fund maintenance of protection works through special purpose levies albeit with accountability that should prove a challenge to administer. However, the levy can only be applied to new works or in situations where existing protection is upgraded. The obvious difficulty being that in existing problem areas where many properties already have protective works (with possibly varying, and unknown degrees of engineering competence) council cannot apply a levy to bring those works up to a suitable standard nor to carry out offset actions such as beach nourishment (in order to restore the public beach amenity) unless the owners trigger the levy provisions. Even more challenging will be equitably levying the small number of as yet unprotected properties at these locations, particularly in regard to maintenance of beach nourishment programs to offset the potential adverse impacts of any new approved structures the owners may wish to construct. The levy can only be implemented with the approval of all affected property owners and is attached to their property title in perpetuity.

The changes purport to introduce the concept of Emergency Management Plans, a mechanism that already existed in the legislation, and had been used previously by councils. However the 2011 provisions incorporated the Ministerial direction to nominated councils to prepare such plans as a first step, prior to preparing new coastal management plans (the “cart before the horse”). The State’s argument being that it was a priority to prepare for emergencies. However, in the named council areas the problems have been known for many years and in most cases there are already management plans/strategies that could provide a context for appropriate emergency actions. The State appears to have summarily dismissed these plans/strategies or has lost the corporate memory of their existence. That emergency management is not a credible replacement term for “past planning failure” is a fact the State chooses to obfuscate (Gordon, 2010).

The strictures contained within the Act and associated documents dictate that during a storm emergency the only legal actions that can be undertaken are evacuation and the erection of barricades. While the Act and associated documents may give the impression that emergency action can be taken to save dwellings the reality is that no action to save dwellings is possible and if attempted would be subjected to a substantially increased penalty. It may be problematic however as to how successful any court action might be, particularly when individuals breach the Act while trying to save their own family home.

The fact is that significant property loss could be associated with future storm erosion events and the Act exacerbates this situation; a disaster waiting to happen.

Lord and Gordon (2011) detail some of the limitations and shortcomings of the emergency measures’ provisions. In reality, from a coastal engineering perspective, “emergency works” can only be undertaken some time after a storm event when the escarpment has slumped to a stable slope, a remote source of sand has been secured, the necessary certificates have been obtained and safe and reasonable access for construction purposes has been achieved. Unfortunately however the further strictures imposed through the Act that the height of any sandbag wall not exceed 1.5 metres from the base of the escarpment and that the toe of the wall cannot be excavated into the beach, mean that any such structure has a very limited ability to withstand further storm attack. Hence, the

“allowable” structures cannot be considered engineeringly competent, even as a “holding works” while awaiting consideration of a Development Application for a more permanent solution. Nielsen and Mostyn (2011) detail some limitations of the use of geotextiles in coastal revetments.

The option of sand nourishment as an alternative to a sandbag wall is not likely to prove viable because of the approvals necessary to obtain and place the sand, the time required to obtain those approvals and the overall cost of placing sufficient sand to provide effective protection, given that storm demand can be in the range of 50 to 200 m³ /m of beach (Gordon, 1987).

The Act details the appointment of “authorized officers” who can issue certificates in relation to permitting “emergency” measures. Where the body appointing the “Authorized Officer” is a council, changes have been made to extend the indemnity provisions of Section 733 of the Local Government Act to cover the actions of these officers. However the indemnity depends on a demonstration of “good faith” when decisions are taken. This potentially opens up a legal minefield because, while there are Guidelines for the actions of authorized officers they still have to form professional opinions regarding whether a proposed works will be damaged by coastal process or give rise to damage to other properties, including the amenity of the beach. To make such judgments, in “good faith,” the authorized officers will need to either be suitably qualified or be able to call on a suitably qualified person who is prepared to make a recommendation.

Coastal processes do not recognize individual property boundaries yet the Act places responsibility on individual owners to lodge Development Applications (DA) for the construction of defence works for individual properties rather than encouraging holistic solutions. Such individual DAs are, in the main, likely to fail the test of having no adverse impact on neighbouring properties and/or the public beach. Councils approving such DAs are potentially opening themselves up to future litigation. Further, notions of individual properties offsetting adverse impacts by implementing beach nourishment programs are naïve and demonstrably untenable. The problem is exacerbated in locations where individuals and/or councils have constructed previous protection works and an as yet unprotected property lodges a DA. Clearly the Act, as it now stands, does not ensure achievable, equitable and holistic solutions and provides no leadership in resolving the legacies of past decisions or in addressing the dilemma of the contradictions between private and public rights to enjoyment of the coast.

The influences of the Sea Level Rise policy and climate change concerns on changes to the Act have focused solely on natural hazards associated with beaches. While the majority of potentially endangered assets are located behind beaches and hence the likelihood of property loss is greater, the potential for loss of life is far less than that for persons dwelling in cliff/bluff top locations due to the unpredictable, and sudden, nature of cliff/bluff collapses, particularly during storms. This issue appears to have “fallen below the radar”.

