

28 March 2024

Mashal Moughal
Strategic Planner
Lake Macquarie City Council
mmoughal@lakemac.nsw.gov.au

RE: PP-2022-3016 – 1377 Hue Hue Road, Wyee – Revised flood information

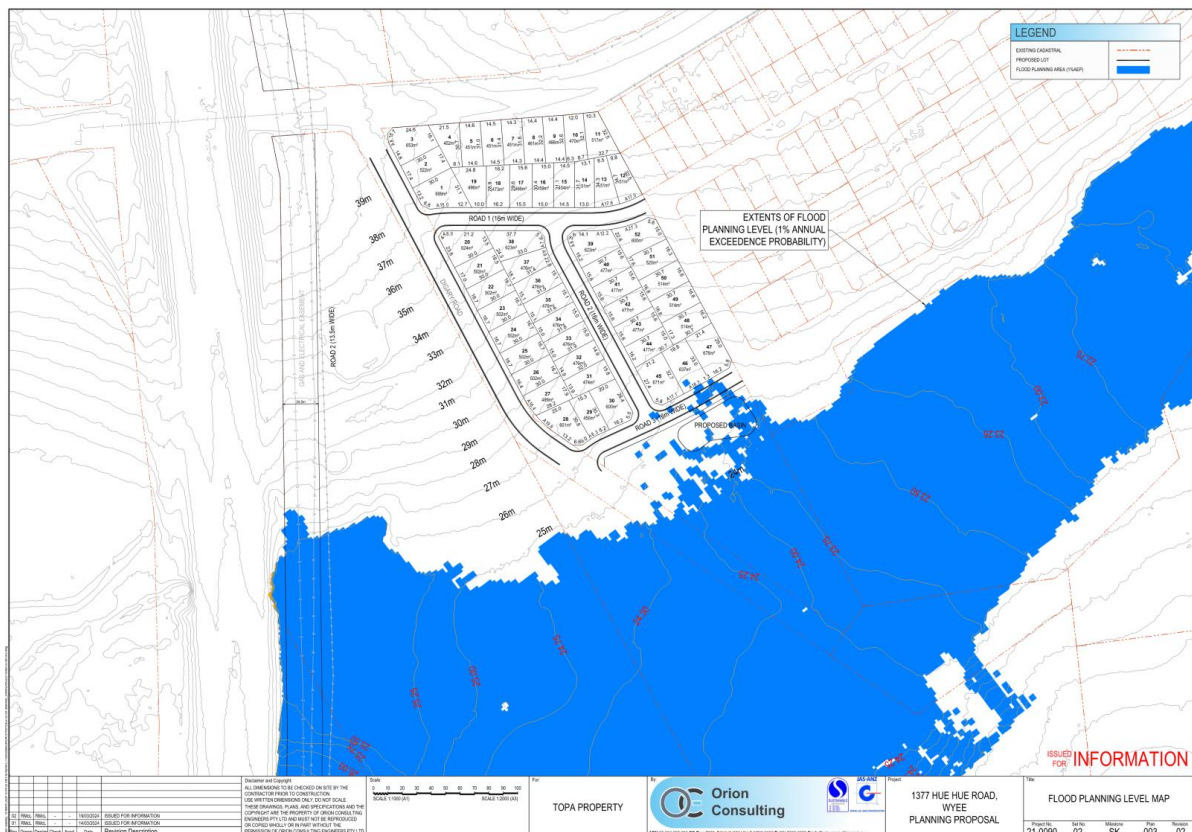
Dear Mashal

Orion has reviewed the recommendations issued by the Biodiversity and Conservation Division letter sent 7th March 2024 (letter in Attachment C), and the 27/03/2024 email comments (attachment C) we provide the following responses:

Recommendation No 1:

The report must clearly specify what FPL is proposed for the site. The rezoning boundary must be located above this level.

The Flood Planning Level proposed for the site is the 1 in 100-year flood level. The 100-year flood level is shown on the following Flood Planning Level Map added to our revised report.



