Planning and Strategy Committee

Notice is hereby given that an Planning and Strategy Committee of Council will be held at Council Chambers, 1 Belgrave Street, Manly, on:

Monday 6 December 2010

Commencing at 7:30 PM for the purpose of considering items included on the Agenda.

Persons in the gallery are advised that the proceedings of the meeting are being taped. However, under the Local Government Act 1993, no other tape recording is permitted without the authority of the Council or Committee. Tape recording includes a video camera and any electronic device capable of recording speech.

Copies of business papers are available at the Customer Services Counter at Manly Council, Manly Library and Seaforth Library and are available on Council’s website:
www.manly.nsw.gov.au
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### PLANNING AND STRATEGY DIVISION

#### Planning And Strategy Division Report No. 29
Adoption of the Sandy Bay Landscape Masterplan

- **AT1**: Sandy Bay Landscape Masterplan – Final Design ........................................... 2
- **AT2**: Submissions received during the public exhibition period .................................. 5

#### Planning And Strategy Division Report No. 30
Pine Street Storm Water Outfall

- **AT1**: Cardno letter and attachments dated 27 October 2010 .................................... 25
- **AT2**: Cardno Diagrams 1 & 2 .................................................................................. 47

***** END OF ATTACHMENTS *****
Development of Landscape Masterplan for Sandy Bay Reserve is proposed to integrate improvements of areas addressing community concerns and encompassing five different components:

1. Improved pedestrian access along popular sections of the Manly Scenic Walkway
2. Grading and landscaping of open space with provision of seating
3. Mitigation measures to address sections of the shoreline affected by erosion
4. Construction of newly designed horizontal dinghy/kayak storage facility and allocation of storage spaces through establishment of a dinghy registration/licensing system with a ‘boat storage fee’ charged per annum
5. Responsible use of Sandy Bay for off-leash dog exercise activities with developed ‘Code of Conduct’ and provisions of additional dog faeces bag dispensers, drinking fountains/bowl, waste disposal bins and improved signage

Based on these components, Final Design of the Sandy Bay Landscape Masterplan has been prepared with following elements:

FOOTPATH
A path from Clontarf Boat Club adjacent to the water’s edge at Sandy Bay is proposed. This path is located in direct response to the Manly Scenic Walkway (MSW) user desire line. By using the existing boat ramp pedestrians can access the beach as an alternative path.

SEATING
The seating locations take advantage of existing views at nodal points where the user can be separated from the main pathway and also as a resting spot adjacent to the footpath.

SIGNAGE
This park has many different users, the main users are, walkers traversing the Manly Scenic Walkway, dog walkers and boat users. We propose two types of signage, a Sandy Bay Sign in response to park users and a Manly Scenic Walkway sign.

DOG USE
The dog user code of conduct will be clearly illustrated on the signage proposed. We suggest the provision of dog bag dispensers to be incorporated in the park signage.

GRADING AND TURF ESTABLISHMENT
To maximize park use we propose some minor grading works in particular to the turf area close to the existing beach ramp to promote beach access and quality user space. As part of the proposed grading the existing turf will be upgraded.

BOAT STORAGE
Defined boat parking spaces are proposed to the area where the existing boat parking is currently located. We suggest that the organized boat parking will be defined by a material such as timber sleepers and will have parking numbers and a locking device attached.

WATER ACCESS
To promote easy access to the water by boat users we suggest the location of a stepped pier as an extension to the footpath on the northern side of Sandy Bay.
Draft Sandy Bay Landscape Masterplan
Public Exhibition Submissions & Staff Response September 2010

SUMMARY
Submissions received: 9

Submissions received from
- 7 individuals
- 1 individual with additional signatories
- 1 Precinct

Type of submissions
- 7 submissions dealt with multiple issues, and
- 2 single issue (erosion at Sandy Bay)

A total of seven submissions are from nearby residents of Sandy Bay Road.

Main feedback (Comments highlighted)

**Concerns**
“Our concerns however, are strongly influenced by the majority of resident’s desire to keep Sandy Bay as natural and as peaceful as it is now”

“Two fundamental issues that this plan does not address relates to parking and access”.

“We do not need under lighting for seating areas, which will encourage night-time partying in a quiet suburban street.”

“We love living in Sandy Bay and have great pleasure seeing all the children and dogs playing alongside each other, but fear this will be a sight from the past”

“Sandy Bay is a residential dead end street. To encourage more people to this area is overcrowding our bay even more”;

“Sandy Bay is a unique part of Manly and Sydney Harbour and deserves to be retained in as natural state as possible.”

“The reserve is part of the Manly Scenic Walkway, a piece of the bush in metropolitan Sydney. The reserve should reflect the bush aspect, not the urban aspect.”

**Appreciations**
We appreciate the need for improved pedestrian access and measures to address shoreline erosion’.

“The walkway (improved pedestrian access – from Marina to eastern end of Sandy Bay) would be a sensible idea in that this will prevent walkers using the 50 Kmph road as a walkway – this clearly is a safety issue”.

“Seating in the reserve is a good idea”.

“Signage is a good idea.”

“Residents have noticed that there is severe erosion of sand at the North end of Sandy Bay and it is hoped that the Sea Wall in the Sandy Bay Improvement Plan will reach along to this end of the beach”.

“We are keen to work with you to deliver improvements to the area that reflect the nature of the Bay”
# 1.
Thank you for the opportunity to view the plans for Sandy Bay. As residents of Sandy Bay for the last 15 years, we appreciate the need for improved pedestrian access and measures to address shoreline erosion. Our concerns however, are strongly influenced by the majority of resident's desire to keep Sandy Bay as natural and as peaceful as it is now.

We object to the following points…

1. The new seating in the area adjacent to the dinghy storage opposite Fairbairn Avenue. Previous experience with the seats near the marina shows us that this arrangement encourages after hours gatherings by groups of young people and often underage drinkers, resulting in noise and repeated vandalism.

   Agreed, this will be removed.

2. The planting of a tree opposite near the dinghy storage area. The position marked on the plan refers to it as a ‘replacement tree’ when in fact, no tree stump exists in that exact spot. The residents of sandy bay do not want any structures which will obstruct the view of this pristine area. Sandy Bay is well known for its open spaces and we would like to keep it that way.

   Agreed.

3. It is of great concern to the residents in the cul-de-sac of Sandy bay, that there is a suggestion of introducing garbage bins in this spot. The houses and resident parking is in close proximity to this site and we believe the smell and unnatural nature of the garbage bins would be unsightly. At present, there is no problem with rubbish at this end of the bay and dog users are happy to walk to the existing garbage bin. The present site of garbage bins at the eastern side of the bay works well, as it is not as close to the existing houses.