The Future

The current focus on climate change impacts as the driver for coastal management reform, rather than addressing them as another aspect of coastal hazard management, has ignored the reality that most of the issues faced today were identified decades ago. They are only problems due to the past failure to effectively manage them. Further, climate

change was identified as a factor in coastal management a quarter of a century ago and was included in the 1990 Coastline Management Manual and subsequent 1997 NSW Coastal Policy.

It is well understood that coastlines accrete when there is a supply of material or there is uplift (relative sea level fall) and retreat when there is sediment loss or there is a relative sea level rise. Waves and wind provide the erosive forces which constantly work to re-shape coastlines. The geological evidence is that, over millions of years, coastlines have been constantly changing. Coastal land is not permanent; it is transitory. Coastal recession/erosion is a natural phenomenon (irrespective of climate change) that is only a problem when public and private assets have been placed in harms way.

The State Government is the basic legal Crown authority charged with stewardship of the coast. The Commonwealth of Australia owes its powers and responsibilities to an agreement by the Crown States to participate in a Federation. Local Government is a vehicle of the State, being established under a State Act. If the State is not to leave future generations with a crippling and irresponsible legacy, the issues which must be fundamental to any Coastal Act are twofold: how to manage future development in as yet undeveloped regions of coastline and; how to manage existing development which is under, or will in the future come under, threat.

Practical achievement of competent coastal management dictates an overall guiding principle of the achievement of equity for both individuals and the broader community. To achieve this the current Act requires significant revision focused on risk management and a Risk Matrix approach. Coastal hazards including, but not limited to: short term beach erosion; long term coastal recession; cliff erosion/recession; oceanic inundation; sea level rise; changes in storminess together with the type of development and relevant planning timeframe form one axis of the risk matrix. The other axis must identify who is/are taking the risk, who is accountable for managing the risk and who is responsible for both advising on the risk, its likelihood, and the consequences should the risk materialize. The Brisbane floods and the aftermath of the Tsunami in Japan provide salutary warnings of the need to apply a risk management discipline to decision making when dealing with developments potentially impacted by natural hazards

In managing future development of as yet undeveloped areas that have not been re-zoned, the ambulatory nature of the coastline needs to be recognized. The fact that a coast is receding is however not necessarily a reason to prevent its use and enjoyment. Simply applying the traditional formula of setbacks fails to address the progressive nature of long-term recession, only ensuring a dire problem at some future time. The legal concept of Torrens Title and the associated common law rights of property ownership are a poor fit to the use of land that will in time be consumed by the sea. Examples exist along the NSW coast where legally subdivided residential allotments are now located completely below the high water mark.

In setting up land tenure within the Australian Capital Territory it was recognized that the opportunities to plan for potentially changing circumstances was best served by the use of long-term leasehold rather than freehold title. The greater flexibility afforded by leasehold provides a workable framework to manage future coastal development, given the uncertain nature of coastal hazards (whether natural or anthropogenic in origin). Effective implementation of such an approach should be based in the Coastal Act and be a statutory requirement of the planning legislation for new residential or commercial land releases along the NSW coast and estuaries. Re-zoning for private uses should be based on long-term leasehold with the right to sell the initial lease(s) at market value being conferred on

the current owner/developer. Once sold, the purchaser would have the same property lease transfer rights as exist in the ACT, for the duration of the lease. However at the time of the initial sale the actual ownership of the property would convert to the State who would become the future lessor.

The State would have an interest in ensuring the initial subdivision provided viable private and public outcomes while allowing coastal development for both public and private use. There would be an incentive for the State to identify appropriate uses and initial setbacks in keeping with the lease period (commensurate with the identified hazard, say 50 years or 99 years) but there would be the balancing stricture that if the State were overly conservative there would be no incentive for development of coastal areas with the resulting loss of State revenue.

There would also be incentive for the State to ensure that any infrastructure was sufficiently flexible or had a design life that enabled it to be adapted to an uncertain future. Should coastline recession not proceed at the projected rate the State could re-lease the land. If, on the other hand accelerated recession took place the State, as the lessor would have the opportunity to implement a suitable course of action. The approach would allow the current owner/developer to achieve a commercial outcome when first developing an area. Future lessees would have use of coastal land for the duration of its viable existence and/or could on-sell it at a value reflected by the remaining duration of the lease. A lease approach would create the opportunity to factor the risk of an uncertain future into the value of coastal land while also providing a mechanism for the State to manage the potential future loss of land, while retaining foreshore access.

In line with a leasehold approach the Act needs to specify the use of Time Limited Development Consents (TLDC). This facility already exists within the Environmental Planning & Assessment Act but to date has had limited use by councils. It is a form of consent that is well suited for properties with uncertain futures. A development subject to such a consent is only legally approved for the time granted by the consent. When the specified limit is reached an application for extension can be lodged and a council can reconsider the renewal of consent if circumstances warrant, if not the development should be removed as per the provisions of the original approval.

