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**RE: DA2020/0552 - 181 Allambie Road ALLAMBIE HEIGHTS NSW 2100**

DA: DA2020/0552  
181 Allambie Road, Allambie Heights, NSW 2100

I strongly object to this Development Application. The DA was rightly rejected by Council in the first instance, and now with its resubmission and minor alterations, it still falls well short and is not in line with the Vision, Value and Aims of Council.

I urge Council to reject this Development Application and my reasons for doing so are outlined below.

## SERIOUS SHORTCOMINGS IN THE BIODIVERSITY ASSESSMENTS SUPPLIED BY THE DEVELOPER

### 1. AQUATIC ENVIRONMENT

Both the Biodiversity Development Assessment Report (BDAR) (May 2020) and the earlier Biodiversity Management Plan (Feb 2020) fail to address or consider any off site downstream impacts of the proposed development on the Curl Curl Creek/Many Dam water catchment. Even a dedicated and separate Waterways Impact Report prepared by the same company (Total Earth Care) fails to address potential downstream impacts on aquatic fauna.

The majority of the proposed site is mapped as Waterways and Riparian Lands (Warringah DCP 2011) which is based on the riparian buffer around Curl Curl Creek (Warringah Creek Management Study (WCMS) 2004). There are 3 drainage lines on the site, which have all been artificially altered. The main drainage line - referred to as 'Drain 1' in the documents is mapped as forming part of the upper headwaters of Curl Curl Creek within the Manly Creek sub-catchment (WCMS 2004). Council has determined that the beginning of Curl Curl Creek is a culvert on the site just below the existing road.

A statement by the Council's own assessing officer in the Natural Environment Referral Response Document said "according to the Warringah Creek Management Study 2004, the site possesses a first order stream, which flows in a southerly direction. The creek forms part of the Curl Curl Creek/Manly Dam catchment and according to the Creek Management Study is a 'Category A' Catchment which is characterised as "very high ecological value"."

While the Biodiversity assessments make a point that the beginning of Curl Curl Creek on the site are now highly modified channels that fail to provide much in the way of significant aquatic habitat, they have completely ignored the potential downstream effects on aquatic life that

could potentially arise from site runoff, pollutants, siltation etc. The report does acknowledge the potential for "downstream degradation of aquatic habitats" (Table 21 p112. May 2020) but fails to address what fauna there is downstream and how and what it might be affected by.

According to the Biodiversity documents supplied, there has been no field assessment of the downstream aquatic fauna, nor it appears has there been any desktop literature reference to important documents such as:

Salkavich, L., Cumbo, B and S.Ku (2002) Manly Dam Galaxias Action Plan: A Plan aimed at the Protection of the Galaxias brevipinnis population in Manly Dam

Fong. M and Nou T. (2001), The diversity of Benthic macro invertebrates within the creeks of the Manly Dam catchment In: Freshwater ecology report of 2001. Department of Environmental Sciences, University of Technology Sydney

Boey A (1997). Manly Dam catchment water quality studies: report for the preparation of a plan of management for Manly Warringah War Memorial Park. Department of Land and Water conservation, NSW.

Given it has been well known for some time (since at least 1999 and widely reported in the media) that there is a small relict population of Climbing Galaxias (*Galaxias brevipinnis*) - a fish - in the headwaters of Curl Curl Creek - and that the site for this DA is in the headwaters of that creek - it is incredulous that any Biodiversity management plan could be prepared without referencing this population and any potential threats posed to it! To the best of my knowledge, this is the only landlocked population of the species that occurs within the greater Sydney region, and it appears to be just hanging on. These fish require cool, clean, well oxygenated water and an abundant supply of aquatic invertebrates such as mayflies and caddisflies to feed on. They do not live in the open waters of the dam.

Potential threats to this fish and downstream aquatic habitats which are not addressed in the Biodiversity assessments include:

@ Increased siltation from upstream vegetation removal and site works resulting in gravel and rocky creek bottoms becoming smothered in silt, rendering them unsuitable for the small aquatic invertebrates that the fish feed on, and unusable as spawning sites for the fish. Despite assurances from a previous developer, there is well documented evidence of uncontained sedimentation runoff from the site of a recent development in the catchment at Manly Vale School.