Orion Group

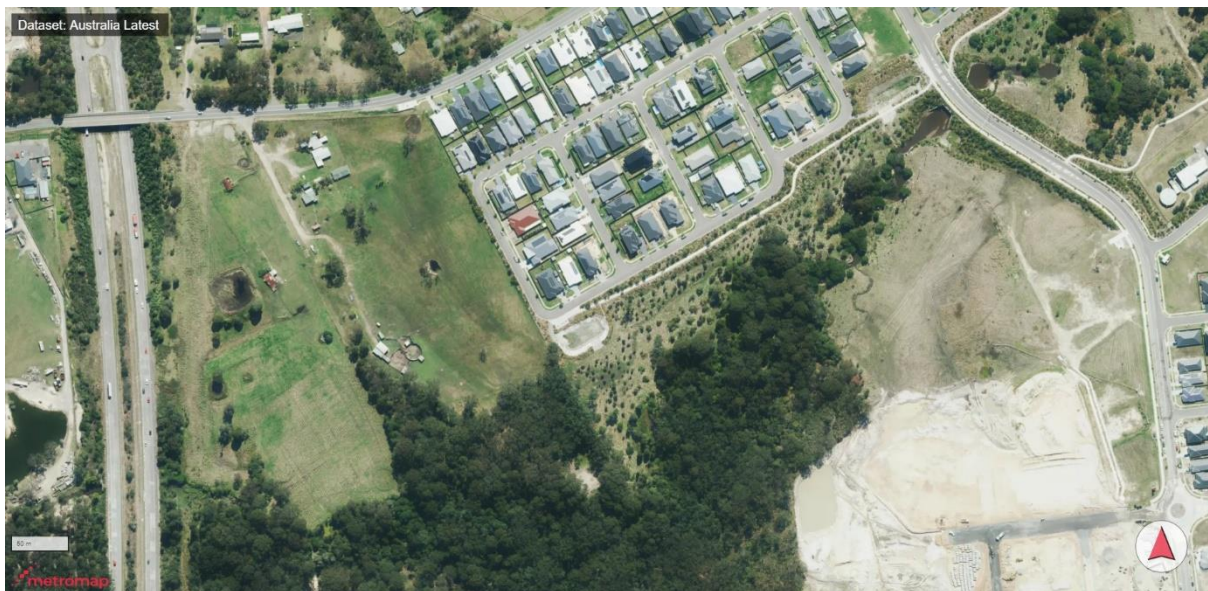
info@theoriongroup.au
theoriongroup.au

As per section 2.9 of DCP 2014 Part 8 Subdivision development, the new lots are located above the Defined Flood Event which is the 100-year flood level (also referenced as the 1% AEP Storm event) as shown on Figures 6 and 7 on page 25 and discussed on pages 26 and 27. The 1 in 100 year is our defined flood event. The rezoning boundary will be located above the flood planning level. Note that no development lots are proposed south of Road 3.

Note that the flood modelling is based on the existing site levels. The detailed design of the subdivision will include raising road 3 and Lots 45, 46 and 47 to be above 25.8m RL to be above the proposed basin crest and to connect to the existing Jarvis Street to the east and to Digary Road to the West

The proposed lots are to be outside the footprint of the 1 in 100-year flood extent. As per the Flood Planning Level Map, the adjacent Flood levels of 24.80 m RL in the west to 23.75 m RL in the east.

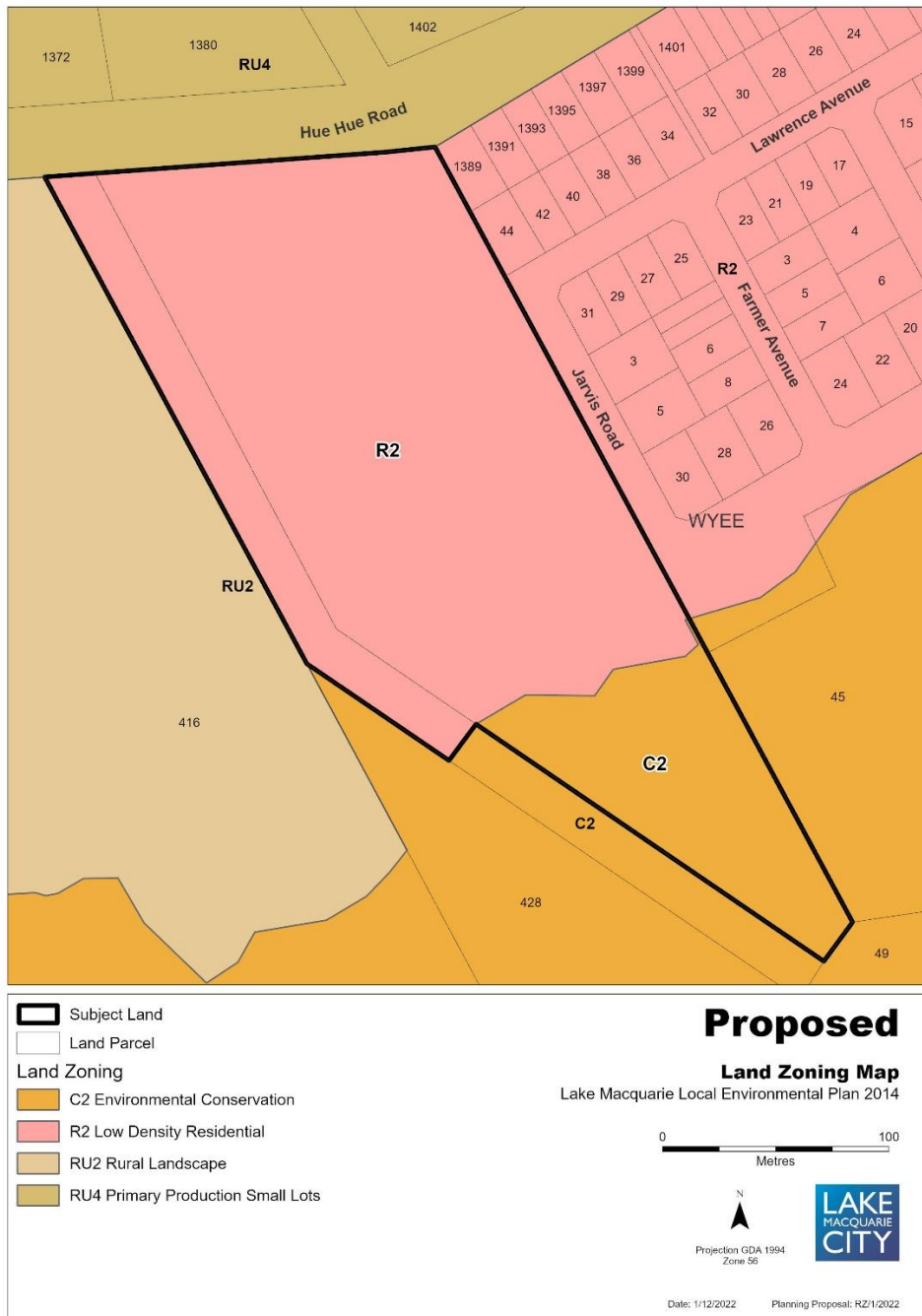
The proposal complies with the controls described in section 2.9 of DCP 2014 Part 8. We have ensured that development of the land is consistent with the NSW Government's Flood Prone Land Policy and the principles of the Floodplain Development Manual 2005 and its requirements with respect to flood behaviour including consideration of the potential flood impacts on and off the subject land.



