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Our ref ER21455
Your ref MP10_0229

Dear Mr Brown

MP10_0229 – Concept Plan – Cronulla Sharks Development – 461 Captain Cook Drive, Woollooware – Environmental Assessment

Thank you for your letter of 30 September 2011 seeking comment from the NSW Office of Water (Office of Water) in relation to the Environmental Assessment (EA) for the above major project proposal.

The Office of Water's comments on the EA are provided in **Attachment A**. The riparian issues previously raised by the Office of Water in the Test of Adequacy (ToA) submission are still relevant. The Office of Water does not consider the EA adequately addresses the protection and rehabilitation of riparian land on the subject site. Please note, this submission only relates to riparian issues and does not include groundwater comments.

Contact Details

Should you have any queries in relation to this matter please contact Janne Grose on telephone (02) 4729 8262.

Yours sincerely



Mark Mignanelli
Manager Major Projects, Mines and Assessment
21 November 2011

NSW Office of Water Comments

Concept Plan - Concept Plan – Cronulla Sharks Development – 461 Captain Cook Drive, Woollooware – Environmental Assessment

Reference is made to the NSW Office of Water (Office of Water) submission of 25 August 2011 on the Test of Adequacy (ToA) Environmental Assessment (EA). Riparian issues previously raised in the ToA submission are still relevant. The EA has not adequately addressed the protection and rehabilitation of riparian land at the site.

Towra Point Nature Reserve

As previously noted in the ToA submission, the Ecological Assessment (Appendix T) includes important information that has not been included in the EA. For example, Appendix T indicates the site is linked and connected to the Taren Point Shorebird Reserve, Towra Point Nature Reserve and Aquatic Reserve by a significant corridor of mangroves that are adjacent to the site (see pages v, 5, 11, page 25). The EA does not mention this important linkage to the Taren Point Shorebird Reserve and Aquatic Reserve.

Section 2.10 of the EA notes the Towra Point Nature Reserve is located approximately 1.8 kilometres to the north east of the site which implies the reserve is separate from the site but Appendix T clearly states the Towra Point Nature Reserve *"is linked to the subject site by a corridor created by grey river mangrove forest and saltmarsh communities"* (page 5) and Appendix G states the site is bound by the Towra Point Nature Reserve to the north (see page 2).

Riparian Land

On the 10 June 2011, the NSW Office of Water (NOW) met with the Department of Planning and Infrastructure (DP&I), the proponent and their consultant to discuss the proposal. The Office of Water is concerned that issues raised at the meeting and the ToA submission in relation to protection and rehabilitation of riparian land have not been addressed in the EA.

Riparian land along Woollooware foreshore

The DGRs issued by the NSW Department of Planning on 25 March 2011 require the EA to demonstrate compliance with the NSW Office of Water's Guidelines for Controlled Activities (2008) and outline the provision of a 40 m wide Core Riparian Zone (CRZ). In addition to establishing a CRZ, it should be noted the Guideline for Controlled Activities also recommends establishing a 10 m wide Vegetated Buffer (VB).

Section 6.4.7 of the EA indicates the Concept Plan is in accordance with the NSW Office of Water's Controlled Activities guidelines but the Office of Water does not agree with this statement. Section 7.3.1 of the EA makes reference to merit assessment to determine the CRZ width, but the Office of Water's merit assessment recommends a 40 metre wide CRZ is established. The ToA submission recommended the EA's merit assessment include consideration of:

- the environmental significance of Woollooware Bay,
- the important wildlife corridor connections to the Taren Point Shorebird Reserve, Towra Point Nature Reserve and Aquatic Reserve,
- existing planning provisions such as:

- Sutherland Shire LEP 2000 which requires an environmental buffer of 40 m from the mean high water mark and any provision for a pedestrian pathway and cycleway must be outside the 40 m environmental buffer (see Section 6.5.2 of the draft EA)
- The Greater Metropolitan Regional Environmental Plan No. 2 -Georges River Catchment (see comments below)
- any existing constraints (such as the electricity transmission easement) to rehabilitating a fully vegetated riparian area.