   Agreed.

4. We would like to ensure that signage is kept to a minimum in both height and number and do not cause visual pollution.

   Noted.

I am further concerned that the situation regarding off-leash dog areas in sandy bay grasslands may be revisited.

Over the last 15 years this question has been raised and due to ongoing local and wider community support, the area remains off-leash. We are very happy with this arrangements and the Council ruling in 2008, it is now legally recognised. There has been no known accidents of dog running wild or being hit by a car in recent years. The arrangement works well as it is and both residents & visitors to Sandy Bay use the grass daily to walk their dogs to the Marina and back, in most cases under effective control and off leash.

In conclusion, I would like to request that the residents are fundamentally involved, in the planning and next stages of these proposed works.

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<th>Comments (as written)</th>
<th>Staff Response</th>
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<tr>
<td># 1.</td>
<td>Thanks for the appreciation on the proposed improvement of pedestrian access and measures to address shoreline erosion.</td>
</tr>
<tr>
<td># 2.</td>
<td>Agreed.</td>
</tr>
<tr>
<td># 3.</td>
<td>Agreed.</td>
</tr>
<tr>
<td># 4.</td>
<td>Noted.</td>
</tr>
<tr>
<td># 5.</td>
<td>There will be no change to off-leash status of the area.</td>
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This letter represents our response to your landscape master plan, as requested in your undated submission form that arrived after the 7 August “Community Consultation”.

As residents of Sandy Bay we are extremely disappointed with Manly Council’s approach and focus on many fronts:

- Two critical issues have not been addressed in your plan,
- Your responses to the 5 community concerns show a clear ignorance of specific issues facing this area,
- The quality of presentation of the Plan is extremely poor, and
- There has been lip service to community consultation.

We are keen to work with you to deliver improvements to the area that reflect the nature of the Bay, and look forward to your specific response to the issues raised in this letter, and to issues raised by other residents in separate submissions.

### 1. CRITICAL ISSUES NOT ADDRESSED

Two fundamental issues that this plan does not address relates to parking and access.

#### I. Parking

We live in one of 3 houses at the end of the street with no off street parking. Between Fairburn St and the turning circle near our house the street is fully parked out most nights, with 15 cars parked on the street (5 in a row on the waterfront, 2 abutting the central telegraph pole, 2 next to our stairs, 3 in front of #17, and 3 in front of #16-15. These cars are mainly owned by residents. At weekends we often cannot park in the street and we expect that your plan will encourage far more local activity. Although the details in your plan are very vague, it appears you will be reducing parking by around 50%.

*Please let us know how you will address this issue.*

#### II. Over Engineering a Solution

The West end of the beach is very narrow and you are planning to add dinghy racks, a walkway and a sea wall. Without taking away some of the street (see “Parking” above) or reclaiming some beach area for the walkway, this will not all fit.

*Please let us know how you will address this issue.*

### 2. YOUR 5 COMMUNITY CONCERNS

Commentary regarding your 5 key community concerns is detailed below:

#### I. Improved access along the scenic walkway.

No problem with proposed pathway along scenic walk way but we do not need an over engineered solution (e.g. bollards) that wastes ratepayers money.

#### II. Grading and landscaping of open space with seating,

The current plan presented does not clearly show drains or any specific landscaping solutions.
### Comments (as written)

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<tr>
<td>We do not need under lighting for seating areas, which will encourage night-time partying in a quiet suburban street.</td>
<td>Agreed, under lighting for seating areas will be removed.</td>
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</table>
| **III. Shoreline affected areas**  
While we do need a management plan to maintain our beach and boat storage area we also need a plan to bring back the sand that has been previously disturbed from the dredging of the Clontarf marina, Middle Harbour Yacht Club and Clontarf swimming enclosure | Any initiative to bring back sand will be taken after the Masterplan is implemented and sand movement monitored.                                                                                             |
| **IV. Construction of the dinghy/kayak storage and established licensing system**  
Your plan appears to have the storage area taking up a significant parking and road area, and also includes recycle waste, dog bins and extra signage. This area being the thinnest region of the beach should not have the excess volume of activity. Boat racks could be incorporated over the steel drainage panels at the widest region of this parkland area. | Proposed storage facility will remain confined within existing area. As mentioned elsewhere, there will be no encroachment to parking and road area. Code of Conduct will encourage more responsible dog management. |
| **V. Responsible off leash dog exercise “Code of Conduct” drink fountains, bowls and extra signage.**  
Council has previously had several complaints regarding the lack of management at the dog exercise area. Signage will not make any difference. An active cleaning program is required to collect the faeces. Also with extra fountains, bowls and seating we will only be encouraging more dog owners to come sit and relax in this area. |                                                                                                                                                                                                           |

**3. POOR PLAN PRESENTATION**

Your “Masterplan” draft is very poor presentation and incomplete, and does not provide sufficient information to respond fully. In particular you have not identified changes to the existing structures / topography.

For example:

- **Electricity Poles:** You have not stated where electricity poles will be located on your plans, including the one outside #16 in the middle of the turning circle.

- **Drainage:** The west end of Sandy Bay constantly collects tidal rubbish and stormwater run off debris. No recognition of this is included.

- **Maintenance Plan:** No commentary is provided for current facilities in poor condition, such as water mains. Over the past 24 months the water mains have burst in Sandy Bay at least 5 times. Your masterplan must address this issue to avoid any new work having to be dug up regularly.

**4. LIP SERVICE TO COMMUNITY CONSULTATION**

We have serious questions regarding whether you plan to conduct appropriate community consultation on this plan. Our first knowledge of this plan, and the fact that the Council had been investing our rates money in this exercise, was when we received a letter on a Monday to

| Relocation will be on the opposite side of the road. This has to be done in consultation with Energy Australia. Tidal rubbish collection is done by NSW Maritime. Will be referred. | Referred to relevant section of Council and agency. |
| This Masterplan is the product of extensive community consultations. |                                                                                                                                                                                                           |
Planning And Strategy Division Report No. 29 - Adoption of the Sandy Bay Landscape Masterplan
Submissions received during the public exhibition period

