From: [redacted]
To: Strategic Planning
Subject: [redacted] Assessment for C217
Date: Friday, 29 May 2026 4:17:59 PM
Attachments: image002.png
image003.png
R.M00694.001.00.Review.pdf

Your attachments have been security checked by Mimecast Attachment Protection. Files where no threat or malware was detected are attached.

We lodged a reply to the first round of the Ballarat 11 Waterways Planning Scheme Amendment (Amendment C217ball). To which we received no consultation and further note that there has been no change in the assessment in the second round.

We have had an independent assessment undertaken – see letter attached. Based on this assessment undertaken we are confident that our property has been mis-assessed. The advertised assessment shows our driveway (on the east side of the property) will receive higher water levels than our neighbours to the east – from where the water would flow if there was ever to be such a significant event that water would spill from our neighbours[redacted]. Further to this the flow of the water into our dam and from our dam is misrepresented in the assessment.

Further to this we would like to note, we have an approved subdivision for our property in which our dam will in fact disappear. This dam has no natural flows – the only in flows being stormwater off our house and shed.

Regards,

[redacted]

From: [redacted]
Sent: Thursday, 28 May 2026 11:06 AM
To: [redacted]
Cc: [redacted]
Subject: RE: [redacted] Flood Assessment for C217

Hi [redacted]

Please find attached the letter documenting my review of the flood modelling that the C217 is based on.

Regards [redacted]

[redacted]

VENANT SOLUTIONS

T. (03) 9089 8700 | W. www.venantsolutions.com.au https://www.linkedin.com/company/venantsolutions/
A. Office 704, 222 Hoddle St, Abbotsford VIC 3067 | PO Box 877, Macleod VIC 3085

From: [redacted]
Sent: Wednesday, 27 May 2026 11:59 AM
To: [redacted]
Cc: [redacted]
Subject: RE: [redacted] Assessment for C217

Hi [redacted]

Please prepare a letter indicating that the impact on our property is overstated and that it has not taken into account a site inspection. We also don't believe the engineering of the primary [redacted] has been taken into account.

- [redacted]
- [redacted]
- [redacted]
- [redacted]

Invoice can be emailed to me.

The secondary spillway you refer to on your map is our neighbours [redacted]. Not actually a [redacted] – but I guess mapping may suggest this. From our experience in high rains water has never crossed our driveway from our neighbours property. Water typically flows down our neighbours roadway to his front gate. It is our view that water is likely to spill over the dam walls before any significant water exits the [redacted]

Thanks,

[redacted]

From: [redacted]
Sent: Monday, 25 May 2026 12:21 PM
To: [redacted]
Subject: [redacted] Flood Assessment for C217

Hi [redacted]

So that we can get a project setup in our system could you please confirm the details for invoicing:

- Billing Name
- Street address
- Phone number
- Email

Over the weekend I completed a review of the flood study reports, the topography data and the videos that you provided and can provide the following summary:

- The proposed Land Subject to Inundation Overlay (LSIO2) is based on the flood mapping prepared as part of the Ballarat 11 Waterways Flood Study (Water Technology 2025) (the Study), specifically Canadian Creek and Tributaries Hydrology and Hydraulics report (Water Technology 2023).
- It is considered that the modelling approach used for the flood study is appropriate for defining flood related planning controls.
- However, the adopted 3 m grid resolution model used may not have picked up the high ground along your boundary fence (shown in the topography data and your videos). That could be why the mapping is showing water existing the neighbouring dam flowing towards your pond (light blue arrows in figure below). Where it may actually flow down the track on your neighbours property (dark blue arrows).
- While the extent of flood mapping may be overstated uphill of the pond, it is likely that northern parts of the Site would be subject to inundation and still be within the LSIO2.
- Therefore, we will not be able to prepare a submission to support the removal of the LSIO2 from your Site completely, but we could prepare a letter detailing that the extent currently mapped is potentially overstated.
- It should be noted that LSIOs identify flood prone land where development will still generally permissible. Given the shallow depth of flooding on the Site, it is not expected that future development or sub-division of the Site will be prohibited and a site specific flood assessment would determine the extent of inundation and any drainage design requirements.

Please let me know if you like to proceed, I am also available for a call anytime this afternoon on [redacted] talk through it.

[redacted]



[redacted]

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Our Ref: R.M00694.001.00.Review.docx

28 May 2026

[redacted]

Attention: [redacted]

Dear [redacted]

RE: REVIEW OF FLOOD MAPPING ON [redacted]

This letter report presents the outcomes of a review that I undertook of the extent of the flood mapping on the property located on [redacted] (the Site). The flood mapping has been used to define the extents of the Land Subject to Inundation Overlay (LSIO2) for the Draft Planning Scheme Amendment C217ball.