@ More impermeable surfaces upstream (as a result of development) increase runoff which can include pollutants such as detergents (eg car washing), herbicides (eg Roundup/Glyphosate used in gardens), petrochemicals (car oils), increased nutrient loads (eg garden fertilisers which then result in algal blooms) and pesticides (termite sprays etc). These are REAL WORLD threats. The potential catastrophic hazards of urban pesticide use and the risks associated with direct stormwater connections between urban areas and natural waterways was highlighted by a Bifenthrin (termiticide) incident in Jamison Creek at Wentworth Falls in the upper Blue Mountains in 2012; I suggest assessors contact Blue Mountains City

Council about that one!

([https://www.bmcc.nsw.gov.au/sites/default/files/document/files/Jamison\\_Creek\\_Bifenthrin\\_con](https://www.bmcc.nsw.gov.au/sites/default/files/document/files/Jamison_Creek_Bifenthrin_con)

@ Increased water temperature from upstream vegetation removal which ultimately results in lower dissolved oxygen levels in the creek which both affect aquatic life.

@ Increased potential for feral fish and exotic water plants to be introduced into the headwaters via upstream runoff containment areas.

In the conclusion and recommendations of the separate Waterways Impact Report (Feb 2020) prepared by the same company and supplied by the developer, it states that the potential impacts of the proposed development include:

- @ Increased erosion and sedimentation, especially during the construction phase;
- @ Increased stormwater runoff during the operational phase due to an increase in impermeable surfaces;
- @ Modification loss of habitat and connectivity due to the removal of vegetation;
- @ Decrease in water quality and increase in nutrient loads;
- @ Potential contamination of natural areas downstream including Manly Dam Reserve;
- @ Increase in peak stormwater flows; and
- @ Increased stormwater runoff being directed into Council's drainage systems.

It then goes on to state that these potential impacts MAY BE significantly reduced by the implementation of number of mitigation measures. Assessors should note the very careful choice of words: 'MAY BE' instead of 'WILL BE'. ie there is no guarantee that any of these effects will be mitigated!

In addition to the Galaxiids in the creek, the headwaters are also home to a variety of other aquatic animals which rely on high quality water. Most notable of these is the dominant predator in the creek, the Sydney Giant Spiny Crayfish (*Euastacus spinifer*) which can reach more than 40cm in length, 1kg in weight, and live for 50 years or more. Its much smaller relative the Sydney Crayfish (*Euastacus australasiensis*) is also found in the catchment headwaters. In the Feb 2020 biodiversity report Table 10 provides a list of species recorded during previous surveys - when and where is not specified! In that table is a reference to a 'yabby' in the 'southern creek'. This is an unfortunate mistake as there are no 'yabbies' in the Manly Dam catchment; they only occur naturally to the west of the Great Dividing Range, and are very different to Spiny Crayfish. Yabbies (*Cherax* spp) are short lived, mature at around 18 months of age, breed profusely, and tolerate poor quality water conditions - they are completely different to Spiny Crayfish which need high quality water, don't breed until 7-10 years of age, produce much fewer offspring and live to be as old as many people!

From the above it is abundantly clear that there is a need for a proper assessment of the aquatic habitats downstream of the proposed development to be carried out, and that this needs to be done by a suitably qualified and experienced aquatic ecologist who can give careful consideration to potential threats posed by the development.

I note that Council itself still has serious concerns about various aspects of the proposal and would like to remind the council of those matters.

In the Water Management Referral Response of 29 06 2020 council states " The Landscape plan, engineering plans and stormwater management report has been reviewed. In general the information provided is insufficient to review the proposed water quality treatment chain. The development application is not supported."

In the Natural Environment Referral Response the Council officer comments that "Note that the riparian is still within the APZ zone and the proposal is not fully satisfying the Council's DCP and Protection of Waterway and Riparian Lands Policy, however the water quality treatment chain (bioretention and pond) and the proposed vegetation regeneration MIGHT mitigate the impact of the APZ zone"

As an aside, I have spent considerable time doing underwater filming in the headwaters of Curl Curl Creek and have produced several short videos which showcase the creek and its inhabitants. I would strongly encourage all members of the DA assessment committee to view these videos as they give a very different insight into the creek, a perspective which is not normally available to those who make assessments from looking at maps, diagrams and tables. You can view the videos on YouTube via the following links:

Sydney Giant Spiny Crayfish (*Euastacus spinifer*) which also includes footage of the Climbing Galaxias

<https://www.youtube.com/watch?v=M6b44WweEo0>

Eastern Water Dragons feeding on Firetail Gudgeons: Sydney, Australia

<https://www.youtube.com/watch?v=NjP3YPW75JU>

Native Fish: Firetail Gudgeon (*Hypseleotris galii*), Manly Dam, NSW

<https://www.youtube.com/watch?v=a1qQ1Jew8x4>

All of the above videos were shot in the headwaters of Curl Curl Creek downstream of the proposed development.

