Mr. I. K. Foreman
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The Hon. Brad Hazzard MP
Minister for Planning and Infrastructure
Parliament of NSW
Macquarie Street
Sydney NSW 2000

3 March 2014

**Dear Mr Hazzard**

## Submission on the NSW Planning & Infrastructure Draft Planning Circular on Coastal Hazard Notations on Section 149 Planning Certificates

Having read through the Draft Circular regarding the above issue I can't help but wonder why this whole matter has got to the state that it has through a hypothesis surrounding predictions of future mean sea levels (MSL). There are literally tens of thousands of people who reside adjacent to the coastline of NSW who are now adversely affected by one root cause and that is projected MSL's. These people have found that overnight their properties have been devalued by tens if not hundreds of thousands of dollars and in addition insurance premiums on their properties have skyrocketed and even minor modifications to their dwellings now require a report from a consultant coastal engineer.

There have been hundreds of papers written about sea level rise but one underlying theme is that they are over time continually revising downwards their predictions. This is clearly highlighted by the IPCC reports – their original report back in 1989 predicted sea level rises far in excess of what they are now predicting. Over this twenty five (25) year period based on their 1989 report we should be seeing a significant rise in sea levels however a relatively recent paper by Modra and Hesse from the Manly Hydraulics Laboratory concludes by stating that at the Fort Denison tide gauge MSL over the period 1986 to 2007 rose by only 0.4 mm / year as opposed to a 0.9mm / year rise over the last hundred (100) years. These measured, miniscule rises make a mockery of the so called science regarding the hypothetical prediction of MSL and it is most inappropriate that this incorrect information is then used to calculate predicted recession lines over

various time periods which then impacts adversely on the Section 149 Certificate advice to the tens of thousands of people who reside next to the NSW coastline.

As a possible remedy and one in which I believe would add credence to MSL projections would be to adopt a similar model that is used by the Metrological Bureau for their predictions regarding Intensity-Frequency-Duration (IFD) curves that are used for predicting various rainfall intensities over varying time periods and return intervals. These curves rely upon historical data in order to predict the intensity of future rainfall events and are updated on a regular basis to ensure any short term trends that do not comply with their predictions are taken into account. This same methodology could be adapted for MSL predictions in that tidal gauge information surrounding the Australian coastline over whatever period of time that is available could then be used to calculate a trend line that can then be projected forward in time. It would be necessary to adopt a moving averages approach to the trend line to ensure that short term fluctuations are smoothed over. This approach I believe would be far more accurate than the hypothetical process which is currently used and more importantly it would make it far easier for residents along the NSW coastline to understand. At the moment these residents are being asked to believe in a MSL prediction that as time progresses is proving to be continually wrong and it is not hard to understand the angst they are suffering. If it is good enough for the Metrological Bureau to adopt an approach for rainfall prediction that relies on an historical analysis of dataset information and not hypothetical scaremongering then it should also be acceptable for MSL predictions to be calculated using a similar approach.

I should point out that I have studied coastal engineering at a post graduate level and have as a member of the American Society of Civil Engineers (ASCE) received regular copies over the last forty (40) years of the *"Journal of Waterway, Port, Coastal and Ocean Engineering"* to ensure my knowledge in coastal engineering is kept up to date. I was also responsible for foreshore maintenance along the beaches of Wollongong for the last fifteen (15) years of my employment with Wollongong City Council.

Yours faithfully

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Cc: NSW Premiers Office

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The General Manager
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29 March 2012

## Public Exhibition of Coastal Zone Management Plan

## Dear David

I wish to submit the following comments/objections in relation to the Coastal Zone Management Plan (CZMP) that is currently on exhibition. Comments at this stage have been limited to the validity of projected sea level rise (SLR) and proposals for Austinmer beach. Having perused the whole document however it appears that there is a lack of local input and/or that of Council officers responsible for overall beach and foreshore management and I may provide additional comment in relation to other beaches at a later date.

As mentioned above my comments at this stage are limited to the validity of projected SLR and proposals for Austinmer beach which I have split into Austinmer beach reserve and Austinmer rock pools. Dealing with each in turn my comments are as follows:

**Projected Sea Level Rise**
The directions stipulated by the State Government as to guidelines to be used for projected SLR I believe need to be urgently questioned as it is these projected rises that are generally directly proportional to the extent of projected recession lines that are now mapped onto foreshore properties and appear as constraints on Section 149 Certificates issued by Council. There is mounting evidence I believe that the SLR scenarios as postulated by the Intergovernmental Panel for Climate Change (IPCC) give serious cause for concern. This is reflected in the continual downgrading of SLR projections by the IPCC since their original report of the late 1980's. It is noted that the credibility of IPCC reports is now being increasingly questioned by governments around the world to the extent that the German chancellor has issued a directive that all reports from the IPCC are to be peer reviewed by her own government scientists before being acted upon. There is also the recent incident involving a direction by the NSW government that a paper on

SLR was to be withdrawn from a coastal conference agenda in Perth late last year because it apparently cast some doubt on the validity of projected SLR particularly on the eastern seaboard of Australia. This paper was to be presented by Doug Lord who I believe to be one of the more eminent coastal engineers in Australia.

The question that Council should be directing to the State government is what will happen after another 10 to 20 years when the IPCC further downgrades their SLR projections. Will this mean that there will be a complete revision of the Coastal Management Study with a whole new set of projected recession lines mapped onto coastal properties with a consequent revision of advice contained within Section 149 Certificates. This course of action I believe will make a mockery of the whole coastal management process.

