

20 January 2023

David Kiernan  
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Locked Bag 22  
GOULBURN NSW 2580

Contact: *Stuart Little*  
Telephone: *0436 948 347*  
Our ref: *D2022/3192*

Dear Mr Kiernan,

**RE: Planning Proposal to Rezone and Amend Minimum Lot Size on Lots at 48 Mountain Ash Rd & 292 Rosemont Rd Planning Proposal (REZ\_0006\_2121) (PP-2022-1180)**

We refer to your email of 2 December 2022 regarding the Pre-Gateway Planning Proposal for lots at 48 Mountain Ash Rd (the Windellama site) & 292 Rosemont Rd (the Rosemont site).

The Proposal involves the rezoning of two separate areas in south-east of Goulburn having a combined area of 73.7 ha. It involves the rezoning of RU6 Transition land to part R5 Large Lot Residential and part C2 Environmental Conservation zones for both lots. The new R5 areas are to have a minimum lot size (MLS) of 2ha while the C2 zone is to have no MLS. The C2 zoning has been designed to accord with the areas of existing drainage features and the areas subject to highest flooding risk from overland flows.

In reviewing the Planning Proposal, we have had the benefit of the draft DCP chapter for the Brisbane Grove and Mountain Ash Precincts, indicative subdivision layout plans, supporting on-site wastewater management assessment and stormwater (MUSIC) modelling reports, and preliminary site investigation contamination assessment reports. We have made separate representations on the draft DCP chapter in other responses to the 'Allfarthing' and 'Brisbane Grove Road' Planning Proposals, and on the 'no MLS' policy arrangement for the C2 zoning which has been adopted for the Brisbane Grove Precinct. We provide no further comment on the DCP here.

In our assessment of the Proposal, we have treated the subdivision plans as conceptual regarding how the sites could be subdivided to support proposed unsewered rural residential development under the R5 zoning and MLS arrangement proposed. Our comments on the subdivision plans should be considered in that context, although our comments may also assist in refining the layouts at subdivision development application stage.

We believe that the Proposal is likely to be capable of sustaining the R5 and C2 zoning and a 2 ha MLS for the R5 zone as proposed. However, we ask for more detail regarding the consideration of groundwater bore locations and whether and how this will influence the location of effluent management areas. Also, current versions of relevant current recommended practices and legislation should be referenced in supporting technical reports and the Proposal where relevant.

We would appreciate the opportunity to examine the Proposal again at exhibition stage to see how the groundwater issue and our other comments have been addressed. Our detailed comments are provided in Attachment 1 while a relevant Strategic Land and Water Capability map is provided in Attachment 2.

If you have any questions regarding the issues raised in this letter, please contact Stuart Little at [stuart.little@waterNSW.com.au](mailto:stuart.little@waterNSW.com.au).

Yours sincerely

A handwritten signature in black ink, appearing to read 'AK' with a long horizontal flourish extending to the right.

**ALISON KNIHA**  
**Catchment Protection Planning Manager**

## **ATTACHMENT 1 – DETAIL**

### **Site and Zoning Description**

The Windellama site comprises one large lot (Lot 21, DP 811954) with an area of 40.98 ha, and is to be zoned from RU6 Transition to part R5 Large Lot Residential, and part C2 Environmental Conservation. The C2 zone is to be applied to the NE quarter of the site. The MLS is also proposed to be varied from 100 ha to 2 ha (for the R5 zone) and for the C2 area to have no MLS.

The Rosemont site comprises Lots 117 and 118 DP 126140 with a total area of 32.74 ha. The Rosemont site is to be similarly rezoned from RU6 Transition to part R5 Large Lot Residential, and part C2 Environmental Conservation. The C2 zone is associated with the watercourse and overland flow path that flows north-east to south-west across the centre of the site. The current 10 ha MLS is to be replaced with a 2 ha MLS for the R5 zone, with the C2 zone having no MLS.

### **Servicing**

Both sites occur in the Mountain Ash Precinct. Both sites are, and will remain, unserviced by reticulated water and sewer. The Proposal notes that all lots in the Mountain Ash Precinct will be required to provide on-site rainwater collection and on-site effluent management systems. We agree with this approach.

### **Subdivision Layout Plans**

The Proposal includes two supporting indicative subdivision plans, provided in Appendices 3a and 3b, that help demonstrate how the two sites could sustain a R5 zoning and accompanying 2 ha MLS. We have treated the subdivision plans as conceptual, although our comments may also help inform the later subdivision development applications (DAs) for the respective sites.