Recommendation 2

Mapping presented in the report should be updated to show the correct subdivision layout.

The subdivision layout in Appendix C of the integrated water management and flood report has been updated to show the current layout. A link to the updated report is provided in Appendix A of this response letter.



Land Zoning Map

Subdivision Layout overlaid on survey.

Recommendation 3

Post-development flood modelling is required to understand flood hazard and emergency response requirements during the PMF event.

We believe the existing analysis provides a good understanding of the flood hazard and emergency response requirements for the PMF Flood event.

The flood modelling shows the minimal extent of PMF flood depth and velocity impact for the subdivision for lots 45, 46 and 47.

The modelling shows the current PMF depth is less than 200mm and the velocity less than 1.0m/s.

This gives a depth velocity figure of 0.2, which is in the H1 Flood Hazard zone for the PMF flood event which is generally safe for people vehicles and buildings as per the Hazard Category figure below from DPE's Flood risk management guideline FB03.

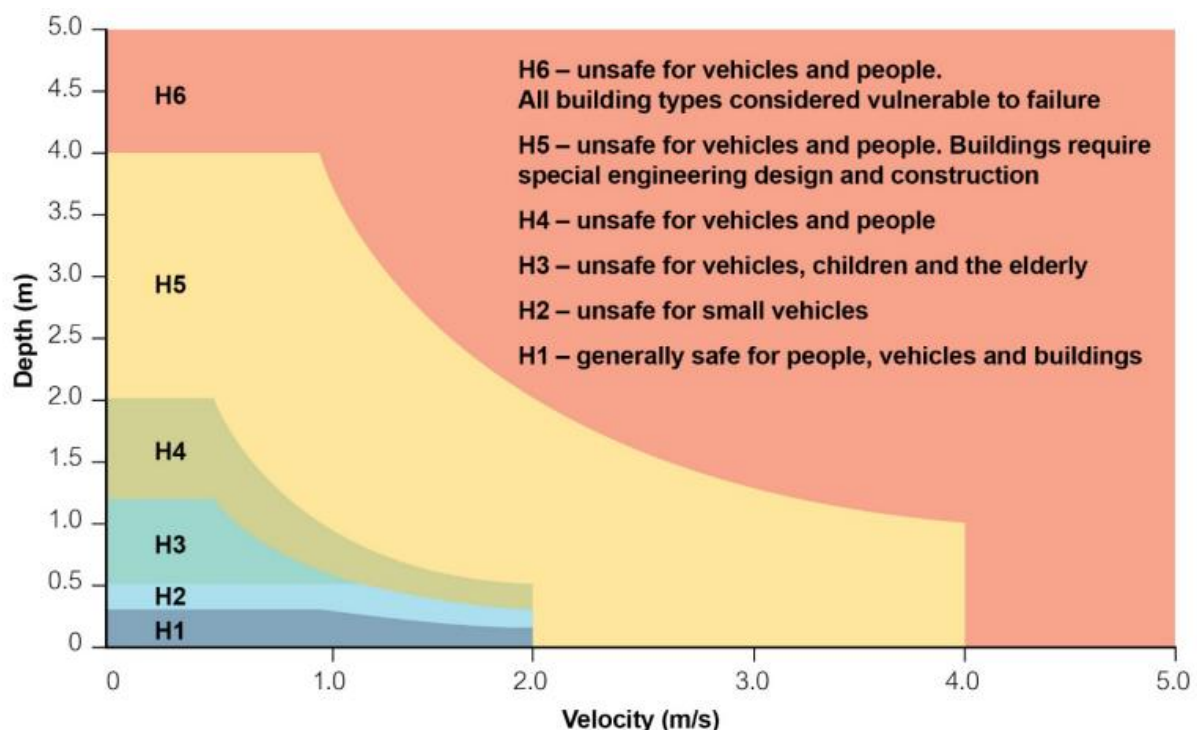


Figure 1 General flood hazard vulnerability curve

Note: Categories H1 to H4 in this guideline are equivalent to low hazard and H5 to H6 equivalent to high hazard in the 2005 *Floodplain development manual* (DIPNR 2005).

Source: Figure 6 AIDR 2017b.