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| tell us that there would be a community consultation visit to the beach on the previous Saturday! | conducted as part of the Estuary Management Plan in 2008. Council has communicated information regarding Morning Tea and Public exhibition through:  
  - Clontarf Community Precinct (4 August 2010)  
| Further, there is no information to identify the source of your “Community Concerns”, and no apparent link to the extensive exercise conducted as part of the Estuary Management Plan in 2008. |                                                                                                                                                 |
| We love living in Sandy Bay and have great pleasure seeing all the children and dogs playing alongside each other, but fear this will be a sight from the past should council continue to try and capitalise on the already extremely popular Beach and Bay. |                                                                                                                                                 |
| Please advise us of your responses and next steps in this important process.         |                                                                                                                                                 |
| # 3                                                                                | Council is aware of continuing erosion. This has been addressed in this Masterplan through incorporation of landscape retaining wall to prevent further erosion. |
| I’m not sure if council is aware but Sandy bay foreshore (NW corner) is continuing to be eroded badly. Not sure what can be done but just wanted to bring it to your attention. |                                                                                                                                                 |
| # 4                                                                                | Agreed, lighting at seating areas will be withdrawn.                                                                                           |
| Sandy Bay Masterplan is unnecessary. It is too manicured and will spoil the natural beauty of our foreshore. | Incorporation of small trees near seating is considered by Council to be valuable as a way of enhancing public amenity. |
| Bench seating with strip lighting is only going to encourage dog owners to stay longer and encourage the drug users to gravitate Clontarf Reserve to Sandy Bay. As it is our beach has visitors from 6.00am with barking dogs until early evening ...... we do not need to encourage them to stay longer. If seating is encouraged we have less chance of the owners picking up dog faeces as the owners will be relaxing and enjoying each other’s company and not being responsible dog owners. Daily I watch many dogs do their business and owners too busy talking and not observing what their dogs are doing |                                                                                                                                                 |
| Planting of trees for shading is unnecessary. This Sandy Bay part of the scenic walkway is enjoyed because of the sunshine. Coming from the Spit Bridge you are walking through a very shaded path, you then arrive in Sandy Bay and then continue through the shady Clontarf Reserve and a shady bush all the way to Tania Park. Our bay during the winter months is very cold and in shadow early in the day so trees are not relevant |                                                                                                                                                 |
| As the Masterplan is very badly laid out and hard to read, it appears a tree close to my house will be planted to replace a stump that has been removed. I have lived in the bay for 43 years and the stump mentioned | Agreed. Please see response under #1                                                                                                           |
# Comments (as written) vs Staff Response

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<th>Comments (as written)</th>
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<tr>
<td>does not exist. A tree is the last thing needed.</td>
<td>Noted.</td>
</tr>
<tr>
<td>Existing service pits need to be maintained better and cleaned out more often. They smell and are full of sand.</td>
<td>Not agreed, only two water bubblers have been proposed.</td>
</tr>
<tr>
<td>Water fountains and bowl are not required and an expensive exercise. Clontarf reserve has plenty of bubblers. Most walkers have their own water bottles. Please remember this is a residential street.</td>
<td>Not agreed.</td>
</tr>
<tr>
<td>I have noted that the pathway between Clontarf Reserve and the Marina is not uses as often as you and I would like, because the groups of people are often more than two, so they still tend to walk abreast and take up the width of the road. So to continue the pathway and destroy the reserve seems to be a pointless exercise.</td>
<td>Not agreed, the Masterplan is not to encourage over crowding but to facilitate existing use of the area for wider community of Manly LGA.</td>
</tr>
<tr>
<td>Sandy Bay is a residential dead end street. To encourage more people to this area is overcrowding our bay even more. We have massive existing traffic and parking issues that Manly Rangers do not patrol, adding a kayak storage facility at the end of the street is taking parking away from the residents who have no access to garages.</td>
<td>Not agreed. Proposed bollards are not removable.</td>
</tr>
<tr>
<td>The bollards you are thinking of using to replace the low fence will only encourage boats to be launched from the beach. It will take the removal of one bollard to open the gap to fit a car with trailer. This is already happening around at the marina.</td>
<td>We still believe this will be a useful addition and make the beach and pathway more directly accessible to users and will not affect the amenity of local residents.</td>
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<tr>
<td>Stainless steel steps are not necessary to get down to the beach (very pointless when it is high tide). Aren’t people going for a walk or taking their dogs for a walk, which means they only have to walk another 20 meters and they can access the beach like they have always done.</td>
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<tr>
<td>LEAVE THIS BAY NATURAL – DON’T SPOIL NATURAL BEAUTY</td>
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<tr>
<td># 5</td>
<td></td>
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<tr>
<td>Since we bought in 1987 and built our home at 15 Sandy Bay Road, the subject of landscaping the Bay has been promoted by the Council and discussed by residents of the Bay on many occasions.</td>
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<tr>
<td>There has generally been a resistance to change, as the residents consider that Sandy Bay has a natural charm and is one of the few areas on the harbour foreshore that is untouched. There is also a fear by the residents that giving support to a scheme would eventuate in an over worked result including a mishmash of materials, styles and extent and a spasmodic placement of signs, seating, bins, trees, etc.</td>
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<td>I am an architect and have some skill in landscaping and with my wife have extensive knowledge in the way the Bay is used, its weather pattern dogs, boats and kayaks use.</td>
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<td>My wife and I understand the Council’s desire to provide order, facilities and direction in line with other areas of the Scenic Walk from the Spit to</td>
<td></td>
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**Comments (as written)**

Manly.

We would like to compliment the designers and installers of the landscaping from the commencement of Sandy Bay Road and the Marina as well as the northeastern side down to the roundabout.

It is with this sentiment that I have prepared 6, A4 free hand sketch plans which when joined together form the area you are addressing in your Draft Sandy Bay Landscape Masterplan.

**Staff Response**

Noted.

Council has considered your freehand sketches and have adopted changes which are in line with all other submissions.

The Scheme I am presenting;

- Does not require extension of the sea wall and the provision of stainless steel steps at great expense.
- It does not require expensive concrete formed seats and built up seating platforms.
- It does recognise the way in which people use the bay; for instance
  
  There would be less than 10 boats of the 32 that lie on the grass at the dead end of Sandy Bay Road that are still used. Similarly, there are about 8 kayaks and boards that are used. The rest of the boats, kayaks, canoes and boards have been abandoned.

  There is no need for the proposed numbers and rows of secured and controlled boats and kayaks, as there is not sufficient parking to sustain their use.

At Forty Baskets Beach you have separated boat storage. The same opportunity is available around the Clontarf foreshore. I propose an ideal place to control boat storage is on the southern side of the Marina for some 20 m. Access to the boats is by the existing timber sleeper boat ramp and there is plenty of car parking available. This area is used infrequently by locals and visitors to the area and would not disturb the residents who live high on the hill.

Also, there is plenty of opportunity for boat storage both sides of the western end of the sewerage duct with ample parking and ease of access for boat owners to get their boats into the water.

