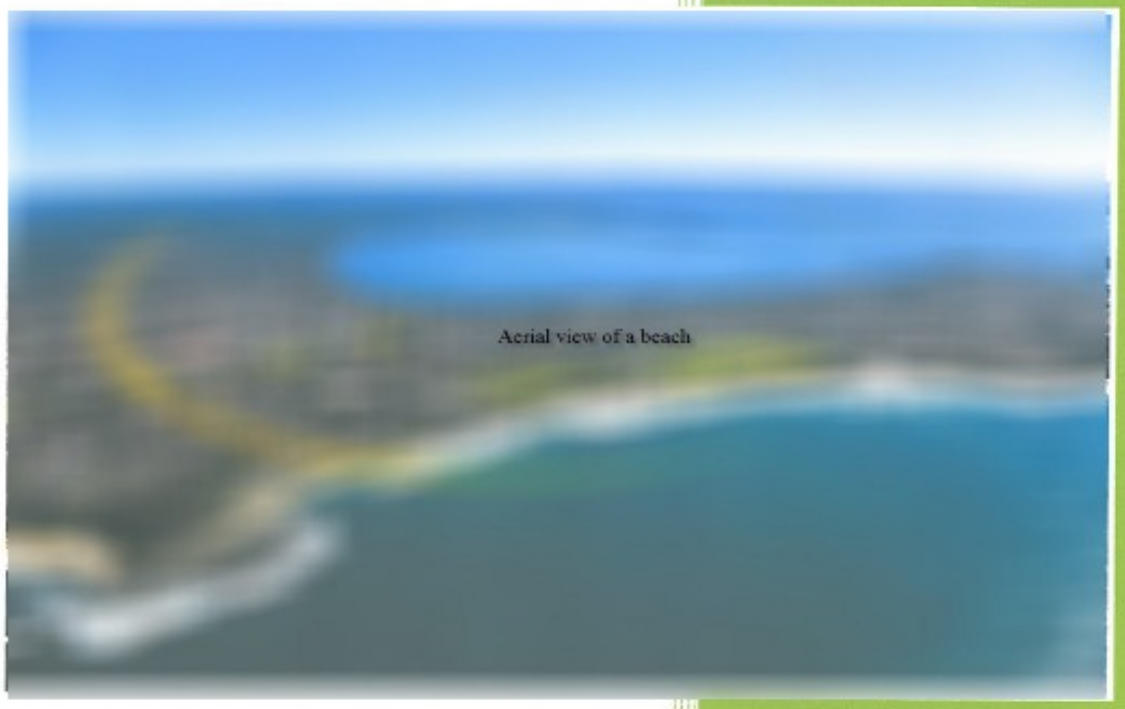
# 2012

# Beach Report




## To: Shire Council

Environmental Consultant

3/17/2012

# Labelled diagram of [redacted] Beach

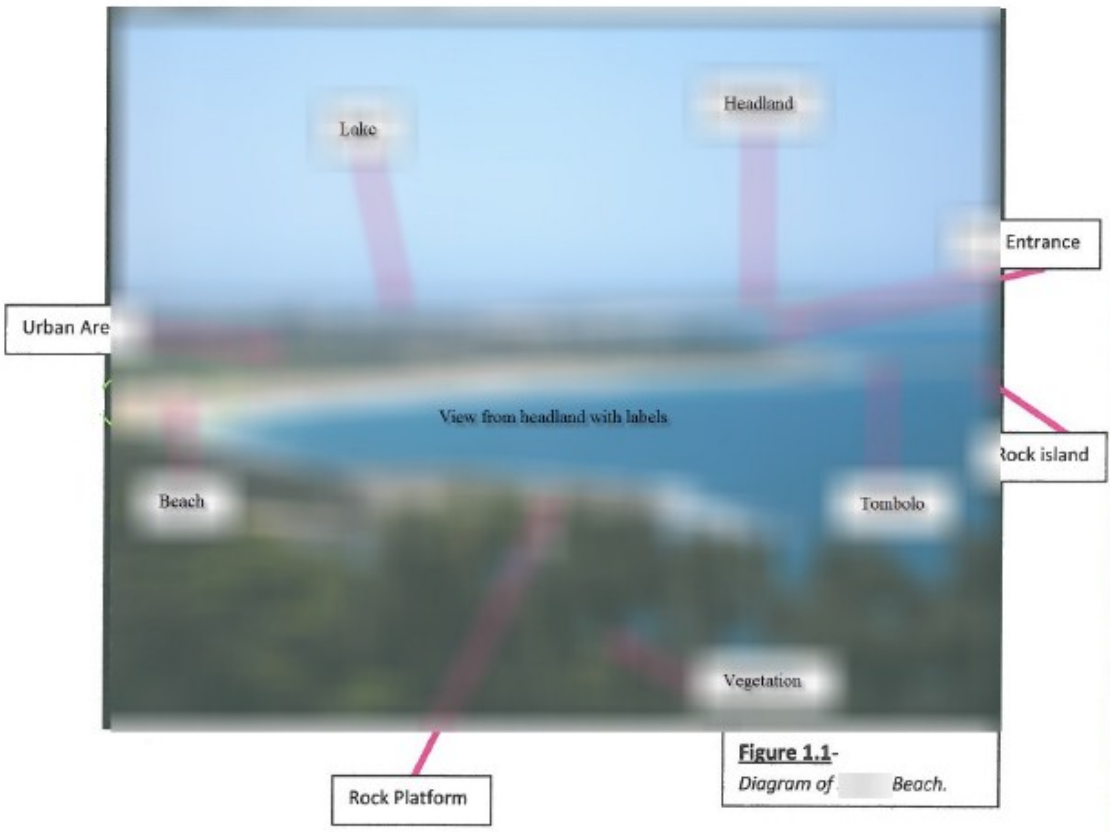



**Figure 1.1**-
*Diagram of [redacted] Beach.*

Excellent photograph with clear labels

This diagram shows the evidence of erosion in various ways. The tombolo with the rock island at the end has been caused due to erosion and the sand dunes are uneven. Through this photo evidence of longshore drift is exposed through the build up of sand where the green circle is. On the right of the circle we can see the shortage of sand which is fixed through my strategy of beach nourishment.

Sophisticated use of geographical terminology to describe both the natural and human processes on the beach

Dear Madam,
After undertaking my investigation in the effectiveness of current coastal management strategies at XXX Beach I have come to a few conclusions which will sustain the beach for many years to come. Whilst acknowledging the strategies in place, I graded their effectiveness and considered the human and natural impacts. Combining my alternatives with your ideas, I feel we can come to a sufficient agreement to renew the beach and sustain it for many years to come.

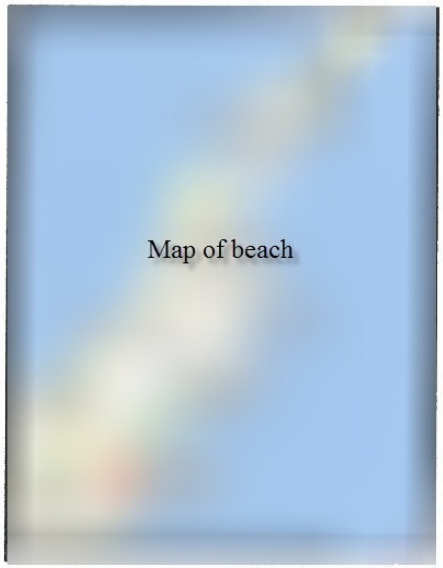



**Figure 1.2**- *Shows the surroundings of Beach. Clearly establishes how close the entrance is.*

Use of formal language and sophisticated geographical terminology

The human and natural impacts have both a positive and negative effect on the environment. As reads, toilets, café, golf clubm picnic area, car-park and housing improve facilities for the public they also reduce the natural habitat zone, creating a negative result on the biodiversity and environment. Urban encroachment reflects the proximity of buildings to the fore dunes which depletes sand reservoirs and reduces biodiversity. Not only at XXX beach, but also its surroundings need to be inspected so construction isn't taking place on the dunes or to close to the beach.

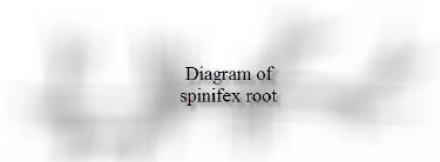



**Figure 1.3**-*Shows root system of the Spinifex. Covering the fore dune, this plant traps the wind from eroding the sand.*

The main natural impact significantly damaging the beach is erosion. The weather is one of the major problems causing the coastal environment to crumble. Although it is a big negative, the weather can also be considered positive as the warm, summer days renew the sand from previous disasters and nourish the vegetation. The spinifex plant is situated on the fore dune and has roots which hold the dune in place.

