

## **SITE INSPECTION OLD BAR**

Gary Blumberg, Patrick Lawless (Haskoning Australia) 23 September, 1.45 pm to 4.30 pm.

The wind during the inspection was moderate to fresh from the NE, it was about mid tide with the tide falling to a low at 5.00 pm, and the breaking wave height on the beach was estimated at between 0.5 and 1.0 m. The inspection was commenced at the Surf Club, walking in a southerly direction along the beach to the southern end of the site, and then returning to Rose Street, walking along Pacific Parade along the shore and bank of Racecourse Creek, and finally along the southern boundary of the school into the SEPP 26 hind dines before returning to the beach and completing the circuit. Particular items of interest were located with GPS. Selected photos taken during the inspection are interspersed in these notes.

The board and chain accessway fronting the Surf Club was inspected. This comprises  $150 \times 75$  thick timbers chained together at the underside. A synthetic fabric sand screen is placed up the sides of the beach entry to guard against wind erosion.



Photo 1 - Accessway fronting Surf Club



Photo 2 - Fabric sand screen beside Surf Club accessway

Occasionally an inspection was made up the face of the eroding dune to examine conditions at and immediately landward of the dune crest.



Photo 3 – Steep eroding dune face



Photo 4 - Steep eroding dune face

Approximately 150 m S of the Surf Club a small blow out was observed near the crest of the dune.



Photo 5 - Blow out 150 m S of Surf Club

The toe of the escarpment was estimated at approximately RL  $_2$  and the eroded crest at say RL  $_7$  to 8. The size of the blow out measured some 8 m  $_X$  8 m in plan.

An outcrop of rock, possibly a siltstone, was observed adjacent to an outcrop of cemented or indurated sand (S  $31^{\circ}$  58' 20.5'', E  $152^{\circ}$  35' 25.1'').



Photo 6 - Trees fallen onto the beach

Active erosion was evident along this section of shoreline with Banksia trees cascading down the escarpment (S  $31^{\circ}$  58' 21.0'', E  $152^{\circ}$  35' 24.5'').



Photo 7 – Eroding dune face



Photo 8 - Trees undermined at dune face

Estimated escarpment crest at this location RL 11. It appeared that the sand which had eroded off the scarp was feeding the beach to create a widened berm low in the swash zone. Water was trapped within this berm.

At 2.00 pm the predicted tide was about MSL although the beach had the appearance of a lower tide, i.e. the beach appeared relatively wide, possibly due to the active sand feed from the eroding dune.



Photo 9 – Beach appears relatively widened at about mid tide, possible due to active sand feed from eroding dune

A low point in the dune was observed at S 31° 58′ 24.2″, E 152° 35′ 19.9″ at 2.10 pm. The crest of the dune at this location joined an access track linking to the boundary fence of the school estimated at approximately 40 m landward of the dune crest. Wooden debris was littered alongside this dune low point, at the toe of the dune.



Photo 10 – Wooden debris along back of beach



Photo 11 - Access track to school behind dune



Photo 12 – Vantage to beach from high dune crest, estimated at approximately RL 10

At S  $31^{\circ}$  58′ 28.4″, E  $152^{\circ}$  35′ 15.1″ banksia to 4 m in height were growing behind the dune crest. Teatree and grasses were also observed here. The seaward face of the dune was steep, at the point of slipping (repose slope). This indicated active removal of sand from the toe.



Photo 13 - Steep eroding dune face

A low point in the dune, with crest level estimated at ~ RL 5, was observed approximately 100 m N of the end of the outer dune adjacent to Racecourse Creek at 2.25 pm (S 31° 58′ 30.5″, E 152° 35′ 12.9″). The dune was steep in this location, and actively slipping at its seaward face. The dune crest and area immediately landward was vegetated. There were small hummocky dunes behind the eroding crest. These appeared to have been built up in the recent past, and now they were eroding. The transient dunal area fronted what appeared to be older and more established dunes further landward.



Photo 14 – Low point in dune crest ~100 m N of end of seaward dune barrier opposite entrance to Racecourse Creek



Photo 15 – Entrance to Racecourse Creek

Opposite the ponded water edge at the entrance to the creek old cement bag protection could be seen. Bag sizes were estimated at: 300x200x200, 400x200x200. The cement bags were stacked stretcher-bond in front of the embankment beside Pacific Parade.



Photo 16 — Cement bag wall behind vegetation at entrance to Racecourse Creek

The bank appeared stable here at present. Vegetation observed in the bank included lomandra, sea cabbage, wattle and grasses (S  $31^{\circ}$  58' 33.2'', E  $152^{\circ}$  35' og.o'', 2.35 pm). Although well established, it is likely that these plants could grow over a relatively short period, say 3 to 5 years.