With respect to the MLS, the size of the respective areas (40.98 and 32.7 ha) is not necessarily indicative of the lot yield that could actually be delivered. The location of the waterways and the flood prone land will restrict development and access in lower lying areas. Effluent management area (EMA) buffer distances will also constrain the lot yield for the area.

Based on the subdivision plans presented, the layouts are generally considerate of the site constraints and show a range of lot sizes above 2 ha being potentially delivered. The plans project a lot yield of 10 lots for the Windellama site and 5 lots for the Rosemont site and show how a R5 and 2 ha MLS could deliver rural residential development along the lines of such yields. However, this is based on the zoning and MLS map boundaries being in accordance with those presented in the Proposal. It is also based on the EMAs and buffer distances being as described in the Proposal and supporting reports (discussed later). Comments on how the subdivision plans respond to EMAs and stormwater are discussed further below. Lot configuration and exact size may vary at subdivision DA stage.

### **Waterways and Catchments**

Both sites are traversed by perennial drainage channels which feed into Gundry Creek, which then drains into the Mulwaree River. An additional drainage channel (1<sup>st</sup> order stream) lies just to the east of the Windellama site.

Based on the Strahler system and our drainage layers, it appears that the Rosemont site includes two 3<sup>rd</sup> order streams that enter from the east, generally flowing from north-east to the south-west. These converge in the west of the site to create a 4<sup>th</sup> order watercourse before it leaves the property in the west. The drainage features effectively divide the property in two, resulting in proposed R5 zoning for a northern and southern portion of the property. The upstream catchment for the waterway at the point it leaves the site is approximately 398.5 ha.

The Windellama site lies downstream of the Rosemont site. It includes the confluence of two 4<sup>th</sup> order watercourses that converge into a 5<sup>th</sup> order watercourse in the north-east quadrant. The watercourses generally flow from the south-east to north-west across site before the 5<sup>th</sup> order watercourse leaves the site in the north-west. The upstream catchment of the waterway at the point it leaves the site is approximately 1645.81 Ha. As the watercourses are confined to the north-west quadrant, this section of the property can more readily be managed through the

proposed zoning arrangement with ascribes the C2 zoning to the north-eastern area. That said, we note that a large part of the proposed R5 zoning will still lie within the probable maximum flood limit (PMF) (discussed below).

### **Farm Dams**

The Planning Proposal notes that the Windellama site has three existing farms dams and that the Rosemont site has one existing farm dam (page 37). Based on an examination of aerial photography, and the subdivision layout plan, we believe that Rosemont has two farm dams, one situated in the centre of the site north of the drainage feature and in the east that is south of the drainage feature.

### **Groundwater bores**

The Proposal (page 21) notes that neither site has existing groundwater bores, EMAs or dwellings. We have taken the comments on groundwater bores at face value. It is unclear if a search of groundwater bores has been undertaken (see below).

### **EMA Buffer Distances**

Later development of the site will require EMAs to meet specified buffer distances including 100 m from waterways, drainage channels and groundwater bores used for domestic purposes, and 40 m from drainage depressions and farm dams. This in turn influences where dwelling and EMAs will be located and the potential capacity of the site for unsewered rural residential development.

The indicative subdivision layout plans generally adopt a 4,000 m<sup>2</sup> footprint to accommodate buildings and EMAs (see below). The indicative plans consider the need for 100 m and 40 m setback (buffer) distances from waterways. The Proposal notes that all proposed envelopes meet a 40 m buffer distance and all but Lot 2 stand outside a 100 m buffer distance (page 21). Having examined the plan, we also observe that:

- Lot 4 at Rosemont slightly infringes on the 100 m buffer distance
- Lot 2 at Rosemont also shows the EMA as potentially being close to stormwater bioretention raingarden area. A separation distance of 40 m will need to be achieved if the raingarden area is located on the downstream flow-path
- While not immediately clear, the envelopes occur at least 40 m from farm dams.

The Proposal notes that the sites are large enough for the envelopes to meet the required EMA buffer distances even if Lot 2 at Rosemont requires repositioning. We agree with this statement and note that the EMAs in Lot 4 at Rosemont may also require some repositioning. Additionally, the envelope and lot boundaries for Lot 8 at Windellama may require some reconfiguration following further site-specific investigation of the drainage channel at the base of the property. These are more matters for the subdivision DA stage, as are the EMA setback distances. However, overall, we believe there is sufficient room to accommodate R5 large lot residential development with proposed buildings and EMAs meeting necessary buffer distances from waterways and dams.

### **Flooding**

The two sites are not directly affected by riverine flooding and are beyond the scope of the Goulburn Floodplain Risk Management Study and Plan. However, both sites are affected by overland flow flooding risk in the vicinity of the drainage channels.