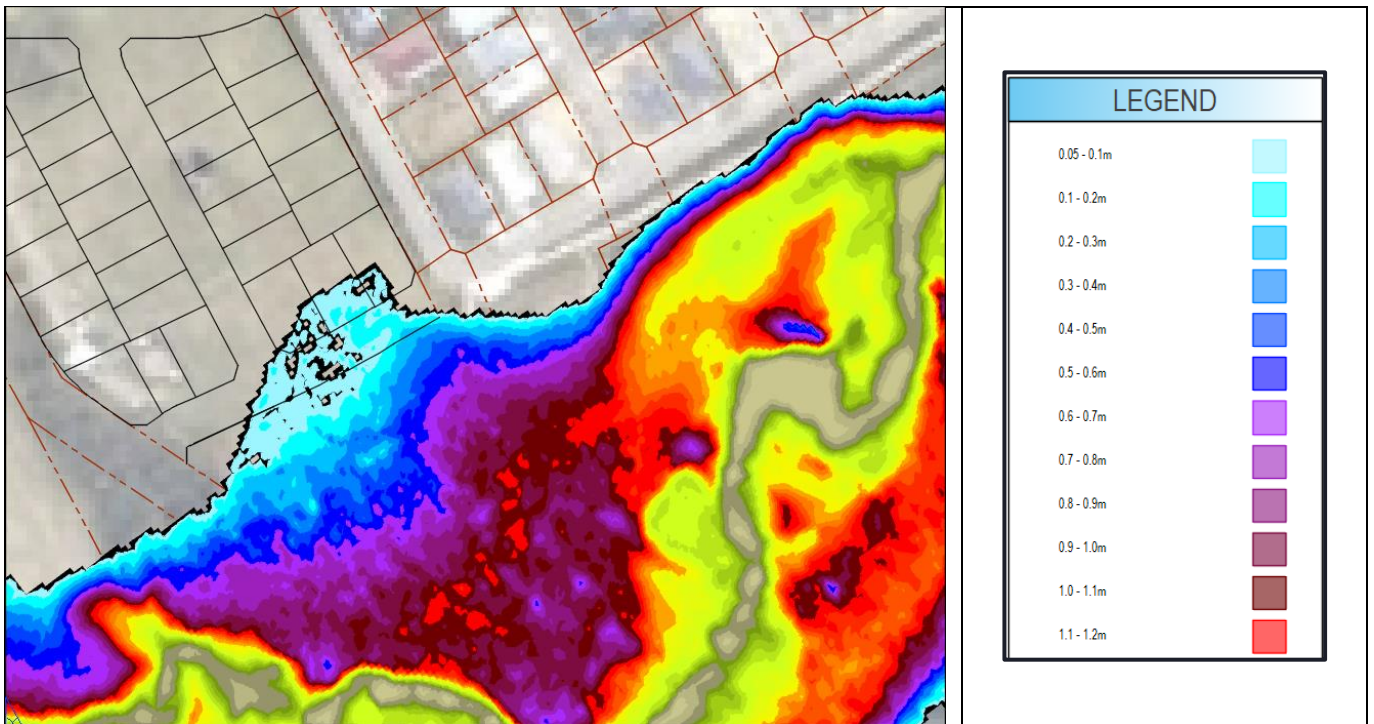


Figure 1: PMF Event Depth Map

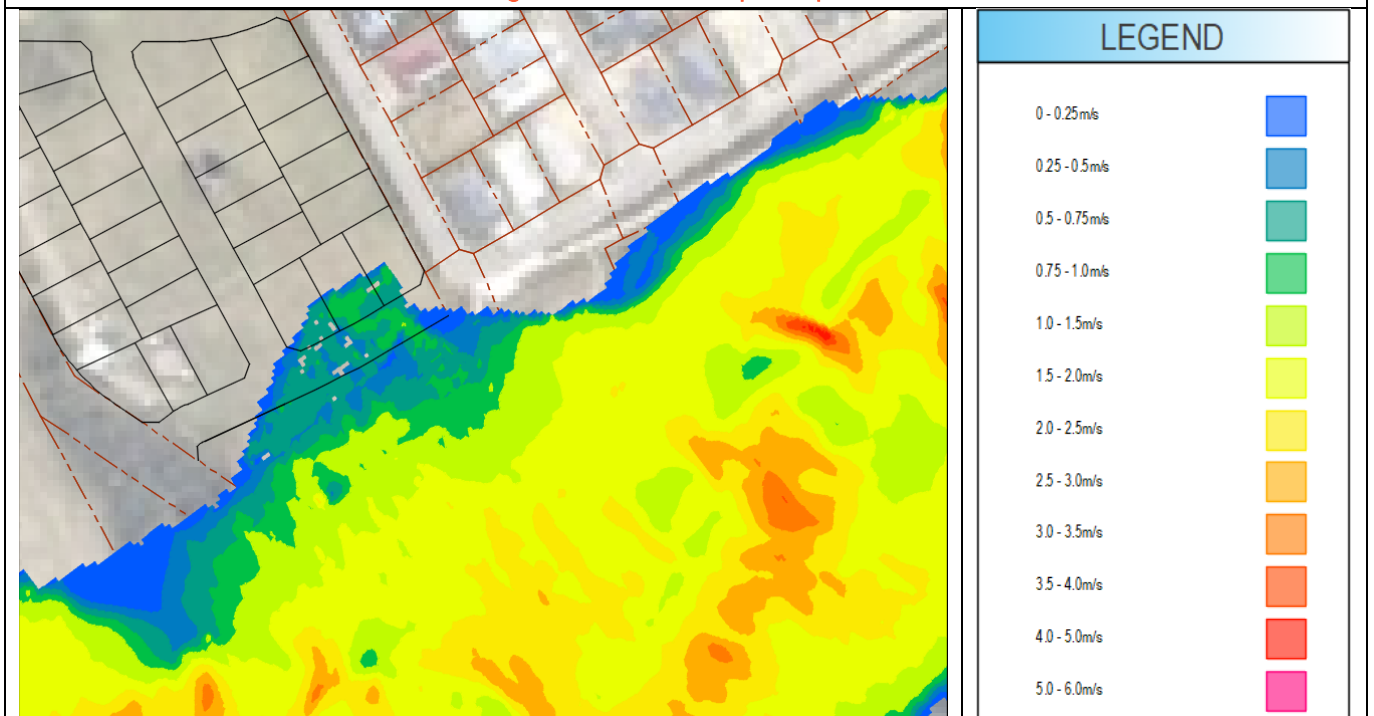


Figure 2: PMF Event Velocity Map

27 March email clarifications

- *The PMF mapping referenced in the cover letter (22/03/24) is not consistent with the mapping included in the previous technical memo (18/05/22) – see screenshots below. It looks like the cover letter is referencing the Manning's roughness sensitivity result which has lower flood depths and velocities than the baseline run. The commentary under "Recommendation 3" in the cover letter needs to be updated to reflect the correct model results.*

In response to this comment Orion was asked via BCD comments to use the manning's n values which were consistent with the WMAwater report as discussed on pages 19 to 23 of the IWC management report – refer to the link in Attachment A. The results as quoted in figures 1 and 2 of the Recommendation 3 response are consistent with the WMAwater manning's values rather than the values used in the 18/05/22. The results used are the most recent corrected results.

