

Department of Planning and Environment

Our ref: DOC22/551051

Your ref: PP-2021-837

The General Manager
Shoalhaven City Council
By email: council@shoalhaven.nsw.gov.au

Date: 5/7/2022

Attention: Matthew Rose, Co-ordinator – Strategy Planning Team

Subject: Shoalhaven LEP 2014 Moss Vale Road North Urban Release Area – Public Exhibition

Dear Matthew

Thank you for referring the above matter to the Biodiversity Conservation Division (BCD) of the Department of Planning and Environment (DPE) to provide further opportunity to comment on the Planning Proposal. We provided advice on this proposal in our submission dated 9/2/2021 (our reference DOC21/66679). We have provided further detailed comments on flood and riparian corridors in this submission (Attachment A). We also note that some of our previous comments on protection of biodiversity and proposed land zoning have not been addressed.

Flooding

As presented, this Planning Proposal has not demonstrated consistency with flood related planning direction and as such presents a potential risk to manage flooding and the environment which could be avoided through appropriate consideration of these issues at the rezoning stage. We are concerned that the high level of uncertainty in assumptions used to inform this proposal may result in an underestimation of flood planning levels (and planning areas) which could be better accommodated in a greenfield development. We suggest Council consider these uncertainties when defining planning requirements to protect the future community.

We consider that further work is required for the Planning Proposal to:

- Meet flood related section 9.1 Local Planning Direction 4.1 Flooding and for consistency with the NSW Government's Flood Prone Land Policy as set out in the Floodplain Development Manual. This will ensure that the rezoning and resultant development provides outcomes for new development that meets public safety and environmental planning expectations.
- Reassess the proposed riparian corridors for consistency with Council's LEP and consult with NRAR and DPI to ensure that riparian corridor outcomes are planned for and integrated with measures to manage water quality and flood risk.

Biodiversity

Our previous comments suggested that areas of moderate-high condition vegetation be further protected through expanded application of the E2/C2 zone. The revised proposal addresses our comments by adopting a so-called "more balanced approach" which involves the rezoning of the north western patch and an area close to the south western corner to R5 Large Lot Residential (with a minimum lot size of 1000m²). We are generally supportive of this approach in the north-western corner. We do not support this approach in the south western corner due to the higher biodiversity values and inconsistency of applying the R5 zoning to an area recommended for riparian corridor offsets (see comments on this issue in Attachment 1).

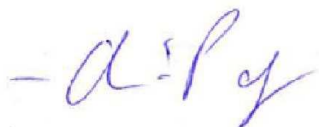
Additionally, the Indicative Layout Plan (ILP) should ensure all vegetation in the eastern area marked with purple highlighter, (Attachment 2), be protected and zoned for environmental conservation. Currently, vegetation as seen in the aerial image and the ILP does not correlate. Also, maps with an aerial underlay would be more informative. We also question why the zoning map continues to show this eastern patch of vegetation as R1 zone? Similarly, another park to the west of this patch is also in an R1 zone (also marked with purple highlighter on Attachment 2). This park should be zoned appropriately and the consistency between the ILP and the proposed zoning maps checked and rectified as necessary.

Development Control Plan

We have reviewed the Riparian Restoration Planning – Moss Vale Road North URA and support the inclusion of this document within the DCP and the objectives to provide guidance for future Vegetation Management Plans that will accompany Development Applications.

If you have any questions about this advice, please contact Vanessa Allen, Senior Conservation Planning Officer, via Vanessa.Allen@environment.nsw.gov.au.

Yours sincerely,



Chris Page

Senior Team Leader, Planning (Illawarra)
South East Branch
Biodiversity and Conservation Division

Attachment 1: Flood Risk Management Comments, Moss Vale Road North URA

The BCD's Water, Floodplains and Coastal team has reviewed the documentation associated with this Planning Proposal and offers the following advice for consideration by Council (and DPE - Planning and Assessment Group in determining the matter).

Floodplain Risk Management

As the Planning Proposal involves the rezoning of flood prone land it should be considered in accordance with Section 9.1 (2) Local Planning Direction - Focus Area 4: Resilience and Hazards 4.1 Flooding and the NSW Government's Flood Prone Land Policy as set out in the Floodplain Development Manual (FDM), 2005. The policy aims to reduce the impact of flooding and flood liability on individual owners and occupiers, and to reduce private and public losses resulting from flooding utilising ecologically positive methods wherever possible.