## 2. FAUNA ASSESSMENTS

Whilst the vegetation associated with the site appears to have been well documented, the same cannot be said for the fauna which has been poorly reported. Although the presence on site of several threatened species of note is reported in the Biodiversity Assessments provided, the report does not in any way convey an accurate representation of the diversity of species associated with the site. As a former biologist and herpetologist, reptiles are of particular interest to me and I grew up spending time running around the Manly Dam bushland chasing them. It appears no effort at all has been put into documenting the reptiles on site.

A reported diurnal survey was conducted by 2 staff over one day on 19 February 2020 in ideal weather conditions and returned only 13 species of birds and 2 mammals. (Table 9 Feb 2020) Not one reptile was reported! Table 10 in the same document refers to species observed during previous TEC Surveys but fails to state when or where these surveys were carried out, and no reference is provided. Of note, the only reptile included in that list is a small lizard, the Common Dwarf Skink (*Menetia greyii*), which has never previously been recorded from the greater Sydney area, and is only found in the drier country west of the Great Dividing Range. Sadly along with the 'yabby', this skink appears to represent yet another misidentification.

More concerning is the 54 person hours spent doing targeted surveys on site on various days/nights between February and April 2020. (Table 14 May) This returned a total of 54 vertebrate species (birds, mammals, frogs and reptiles) which are listed in Appendix G (May 2020). Incredulously, only 1 species of reptile was recorded in that time, the large and very conspicuous Eastern Water Dragon (*Intelligama leseurii*). Such a poor result for finding reptiles beggars belief and grossly misrepresents the situation. Whilst any wildlife survey can only be expected to record a small percentage of the animals that inhabit a site - and the report includes a disclaimer for this (4.3.4. Targeted survey limitations) (May 2020) - it seems here that no effort was put into recording any reptiles on site. At the times the surveys were done (summer and autumn) there would have been at the very least an abundance of small skinks of several different species scurrying through the leaf litter and around trees that could have readily been observed by even the most casual observer. Any effort put into actually searching should have revealed much more as there are at least 20 different species of reptiles that have been recorded from Manly Dam and the surrounding bushland.

While it is inevitable that numerous small species will be killed during clearing and construction operations associated with the proposed development, of more importance is the continued reduction in available habitat to some of the larger species which, although they may not live on the actual proposed development site, will include it within their home range. Species such as the Lace Monitor (*Varanus varius*) and the Rosenbergs Monitor (*Varanus rosenbergii*) - both types of large goannas - travel considerable distances daily patrolling their territories in search of food, mates and rivals. As has been the case over the last few decades, there has been a constant 'nibbling away' at the edges of the Manly Dam bushland by developers, and at some stage we reach a critical point where there is not enough bushland left to sustain populations of these large predators. Have we reached that point yet? I don't know, but I would guess we have already passed it, but if not then we are very close.

The report (May 2020) notes that the threatened Powerful Owl (*Ninox strenua*) - a very large and powerful predator of possums - was recorded on site but notes that breeding habitat was not present and hence it could not be used as a credit species. While this may well be the case, the owl was clearly there for a reason, and it was most likely using the area to hunt. Again like the monitors, it is a large predator that needs a large home range or territory. A reduction of suitable habitat within its territory may render that area unviable and the owls may disappear from the Dam area. The Development Proposal includes the removal of a large number of trees; the trees provide homes to possums which in turn provide food for the owls.

We as a community, cannot afford to lose more bushland, however small those parcels of land may be, to further development and encroachment on Manly Dam, a unique reserve, in the heart of suburbia.

The developers claims in the Waterways Impact Report that " the proposed development will, on balance, have positive impacts on the waterway and will result in better onsite detention, reduced flow rates, better aquatic habitat, healthier bushland and a reduced weed seed source to the catchment below" is not supported in the documents presented by the developer and the statement does not stand up to scrutiny.

I have chosen in my submission to focus on the potential impacts on the downstream aquatic fauna and other wildlife as that is more in line with my areas of expertise. I note that there are a number of other equally valid reasons that have been raised to support the rejection of this DA.

I again strongly request that Council reject this development application.

Thank you for taking the time to review and consider my submission

regards

Greg Wallis