When using their boats people are usually in bare feet and the last thing they want is to walk on chipped granite and damage their boats and kayaks as they drag them over the granite, aggregate finished path and the sea wall. It is preferred to simply unlock them and drag them over the sand to the water. It is for that reason that I have shown a single line of boats and kayaks secured to a timber rail and lying on sand that has been graded from flush with the boardwalk to the natural water line. Also chipped granite is foreign to a beach and will find its way into the sand, onto the road and become a menace.

The very clear direction of your walkway around the Bay is good but it does not recognise that people using the bay will not use the featured...
and lavish timber steps and platform at the end of Sandy Bay Road. People in the majority access the beach between the Telstra cable pits and the tractor access through the sea wall. They like to walk across an even grade either over turf or sand with their dogs, boats and picnic gear.

Also, the timber boardwalk, similar to that installed at Forty Baskets Beach, is a far more natural and pleasant material to look at and walk on.

We applaud the removal of the post and rails separating the road from the turfed areas and the consistency that the timber bollards would bring to the area. However in doing so we believe ground cover should be used as a separator to where seats, bins, signs, etc can be placed reducing spasmodic placement of these items.

We have much more to say and would welcome the opportunity to further discuss the Draft Landscaping Masterplan, especially in relation to parking, seating materials, maintenance, planting, signs, bins bubblers, dog bowls and dog bag dispensers.

Thank you for the opportunity to submit our comments.

### # 6

As long-term residents of Sandy Bay (over 22 years) and as observers of the issues and problems for the residents and ratepayers of Sandy Bay, we believe that our views are well informed and as such we put forward the following as input to the final design.

The current proposed design is significant over-build for Sandy Bay beach and the small park which is available to all for general use. (It is interesting that to my knowledge no resident of the Bay were involved to any significant degree in the development of this plan). In general discussion with our neighbours it appears that only minimalist intervention is required to satisfy any outstanding issues.

Sandy Bay is a unique part of Manly and Sydney Harbour and deserves to be retained in as natural state as possible. In our years of observation the natural tidal flow corrects any manmade intervention e.g. the gradual degradation of the current eastern end seawall such that it required rebuilding some years ago. It will be a credit to the council when the beach can continue to be enjoyed by children, fishermen, picnickers and swimmers.

Manly Council needs to further consider the following problems and their resolution for the benefit of all residents and ratepayers.

This beach is the frontage to 16 houses with many more houses sitting behind them. Most do not have fences and are within 20-40 metres of the beach. The bay is a natural amphitheatre and every sound is amplified into residents’ homes. Any plan needs to address the noise issue.

Sandy Bay Rd is a residential area and a dead end street and differs significantly from the other Manly Council designated off leash areas where residents are not significantly inconvenienced by the influx of vehicles, people and dogs. Parking difficulties need be addressed in the

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<td>Noted</td>
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<tr>
<td>...</td>
<td>Noted. This will be investigated during detailed design phase.</td>
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<tr>
<td>...</td>
<td>Thanks, Council will welcome your contribution.</td>
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<tr>
<td>...</td>
<td>As mentioned before, this Masterplan is the product of extensive community consultations conducted as part of the Estuary Management Plan in 2008. During that time, most of Sandy Bay residents did make submissions.</td>
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<tr>
<td>...</td>
<td>Noted.</td>
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<tr>
<td>...</td>
<td>Noted. Parking issue is not part of the scope of this Masterplan and is being dealt with</td>
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</table>
1. IMPROVED PEDESTRIAN ACCESS – From Marina to Eastern end of Sandy Bay

The walkway would be a sensible idea in that this will prevent walkers using the 50 Kmph road as a walkway – this clearly is a safety issue which has already been identified by the police and council who should be congratulated for the “No Stopping Signs” on the Beach side which now provide clear view from the road.

2. LANDSCAPE RETAINING WALL (not clearly designated on plan)

Any suggestion of a full length seawall is completely unnecessary and will “sanitise” the bay such that it becomes just another non-beach. As long-term residents of Sandy Bay, we would point out that children, walkers, picnickers, boat users, swimmers and local residents have used the beach for years and continue to do so.

A suitable compromise is a small sea wall from the western end but please leave the beach alone for the enjoyment of all. However one problem in this approach is that this seawall will have to take into account the stormwater flow at the western end - will we end up with another pipe which simply scour a hole in the middle of the beach as we currently experience from the storm outflow pipe already in place?

3. BOAT STORAGE: Defined boat parking spaces are proposed to the area where the existing boat parking.

Given the dimensions of this area and that a section of this will be taken up with the pedestrian walkway, I cannot see how this can possibly fit a significant number of boats without impacting the street or enlarging the area currently used. And where will the owners of the boats (who presumably will be out for a large part of the day) park?

4. PARKING. – (No reference to this in the plan)

Since the Council has seen fit to redesignate the Beach as a tidal flat to
## Comments (as written)

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<td>from the street or impinge on existing beach area</td>
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get around its own rules of no off leash access to beaches, parking in this dead end residential street has become much more difficult for the ratepayers who live here. Any plan should look to correct this.

A component of this plan must be that the current parking “norms” as established are unaffected and that a further 3-4 parking spots could be built to the east of the power pole opposite Fairbairn Ave to assist to avert the problem created by Council, if this is acceptable to other residents.

4 WATER ACCESS: (Stepped pier as an extension to the footpath on the northern side of Sandy Bay).

A cursory review of the tidal charts would reveal that this set of stairs would be semi submerged by the tide twice a day every day. I am looking forward to a photo of this in the Manly Daily with the title – “Golden steps to no-where – paid for by your Council!”

Any such steps would also act as a sand trap as the tidal flow operates in a clockwise fashion

This is totally unnecessary.

5. DESIGNATED “OFF-LEASH” AREA

Since 2004, the incidence of dogs running unleashed and illegally on the road has increased and a recommendation to avert this is outlined below.

The small park area is adjacent to a designated 50kph road separated by a 200mm high log divider. It is tantamount to negligence to consider this “park” as a safe area for off leash dogs.

The designated “off leash area” should be designated as extending from the current seawall out onto the beach.

This provides a buffer zone separating dogs from 50kph road traffic and fulfils the Council’s duty of care to avoid any incident where a dog could cause a car accident by running on the road.

6 MULTIPLE SEATING

Multiple Seating as shown in the plan is unnecessary and a complete waste of money as are additional bins, poo bins, drinking fountains. There is no current garbage problem in the Bay as any refuse is removed/placed in the bin on the corner and not left behind. The last time additional bins were placed here they quickly overflowed with garbage such as rotting prawns. The bins were subsequently relocated by the Council.

