



Office of
Environment
& Heritage

DOC18/56401
7325

Mr Mark Ruddiman
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WOLLONDILLY SHIRE COUNCIL	
TRIM NO.	7325
PROP. No.	
20 MAR 2018	
AUTH. No.	
ASSIGNED TO:	M. Ruddiman

Dear Mr Ruddiman

**OEH comments on Planning Proposal – 45 Noongah Street and 25 Gwynne Hughes Street,
Bargo – revised planning proposal**

Thank you for your letter of 4 January 2018, requesting further advice from Office of Environment and Heritage (OEH) on the revised Planning Proposal for 45 Noongah Street and 25 Gwynne Hughes Street, Bargo in relation to the flood affectation of the site and impacts on vegetation.

OEH has reviewed the following documents:

- Plan of Proposed Subdivision – Revision B (6 December 2017)
- Specialist Study Bushfire Hazard Risk Assessment (4 December 2017)
- Preliminary Flood Study (Martens, 2015)
- Additional Information 1252 - Flood Modelling and preliminary regrading report – Revision B (Martens, 2017)
- Your email of 6 February 2018 with comments from Council's flood engineer

and provides comments in Attachment A.

Should you have any queries regarding this matter, please contact Janne Grose on t:8837 6017 or e: janne.grose@environment.nsw.gov.au

Yours sincerely

S. Harrison 13/03/18

SUSAN HARRISON
Senior Team Leader Planning
Greater Sydney
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Attachment A

OEH comments on Planning Proposal – 45 Noongah Street and 25 Gwynne Hughes Street, Bargo – revised planning proposal

Reference is made to the Office of Environment and Heritage (OEH) previous submissions of 14 December 2016 and 20 April 2017 on the Planning Proposal for this site. OEH has reviewed the following documentation:

- Plan of Proposed Subdivision – Revision B (6 December 2017)
- Specialist Study Bushfire Hazard Risk Assessment (4 December 2017)
- Preliminary Flood Study (Martens, 2015)
- Additional Information 1252 - Flood Modelling and preliminary regrading report – Revision B (Martens, 2017)
- Your email of 6 February 2018 with comments from Council's flood engineer

and provides the following comments.

Biodiversity

OEH notes the Flora and Fauna Assessment report (FFAR) provided with the revised planning proposal is the same version of the report (dated 7 March 2017) that was reviewed previously by OEH. The following comments are in addition to advice previously provided by OEH on native vegetation at the site.

Plan of Proposed Subdivision

OEH supports the Plan of Proposed Subdivision (PPS) zoning the high ecological constraint land along Hornes Creek as E2 Environmental Conservation zone (rather than E3 Environmental Management zone). This is consistent with advice previously provided by OEH that areas of high ecological value are most appropriately protected by the application of an E2 zone (rather than an E3 zone).

Comparing the PPS with Figure 3.19 in the FFAR, OEH notes the rectangular area of land identified as high ecological constraint on the northern boundary has not been zoned E2 and is still proposed to be subdivided as R5 large lot Residential. It is noted this area of land has a 'restriction on use of land variable width'. Details need to be provided on what this means. OEH recommends the PPS is amended to apply an E2 zoning to this area.

OEH seeks clarification on who will own and manage the E2 zoned land at the site in the long term. OEH previously recommended the areas of high ecological value are managed in perpetuity under a biobanking agreement or via a community title. Details are required on this.

Some of the proposed lots, the perimeter road and Asset Protection Zone (APZ) would impact vegetation that has been identified as moderate ecological constraint in the FFAR. A scaled plan which overlays the PPS and the ecological constraint vegetation would be useful. The proposed location of perimeter road 2 and APZ would result in the clearing of moderate ecological constraint vegetation. OEH recommends the planning proposal is in accordance with the *OEH Principles for the Use of Biodiversity Offsets in NSW* which can be found at the following link: <http://www.environment.nsw.gov.au/biodivoffsets/oehoffsetprincip.htm>. The first principle outlines that impacts to native vegetation are avoided first by using prevention and mitigation measures. If impacts are unavoidable, offsets then must be used to address any remaining impacts to native vegetation that is proposed to be removed. The perimeter road/APZs should be located to protect and avoid clearing the moderate ecological constraint vegetation.

The PPS shows the perimeter road 2/APZ are located within the riparian extent of Hornes Creek. OEH recommends DoI Water is consulted on this to ensure the planning proposal complies with the DPI Office of Water (2012) guidelines for controlled activities. OEH understands encroachment of APZs/roads into the outer vegetated riparian zone needs to be offset by an equivalent area adjoining the riparian corridor along the creek. Encroachment into the riparian corridor does not appear to have been offset.

