



CMA Reference No: CCMA-F-2023-00699
Document No: 1
Date: 03 August 2023

GHD
103 - 105 Hume Street
Wodonga VIC 3690

Dear Richard,

CMA Reference Number: CCMA-F-2023-00699
Re: FIR - Flood Information Request
Location **Street** 60-62 Morgan Street Norlane VIC 3214
Cadastral Lot 1 TP2679, Parish of Moorpanyal

I refer to your **flood advice request** dated 03 July 2023, received at the Corangamite Catchment Management Authority on 03 July 2023.

Below is the authority's understanding of the application:

The applicant(s) propose the following;

Proposed Development Type: Other Community or Extension to Other Community Facility

Proposed Development Description: Guidance sought for proposed development particularly regarding a bridge proposed over Cowies Creek
on the abovementioned proposed development location.

The authority's assessment indicates that the property is covered by the following Zones and Overlays in the Greater Geelong City Council Planning Scheme:

Zone(s): Public Park and Recreation Zone
Transport Zone 2 - Principal Road Network

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The Authority has assessed this application in accordance with its functions as the Floodplain Management Authority for the Corangamite Waterway Management District pursuant to Sections 201 to 212 of the Water Act 1989.

The Floodplain Management functions of the authority are described in Section 202 of the Water Act 1989:

- to find out how far floodwaters are likely to extend and how high they are likely to rise.*
- to control developments that have occurred or that may be proposed for land adjoining waterways.*
- to develop and implement plans and to take any action necessary to minimise flooding and flood damage.*
- to provide advice about flooding and controls on development to local councils, the Secretary to the Department and the community.*

Applications are assessed on their merits considering the flooding characteristics of each site. Applications are not assessed in comparison with other development applications within the area and existing precedence should not be used as an argument to allow new development to occur.

The Guidelines for development in flood affected areas (DELWP, February 2019) and Floodplain Development Guidelines, guidelines for development in flood prone areas (Corangamite CMA, 2022) outline the key principles used to assess development in floodplains.

The Corangamite CMA (the Authority) understands this application relates to **guidance sought for proposed development particularly regarding a Flood Emergency Response Plan using the existing bridge over Cowies Creek** for the property at 60-62 Morgan Street Norlane VIC 3214.

The proposed development of the Wathaurong Aboriginal Cooperative facility has come into some difficulty on access, an issue identified by the Authority early in the project. At present there is no safe access/egress as the existing bridge is impacted during floods smaller than the 10% AEP flood event. Numerous scenarios were tested and posed by the applicant during a meeting (dated 17 July 2023) followed by an email dated 20 July 2023. There is scope to increase the capacity of the bridge, however, Morgan Street experiences significant flooding rendering the proposed option untenable.

The applicant proposes to retain the use of the existing bridge as the primary access, using a Flood Emergency Response Plan (FERP) to mitigate the risk, by stipulating emergency access via Council owned land to the North. Once ownership is transferred to the Wathaurong (2-3 years' time), this access would become permanent, and the access to the existing bridge would be blocked by metal posts, to prevent access during flood events, this would be a requirement of the updated FERP.

The detailed flood study which exists, the non-habitable nature of the facility, the safe emergency access/egress and the temporary (<12 hours) inundation duration, result in the proposed option seeming suitable for the development to proceed.

Development Advice:

In light of the above information the Authority **would not object** in principle to the use of the existing bridge as part of a Flood Emergency Response Plan subject to the following minimum condition(s):

1. A Flood Emergency Response Plan (FERP) to the satisfaction of Authority must be submitted and approved. When approved, the FERP will be endorsed and will form part of the planning permit. The FERP must be prepared by a suitably qualified person and must be in accordance with industry best practise. The FERP must include:
 - a. Consideration of the appropriateness of a flood monitoring system (i.e. upstream gauging and warning dissemination) and make recommendations if appropriate.
 - b. Create both warning and evacuation measures for occupants and staff on-site including 'defined triggers' and the most appropriate 'safe areas' and 'safe evacuation routes'.

- c. A building flood emergency response plan, similar to a building fire evacuation drill, and measures to ensure this is tested at least annually;
 - d. Identification of the roles and responsibilities of the proposed 'Flood Warden' with key tasks including;
 - i. Reporting changes to Property Manager to give examples such as identifying staff with special needs (e.g. a disability), changes to the flood tenancy or staff numbers that might be relevant to the flood risk.
 - ii. Participating in FERP training on an annual basis as a minimum.
 - e. Provide examples of 'appropriate emergency provisions' e.g. water, types of foods, medical kit, etc and state where it will be housed.
 - f. The proposed route for the emergency access must be an all-weather access road so that emergency vehicles can access the site during a flood event.
 - g. A formal yearly review of the FERP including any recommendations for amendments to the FERP and an updated FERP (if appropriate) must be submitted to the Authority, until such a time as the land to the North is transferred.
 - h. A formal five yearly review of the FERP including any recommendations for amendments to the FERP and an updated FERP (if appropriate) must be submitted to the Authority, following the transfer of the land to the North. If there is an updated FERP, it must be approved by the Authority. When approved, each updated FERP will be endorsed.
 - i. The proposed alternative emergency access route must be placed on the title of the land, using an agreement as discussed in the meeting.
 - j. The Flood Emergency Response Plan must be part of a 173 agreement to be placed on the title.
2. The finished floor level of the proposed development must be a minimum of 300 millimetres above the applicable 1% AEP flood level.
 3. The emergency access road to the north must be constructed to a suitable standard to allow all-weather access and be suitable for emergency vehicles access.