Photo 17 – Well vegetated foreshore between Pacific Parade and entrance to Racecourse Creek

If a new structure was to be built to protect the road at this location, it was estimated that the crest of the structure should be approximately 10 m from the edge of bitumen. However, large banksia (height ~6 m, canopy diameter ~8 m) would need to be removed to make way for the embankment protection.



Photo 18 – View to S from foreshore fronting Pacific Parade

A dune well vegetated with coast wattle and lomandra was observed to extend to the S from S  $_{31}^{\circ}$  58′ 34.4″, E  $_{152}^{\circ}$  35′ 08.3″. It was considered important not to disturb this vegetated dune as part of any initial stage to a seawall project.



Photo 19 – Foreshore fronting Pacific Parade

Consider any opportunity to build up the dune at this location, possibly with a terminal wall under the beach at the toe of the built up dune.



Photo 20 – Well vegetated dune face fronting Pacific Parade near Rose Street

Pig face observed opposite corner of Pacific Parade and Rose Street (2.50 pm). Other vegetation at this location included bitou bush, gazania, sea cabbage, wattle and spinifex. Lot of bitou observed 30 m N of leaning pine tree at S  $31^{\circ}$  58′ 39.9'', E  $152^{\circ}$  35′ 03.4''.



Photo 21 – Bitou amongst native shrubs opposite Rose Street

N end of geofabric protection fronting Meridian Resort at S  $31^{\circ}$  58′ 40.8″, E  $152^{\circ}$  35′ 02.5″. S end of geofabric protection fronting Meridian Resort at S  $31^{\circ}$  58′ 44.4″, E  $152^{\circ}$  34′ 59.2″. This fabric identified as TerraStop TS6ooCAS, supplied as 60 m long by 4 m wide rolls.

Walked to S end of site (S  $31^{\circ}$  58' 49.2'', E  $152^{\circ}$  34' 54.5''. Photo at 3.25 pm.



Photo 22 – Beach to the S of the Old Bar subdivision, close to S end of the works area

Observed 10 m clear back from the crest of the geotextile "wall" at Meridian Resort.



Photo 23 – Geotextile "wall" opposite Meridian Resort



Photo 24 - Geotextile "wall" opposite Meridian Resort

The northern end of any wall protecting the Meridian Resort should (1) return landward to keep it off the beach, (2) be located such as to contain the end effects close to the road head at Rose Street, and (3) be retained in the Pacific Parade road reserve that cuts obliquely onto the beach.

With Stage 2 extension along Pacific Parade, consider locating the crest of wall:

- ~12 m off edge bitumen opposite 33 Pacific Parade, not closer to the road
- ~8 m off edge bitumen opposite 19 Pacific Parade



Photo 25 — Road reserve at Pacific Parade, close to possible Stage 2 seawall end point

Suggest stop Stage 2 wall ~ No 7, and then later extend further to N if required.



Photo 26 – Road Reserve at Pacific Parade, close to possible Stage 2 seawall end point

Culvert section at Racecourse Creek measures 6 x 1.2 m.

Three wallabies observed at S  $31^{\circ}$  58' 20.5'', E  $152^{\circ}$  35' 23.1'' at 4.10 pm.



Photo 27 – Tracks in the hind dune between school and Surf Club

Swale to 6 m deep observed behind dune crest at S  $31^{\circ}$  58′ 17.2'', E  $152^{\circ}$  35′ 29.6''.

Reef observed at 4.30 pm, protruding 200-300 mm above the water line at S  $31^{\circ}$  58′ 17.0'', E  $152^{\circ}$  35′ 33.1''.



Photo 28 — Rock reef emerging in the beach opposite the Surf Club



Photo 29 – Foreshore opposite car park to N of Surf Club



Photo 30 – S end of reserve adjacent to Surf Club carpark. Possible end zone for any Stage 3 wall in this area

There would appear to be ample opportunity for relocation of the Surf Club in the future if required. Any Stage 3 wall fronting the Surf Club should extend to the N of the car park, and finish into the reserve.

Drove N of caravan park to inspect beach access track, and the beach condition at this location. There was a wide back berm area at this location, close to the entrance to Farquhar Inlet. Spinifex grass was growing in this area.



Photo 31 - Wide back-beach area at S end of Farquhar Inlet



Photo 32 - Wide back-beach area at S end of Farquhar Inlet