Evidence of an extensive understanding of both positive and negative impacts on the beach

This along with all other vegetation is a positive impact. Burnt wood and other vegetation intruded by humans destroys the specific habitat, although it can result in germination of new plants. This process causes the new plants to grow is a positive aspect for the beach. After viewing these impacts I have made plans to work in conjunction with the environment.


**Figure 1.4**-*Diagram of the beach after a storm which is one of the major causes of erosion.*

Excellent diagrams

At the moment the main coastal management strategies at XXX beach seem to be the bins, signs, fencing , vegetation and designated walkways. If you are willing to draw people to the beach these strategies used appropriately will impact positively. I have noticed that each of these have been included, however not all of them are in the most suitable locations. I suggest improving the fences on the back dunes is necessary so as to reduce intruders, and signs could be put in front explaining why the fences are there, I noticed there were bins (particularly in front of the café) however; there could be more with both recycling and junk signs to ensure their use. The majority of the bins don't have lids, therefore new installed bins need this upgrade. The designated walkways are already adequate although more of them could be placed. Greater effort needs to be made because many people ignore the signs and bins as they are less noticeable.

Strategies given with solutions in reference to observations made in the field

Throughout this investigation, I have come up with a few strategies which will benefit and help the coastal environment at the beach. I feel that an offshore breakwater should be installed into beach as it reduces the wave power making it less destructive, therefore the erosion progress runs a lot slower. It will be situated under the water (5-10m down) in deeper water so as accidents with humans are prevented. I think that your council should do a lot of fundraising and could possibly ask the government for a grant, because an offshore breakwater would be a useful investment for the beach.

**Figure 1.5-***Diagram of an offshore breakwater. Large boulders/ rocks are placed under the water and built up so as the waves impact hits the breakwater reducing the strength on the beach and dunes.*

Extensive cause and effect of proposed management strategies discussed

I feel that the dunes are in quite a stable condition, yet there are areas including the bottom of the back dune and the majority of the fore dune which are definitely in need of more sand. There is evidence of longshore drift towards the left of the beach as there is a build up of sand. Beach nourishment is a handy procedure which can be taken in small steps to ensure the beach is maintained and restored to its healthy state. Although this is a very expensive resort, it will definitely be effective on XXX beach.


**Figure 1.6-** *during beach nourishment.*

Appropriate use of photographs to support text

I noticed that there is already some dune fencing; however the fences are not secure enough and should be completely wired. Another factor needing to be addressed is the stairs which are the entry/exists of the designated walkways. They are not stable, uneven and fairly steep making them a safety hazard. They need to be fixed by making them more stable (big blocks of wood) which should be evenly distributed so as people know where they are walking. More vegetation needs to be introduced to hold the dunes in place and keep them from suffering erosion.

Concluding my point, I agree that XXX Beach is in a healthy condition however, if my strategies are implemented combined with you own, we can strive towards a well maintained beach for all.

A very well written report that uses a range of strategies and shows evidence of an extensive knowledge of coastal management and natural processes