Council should consider and be satisfied that the following matters have been adequately addressed with relation to floodplain risk management:

- the impact of flooding on the development - including local overland flows and the range of possible floods up to the Probable Maximum Flood (PMF)
- the impact of the development on flood behaviour – particularly adverse impacts of existing communities downstream of the site
- the impact of flooding on the safety of people for the full range of possible floods
- the implications of climate change on flooding - particularly increased rainfall intensity on flood behaviour, and
- The flood behaviour implications of proposed landform modifications, spatial requirements for natural rehabilitation of the riparian zone and stormwater management infrastructure are also utilised to inform the establishment flood planning levels.

We have reviewed the Planning Proposal referred and have identified a range of issues relating to the adequacy of flood investigations and consistency with the Section 9.1 Local Planning Direction 4.1 Flooding and the principles of the Floodplain Development Manual. Insufficient information is provided to demonstrate the proposed zoning complies with the Local Planning Direction 4.1.

With consideration to the above, we suggest the flood risk implications of the Planning Proposal should be considered in greater detail than that currently provided. The Flood Assessment Moss Vale Road North Urban Land Release Masterplan and DCP (Rhelm, Dec 2018) accompanying the Planning Proposal provides limited information to demonstrate a comprehensive assessment of flood related matters consistent with the Section 9.1 Local Planning Direction 4.1 Flooding and Floodplain Development Manual.

The Planning Proposal should be supported by a flood impact risk assessment detailing how each of the requirements of the Section 9.1 Local Planning Direction 4.1 Flooding are addressed with particular consideration of:

- Part (2)
 - Flood Planning Area (FPA) maps have not been provided
 - Insufficient calibration or justification has been undertaken on the proposed hydrology
 - Definition of the Defined Flood Event (DFE) should be sought from Council. Council is encouraged to consider all relevant factors including full range of possible floods and climate change rainfall scenarios in establishing the DFE
 - Due to the uncertainty in the adopted hydrology and a lack of clarity on Council's DFE requirements, it is not clear what the appropriate flood extents and FPA are and therefore compliance with this requirement has not been demonstrated.

- Part (3)
 - The proposal discusses cut/fill balance to manage various aspects of the development. It is unclear what modification to the floodplain are proposed. As such, changes to flood levels, velocities and watercourse geomorphology need to be assessed along with management measures to demonstrate no off-site adverse impacts over the range of possible floods.
- Part (4)
 - Probable Maximum Flood (PMF) impact maps have not been provided
 - Access for emergency services and emergency evacuation of the proposed development has not been adequately considered.
- The flood risk assessment and associated modelling methodology needs to better demonstrate adequacy in a range of areas that include, but not limited to:
 - ARR19 suitability has not been considered in any FRMS&Ps in Shoalhaven. Significant issues have been identified with adopting ARR19 “off the shelf” in neighbouring LGAs. It is therefore recommended that the ARR87 methodology is retained until the suitability of ARR19 is adequately assessed
 - Further justification is required for the modelled hydrology verification
 - Flood hazard should be analysed in accordance with the Manual and Australian Institute for Disaster Resilience guideline 7-3 (current industry best practice)
 - Consideration should be given to the sensitivity of the catchment to the proposed riparian vegetation manning’s assumptions. Council may wish to adopt a manning’s of up to 0.15 given the uncertainties of future vegetation density for the life of the proposed rezoning.

To assist in the preparation of a Flood Impact and Risk Assessment (FIRA) consistent with the Floodplain Development Manual, Council should refer to the Flood Risk Management Guide LU01, DPE, 2022 which can be found on the Department’s website at:

[Flood Impact and Risk Assessment | NSW Environment and Heritage](#)

Riparian Corridor

We are unclear on requirements for riparian offsets but we are aware that Council has provisions in its LEP to manage issues around the integrity of watercourses. In the absence of other information we would be supporting Council in implementing LEP requirements for riparian widths and ensuring flood modelling has appropriately considered the fully rehabilitated roughness conditions of the watercourse. If Council chooses to implement the riparian requirements as per the provided Moss Vale Road North Urban Release Area Riparian Assessment (Ecological, 2022) then the following should be noted:

- The western riparian “offset for encroachment” area is also proposed to be zoned as R5 which appears incompatible (Figure 9 of the *Moss Vale Road North Urban Release Area Riparian Assessment (Ecological, 27th April 2022, see extract below)*).
- The North Eastern watercourse diversion appears to be relied upon as justification to remove the downstream riparian corridor.
 - As this area diversion is outside of the site extents, the long-term flood and riparian implications of relying on this diversion should be considered
 - If this diversion is formalised the watercourse stream order should be reviewed to account for this.

