

# MARINE POLLUTION RESEARCH PTY LTD

Marine, Estuarine and Freshwater Ecology, Sediment and Water Quality Dynamics

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Mr. S Crosby

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04 March 2020

**Re: DA2020/0047 Lot 9 DP 629464 New Jetty & Stair Proposal - ASS Assessment against Clause 7.1 of the Pittwater LEP 2014**

## 1 INTRODUCTION

I have been requested by Mr Steve Crosby to address the Northern Beaches Council Environmental Health Referral Response for the above project, in relation to the requirement for ASS Assessment. The Council Referral notes that, as the land where the proposal is sited is *Class 1* on the acid sulfate soil hazard map, the proposal should have included an assessment against Clause 7.1 of the Pittwater LEP 2014. The following addresses this issue.

## 2 CLAUSE 7.1 OF PITTWATER LEP 2014 & ASS MANUAL REQUIREMENTS

**LEP Clause 7.1 (2)** states that *Development Consent is required for the carrying out of works described in the Table to this subclause on land shown on the [Acid Sulfate Soils Map](#) as being of the class specified for those works and for Class 1 Lands the works are described as "any works"*.

**LEP Clause 7.1 (6)** states that *Despite subclause (2), development consent is not required under this clause to carry out any works if:*

- (a) the works involve the disturbance of less than 1 tonne of soil and*
- (b) the works are not likely to lower the watertable.*

These two clauses are encapsulated in the ASS Manual (ASSMAC 1998) model ASS LEP that states *inter alia*:

*The Model Acid Sulfate Soils LEP requires that if works:*

- *involve disturbance of more than one (1) tonne of soil or lowering of the watertable;*
- and*

- *trigger the criteria relating to the land (see the ASS Planning Maps which are based on the level of risk associated with the soil characteristics and the depth and type of works),*

*a preliminary test must be undertaken to determine if an ASS Management Plan is required. If an ASS Management Plan is required, a development application must be lodged for the works. The Model ASS LEP clauses only apply to works likely to result in environmental impacts from the disturbance of acid sulfate soil.*

### **3 ASSESSMENT OF PRESENT APPLICATION AGAINST THE LEP PROVISIONS**

#### **3.1 Potential for soil disturbance and relationship to tidal waters**

The proposal as outlined in the DA2020/0047 Aquatic Ecology Impact Report and the project Site Proposal Plan & Sections - indicate that the only **potential** disturbance to soils associated with the project is placement of new piles into intertidal estuarine waters generally below the MHWM and placement of the portion of the jetty on land above MHWM.

The proposal is located in Careel Bay, which is tidal and has the same tide range as Pittwater - being around 0m Lowest Astronomical Tide (LAT) to +2m HAT (Highest Astronomical Tide). The project Plan Contours are shown as mAHD, where 0m AHD approximates +0.925m LAT. Accordingly:

- Placement of a 1.5m wide piled deck around the front of the existing boathouse. The piles would be placed into sandy beach habitat in the upper intertidal.
- A 1.5m wide timber jetty 19m long supported on ten piles. All ten piles would be placed into unvegetated mid to low intertidal silty-sand habitat.
- An outer platform 5.5m long and 3m wide including a set of 1.5m wide sea-stairs all supported on six additional piles. Piles would be placed into shallow sub-tidal waters.

#### **3.2 Actual Soil Excavation and Potential for Alteration of the Water Table**

In terms of potential soil disturbance, there will be no excavation required for the project.

- All the new piles for the jetty are to be driven into the inter-tidal sediments from a barge-mounted pile driving rig and therefore there will be no sediments mobilised, as the pile driving action pushes and compresses soils aside with some entrained downwards via friction effects. As a result, the sediments remain intact and under water, and as they are not exposed to air, there is no risk of acid generation arising from piling activities.

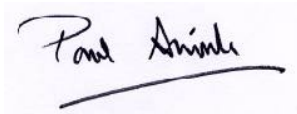
- Pile driving is associated with pulse turbidity, and this is caused partly by rig and pile driving head lateral vibration, and also via compression of sediments, whereby the laterally-compressed sediments compress waters in adjacent benthic fauna burrows jetting turbid water up out from burrows.
- As the local waters are generally full marine salinity , these sediments rapidly fall back to re-settle on the seabed.
- There is therefore no 'secondary excavation' or any exposure to air of sediments associated with turbidity caused by pile removal or driving.

### **3.3 Assessment against Pittwater LEP 2014 Clause 7.1**

In sum, no soil is to be excavated for the project, and as there will be no permanent excavation associated with the project there will be no lowering of the local water tables. Accordingly, the project meets both provisions of Pittwater LEP Clause 7.1 (6) and thus the project does not require development consent under Section 7.1 (2) , and there is no requirement for the preparation of an ASS Management Plan as per Clause 7.1 (3).

Over and above this finding, I conclude that the project as described above would meet the objectives of Clause 7.1 (1), in that the development would not disturb, expose or drain acid sulfate soils and cause environmental damage to the locality or to the waters and ecology of Careel Bay or Pittwater.

Yours Sincerely,

A handwritten signature in black ink, reading "Paul Anink", with a horizontal line underneath.

Paul Anink  
Managing Director and Principal Scientist  
Marine Pollution Research Pty Ltd