Flood/Waterway Advice:

Flood extents and levels for the 1% Annual Exceedance Probability (AEP) flood event have been modelled for this area from the Cowies Creek Stormwater Management Strategy (WMS, 2022) and recently updated by Water Technology. This modelling has not been supplied to the Authority and therefore the proposed consultant must determine the 1% AEP flood level.

Please note that the 1% AEP flood is not the maximum possible flood. There is always a possibility that a flood larger in height and extent, than the 1% AEP flood, may occur in the future.

Mapping available to the authority indicates a designated waterway flows through the subject property. Please note that any works within the bed and banks of a designated waterway require a permit from the authority in accordance with the By Law No. 4 – Waterways Protection 2014 and the Water Act 1989. The authority does not charge an application fee for Permits or Works on Waterways Advice. For further advice or to apply for a Permit, please visit the authority's website at <https://ccma.vic.gov.au/waterways/flood-advice-works-on-waterways/works-on-waterways-application-form/>

The authority supports *Clause 14.02-1S (Catchment planning and management)* of the *Victorian Planning Policy Framework* which seeks to retain natural drainage corridors with vegetated buffer zones at least 30 metres wide along each side of a waterway to:

- Maintain the natural drainage function, stream habitat and wildlife corridors and landscape values,
- Minimise erosion of stream banks and verges, and



- Reduce polluted surface runoff from adjacent land uses.

The authority has not assessed this application in relation to stormwater management or impacts on the capacity of stormwater drainage infrastructure in the area. Council, as the drainage authority, is the responsible authority for managing stormwater flood risk, including applying the planning requirements of Clause 56 of the Victorian Planning Provisions' Practice Note 39 to ensure that new developments do not have significant third-party impacts due to increased runoff from impervious surfaces.

The Authority has provided this advice as preliminary information only and has been based on the information you have provided. Any flood level advice provided is based on the most accurate information currently available and may change if new information becomes available.

The Authority can provide further information regarding any proposed development of the property in response to a planning permit application referred by the Greater Geelong City Council in accordance with the Planning and Environment Act 1987.

This document contains flood level **advice only** and does not constitute approval or otherwise of any development at this location. The authority recommends you seek further advice from the Greater Geelong City Council.

Should you have any queries, please do not hesitate to contact our office at floodinfo@ccma.vic.gov.au. To assist the Authority in handling any enquiries please quote **CCMA-F-2023-00699** in your correspondence with us.