Let us not see a repeat of history and a further waste of money.

7. SIGNAGE

Please minimise the overall signs. Last time we requested the Council reduce signs they were able to replace nine signs with four – once again sensible policy whereby the only losers are the sign makers.

Your comment will be referred to Traffic section of Council for further consideration

Noted. This issue will be further considered during detailed design.

Council has dealt with the issue previously in detail and has resolved to designate the whole area as off-leash. No plan to change the status.

Noted.
8. **DOG code of conduct** –

The dog user code of conduct will be clearly illustrated on the signage proposed.

The Code needs to consider and cater for the following:

- Increased dog faeces on beach and street
- Increased incursion of dogs into the unfenced (majority) of houses
- Increased noisy dog fights and loud barking at all times from 7.00 am to 8.00 pm seven days a week.
- Increasing number of owners who release their dogs and exercise them by having them run the length of Sandy Bay road, alongside the moving vehicle
- Parking and access problems in the street. The increased parking of cars has also created difficulties with residents entering and leaving their property.
- General unwillingness for adults and children to use the beach in the presence of large number of dogs on weekends and public holidays
- Increased use of the beach by professional dog “minders” – instances of people arriving with up to eight dogs are not uncommon.
- Environmental impact statement required: pelicans, herons, sandpipers and water dragons did use the bay but have diminished in number since the park/beach was redesignated.

With thank you for your consideration.

<table>
<thead>
<tr>
<th>Comments (as written)</th>
<th>Staff Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Noted.</td>
<td>Code of Conduct will encourage more responsible dog management</td>
</tr>
<tr>
<td># 7</td>
<td>Estuary Management Plan (EMP) is being implemented at stages and as funding becomes available. Maintenance dredging of the Clontarf pool is part of the EMP.</td>
</tr>
<tr>
<td>In 2007 Manly Council issued the Estuary Management Plan. Before I respond the Sandy Bay Landscape Masterplan (i.e., the Plan) I have to ask:</td>
<td>Yes.</td>
</tr>
<tr>
<td>☐ What happened to the estuary plan? I have not heard anything since.</td>
<td></td>
</tr>
<tr>
<td>☐ Was feedback from the estuary plan taken into account when</td>
<td></td>
</tr>
</tbody>
</table>
Planning And Strategy Division Report No. 29 - Adoption of the Sandy Bay Landscape Masterplan
Submissions received during the public exhibition period

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<thead>
<tr>
<th>Comments (as written)</th>
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</tr>
</thead>
<tbody>
<tr>
<td>preparing the Plan?</td>
<td>Agreed, Council also aims at improving facilities for wider Sandy Bay users as well as retaining natural environment.</td>
</tr>
<tr>
<td>In general I would like to say that the best part of living on the beach at Sandy Bay is its (almost) unspoilt, natural state. I do not see why it should be transformed into a manicured park. We are losing touch with our environment as we keep ‘improving nature’. The reserve is part of the Manly Scenic Walkway, a piece of the bush in metropolitan Sydney. The reserve should reflect the bush aspect, not the urban aspect. Some preliminary comments:</td>
<td></td>
</tr>
<tr>
<td>Residents with adjoining properties were only notified of the Plan via an article in the Manly Daily, no letters were sent out as is the case with DAs</td>
<td>Council has encouraged community consultation through structured process as: - Clontarf Community Precinct - Advertisement in the Manly Daily - Morning Tea for residents - Public exhibition.</td>
</tr>
<tr>
<td>Residents were not properly informed of the meeting held in the Bay by the architect at the beginning of August to discuss the Plan</td>
<td>Council has not done a letter drop.</td>
</tr>
<tr>
<td>I visited Council Chambers twice to prepare this document. The Final Design of the Plan is hard to read in A3 size so it was good to be able to see it in A2 size on the wall. I also downloaded the PDF from Council’s website. The Final Design is the most important part of this document; unfortunately it is impossible to read because it was not scanned at a resolution that renders it readable.</td>
<td>The map is supported by ‘Explanatory Notes’ on all proposed works. Both the map and ‘explanatory note were on public exhibition.</td>
</tr>
<tr>
<td>It is generally accepted that plans show existing structures with dashed or red lines and proposed changes in solid lines and both are adequately labelled. In the Final Design there is no indication of what exists now, there are only the proposed markings. This makes it very difficult to see the change. I don’t understand why Manly Council is putting forth this type of document given how many DAs they deal with.</td>
<td></td>
</tr>
<tr>
<td>The document does not explain how the changes suggested will resolve the five components. It is not always obvious.</td>
<td></td>
</tr>
<tr>
<td>Footpath (bollards)</td>
<td></td>
</tr>
<tr>
<td>The Final Design does not state what the footpath is made of. Is it decomposed granite? We think this is a good option. 40 Baskets has a wooden path that also seems a good option.</td>
<td></td>
</tr>
<tr>
<td>Noted. The proposed walkway and bollards will match existing walkway and bollards closer to Clontarf Marina</td>
<td></td>
</tr>
<tr>
<td>I am not sure where the existing boat ramp mentioned in this section is. Where is the Clontarf Boat Club? Surely you don’t mean that pedestrians use the boat ramp on the east side of the marina to access the beach and continue walking along the beach under the marina (depending on the tide) to get to Sandy Bay?</td>
<td></td>
</tr>
<tr>
<td>Comments (as written)</td>
<td>Staff Response</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------</td>
</tr>
<tr>
<td>We see little point in changing the edge of the park from the existing low wooden</td>
<td>Not agreed, the landscaping retaining wall has been</td>
</tr>
<tr>
<td>fence to bollards. The bollards are more likely to cause damage to cars if they are</td>
<td>proposed to prevent sand bank erosion.</td>
</tr>
<tr>
<td>accidentally hit because of their height. We like the current ‘fence’ shown here.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Landscape Retaining (Sea) Wall</strong></td>
<td></td>
</tr>
<tr>
<td>While the installation of a retaining wall may stabilise sand bank erosion, it does</td>
<td></td>
</tr>
<tr>
<td>not ‘retain some of the existing sand bank character of the inner harbour’. Our Bay</td>
<td></td>
</tr>
<tr>
<td>was a beach until it was changed. ‘Links between the harbour and the community/user’</td>
<td></td>
</tr>
<tr>
<td>are not established with a retaining wall, as stated. We already have a link via the</td>
<td></td>
</tr>
<tr>
<td>beach.</td>
<td></td>
</tr>
<tr>
<td>I do not see the need to extend the retaining wall. It takes away from the natural</td>
<td></td>
</tr>
<tr>
<td>character of the land and changes it into something man made, it has an industrial</td>
<td></td>
</tr>
<tr>
<td>character similar to the water waste building at the end of Monash St.</td>
<td></td>
</tr>
<tr>
<td>I see the merit in keeping the wall that has already been built, mostly because it</td>
<td></td>
</tr>
<tr>
<td>would be very costly to remove it. The current wall is covered in sand, eroded and</td>
<td></td>
</tr>
<tr>
<td>windswept from the beach as seen in the two photos. The beach is maintained by a</td>
<td></td>
</tr>
<tr>
<td>Manly tractor at least once, maybe twice a week. No effort is made by the driver to</td>
<td></td>
</tr>
<tr>
<td>remove the sand built up along this wall, which is why half of it has disappeared</td>
<td></td>
</tr>
<tr>
<td>under the sand.</td>
<td></td>
</tr>
</tbody>
</table>
### Comments (as written)

