

Posted Faxed Emailed Х Peter Mosedale Courier By Hand Contact: Our Ref: Pages: cc.

Andrew Norris P1605609JC07V02 3 + Attachments

21 April, 2021

Upstate Attn: Peter Mosedale By email

Dear Peter,

### **RE: PROPOSED BOARDING HOUSE DEVELOPMENT 255 CONDAMINE STREET MANLY VALE** NSW – RESPONSE TO NATURAL ENVIRONMENT AND WATER MANAGEMENT OFFICER COMMENTS

Martens and Associates Pty Ltd (MA) have prepared this letter to address the comments from Council's Natural Environment and Water Management officers dated 1 April and 6 April 2021 (Attachment A) at 255 Condamine Street, Manly Vale, NSW (the site). This letter details the response to the comments in relation to flooding, water management, and riparian management. This letter is to be read in conjunction with the MA Flood Assessment (P1605609JR05V02), MA Stormwater Management Plan (P1605609JR07V01), and MA Waterway Impact Assessment (P1605609JR08V02).

Table 1 demonstrates that flooding, riparian, and water management comments have been addressed, and complies with Council's requirements.

Please call our offices if you have any further queries regarding this matter.

For and on behalf of **MARTENS & ASSOCIATES PTY LTD** 

m

**PAUL DINH** BEng(Civil) **Civil Engineer** 

### World Class Sustainable Engineering Solutions

Environmental EIS & REF

Streams & rivers Coastal Groundwater Catchments Bushfire Monitoring

Geotechnics
Foundations
Geotechnical survey
Contamination
Hydrogeology
Mining
Terrain analysis

Waste management

### Water

Supply & storage Flooding Stormwater & drainage Wetlands Water quality Irrigation Water sensitive design

### Wastewater

Treatment Re-use Biosolids Design Management Monitoring Construction

Farthworks Excavations **Pipelines** Roads Pavements Parking Structures

Civil

### **Head Office**

Suite 201, 20 George St Hornsby NSW 2077, Australia Ph 02 9476 9999 Fax 02 9476 8767

> mail@martens.com.au www.martens.com.au MARTENS & ASSOCIATES P/L ABN 85 070 240 890 ACN 070 240 890 Table 1: Summary of response to issues raised by Council's Natural Environment and Water Management Units

Reference	Issue Raised	Response
	The proposed development is for a multi-level boarding house. The flood modelling output, specifically Map 16 of the Attachment F in the Flood Assessment Report shows post-development increases in the PMF velocities on private property (lot to the south of the subject site) of greater than 10%. The development cannot result in potential adverse flood impacts of more than 10% increase of PMF velocity on private land.	PMF velocity increases in excess of 10% are generally confined to the main road (where these do not result in unacceptable velocities or scour), or are the result of very minor absolute velocity increases (velocity increase from 0.05 m/s to 0.08 m/s to the south of the site, and from 0.2 m/s to 0.4 m/s to the east). As none of these increases result in unacceptable erosion risks, combined with the rarity of the PMF event, we note these velocity increases are acceptable despite them exceeding the arbitrary 10% threshold.
Natural Environment	More information is required to show the flood model set up, this includes how existing buildings have been modelled in the lots to the north and south of the subject site. It appears the modelling conducted by the flood consultant does not include neighbouring existing buildings in the model. The flood impact assessment for the development should factor in buildings in the assessment.	Model setup is consistent with Council's Manly Lagoon Flood Model (2013) in relation to building setup. Buildings are modelled with a Manning's roughness of 2.0. Refer to Attachment A Map 1.
Referral Response – Flood		The building to the north of the site (259 Condamine Street) is suspended over Burnt Bridge Creek and is modelled as a layered flow constriction. Refer to Attachment A Map 12.
	1% AEP and PMF Water Level and Velocity afflux mapping must be provided for a greater area around the site (extent of 100-150m upstream and downstream of the site to shown proposed flood impacts on surrounding properties).	Refer to Attachment A Maps 3 – 5. We note that there is a general trend of water levels dropping in the proximity of the site. This is due to the extra conveyance and storage provided by the cut under the building.
	The Air Conditioning condensers must be positioned completely above the 1% AEP due to risk of damage in a 1% AEP flood. Justification must be provided as to why the base of the western lift must be located below the 1% AEP flood level. Without adequate justification it must be raised above the 1% AEP flood level.	Air conditioning unit to be relocated above the 1% AEP event. Western lift is entirely enclosed below the ground floor level, and therefore flood proofed to the 1% AEP event.
Natural Environment Referral Response – Riparian	The Waterway Impact Statement is missing from the documentation and must be supplied.	The Waterway Impact Assessment (P1605609JR08V02) is attached.
Water Management	The MUSIC model must be supplied for Council review.	Provided.
Referral Response	The bio-swale details is not showing extended detention depth and is lacking details.	As shown in Table 4 and the table in Attachment A of the Stormwater Management Plan, the proposed bioretention system (unvegetated) was modelled with an extended detention depth of 0.3 m.
	The location of the biofiltration is too close to the creek flow path (elevation and location) with risk of damages (erosion of filter material a deposition of sediment from the creek).	Following discussions with the client, the proposed bioretention option to be adopted has been changed. Option 3 as described in the Stormwater Management Plan is to be adopted. This locates the bioretention system beneath the suspended building slab. Refer to Section 4.3.1.4 of the Stormwater Management Plan for details of the (now) proposed solution.