Yours sincerely,

Acting Manager, Floodplains

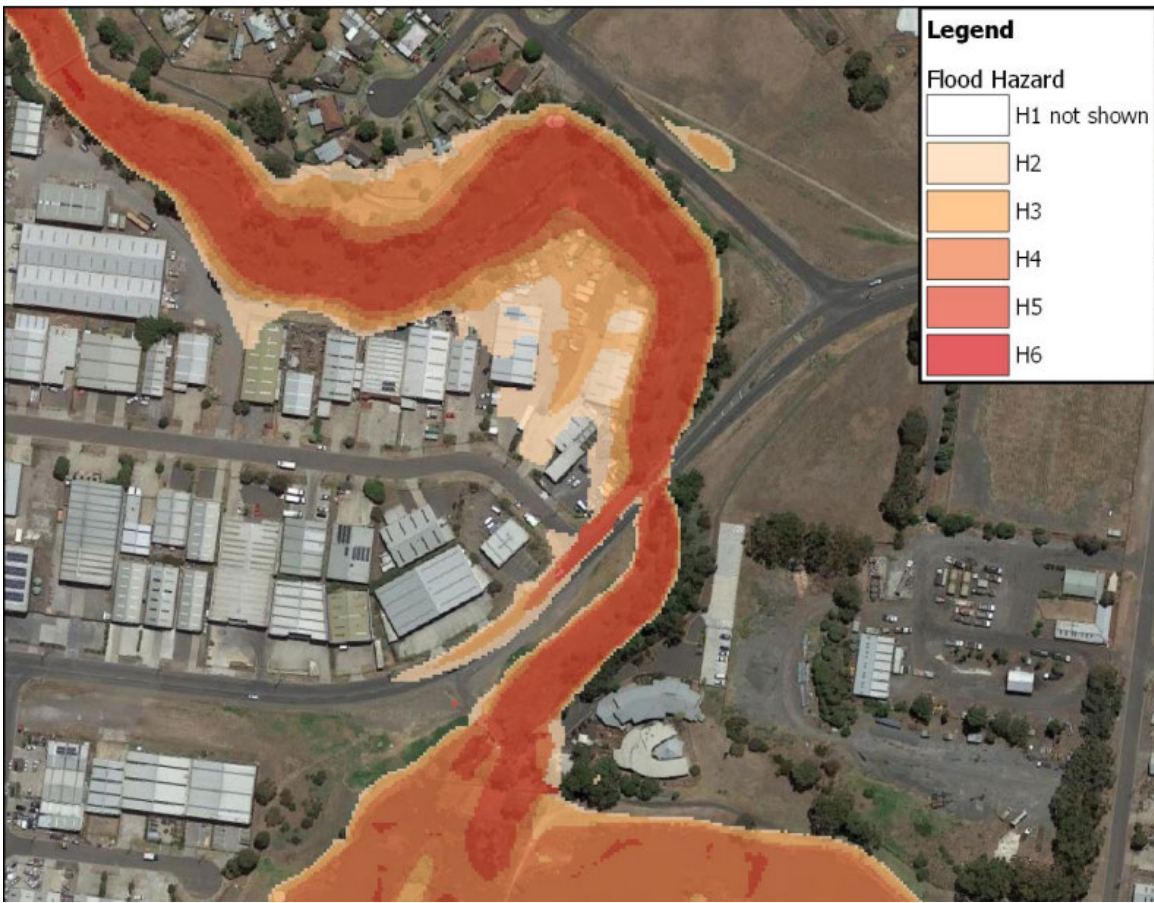


Figure 1: Flood hazard from Water Technology



Figure 2. Emergency access through Council land to north

The information contained in this correspondence is subject to the disclaimers and definitions attached.

Definitions and Disclaimers

1. The area referred to in this letter as the 'proposed development location' is the land parcel(s) that, according to the authority's assessment, most closely represent(s) the location identified by the applicant. The identification of the 'proposed development location' on the authority's GIS has been done in good faith and in accordance with the information given to the authority by the applicant(s) and/or Council.
2. While every endeavour has been made by the authority to identify the proposed development location on its GIS using VicMap Parcel and Address data, the authority accepts no responsibility for or makes no warranty regarding the accuracy or naming of this proposed development location according to its official land title description.
3. **AEP** as Annual Exceedance Probability – is the likelihood of occurrence of a flood of given size or larger occurring in any one year. AEP is expressed as a percentage (%) risk and may be expressed as the reciprocal of ARI (Average Recurrence Interval). Please note that the 1% probability flood is not the probable maximum flood (PMF). There is always a possibility that a flood larger in height and extent than the 1% probability flood may occur in the future.
4. **AHD** as Australian Height Datum - is the adopted national height datum that generally relates to height above mean sea level. Elevation is in metres.

5. **ARI** as Average Recurrence Interval - is the likelihood of occurrence, expressed in terms of the long-term average number of years, between flood events as large as or larger than the design flood event. For example, floods with a discharge as large as or larger than the 100 year ARI flood will occur on average once every 100 years.
6. **LiDAR (Light Detection And Ranging)** is an optical remote sensing technology which measures the height of the ground surface using pulses from a laser. LIDAR can be used to create a topographical map of the land and highly detailed and accurate models of the land surface.
7. No warranty is made as to the accuracy or liability of any studies, estimates, calculations, opinions, conclusions, recommendations (which may change without notice) or other information contained in this letter and, to the maximum extent permitted by law, the authority disclaims all liability and responsibility for any direct or indirect loss or damage which may be suffered by any recipient or other person through relying on anything contained in or omitted from this letter.
8. This letter has been prepared for the sole use by the party to whom it is addressed and no responsibility is accepted by the authority with regard to any third party use of the whole or of any part of its contents. Neither the whole nor any part of this letter or any reference thereto may be included in any document, circular or statement without the authority's written approval of the form and context in which it would appear.
9. The flood information provided represents the best estimates based on currently available information. This information is subject to change as new information becomes available and as further studies are carried out.

References

1. [Guidelines for Development in Flood Affected Areas, Department of Environment, Land, Water and Planning, 2019.](#)
2. [Floodplain Development Guidelines, Guidelines for Development in Flood prone areas, Corangamite CMA 2022.](#)
3. [Australian Rainfall and Runoff Revision Project 10 – Appropriate Safety Criteria for People April 2010.](#)
4. [Australian Rainfall and Runoff Revision Project 10 – Appropriate Safety Criteria for Vehicles February 2011.](#)
5. [Victorian Floodplain Management Strategy 2016](#)
6. [Corangamite Regional Floodplain Management Strategy 2018-2028](#)