The EA does not show a 40 m wide CRZ has been achieved anywhere on the site, nor does the EA address the provision of an additional 10 m wide VB. The EA does not adequately justify the proposed reduction of the CRZ setback from 40 m to 30 m along the foreshore, nor the proposed locating of uses in the riparian areas.

While previous development in the vicinity of the site has degraded riparian land along the foreshore by encroaching into it, this should not be a reason for the proposed development to not apply better practice in accordance with current guidelines and planning provisions.

Section 7.3.2 indicates the proposed 30 m setback in front of the new retail centre will include a seawall, a 3 m wide path and mangrove buffer planting and 12 m wide mounded area with recreated Swamp Oak floodplain forest. The cross sectional drawing in Volume 3 of the EA does not show fully vegetated Swamp Oak forest is proposed to be established on the mound, it only refers to planting *Casuarina glauca* but the planting should also establish for example *Eucalyptus robusta* or *E. botryoides* in the riparian area.

The riparian areas should be for the rehabilitation of riparian vegetation. The locating of uses such as pathways should be located outside the riparian areas in accordance with the Controlled Activities guidelines. The locating of the pathway in the riparian area would only further reduce the function and width of the rehabilitated riparian area.

At the meeting on 10 June 2011, the Office of Water was told that much wider riparian widths were proposed along the foreshore on the Western Land to compensate for reduced 30 m wide riparian widths elsewhere on the site. The EA does not demonstrate this. The Office of Water advised in it's ToA submission that while a 60 m wide setback is proposed north of the residential estate on the Western Land, it only consists of a 30 m wide riparian setback which includes a 3 m wide pathway and the possibility of establishing a 20 m wide saltmarsh area (see Sections 3.8 and 7.3.2 of the EA). The proposed foreshore park for both passive and active recreation does not provide a fully vegetated riparian area (see section 3.3 of EA).

Section 7.3.3 of the EA states a key factor behind the Office of Water support for a full 40 m setback was "*the potential opportunity to re-establish and expand the inter-tidal zone to create new habitat*". The Office of Water, however recommended in the ToA submission that the endangered ecological community, Swamp Oak Floodplain forest be re-established in the riparian area as it is likely this community would have once grown across the site. Further, the EA does not clarify whether it possible to excavate the Western Land to recreate the saltmarsh due to contamination issues on the site. Section 3.8 notes there is potential for the recreation of intertidal saltmarsh subject to detailed environmental investigation and design but Section 7.3.3 states excavation is not supported by the contamination studies. Clarification is required as to whether this only applies to land adjacent to the retail centre or also the western land. If contamination prevents excavation and intertidal saltmarsh can't be established a fully vegetated riparian area needs to be provided.

The Office of Water reiterates that the 60 m wide setback does not compensate for reducing the CRZ widths from 40 m to 30 m elsewhere on the site, as the 60 m setback is proposed to allow active and passive recreation, barbeque areas, a children's play area and be planted with turf. The

EA provides no provision for a fully structured riparian area with the establishment of Swamp Oak Floodplain Forest in the riparian setback on the Western land.

Electricity Easement

At the meeting held on 10 June, the Office of Water raised the issue of the existing electricity transmission line easement and the need to understand any planting limitations associated with the easement which traverses the northern portion of the site in an east west direction.

It is noted in Section 2.2 of the EA that the easement is approximately 30 m wide and the drawings included in Volume 3 show the easement is located within the riparian area. As the electricity easement would appear to restrict the establishment of fully vegetated riparian areas (especially trees), it is recommended wider riparian areas and not less are provided so as to establish fully vegetated riparian areas (Swamp Oak Floodplain forest) outside the easement.