- *The colours shown on the hazard maps in the Integrated Water Management Report don't align with what's on the legend. I assume the post-processing of results is correct and it is just the colours that don't match up, but probably worth confirming with the consultant.*

The hazard maps have been updated in the Integrated Water Management Report, yes a post processing issue, thanks for the pickup. The revised Integrated Water Management Report is available via the link in Attachment A

Note that the flood modelling is based on the existing site levels. The detailed design of the subdivision will include raising road 3 and Lots 45, 46 and 47 to be above 25.8m RL to connect to the existing Jarvis Street to the east and to Digary Road to the West.

These proposed development levels will further reduce the PMF depths and extents.

As the PMF flood effect on lots 45, 46 and 47 is localised backwater ponding. This localised filling is not likely to have any significant effect on the upstream or downstream flood conditions up to and including the PMF flood event.

We recommend the emergency response appropriate for this subdivision to be shelter in place, as the final floor levels of all dwellings will effectively be above the Probable Maximum Flood level and the 1 in 100-year level plus 500mm freeboard, especially considering that evacuation to a shelter elsewhere may present a higher level of risk.

Kind regards,

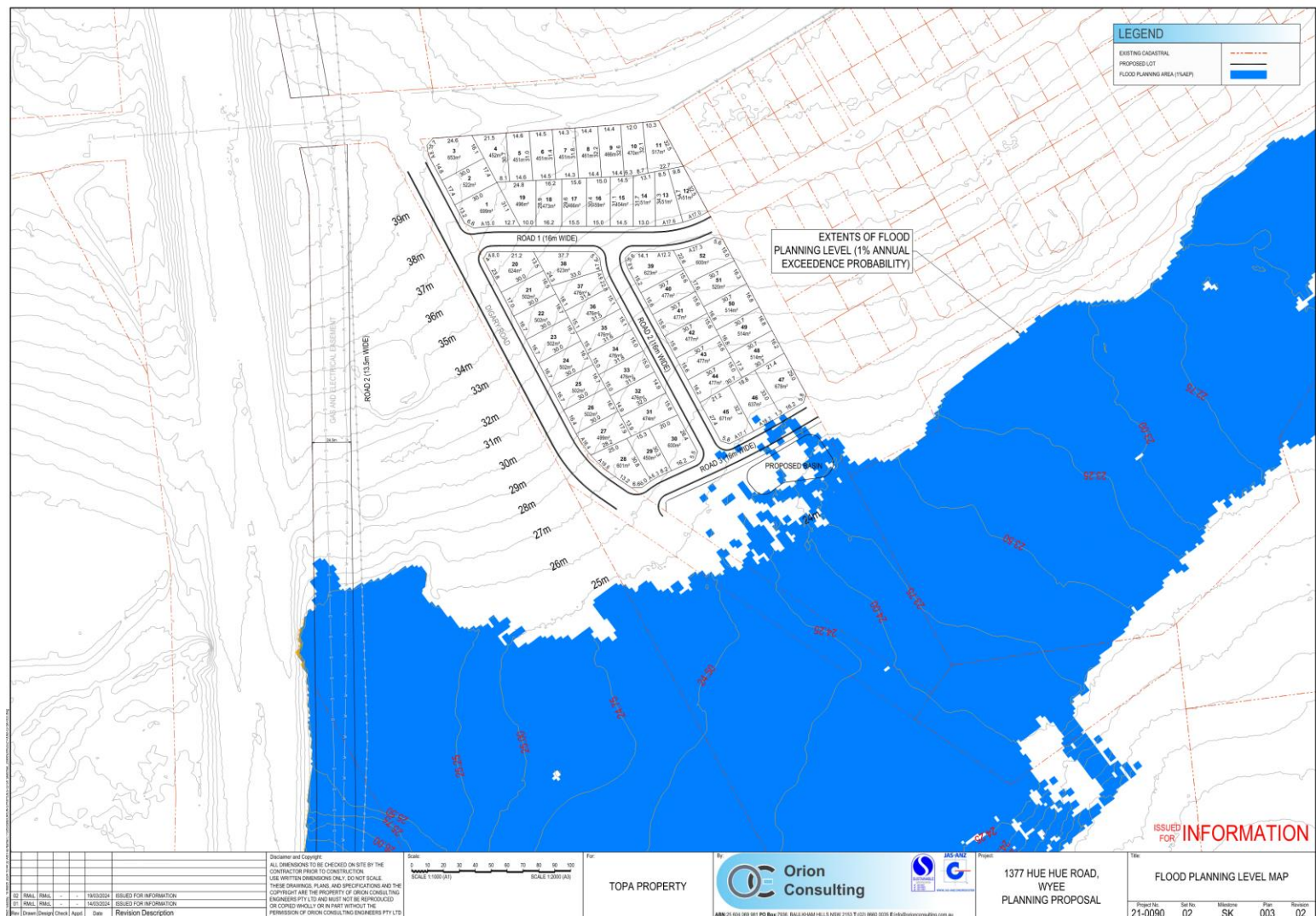
A handwritten signature in black ink, appearing to read 'S. Brain', written in a cursive style.