Flood study review

- The proposed Land Subject to Inundation Overlay (LSIO2) (Figure 1) is based on the flood mapping prepared as part of the Ballarat 11 Waterways Flood Study (Water Technology 2025) (the Study) (Figure 2).
- As documented in the Canadian Creek and Tributaries Hydrology and Hydraulics report (Water Technology 2023) the flood mapping was prepared using a flood model consisting of RORB hydrologic model (converts rainfall to runoff) and a TUFLOW hydraulic model (represents the behaviour of runoff across the terrain in the drainage network to produce flood maps). These programs are contemporary, widely used for flood studies across Australia and are considered best practice.
- A review of the Canadian Creek and Tributaries Hydrology and Hydraulics report indicates that the study was undertaken broadly in line the best practice guidance provided in Version 4.1 of Australian Rainfall and Runoff (ARR) (Ball, et al. 2019) which is the industry standard for flood modelling in Australia. The Study was also subject to a 3rd party peer review.
- The TUFLOW hydraulic model was based on LiDAR topographic data captured in 2019 as shown below in Figure 1 and included pipe and culvert drainage assets. The topographic data appears to representative of current conditions on the Site and surrounds.
- In line with current planning policy climate change has been accounted for by representing increase storm rainfall intensity due to global warming. The RCP8.5 climate change scenario was used representing an 18.5% increase in storm event rainfall by the year 2100. Since the completion of the Study revised guidance has been released by the Department of Climate Change, Energy, the Environment and Water (DCCEEW) as documented in Version 4.2 of ARR that would result in 86% increase in storm rainfall for the corresponding SSP5-8.5 climate change scenario. Therefore, the climate change modelling is not overlay conservative compared to current best practice.
- As described above the overall computer modelling and methods used for the Study are considered appropriate for development of flood planning overlays.