Riparian land along tidal creek

Section 5.3 of Appendix T indicates the mangroves in the creek and adjacent area offer important habitat and act as wildlife corridors providing a corridor between Woollooware Bay and patches of estuarine vegetation on the southern side of the Captain Cook Drive. The Ecological Assessment also identifies that the mangroves in the channel are likely to be impacted by shadow and an altered hydrological regime (see Section 6). It is also noted the cumulative effects of shadowing from the existing stadium and the proposed development are unknown at this stage (see page 31).

Section 2.8 of the EA states the channel is classified as a second order stream under the Controlled Activities guideline but the EA does not justify why the riparian widths along the creek are not in accordance with this guideline. The guideline recommends a 20 m wide CRZ plus a 10 m wide vegetated buffer is established either side of the creek and also recommends uses such as water quality treatment measures and pathways are located outside the riparian area.

Section 7.3.2 of EA indicates a 20 m wide riparian setback is proposed along the channel that separates the Toyota Stadium from the proposed residential area and this area is also proposed to incorporate a bioretention swale and a pedestrian path. The locating of water quality treatment measures and pathways in riparian land is not consistent with the Controlled Activities guidelines. It is not appropriate to locate the proposed swale within riparian land. Such treatment measures should be located outside the riparian area. Section 8.1.2 of Appendix K states the swales would be planted with native grasses and fringe vegetation but the Office of Water recommends the riparian area is fully vegetated with native tree, shrub and groundcover plant species endemic to the vegetation community of this local area at a density that would occur naturally. The maintenance program associated with the swales would disturb the rehabilitation of riparian vegetation. Section 8.1.4 of Appendix K notes the maintenance program for the water quality control measures would include *"periodic (6 monthly) inspection and removal of any gross pollutants and coarse sediment that is deposited in the bio-retention swales"*.

The Draft Statement of Commitments indicate any future application for the reconstruction of the western grandstand of Toyota Stadium will incorporate an 'appropriate environmental buffer to the tidal stormwater channel where practical. It is suggested this SOC is amended to state it will incorporate a riparian setback in accordance with the Office of Water's Controlled Activities guidelines.

Riparian vegetation

Appendix T indicates that it is likely Swamp Oak Floodplain forest would have once grown across the subject site. It is recommended this endangered ecological community is re-established in the riparian area (see Section 5.1).

Appendix G states that where appropriate plant species be selected using providence stock which are indigenous to the local area and genetically compatible with local remnant species (see page 3). It is recommended the riparian land (CRZ and the vegetated buffer) is revegetated with native

plant species endemic to the vegetation community of this local area at a density that would occur naturally.

Riparian land and the locating of uses

The Office of Water reiterates that any new development associated with the proposal (including buildings, paths/cycle ways (with the exception of crossings), water quality treatment structures, roads, the placement of fill etc) should be located outside the riparian land (CRZ and VB). This is consistent with the NOW Guidelines for controlled activities.

The EA indicates pathways are to be located in the riparian area along the foreshore and along the creek. It is noted a boardwalk is also proposed to give access to the mangroves on the Eastern land. It is recommended the paths are located outside the riparian areas so as not to disturb native fauna and further reduce the width and function of the rehabilitated riparian areas. Locating the pathways outside the riparian areas will also assist to mitigate impacts caused by light spill on native fauna if the pathways are to be lit and it would improve public surveillance and safety.

The EA indicates a bioretention swale is proposed to run parallel to the tidal channel. It is recommended the bioretention swale is located outside the riparian land to be consistent with the NOW Guidelines for controlled activities.

The Office of Water previously recommended the EA provide details on any APZ requirements in relation to the riparian land and reiterates any APZs should be located outside the riparian areas (CRZ and VB).

The Greater Metropolitan Regional Environmental Plan No. 2 -Georges River Catchment

The Office of Water previously recommended the EA clarify if Part 3 Clause 11 (21) of the Greater Metropolitan Regional Environmental Plan No. 2 - Georges River Catchment is relevant to the site, as this clause specifies the establishment of minimum 40 m wide buffer widths. The EA does not appear to have specifically addressed this.

**End Attachment A
21 November 2011**