Reference	Issue Raised	Response
		The relocated bioretention system is now considerably higher and further from the creek. Therefore, the risk of damage has been reduced as much as is possible on the site.
	Access for maintenance is also an issue including risk of falls with 1.25m from top of wall to bioretention base.	The bioretention has been relocated to the upper tier area to allow easy access for maintenance of the system.
		Identified maintenance access issues are considered resolved by this change.



### ATTACHMENT A - ADDITIONAL FLOODING INFORMATION MAPSET







1:1250 @ A3





255 Condamine Street, Manly Vale, NSW Proposed Boarding House Development Response to Council Comments Sub-Project MY Manly Vale Pty Ltd

## Мар Site Project Client Date

### Map 01

21/04/2021





1:1250 @ A3

Map Title / Figure: Model Setup - 259 Condamine Street Layered Flow Constriction



Map 02

255 Condamine Street, Manly Vale, NSW Proposed Boarding House Development Response to Council Comments Sub-Project MY Manly Vale Pty Ltd 21/04/2021

Мар Site Project Client Date

N



0 10 20 30 40 50 m

1:1250 @ A3

Notes: Areas coloured white represent negligible change. Areas coloured blue represent water level reduction. Areas coloured yellow/red represent water level increase.



### Map Title / Figure: Proposed Conditions 1% AEP Event Water Level Afflux (m)

### Map 03

255 Condamine Street, Manly Vale, NSW Proposed Boarding House Development Response to Council Comments MY Manly Vale Pty Ltd 21/04/2021

Map Site Project Sub-Project Client Date



0 10 20 30 40 50 m

1:1250 @ A3

Notes: Areas coloured white represent negligible change. Areas coloured blue represent water level reduction. Areas coloured yellow/red represent water level increase.



# N

## Map Title / Figure: Proposed Conditions PMF Event Water Level Afflux (m)

### Map 04

255 Condamine Street, Manly Vale, NSW Proposed Boarding House Development Response to Council Comments Sub-Project MY Manly Vale Pty Ltd 21/04/2021

Мар Site Project Client Date



0 10 20 30 40 50 m

1:1250 @ A3

Notes: Areas coloured white represent negligible change. Areas coloured blue represent velocity reduction. Areas coloured yellow/red represent velocity increase.



# N

# Map Title / Figure: Proposed Conditions PMF Event Velocity Impact (%)

### Map 05

255 Condamine Street, Manly Vale, NSW Proposed Boarding House Development Response to Council Comments Sub-Project MY Manly Vale Pty Ltd 21/04/2021

Мар Site Project Client Date