This whole coastal management process reminds me of when the State Government first tried to introduce floodplain mapping in the late 1970's. After some severe flooding in the Sydney basin during the mid 1970's flood studies were undertaken and floodplain mapping commenced along the Georges River. There was a significant drop in property valuations affected by the floodplain mapping process along the Georges River to the extent that the local MP for the area lost his seat at the next State Government election. This was quickly followed by directives to local Councils from the State Government (Public Works Department) that they could carry on with floodplain studies but under no circumstances was any floodplain mapping to occur. Hopefully the same scenario will not occur under the Coastal Zone Management process.

I believe the whole issue as to the validity of the State Governments guidelines for SLR should at least be listed for urgent discussion at the Coastal Councils group and also listed as an agenda item for discussion at the next Local Government and Shires Association conference. Hopefully a resolution will be forthcoming from this conference seeking a review by the State Government of the whole SLR saga. I am aware that other coastal councils (Lake Macquarie, Newcastle, Central Coast, etc.) have also received significant resident opposition to the whole CZMP process due mainly to the impacts on their properties of forecast recession lines. I would not be surprised if a class action against the State Government's SLR guidelines is not forthcoming in the not to distant future.

**Austinmer Beach**

From my perusal of the CZMP it appears that there are two different proposals being postulated for the treatment of Austinmer beach to combat SLR. Both of these proposals appear to involve the contouring of the sand on Austinmer beach to create a dune in front of the existing seawall and promenade with the planting of dunal vegetation. I am absolutely amazed that anyone of sound mind would even suggest such a disastrous solution to a problem which I believe will never eventuate anyway. In my opinion the construction of a vegetated dune in front of the seawall and promenade would completely destroy the scenic attributes that Austinmer beach currently enjoys and would mean that as the dunal vegetation and dune grows in height over the years

there would be no view of whatever remaining beach is left and also the surf zone for people walking along the promenade. As I have often said to some of the tree planting fraternity of Austinmer if you want to look at vegetation turn to the west and look at the mountain – there is no shortage of vegetation up there.

As mentioned above I question as to whether Council staff have provided sufficient input into the CZMP. The hazard ratings for Austinmer Surf Club are listed as Medium – High – Extreme with a recommendation that investigations commence into the re-design or retrofitting of the existing clubhouse in its current location to withstand coastal impacts such as wave impacts and inundation. Council should still have a copy of the plans for the construction of the Austinmer SLSC building which clearly show the floor slab of the building structure being supported on reinforced concrete piles to bedrock. This construction practice alone would provide a significant level of protection against any future coastal inundation during storm surge events but Council should also be aware that a far greater level of protection has been provided by the relatively recent construction of a new seawall with adjacent twin cell culvert construction for the southern 30-40% of Austinmer beach. The combined effects of the twin cell box culvert with a new seawall at approximately 400mm-500mm higher than the old seawall would in my opinion lower the consequence component of the hazard rating to a point that only a low risk rating should prevail for future damage to the clubhouse from coastal inundation.

There are recommendations within the CZMP for Austinmer beach that involve investigation, design, retrofitting, etc of the stormwater drainage outlets and seawall. Again as mentioned above Council should be well aware that the entire stormwater drainage system including the section of seawall adjacent to the eastern cell of the stormwater drainage structure was completely replaced only 6 – 8 years ago. I don't believe there is any need whatsoever to undertake these recommended investigation / design proposals at this stage.

It is also noted within the CZMP that there is only a Low – Medium – Medium risk rating for the dressing sheds at the southern end of Austinmer beach. Again I believe these ratings should be reviewed especially under the consequence component as any failure and/or collapse of the dressing sheds could lead to serious instability problems for the properties adjacent to the west. There is already stability problems within this area on top of the cliff face immediately to the south of the dressing sheds.

**Austinmer Rock Pools**

Of the two proposals (PR1 or A2) suggested for the rock pools at the southern end of Austinmer beach I strongly believe that anyone who is aware of the popularity and tourist attraction that these pools provide would not even dream of suggesting a planned retreat option for the pools. Once again a planned retreat option for the rock pools would completely destroy the scenic qualities of the southern end of Austinmer beach and would remove a very popular facility not only for locals but also for the thousands of tourists that

utilize the rock pools during the summer months. I also doubt that very much thought has gone into the actual process involved in slowly letting a rock pool at a very popular beach deteriorate to a non-useable state. The whole proposal would be fraught with public liability and environmental issues especially if there is some loony that suggests the rock pool excavation into the rock shelf be filled and concreted over.

It is also noted that the risk ratings for the Austinmer rock pools are rated as High – Extreme – Extreme. I am not sure as to whether this rating applies to the people who use the pools or to the actual pool infrastructure. If the rating applies to the users of the pools I would question as to why there would be such high risk ratings especially when the pools have an average tidal range of approximately 1 to 1.5 metres and any sea level rise due to a high tide does not stop people from using the pools. If anything it makes the experience more enjoyable.

**Summary**

In conclusion I believe there is only one option for Austinmer beach to combat any hypothetical SLR and that is for the continued replacement of the northern section of seawall in its existing location as and when required. The seawall should be constructed at a level to correspond with the level of the new seawall at the southern end of the beach which is approximately 400mm – 500mm higher than the top of the existing seawall. Obviously this work would also involve the reconstruction of the adjoining car park to a corresponding higher level. Under no circumstances should there be any beach nourishment / contouring of the sand to form a dune with the installation of dunal vegetation.

As far as the Austinmer rock pools are concerned there should definitely be no planned retreat option with the pools being maintained in their existing location and configuration. As far as the levels of the pool walls (especially the eastern walls) are concerned these should be maintained at their existing levels to maintain the excellent flushing action that is provided during periods of high tide. Any lifting of the pool walls in level to combat the hypothetical SLR should not be contemplated as this could result in stagnant water conditions that occur at other rock pools during periods of prolonged calm sea conditions with neap tides.

Yours faithfully

Ian K. Foreman