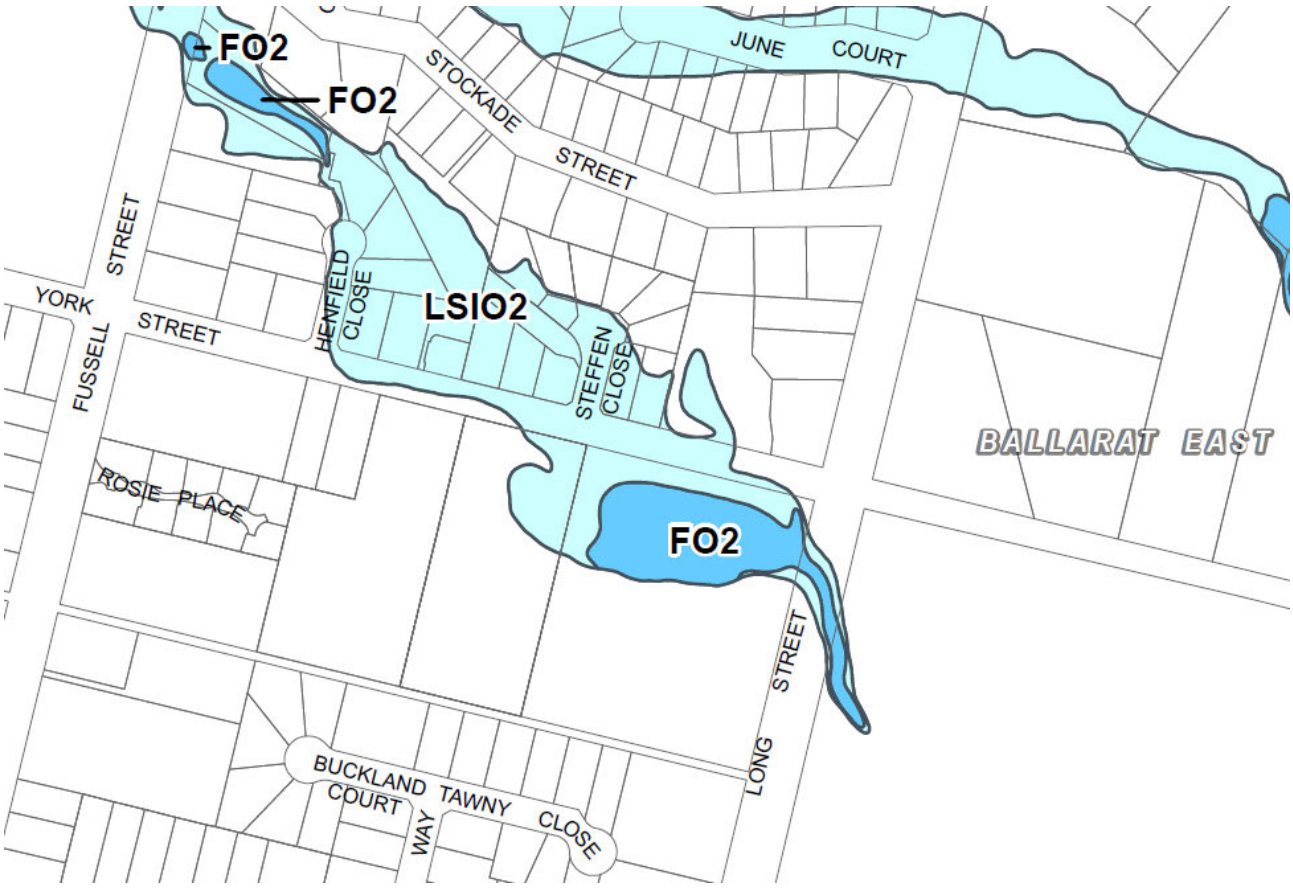


Figure 1 Proposed overlays

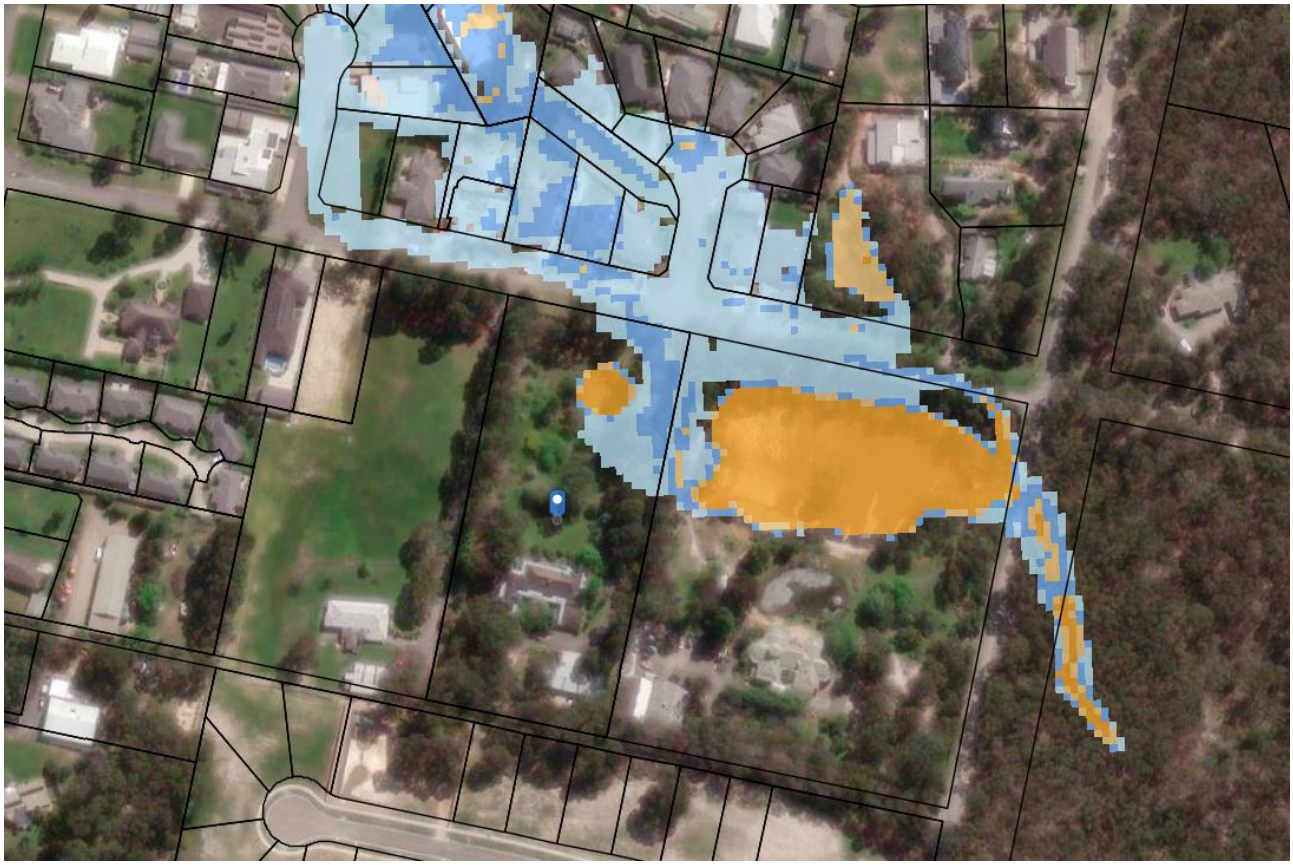


Figure 2 1% AEP RCP8.5 2100 Climate Change event flood depth map (sourced from the interactive flood depth and extent map)