The PPS shows APZs are to be located adjacent to the E2 zone and that lots 106, 116 and 126-131 adjoin the APZ. The Bushfire Hazard Risk Assessment (BHRA) notes the APZs would be conditioned within the development consent to be managed as fuel free/fuel reduced areas for the life of the project (page 22). It indicates the general maintenance requirements (APZ vegetation management) would be conducted by the building owners/tenants in due course (section 2.7, page 22). It is unclear what measures will be used on the site to ensure that future residents will not clear beyond the 25m wide APZ and potentially clear/disturb/degrade the high ecological constraint vegetation. It is important the residents can distinguish on the ground between the APZ and the adjoining E2 zoned land so that it is not cleared. OEH preference is for perimeter roads to be provided between the development lots and native vegetation that is to be protected on the site.

The PPS shows the location of the building envelope on some lots but not all. It is unclear why this detail is not provided for all lots and clarification is required on this.

It is noted for lot 116 the indicative location of the dwelling is immediately adjacent to the APZ. Comparing the PPS with Figure 3.19 in the FFAR, the building envelope appears to impact moderate ecological constraint vegetation. It is recommended the location of the building envelopes avoid the need to clear moderate ecological constraint vegetation.

Floodplain Risk Management

The primary objective of the NSW Government's Flood Prone Land Policy is to reduce the impact of flooding and flood liability on individual owners and occupiers of flood prone property, and to reduce private and public losses resulting from floods. The most appropriate method to assess the development of flood prone land is through the floodplain risk management process, which is a risk based assessment detailed in the NSW Floodplain Development Manual (2005).

Section 117 Direction 4.3 'Flood Prone Land' of the Environmental Planning and Assessment Act 1979, applies to the subject site. A primary objective of this Direction is to ensure that development of flood prone land is consistent with the NSW Government's Flood Prone Land Policy and the principles of the Floodplain Development Manual 2005.

The Preliminary Flood Study (Martens, 2015) provides brief discussion on the hydrologic and hydraulic model set up, though it includes no discussion about the flooding characteristics near the site, the impacts of flooding on the proposed development or the impacts of the development on flooding and on adjacent properties.

The Additional Info 1252 – Flood modelling and preliminary regrading report (Martens, 2017) provides maps that show the flooding characteristics for the 20% AEP, 5% AEP, 1% AEP and the Probable Maximum Flood (PMF) for existing and developed scenarios.

Comments on the above provided information:

- The 1% developed scenario maps show that the proposed rezoned area on the north-east side (along Road 3 and Noongah Street) becomes isolated in the 1% AEP flood event which indicates no safe evacuation route is available. The south-east side along Road 3 has its access through Noongah Street cut off at 5% AEP which indicates that to ensure safe evacuation residents in the south-east areas would evacuate in every flood event equal or larger than the 5% AEP. The PMF developed scenario map shows this area fully inundated in the PMF. Accordingly, OEH supports the recommendation made by Wollondilly Shire Council not to rezone the south-east area along Road 3 i.e. lots marked 127 to 131 in the proposed subdivision Plan.
- The flood immunity at the end of Noongah Street should be investigated as it appears to be cut in a 1% AEP event. The depth of water over Noongah Street is unclear in drawing "Site 1% AEP Proposed Flood Depth (m) and Level" and should be clarified.

- The flood immunity of the existing Kader Street bridge and the proposed river crossing at the end of Noongah Street has not been assessed. OEH agrees with Council that only the Gwynne Hughes Street access is necessary. The Kader Street bridge should have at least a 1% AEP immunity for evacuation purposes. The current immunity of the bridge is unclear from the information provided. Discussion on evacuation and a suitable evacuation plan should be provided.
- The proposed Subdivision Plan shows the 1% AEP extent encroached or is close to some proposed lots. New development should be allocated in areas above the 1% AEP plus 0.5m freeboard. The 1% AEP event plus 0.5m freeboard planning level should be mapped and levels adhered to as the minimum floor level for the properties.
- An Emergency Response Plan (ERP) should be prepared for the proposed development in consultation with the State Emergency Service to ensure safe evacuation. Available information on the proposed RFS crossing and on evacuation routes cut-off time is prudent in the preparation of the ERP for the site.

Relevant Policies and Guidelines

- NSW Government Flood Prone Land Policy (1984) as set out in the Floodplain Development Manual (2005)
- Section 117(2) Local Planning Direction 4.3 "Flood Prone Land"

(END OF SUBMISSION)