<table>
<thead>
<tr>
<th>Seating ( &amp; Lighting)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seating in the reserve is a good idea.</td>
</tr>
<tr>
<td>The proposed seating is over-developed for our low key natural beach environment. It is not in keeping with the Bay's natural area; it is in keeping with a metropolitan environment. We need much simpler benches to fit into the natural environment like this one close to the marina.</td>
</tr>
<tr>
<td>In addition, I question why strip lighting is required under the benches. This is an expensive lighting option to implement. We do not want to encourage night time use of the Bay. You have to imagine how people will use it at night, and decide whether lighting is a good idea. We envisage this will promote underage drinking and potentially introduce night time safety issues. If anything the overhead electrical wires should be moved underground instead of bench seating lights used by visitors to the area.</td>
</tr>
<tr>
<td>One downside of additional seating is that it will encourage dog owners to be even less attentive to their dogs increasing uncollected dog poos.</td>
</tr>
</tbody>
</table>

### Staff Response

<table>
<thead>
<tr>
<th>Seating ( &amp; Lighting)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agreed, building waste exposed by the erosion will be removed.</td>
</tr>
<tr>
<td>The bench seating proposed will be of low maintenance type and complement seating used throughout the LGA.</td>
</tr>
<tr>
<td>Agreed, as previously mentioned, proposed strip lighting has been deleted from the Masterplan.</td>
</tr>
</tbody>
</table>

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**Planning and Strategy Division Report No. 29 - Adoption of the Sandy Bay Landscape Masterplan**

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<table>
<thead>
<tr>
<th>Comments (as written)</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Good idea.</td>
<td>Noted.</td>
</tr>
<tr>
<td>It is not clear whether the Manly Scenic Archway over the bridge at the west end of the Bay is staying or being replaced by a new sign. It definitely needs improving because people are regularly going the wrong way.</td>
<td></td>
</tr>
<tr>
<td>Why is it necessary to remove the Penguin Habitat signs.</td>
<td></td>
</tr>
<tr>
<td><strong>Dog Use</strong></td>
<td></td>
</tr>
<tr>
<td>If you walk from the marina to the Sandy Bay Rd dead end you will be able to count up to 17 dog poos without even looking hard. I think the biggest issue we have on the Bay is dog owners not picking up their dog’s poo. It makes a mess of the grass and fouls the water for swimmers. I can tell you that no amount of Dog Conduct signs will fix this problem. A smaller dog population might. No feasible solution to this problem has been proposed. In fact, the proposed changes are likely to encourage greater use by dog owners and provide less amenity for rate paying residents.</td>
<td>Agreed, additional dog poo bag dispenser is now being proposed.</td>
</tr>
<tr>
<td>How many fines has Manly Council issued for failure to pick up dog poo?</td>
<td></td>
</tr>
<tr>
<td>In addition it appears that the dog poo bag dispenser in front of 5 Sandy Bay Rd will be moved to the boat area. Shouldn't we be putting in more dog poo bag dispenser and bins instead of moving them around?</td>
<td></td>
</tr>
<tr>
<td>A public rubbish bin is needed at the west end at the start of the bush as walkers often use the green waste bins belonging to 18, 19 and 20 Sandy Bay Rd, or throw their dog poo bags on the road in this area.</td>
<td></td>
</tr>
<tr>
<td><strong>Grading and Turf Establishment (&amp; Trees)</strong></td>
<td></td>
</tr>
<tr>
<td>The existing beach ramp is not marked on the Final Plan.</td>
<td>Agreed but residents concerned are opposed to any new rubbish bin (please read comment #1)</td>
</tr>
<tr>
<td>The Plan seems to be spending lot of money changing things (i.e., grading, and upgrading turf). I am not sure why the turf needs to be upgraded. In its current state it fits in with a natural beach environment.</td>
<td></td>
</tr>
<tr>
<td>All the turf needs is maintenance; regular cutting to keep down ticks, and improve visibility so people can see a dog poo before they step in it.</td>
<td>Not agreed.</td>
</tr>
<tr>
<td>Mention is made of a tree stump, and replacing it with a tree. This stump does not exist, and a tree has never been in that location for at least the last thirty years. A tree would not be well received by the residents.</td>
<td></td>
</tr>
<tr>
<td><strong>Boat Storage</strong></td>
<td></td>
</tr>
<tr>
<td>We agree that something needs to be done about the boats stored at the</td>
<td>Agreed.</td>
</tr>
</tbody>
</table>
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<thead>
<tr>
<th>Comments (as written)</th>
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<tbody>
<tr>
<td>beach, and never used.</td>
<td>To be considered during detailed design phase.</td>
</tr>
<tr>
<td>I question whether decomposed granite is the right substance to have under boats. (At what thickness will this be laid to ensure its longevity?) Would it not be better for the boats to avoid dents and scratching? How are you going to ensure the boats do not get damaged by people jumping on them?</td>
<td>Noted, will be considered during detailed design stage</td>
</tr>
<tr>
<td>40 Baskets boat storage is low key, on grass and would be in keeping with the Bay.</td>
<td>None. Council allocates storage space on 'first come first serve' basis.</td>
</tr>
<tr>
<td>A three step stair has been suggested for water access for the boats. I question whether steps (rather than a ramp) are the best way to get a boat into the water.</td>
<td>Noted.</td>
</tr>
<tr>
<td>What priority will local residents have to use these boat/kayak storage spaces?</td>
<td></td>
</tr>
<tr>
<td><strong>Water Access (&amp; Concrete Steps)</strong></td>
<td></td>
</tr>
<tr>
<td>The ‘connecting stainless steel stair from the beach to the upper pathway close to the elevated seat location’ is not shown on the Final Design. A stainless steel stair is not in keeping with anything currently at the Bay.</td>
<td></td>
</tr>
<tr>
<td>I am guessing that the stepped pier mentioned in this section are the three wooden steps shown in the Final Design.</td>
<td></td>
</tr>
<tr>
<td>The Plan also shows an image of some ‘formal concrete steps to water’s edge’. It is not clear where these are proposed to go.</td>
<td></td>
</tr>
<tr>
<td>I think the Plan needs more natural elements rather than rigid manmade products (i.e., avoid concrete, stainless steel).</td>
<td></td>
</tr>
<tr>
<td><strong>Site Photos</strong></td>
<td></td>
</tr>
<tr>
<td>In the photos entitled:</td>
<td></td>
</tr>
<tr>
<td>☐ ‘Electrical pole on path’ I do not think it is shown where the pole is moving to. I think the Plan only shows one pole being moved and I do not believe it is this one.</td>
<td></td>
</tr>
<tr>
<td>☐ ‘Absence of seating at present’ I would like to point out that people like</td>
<td></td>
</tr>
</tbody>
</table>
Comments (as written) | Staff Response
--- | ---
sitting on the edge of the Bay as shown. | To be moved to opposite side of the road.
☐ ‘Walkers using the informal path’. This adjoins the large metal plates covering stormwater drains. These have not been addressed at all. Even if they are not being changed surely they should be acknowledged in the Plan as they are unsightly. | This will addressed with upgrading of the turf.
☐ ‘Degraded condition of the reserve’ I do not understand what is degraded about it. The natural environment is a changing shifting one and this is what is shown. The thing Manly Council workers could do to maintain the reserve is move the sand that builds up and covers the retaining sea wall that they have previously built. | This will addressed with upgrading of the turf.