Representation of flooding on [redacted]

- Excluding the [redacted] located at the front of the Site, the flood depths across the Site are generally less than 100 mm and with some areas above 100 mm but 300 mm.
- As depicted in Figure 3 (the flow path is represented by the light blue arrows) [redacted] of the Site enter the [redacted]. Once the [redacted] it then flows out [redacted], [redacted] [redacted].
- The flood mapping shows that the Site is inundated by floodwaters [redacted] This flow then crosses the [redacted] boundary of the Site and flows across the Site in a general [redacted] (Figure 3).
- The LiDAR topography data shows that the spillway is only 200 mm below the [redacted] Therefore, flow will occur via [redacted] when the depth of flow in the [redacted] is only 200 mm deep. It is expected that this would occur in significant flood event.
- The adopted 3 m grid size used in the TUFLOW hydraulic model used may not have picked up the high ground that runs along the eastern boundary of the Site as shown in Figure 3 and shown in Figure 4 which is still from a video taken along the boundary
- This could result in the modelled flood extent on the Site being too extensive and showing shallow flow [redacted] Flow into the property may be prevented by the high point and instead [redacted] and enter the Site closer to the front of the property (represented by the dark blue arrows on Figure 3).

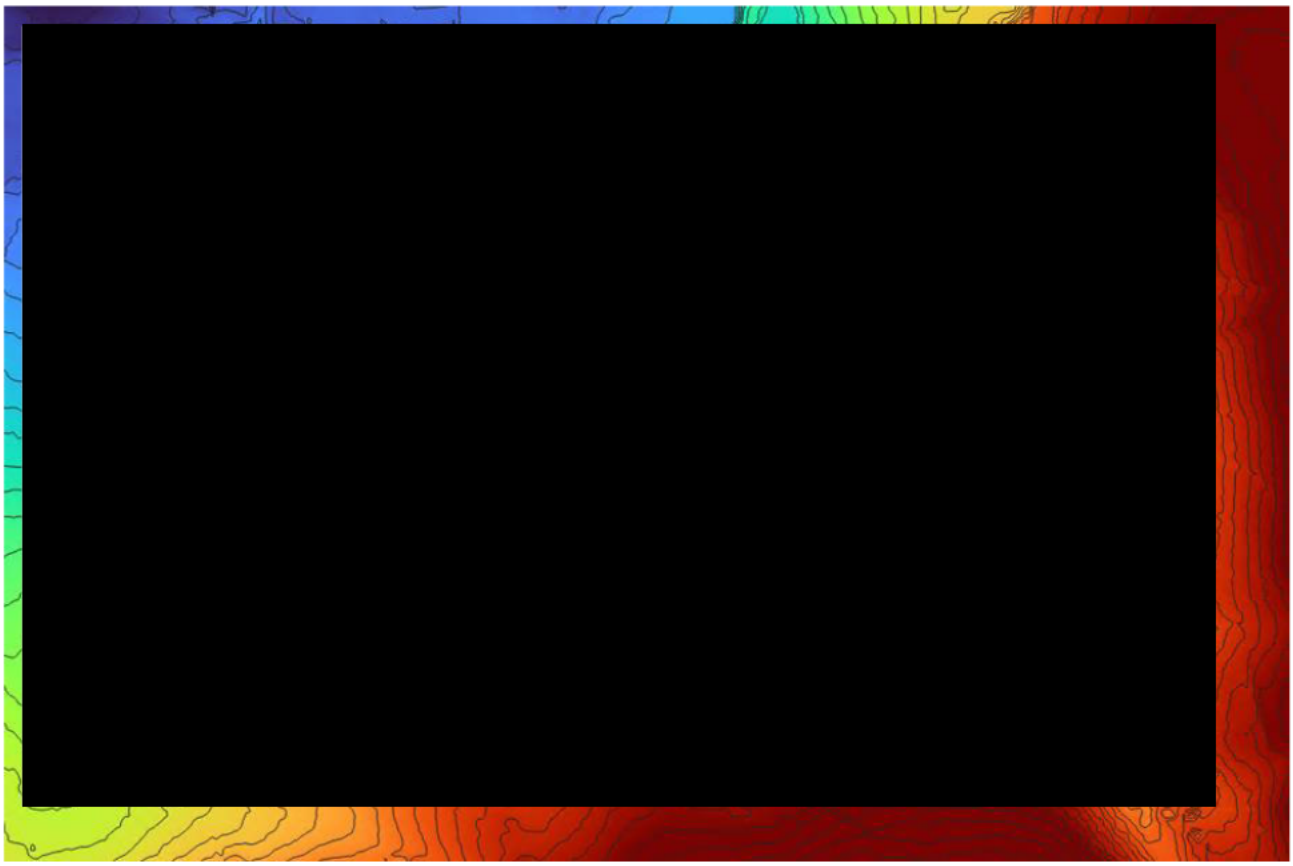


Figure 3 Site and surround topography and flowpaths

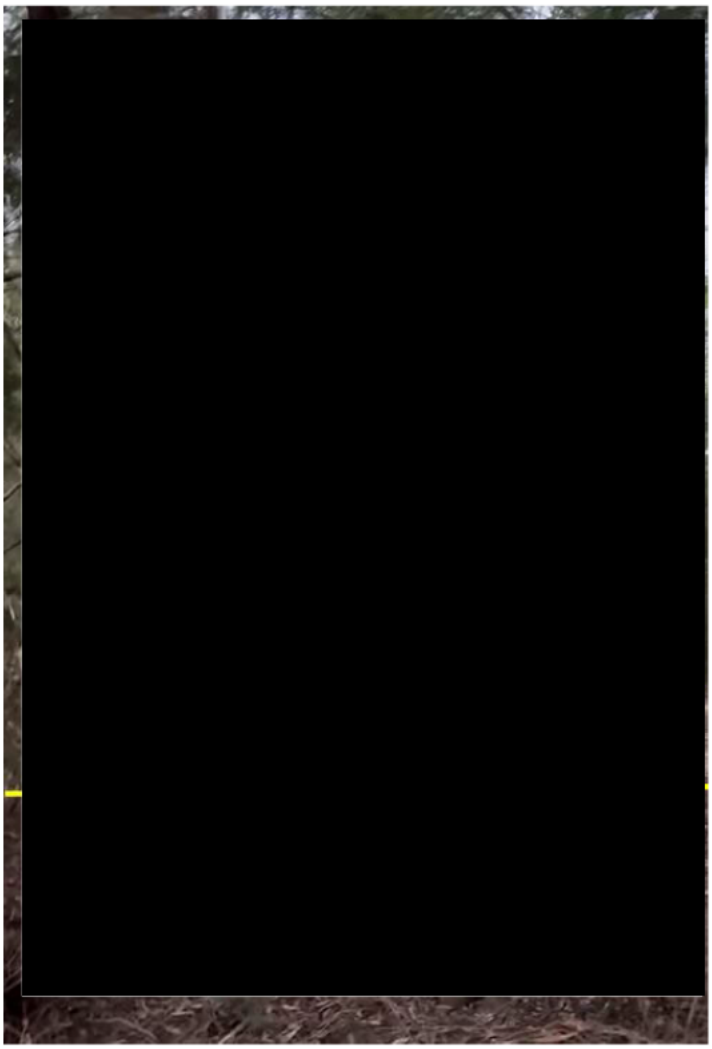


Figure 4 Still of high ground along eastern boundary

Conclusions

After review of the Study and the topography of the Site and surrounds found it is my opinion that:

- The overall computer modelling and methods used for the Study are considered appropriate for development of flood planning overlays.
- Due to the TUFLOW hydraulic model resolution the high ground that runs along eastern boundary of the Site may not have been fully represented in the flood model. Therefore, the extent of flood mapping may be overstated [redacted], but it is likely that [redacted] of the Site would be subject to inundation in a 1% AEP RCP8.5 2100 Climate Change flood event.

Yours sincerely,

[redacted]

[redacted]

Principal Environmental Engineer

References

Ball J, Babister M, Nathan R, Weeks W, Weinmann E, Retallick M, Testoni I (Ed) (2019), *Australian Rainfall and Runoff: A Guide to Flood Estimation*, Version 4.1, Commonwealth of Australia (Geoscience Australia).

Water Technology (2023), *Ballarat Flood Modelling Update Canadian Creek and Tributaries Hydrology and Hydraulics*, Water Technology.

Water Technology (2025), *Ballarat 11 Waterways Flood Study*, Water Technology.