Council should consult with NRAR and DPI-Fisheries on riparian buffer requirements and to establish any geomorphic assessment requirements as part of the Planning Proposal, including impacts of proposed changes to landform and structural elements on flood behaviour and subsequent waterway health and watercourse stability.

Figure 9: Moss Vale Road North Urban Release Area Riparian Assessment (Ecological, 27th April 2022)

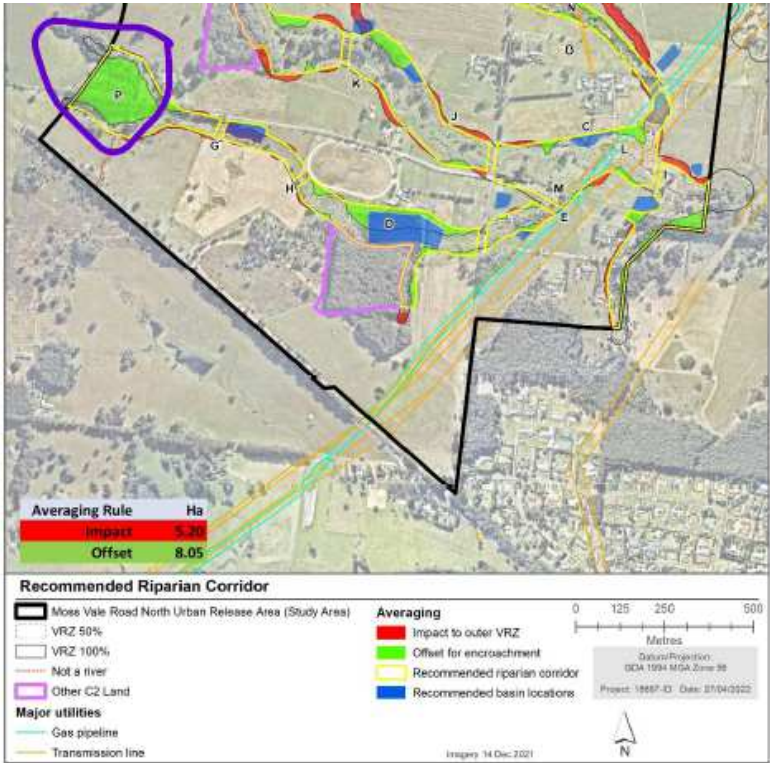


Figure 9: Recommended riparian corridor and averaging rule to meet the NRAR riparian guidelines

Attachment 2: Biodiversity comments, Moss Vale Road North URA



Figure 7: PCTs on the site

We question why the proposed zoning map does not include the two parks marked in purple highlighter?

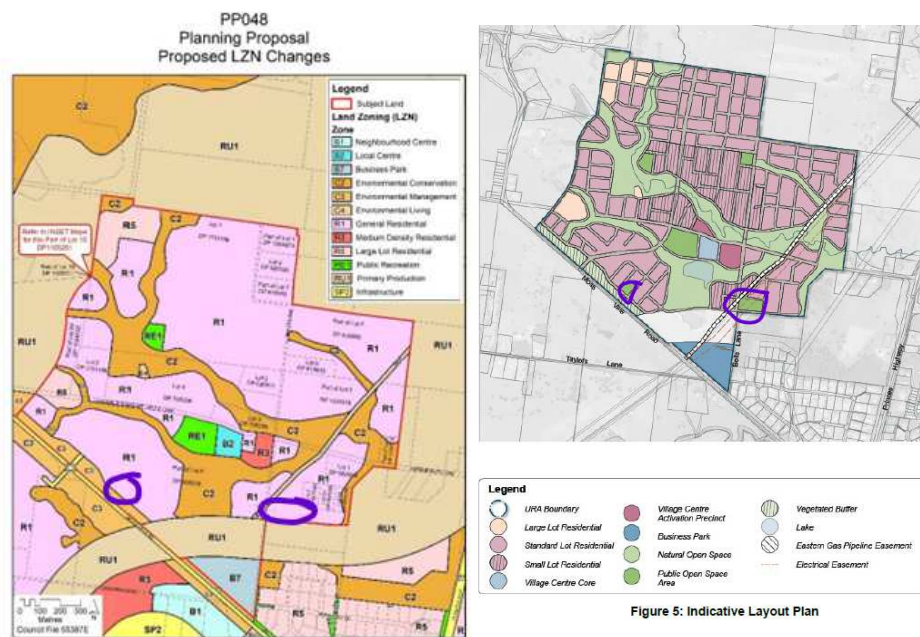


Figure 5: Indicative Layout Plan