Other Points Not Specifically Addressed in the Plan Beach

The movement of sand by dredging of the marina and most recently of Clontarf Pool, as well as the creation of an artificial sea wall has slowly changed the sand patterns. As a result our beach has slowly been diminished.

Now the Plan proposes to remove what remains of the beach by extending the retaining sea wall, and adding steps to the water.

There was no consultation with residents about this. People use the beach to enjoy the sun and the sand. A man made retaining wall with sand on the inside is not the same thing. It is like a big sandbox instead of a beach. We want our beach back. Surely some of the sand from the Clontarf Pool dredge could have been restored to our beach as well as the Monash St area of beach?

Car Parking & Safety

Neither parking impact, nor traffic safety issues are discussed in the Plan.

Section 1 of the Final Design shows that should the boat storage area be built, about seven car spaces along the water’s edge will be lost. A further two will be lost on either side of the electricity post in the middle of the road. This post is not shown on the Final Design or any of the Sections making it difficult to assess the impact. Another four, just east of the Telstra underground cables, have also disappeared. This totals 13 lost car spots.

Not agreed. In fact, Precinct and residents are concerned about the erosion (Please read comments # 1, 3 and 9)

As already mentioned, there will be no reduction in car
Even now, parking is scarce for visitors after school or work and on the weekends. The loss of parking spaces will be especially felt by the three residences at the end of the street (i.e., 18, 19 & 20), who only have street parking (i.e., no driveways or garages or rear access).

The Council parking meters between the marina and the Bay are seldom used. Instead visitors park at the west end of Sandy Bay Rd. We desperately need to retain parking spaces here and designate them as Resident Parking Only as in other areas of Manly.

The reduction of car spaces will be an issue for all users.

In addition, it will be harder to turn around at the end of the street because it has been made narrower. With the number of dogs and children in the Bay this presents a safety issue.

The infrastructure of the Bay should support the population using it. The situation explained above encourages more visitors and worsens an already bad situation, instead of ameliorating it.

**Stormwater**

No mention is made of the stormwater entering the Bay from close to Fairbairn Ave. The stormwater drains are clogged with sand and rubbish.
### Comments (as written)

- **pollution issues and the Bay smells of pollution regularly. How will these drains be integrated into the Plan?**

  No mention is made of the large metal sheet covering stormwater/drainage pipes around 5 SBR, nor is it shown in the Plan. These should be mentioned and effort made to incorporate them in a complementary way.

- **Numbers 18, 19 and 20 are not hooked up to Council’s stormwater drainage network. Stormwater from these houses and houses above the cliff on Linkmead Ave end up on the road after it leaves the houses’ gutter system, and meanders over the hill. The Council’s gully behind numbers 14, 15, 16, and 17 is incomplete and ineffective at coping with storm water. It should be extended behind numbers 18 and 19. This explains why the dead end of Sandy Bay Rd is always wet and is perpetually covered in sand, dirt and silt.**

  The improvements to the Bay should include proper drainage from the street through to the beach.

- **Tidal rubbish ends up in the western end of the Bay close to the bridge entering the MSW. This has not been addressed.**

  **Telstra Cables**

  No mention is made of the Telstra warning sign or the Telstra underground cables. These cables are now exposed because our sand it disappearing.

  I think the Plan should address this issue. How will these be integrated into the Plan? The beach needs to be restored to cover these cables.

  **Overhead Power Cables**

  No mention is made of the overhead power cables which follow the road and nature strip. Consideration should be made to putting these underground which will greatly improve the visual impact of the area.

  **Water Mains**

  There have been numerous disruptions to residents’ water supply over the past 24 months. Sydney Water Board has repaired at least 6 burst pipes during this time. Perhaps Council could work with the Sydney Water Board to renew this infrastructure in parallel with the Plan.

### Staff Response

- **Agreed, this will be addressed during landscaping and grading of the reserve.**

- **Noted. Referred to relevant section of Council.**

- **Referred to NSW Maritime. Tidal rubbish collection is the responsibility of NSW Maritime.**

- **Exposure of Telstra cables will be referred to relevant Authority.**

### Conclusion

- Agreed, this will be addressed during landscaping and grading of the reserve.

- Noted. Referred to relevant section of Council.

- Referred to NSW Maritime. Tidal rubbish collection is the responsibility of NSW Maritime.

- Exposure of Telstra cables will be referred to relevant Authority.
### Comments (as written)

We have gone through Manly Council’s Plan in great detail because this is of great importance to us. In summary, we would like to impress upon Council that although we have been thorough about every issue in your Plan, what we are telling you is that we would like the outcome of this Plan to be a natural reserve that is in keeping with the Australian bush setting and the Manly Spit Walk.

We also request that Manly Council keep us informed of when the next steps are and what these developments might be.