Orion Consulting Engineers Pty Ltd
Stephen Brain | Technical Director (Civil Infrastructure)

Link for updated Integrated Water and Flood Report follows:

[23-0842 - Topa Property - Hue Hue Road 240328 Merge.pdf](#)

Attachment B



Attachment C



Your ref: PP-2022-3016
Our ref: DOC24/134278-3

Mashal Moughal
Strategic Planner
Lake Macquarie City Council

By email: mmoughal@lakemac.nsw.gov.au

Dear Mashal

Subject: PP-2022-3016 – 1377 Hue Hue Road, Wyee – Revised flood information

Thank you for your referral, dated 12 February 2024, seeking Biodiversity and Conservation Division's (BCD) advice regarding the revised flood information for 1377 Hue Hue Road, Wyee.

BCD have reviewed the revised Integrated Water Management Report (Orion, dated 22/12/23).

BCD's comments are provided in **Attachment A**. If you have any further questions about this issue, please contact Chris Drummond, Acting Senior Team Leader, Water Floodplains and Coast at huntercentralcoast@environment.nsw.gov.au.

Yours sincerely

Neil Kelleher
**A/Director Hunter Central Coast Branch
Biodiversity and Conservation Division**

7 March 2024

Enclosure: Attachment A

BCD's comments

1377 Hue Hue Road, Wyee – Revised flood information

1. A planning proposal must not rezone land within the Flood Planning Area to a residential use.

Ministerial Direction 4.1 Flooding issued under section 9.1(2) of the *Environmental Planning and Assessment Act 1979* states that land must not be rezoned from rural to a residential zone if it is within the Flood Planning Area (FPA). The FPA is defined as the area below the Flood Planning Level (FPL). The report has not specified what FPL is proposed for the site.

Recommendation 1

The report must clearly specify what FPL is proposed for the site. The rezoning boundary must be located above this level.

2. The proposed subdivision layout is not consistent throughout the report.

The proposed subdivision layout shown on the concept engineering plan (Appendix C) is not consistent with that shown on the proposed site layout plan (Appendix A) and the flood mapping series (Appendix D). It is unclear which layout is correct.

Recommendation 2

Mapping presented in the report should be updated to show the correct subdivision layout.

3. Risk to life and emergency response requirements during an extreme flood have not been considered for the updated subdivision layout.

Risk to life during a flood is assessed up to the Probable Maximum Flood (PMF) event. Mapping presented in Appendix D indicates that the south-eastern corner of the proposed subdivision will be affected by floodwater during an extreme flood event. Proposed lot 46 (as shown in Appendix A and Appendix D) does not have flood free access to a road reserve.

Post-development flood modelling with proposed road and subdivision levels is required to understand flood hazard at the PMF. Safe egress away from rising floodwater must be provided for all lots within the subdivision.

Recommendation 3

Post-development flood modelling is required to understand flood hazard and emergency response requirements during the PMF event.

Stephen Brain

From: George Rounis <george@newquestprojects.com.au>
Sent: Wednesday, 27 March 2024 4:24 PM
To: Stephen Brain
Cc: Olga Masella
Subject: FW: BCD Comments on submitted revised Flood Information- PP-2022-3016- 1377 Hue Hue Road Wyee

Importance: High

This is an external email and may be malicious. Please take care when clicking links or opening attachments.

Hi Stephen,

Hope you are well.

Please note email below received from Council and BCD.




They have asked for further amendments, which seem minor in nature.

Can you please review and advise on timing to reply. If changes are minimal, would it be possible to provide a response tomorrow?

Regards,

GEORGE ROUNIS

Managing Director

 0438 405 726
 george@newquestprojects.com.au
 www.newquestgroup.com.au

Suite 7, 114 Majors Bay Road, Concord NSW 2137
PO Box 512 Concord NSW 2137



NEWQUEST
GROUP

From: Mashal Moughal <mmoughal@lakemac.nsw.gov.au>
Sent: Wednesday, March 27, 2024 3:57 PM
To: Olga Masella <olga@topaproperty.com.au>
Cc: George Rounis <george@newquestprojects.com.au>; Chris Ferry <christine.ferry@dpie.nsw.gov.au>
Subject: FW: BCD Comments on submitted revised Flood Information- PP-2022-3016- 1377 Hue Hue Road Wyee
Importance: High

Hi Olga,

I hope you find this email well. We have received some comments from BCD (see below) which require some additional information to enable them to complete their review. Can you please review the comments below and request your consultant to make the relevant changes to avoid further delays.

If you have any questions, then please do not hesitate to contact me.

Kind Regards,

Mash

Ms Mashal Moughal

Strategic Planner



T +61 2 4921 0556

E mmoughal@lakemac.nsw.gov.au

lakemac.com.au



Dhumaan ngayin Awabakurlangu kirraanan barayidin

We acknowledge and respect the Awabakal people who have cared for and nurtured this country.

From: Stephanie Lyons <stephanie.lyons@environment.nsw.gov.au>

Sent: Wednesday, March 27, 2024 3:36 PM

To: Mashal Moughal <mmoughal@lakemac.nsw.gov.au>

Subject: RE: Response to update on review of submitted revised Flood Information- PP-2022-3016- 1377 Hue Hue Road Wyee

Hi Mashal,

I've reviewed the additional info provided and noted the following:

- The PMF mapping referenced in the cover letter (22/03/24) is not consistent with the mapping included in the previous technical memo (18/05/22) – see screenshots below. It looks like the cover letter is referencing the Manning's roughness sensitivity result which has lower flood depths and velocities than the baseline run. The commentary under "Recommendation 3" in the cover letter needs to be updated to reflect the correct model results.
- The colours shown on the hazard maps in the Integrated Water Management Report don't align with what's on the legend. I assume the post-processing of results is correct and it is just the colours that don't match up, but probably worth confirming with the consultant.