There is a need to create a similar statutory Distance Limited Development Consent provision within the EP & A Act rather than the current reliance on challengeable and often ill defined distance limited conditions of consent some councils embedded in their approvals. A DLDC would define when a development is considered non-viable because of its proximity to the landward moving boundary of coastal recession and hence the development needs to be removed.

Both TLDCs and DLDCs would encourage more readily removable/demountable building types and/or innovative structures over traditional masonry structures.

Development approvals and land tenure need to factor in the expected life of coastal developments. The overall approach of leasehold and TLDCs/DLDCs provides a practical solution that can allow sensible future management of the coastal resource in an uncertain climate provided they are incorporated into the appropriate statutory planning instruments. The approach allows the State to fulfill its primary function of responsible long-term stewardship of the coast on behalf of the overall community.

The second matter the Coastal Act must address is how to manage developed or rezoned areas at risk. Given the prevailing long-term recessionary erosion trend affecting most of the

NSW coast, not only are private assets increasingly placed at risk but also so are the public beach amenity and overall environment of the coast. The State, as the Crown authority of the people of NSW, has a responsibility to implement effective holistic solutions to problems that can significantly adversely impact on the social, economic and environmental wellbeing of the State.

In areas where development has already commenced but development is sparse the Act should provide a mechanism that would allow for State repurchase, if appropriate, and conversion to leasehold with the State being the lessor. This applies to both re-zoned, undeveloped land and for buildings. There is good reason to lease both property and developed assets for as long as they are viable in order to finance the overall concept. Repurchase of coastal properties and developed assets at threat has taken place in NSW in the past but usually only after the assets have become non-viable. The mechanism required in the Act should allow a re-purchase process that aimed at progressively acquiring property in sufficient time to allow the lease payments to part fund the purchases.

Where intense development exists the Act needs to provide a mechanism for development and practical implementation of holistic, integrated, protective measures. These may include protection for developed assets but would require that those benefiting from that protection not only contribute to the provision or upgrade of the protective measure but also offset the adverse impacts by contributing to funding programs such as beach nourishment and dune re-construction in order to restore the public beach amenity. The form of protection needs to be appropriate to the situation. The mechanism must include provision for incorporation/upgrading of any existing protection measures into the overall solution, particularly where the existing measures are of questionable capability. Such a scheme must holistically address a coastal/sediment compartment, not just individual properties or adjacent properties as currently proposed in the legislation.

While an idealistic approach might be to allow developed assets to simply be lost as recession progresses, the reality of the legal rights of owners in common law and political pressures relating to the loss of family homes is that this is an unlikely and unfair outcome. Rather, authorities and individual owners are more likely to spend considerable funds on legal cases with potentially piecemeal outcomes that further degrade the coastal amenity; as is already the situation at a growing number of locations. The option of re-purchase and possible leaseback can still be considered in intensely developed areas but tends to be more problematic. This is due to the quantum of funds required for the initial purchase, the complexities of multi ownership of unit/townhouse type developments and the historical reluctance of people to participate in such schemes until the property is under such threat that the potential to recover purchase costs through leaseback is severely impaired.

If it is the State's desire to not allow any defensive action to save assets during storms it should be clearly stated, not left as an inevitable conclusion to be individually arrived at by councils and owners. The benefit of the State taking a leadership role on this is that it makes a strong statement to Councils, property owners and the community regarding the need to implement holistic solutions prior to any emergency arising. The cost to the community and property owners of not doing so is well illustrated by the 2011 Brisbane floods.

Unlike the present Act the ability to levy/contribute funds for beach amenity restoration should apply to all those who can be shown to benefit from protection works including but not limited to coast-front owners. There are many situations where a holistic approach requires consideration of an entire embayment such as Collaroy-Narrabeen. Although only

some properties are currently directly affected by erosion threat there are many others that benefit from maintenance of the dune system in the embayment. The State and Council own waterfront assets such as roads, parks and surf clubs. The fact is that where intense private development exists it often co-exists with public assets and therefore it is vital that the Act contain a mechanism for practical “implementation” of overall Management Plans; not simply a requirement to “prepare” plans. The Management Plan and an associated Implementation Plan must be incorporated into the statutory planning instrument and Council’s management regime.

A challenging issue is that of infill development and/or how to manage areas of low density and/or where property values are high. The Act must contain provisions to manage these situations in a manner that will ensure equity to both private owners and the wider community. Consideration needs to be given to a case-by-case approach to infill development, incorporation of building controls to manage the hazards and incentives for moving away from traditional masonry type structures.

The Act must provide leadership in encouraging statutory management plans/strategies that foster flexible innovative solutions and limit the potential future liability of all concerned. A measure of success of any such action is whether property values demonstrate the real risks and costs associated with the coastal threat and the costs of maintenance of not only the property, but also the public amenity. Demountable housing is an oft-misunderstood concept. The value of such an approach is that the built asset can be recovered and relocated when the recession threat materializes thereby limiting the loss to that of the land. It should be noted that a demountable housing strategy does not imply a rolling back approach but rather one in which the investment in the built asset can be retained, albeit located elsewhere.

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