### Staff Response

- Referred to Energy Australia.
- Referred to relevant section of Council.
- Council also wishes to keep the reserve as natural as possible with minimal interventions that facilitate Sandy Bay users coming from wider Manly LGA community.

### # 8

Nice landscaping but Sandy Bay has gone to dogs.

Sandy Bay is peaceful at high tides.

Feel sorry for residents adjoining that amphitheatre.

### # 9

**Clontarf Action Sheets from September 2010 meeting**

**Sandy Bay Erosion**

Residents have noticed that there is severe erosion of sand at the North end of Sandy Bay and it is hoped that the Sea Wall in the Sandy Bay Improvement Plan will reach along to this end of the beach.

Sandy Bay will remain as natural as possible with minimal interventions that facilitate Sandy Bay users coming from wider Manly LGA community.

Noted and agreed.
27 October 2010

Mr Henry Wong
General Manager Manly Council
1 Belgrave Street
MANLY NSW 2095

Dear Sir,

PROPOSED REMOVAL OF PINE STREET STORMWATER PIPE – IMPACT ON BEACH PROCESSES

Preamble

It is understood that Manly City Council has proposed removing the section of the Pine Street stormwater pipe where it crosses the beach opposite Pine Street, North Steyne.

Since publishing news of the Council’s proposal, people from the community, in particular surfing groups, have raised concerns that the removal of the pipe may affect the North Steyne sandbanks and therefore the quality of the surf at North Steyne. Mr Henry Wong from Manly Council has requested that Cardno (NSW/ACT) Coastal and Ocean group review the potential impact of the removal of the stormwater pipe at North Steyne on the beach morphology and in particular its potential effect on the sandbanks and character of waves.

Background

Overall, the potential impacts of a shore normal, elongated, impervious structure on beach morphology may be the following:-

- Obstruction to longshore drift: accumulation of sediment on the updrift side of the structure and erosion on the down-drift side of the structure. This may create local cross shore current patterns that may affect offshore/onshore sediment transport and therefore sandbank formation.

- Local wave refraction and wave convergence leading to an offshore current that may initiate the formation of a rip current.

- Formation of a rip current due to storm water discharge at the tip of the structure.

A rip current is a strong seaward directed flow of water that develops between shallow banks or cusps. It carries water and sand offshore and can cause the development of a deep channel in the seabed and localised shoreline erosion.
Wave quality in terms of a surfing perspective is usually classified by the wave peeling characteristics: a long peeling wave being rated high and a short peeling and dumping wave being rated low.

In terms of beach breaking waves, longshore sandbanks interrupted by a rip-current channel tend to provide quality waves for surfing, allowing the wave to break on the shallow area of the bank and peel towards the deeper area of the rip current channel.

Review

The Pine Street storm water outlet is a 600mm diameter cast iron pipe extending approximately 75m beyond the seawall. This outlet covers a catchment area of 24 hectares. Cardno has undertaken site visits of North Steyne Beach as well as a review of aerial images from View Map and Google Earth. They also have significant coastal processes experience.

Two site visits were undertaken recently during a period of spring tides. The first visit was undertaken on the 7th October 2010 near 6.30pm (High Water 1.7m at 6.41pm) and the second on the 10th of October 2010 near 2.30pm (Low Water 0.2m at 5.13pm).

Photographs 1 and 2 were taken during site visit 1 and photographs 3, 4 and 5 during site visit 2. During these site inspections the offshore wave conditions were about 1.5m significant wave height from the south-east and peak period of Tp=10s, which represent the mean wave conditions offshore Sydney (see Figure 1) – Long Reef offshore WaveRider buoy (MHL).

Observation of these photographs shows that about 16m of the stormwater pipe is currently exposed as shown on photographs 1 and 2. There was not any particular accumulation of sand on either side of the pipe, which indicates there was no significant longshore drift and therefore no net alongshore sediment transport.

At low tide the pipe was completely exposed and on dry sand as shown on photographs 3 to 5 (taken ~2 hours before low tide). Near high tide the pipe is underwater in approximately 1m depth of water at the offshore end of the pipe. Overall the pipe does not generally extend into the breaker zone, but is within the swash zone where wave energy is dissipated.

The impact of such a shore normal structure in terms of offshore sandbank dynamics may only be in terms of the rip current formation and therefore entrainment of sand offshore and redistribution onto the alongshore sandbank.

However, the size (diameter) of the pipe and its exposed length to the surf zone are very limited and not significant enough to create localised currents along itself that are strong enough to affect the surf zone dynamics.

Discharge water from the pipe is the only mechanism that may lead to the formation of a local rip current by creating an offshore flow of water and associated rip current channel. Once a rip current channel is initiated wave breaking and dynamics provide a feedback loop that may increase the channel depth and width and increase the rip current strength. However, flow rate out of the Pine Street outlet is generally minimal and not significant enough to create such a process to any effective degree.

Observation of aerial images from Near Map (http://www.nearmap.com) from 22/09/2009 to 16/09/2010 demonstrates that the pipe has very limited effect on the beach morphology (see Appendix A). Indeed on most of these aerial photographs the exposed length of pipe and its width compared to the surf zone is minimal and there is generally no significant impact of the pipe on the local currents. An aerial photograph on the 10 May 2010 is the only image that shows local sand patterns close to the pipe, that is, erosion directly at the tip of the pipe. However, this pattern remains in very shallow depth and within the swash zone where it’s impact on the sandbanks and therefore wave breaking is not expected.
Aerial photographs taken on the 10 May 2010, 15 June 2010 and 10 September 2010 (see Appendix A) illustrate the presence of a strong rip present opposite Pacific Street and subsequently another rip present opposite North Steyne SLSC. These features are one of the main processes responsible for shaping the sandbanks and therefore leading to potentially “good” surfing waves (that is, peeling waves).

Please feel free to contact Doug Treloar or me if you have any comments.

Yours faithfully,

Alexis Berthot / Doug Treloar
Coastal and Ocean
for Cardno (NSW/ACT) Pty Ltd
Photograph 2 (07/10/10)
28 October 2010

Photograph 3 (10/10/10)
29 October 2010

Photograph 4 (10/10/10)
28 October 2010

Figure 1: Wave Data Offshore Sydney (08/10/10 to 11/10/10) Long Reef Wave Rider Buoy (Manly Hydraulics Laboratory)


![Wave Data Offshore Sydney](image-url)
Planning And Strategy Division Report No. 30 - Pine Street Storm Water Outfall
Cardno letter and attachments dated 27 October 2010
Planning And Strategy Division Report No. 30 - Pine Street Storm Water Outfall
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ATTACHMENT 1
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