Thanks,

Steph.

Cover letter (22/03/24)

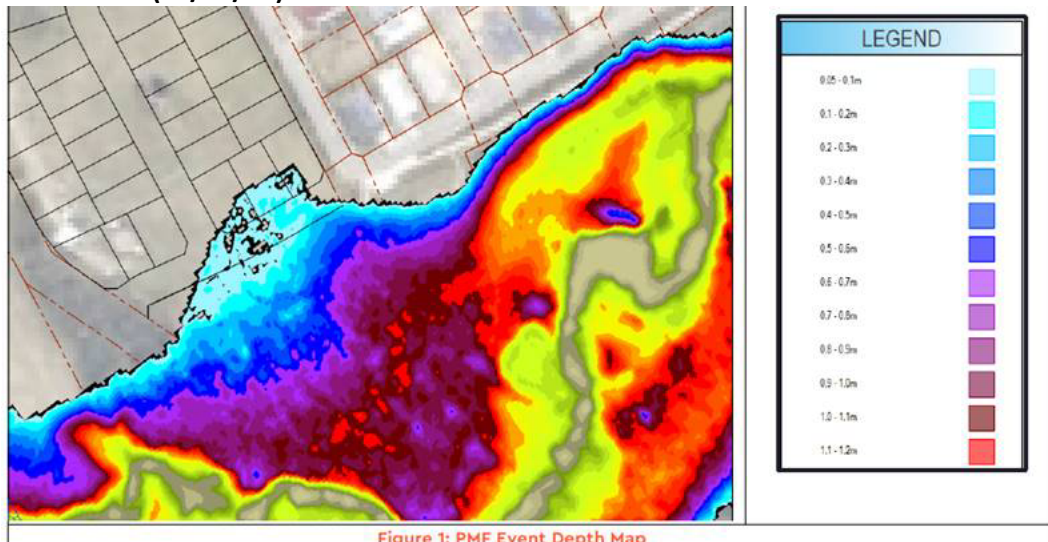


Figure 1: PMF Event Depth Map

PMF Technical Advice letter (18/05/22)



Stephanie Lyons

Senior Floodplain Officer, Hunter Central Coast
Biodiversity and Conservation Division

**Department of Climate Change,
Energy, the Environment and Water**

M 0461 412 275 **E** stephanie.lyons@environment.nsw.gov.au

Working days I don't work on Thursday

From: Mashal Moughal <mmoughal@lakemac.nsw.gov.au>

Sent: Wednesday, 27 March 2024 9:22 AM

To: Stephanie Lyons <stephanie.lyons@environment.nsw.gov.au>

Cc: Olga Masella <olga@topaproperty.com.au>; Chris Ferry <christine.ferry@dpie.nsw.gov.au>; mphil
<mphil@lakemac.nsw.gov.au>

Subject: RE: Response to update on review of submitted revised Flood Information- PP-2022-3016- 1377 Hue Hue Road Wyee

Good Morning Stephanie,

Thank you for confirming that you have received the recently submitted additional information and also for aiming to review the information in such a tight timeframe.

If you have any questions, then please do not hesitate to contact me.

I hope you have a lovely break.

Kind Regards,

Mash

Ms Mashal Moughal

Strategic Planner



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Dhumaan ngayin Awabakurlangu kirraanan barayidin

We acknowledge and respect the Awabakal people who have cared for and nurtured this country.

From: Stephanie Lyons <stephanie.lyons@environment.nsw.gov.au>
Sent: Wednesday, March 27, 2024 8:46 AM
To: Mashal Moughal <mmoughal@lakemac.nsw.gov.au>
Subject: RE: Follow up on review of recently submitted revised Flood Information- PP-2022-3016- 1377 Hue Hue Road Wyee

Hi Mashal,

Thanks for letting our team know the additional information has been uploaded onto the portal.

We will aim to provide a response by Fri 5 April. I will let you know if any queries once I have initially reviewed the docs.

Thanks,

Steph.

Stephanie Lyons

Senior Floodplain Officer, Hunter Central Coast
Biodiversity and Conservation Division
**Department of Climate Change,
Energy, the Environment and Water**

M 0461 412 275 **E** stephanie.lyons@environment.nsw.gov.au

Working days I don't work on Thursday

From: Mashal Moughal <mmoughal@lakemac.nsw.gov.au>
Sent: Monday, 25 March 2024 10:40 AM
To: Stephanie Lyons <stephanie.lyons@environment.nsw.gov.au>
Cc: Chris Drummond <chris.drummond@environment.nsw.gov.au>; EHG HCC Water Floodplains And Coast Mailbox <hcc.wfc@environment.nsw.gov.au>
Subject: RE: Follow up on review of recently submitted revised Flood Information- PP-2022-3016- 1377 Hue Hue Road Wyee
Importance: High

Good Morning Stephanie,

I hope you find this email well and that you had a lovely weekend. I called earlier and attempted to leave a voice message to confirm if you have received the additional information response that was uploaded to the planning portal last Friday (22 March 2024). Also, I wanted to get an understanding of the timeframe of the review period and when we will likely to receive comments. The Department of Planning, Housing and Infrastructure have only granted a one month's extension to finalise the LEP amendment (July 2024), and by knowing your timeframe we can plan ahead and keep the ball rolling.