# Labelled Site Model

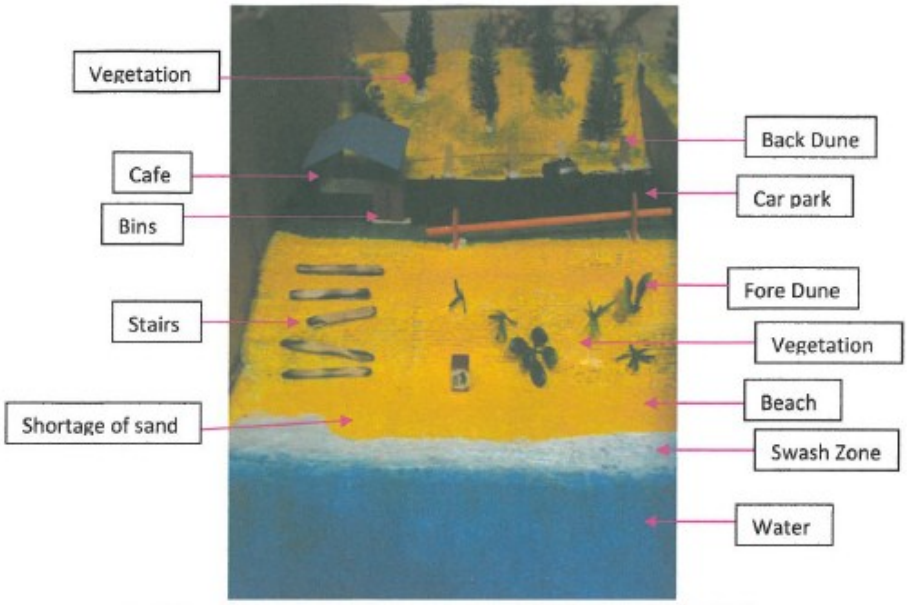



**Figure 1.7**-*Before my inspection and reconstruction of Beach.*

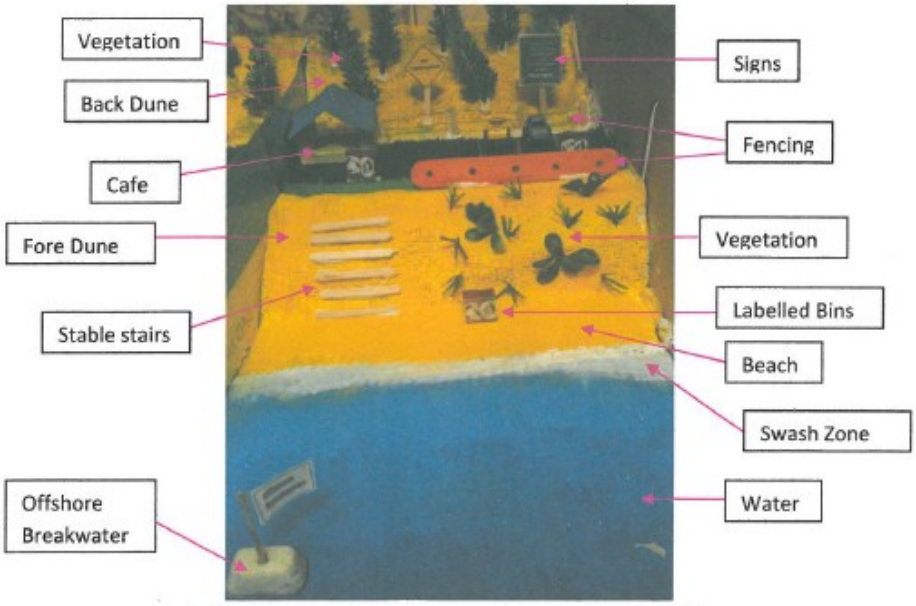



**Figure 1.8**-*After my recommendations for Beach.*

Very high level of competence in presenting research findings

# Evaluation of Site Model

My diagram shows both the before and after of XXX Beach. On the before shot the dunes and beach are more eroded however, are fixed due to beach nourishment in the after. The car park on the before is dodgy not having any parking lines, where as the after has clear lines. The vegetation is much more rich in the after then the before. The bins on the before model only have junk signs and there are only two. In the after model there are three sets of bins which are clearly labelled with recycle and junk. The stairs on the before are unsafe and uneven but on the after site they are perfect. In the before, the dune fencing is almost useless and there are no signs warning intruders, however in the after shot the fences are stable and there are various signs explaining why the fences are there. The major difference is the offshore breakwater. Although this doesn't look like a big impact it stops the dramatic erosion on the beach.

Comparing both the before and after model you can see the major impact my strategies will make on XXX Beach.

Very good written summary of recommendations

# Bibliography

A.Smith.2010.'XXX'. 18/3112.

http:Uwww.skyepics.com.au/pages/browse.php?suburb_id=252

D.J.B.Wheeler.2002.'Grasses Of NSW'. University of New England.l8/3/12.

http://www.fog.org.au/grasses_of nsw/grasses_of_nsw.htm

Dr J Floor Anthoni.2000.'Oceanography:Dunes and Beaches'.

18/3/12.

http://www.seafriends.org.nz/oceano/beach.htm

Excursion Booklet on Coastal Management strategies.

S.Van Zuylen, G. Trethewy,H.McIsaac.2007.'Geogrpahy Focus Stage 5'. Pearson Australia.

## Grade Commentary

Ricky has demonstrated an extensive knowledge of the natural and human impacts on the coastline and makes sophisticated management strategy recommendations. There is evidence of a very high level of competence in the application of geographical tools and skills. Ricky communicates using sophisticated terminology and draws conclusions from data gathered in the field and relates these to coastal processes. This work sample demonstrates work produced by a student preforming at an A grade standard.