I greatly appreciate your help and understanding with the review of the planning proposal. If you have any questions, then please do not hesitate to contact me.

Kind Regards,

Mash

Ms Mashal Moughal

Strategic Planner



T +61 2 4921 0556

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Dhumaan ngayin Awabakurlangu kirraanan barayidin

We acknowledge and respect the Awabakal people who have cared for and nurtured this country.

From: Stephanie Lyons <stephanie.lyons@environment.nsw.gov.au>

Sent: Wednesday, March 6, 2024 1:58 PM

To: Mashal Moughal <mmoughal@lakemac.nsw.gov.au>

Cc: Chris Drummond <chris.drummond@environment.nsw.gov.au>; EHG HCC Water Floodplains And Coast Mailbox <hcc.wfc@environment.nsw.gov.au>

Subject: RE: Request for Update on Review of Revised Flood Information- PP-2022-3016- 1377 Hue Hue Road Wyee

Hi Mashal,

This one is still going through our internal review process, but it has been marked as urgent so will be with you ASAP.

Apologies for the delay.

Thanks,

Steph.

Stephanie Lyons

Senior Floodplain Officer, Hunter Central Coast

Biodiversity and Conservation Division

**Department of Climate Change,
Energy, the Environment and Water**

M 0461 412 275 **E** stephanie.lyons@environment.nsw.gov.au

Working days I don't work on Thursday

From: Mashal Moughal <mmoughal@lakemac.nsw.gov.au>

Sent: Tuesday, 5 March 2024 10:49 AM

To: Stephanie Lyons <stephanie.lyons@environment.nsw.gov.au>

Subject: Re: Request for Update on Review of Revised Flood Information- PP-2022-3016- 1377 Hue Hue Road Wyee

Importance: High

Good Morning Stephanie,

I hope you find this email well. Thank you for taking the time last week to discuss the outcome of the review of the submitted further information regarding the flood concerns. It was understood that the review had concluded that further additional information is likely be requested. The timeframe for agency consultation has exceeded and the Department of Planning, Housing and Infrastructure have advised that they will only consider a one month gateway alteration extension to finalise the planning proposal which may not be sufficient to resolve the matters raised by BCD. Can you please advise when the formal response and the additional information request will be provided to enable the planning proposal to resolve agency matters and proceed to the next stage.

If you have any questions, then please do not hesitate to contact me.

Kind Regards,

Mash

Ms Mashal Moughal

Strategic Planner



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Dhumaan ngayin Awabakurlangu kirraanan barayidin

We acknowledge and respect the Awabakal people who have cared for and nurtured this country.

From: Mashal Moughal

Sent: Wednesday, February 28, 2024 1:49 PM

To: Olga Masella <olga@topaproperty.com.au>

Cc: Chris Ferry <christine.ferry@dpie.nsw.gov.au>; George Rounis <george@newquestprojects.com.au>; stephanie.lyons@environment.nsw.gov.au

Subject: Re: Update on Biodiversity Conservation Division's Review of Revised Flood Information- PP-2022-3016-1377 Hue Hue Road Wyee

Hi Olga,

I hope you find this email well. I have followed up (phone call) with the Biodiversity Conservation Division (BCD) regarding the review of the submitted information regarding the flood concerns. I have been advised that the feedback comments are being reviewed for quality assurance internally and they will aim to provide their formal comments by the end of this week. However, it was indicated by the agency that they will request additional information to address the matters listed below (there could potentially be more items).

Please note that the items listed below were discussed briefly and it is advised to wait for the formal feedback from BCD to understand the scope and detail of the information required.

Key matters raised by BCD:

- s9.1 Local Planning Directions:
 - The flood report does not specify the 'Defined Flood Event' (i.e., 1 in 100 year or 1 in 200 year flood event) used to inform flood the planning area. Hence, the flood report does not demonstrate how the proposal will meet the relevant s9.1 Local Planning Direction 4.1 Flooding.
- Emergency Evacuation
 - the submitted report and the subdivision layout needs to consider emergency evacuation especially for lots along the south eastern part of the site. The report also does not include any measures that could be applied to support evacuation.

[s9.1 Local Planning Directions](#)

4.1 Flooding

(2) A planning proposal must not rezone land within **the flood planning area** from Recreation, Rural, Special Purpose or Conservation Zones to a Residential, Employment, Mixed Use, W4 Working Waterfront or Special Purpose Zones.

[Flood Risk Management Manual 2023](#)

TERMS

Defined Flood Event (DFE)

The flood event selected as a general standard for the management of flooding to development Aims to reduce the frequency of flooding but does not remove all flood risk, for example, in selecting a 1% AEP flood as a DFE you are accepting that there is a 1 in 100 chance that a larger event will occur in any year.

This risk is being built into the decision

Flood Planning Area (FPA)

The area of land below the Flood planning Level (FPL). The FPA is generally developed based on the FPL for typical residential development.

Different types of development may have different FPLs applied within the FPA.

In addition development controls will vary across the FPA due to varying flood constraints

Flood Planning Level (FPL)

*The combination of the flood level from the **Defined Flood Event (DFE)** and freeboard selected for **Flood Risk Management (FRM)** purposes.*

Different FPLs may apply to different types of development.

Determining the FPL for typical residential development should generally start with a DFE of the 1% AEP flood plus an appropriate freeboard 49 Department of Planning and Environment Term Shortened form Definition Context for use/additional information (typically 0.5 m).

This assists in determining the FPA.

If you have any questions, then please do not hesitate to contact me.

Kind Regards,

Mash

Ms Mashal Moughal

Strategic Planner



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