Overland flow risk maps are presented drawing from Council's Overland Flow Flood Maps. The most constrained areas impact the north-eastern quadrant of the Windellama site and the central portion of the Rosemont site. The areas subject to the most frequent and severe impacts (coloured red and blue on Figures 21 and 25, pages 38 and 47, respectively) have been zoned C2. WaterNSW supports this approach as it will exclude rural residential development and ancillary uses from the highest flooding risk areas. This includes impacts from wastewater systems and EMAs which would need to be located outside of the C2 zones as well as meeting any buffer distances required from the drainage features.

We note that a large portion of the Windellama site is coloured deep green. This relates to Flood Planning Constraints Category (FPCC) 4 (Table 2, page 46) and to that area inundated by the PMF but outside of the other FPCC categories. Approximately 19 ha of the site 40.98 ha site lies within the FPCC 4 rating (page 52). The Proposal notes that land designated as FPCC 4 are considered suitable for urban development but that flood-related controls apply to subdivisions. With reference to Part 3.8 (Flood Affected Lands) of the Goulburn Mulwaree DCP, the Proposal notes that land levels (not floor levels) would be required at heights that stand at least 0.5 m above the 1% AEP (page 49). This requirement would apply to the 19 ha of land in the FPCC 4 rating (page 52).

The Proposal explores the implications of extending the C2 zoning to cover all the FPCCs (pages 49-50). The implications of the FPCC 4 rating for the Windellama site are particularly discussed. This rating affects six proposed lots and three proposed dwelling pads in that area. The Proposal notes that if the C2 zoning were applied to all the FPCCs then only 14.5 ha of the Windellama site would be available for R5 zoning, significantly reducing the site's capacity for large lot residential subdivision and overall yield. The Proposal notes that further advice regarding flooding risk will be sought from the Department of Planning and Environment – Flooding Division. *We support this approach and believe any such advice should accompany the Proposal.*

In terms of water quality, please note that the WaterNSW 2021 [Water Sensitive Design Guide for Rural Residential Subdivisions](#) (Table 3.3, page 44) requires EMAs to be located outside the 1:100 flood zone in order to prevent effluent entering rivers or watercourses. Any other flooding and potential water quality risks with respect to the delivery of a neutral or beneficial effect (NorBE) and operation of the NorBE Tool can be examined at subdivision DA stage.

### **Onsite Wastewater Management Assessment (Appendices 8a and 8b)**

The Proposal is accompanied by Onsite Wastewater Management Assessment reports (Appendices 8a and 8b). The reports align with and support the indicative subdivision layouts provided in Appendices 3a and 3b, with Windellama being based on a yield of 10 lots and the Rosemont site based on five lots.

The reports are based on the requirements of the former Sydney Catchment Authority's '*Designing and Installing On-Site Wastewater Systems – Sydney Catchment Authority Current Recommended Practice*'. Please note this Guideline has been superseded by the 2019 document [Designing and Installing On-Site Wastewater Systems: A WaterNSW Current Recommended Practice](#). Similarly references to State Environment Planning Policy (Sydney Drinking Water Catchments) 2011 have been superseded by the provisions contained in Part 6.5 of State Environmental Planning Policy (Biodiversity and Conservation) 2021 (the B&C SEPP). *The documents would benefit by updating to refer to the latest guidelines and legislation.*

The reports examine wastewater based on each lot containing a 4-bedroom dwelling (8 residents). Both reports are based on dwellings having an AWTS draining secondary treated effluent into an absorption bed. This is a smaller footprint than what would be delivered via irrigation, however larger EMA footprints may arise, particularly if effluent irrigation is required due to soil constraints. Notwithstanding, we note there is sufficient land area to accommodate other treatment methods. Both reports discuss the advantages and limitations of different on-site treatment and disposal methods, with respect to the soils and other environmental constraints present.

Both reports consider EMA buffer distances and sizing of land application areas, although this appears to be based on smaller sized absorption beds rather than wider irrigation areas. Onsite EMAs are not individually identified but provide a 4,000 m<sup>2</sup> footprint for most lots comprising an envelope containing a proposed dwelling, onsite effluent disposal, rural sheds, outbuildings and asset protection zones. Two lots are allocated a 3,000 m<sup>2</sup> footprint (proposed Lot 7 at Windellama and Lot 2 at Rosemont). The allocated 4,000 m<sup>2</sup> and 3000 m<sup>2</sup> areas may not be sufficient to service all proposed ancillary aspects to the development. However, the indicative subdivision layout plans contain sufficient space should additional areas of land be required for EMAs and/or to meet adjusted EMA buffer distances.

The assessments are based on soil samples taken from a number of test pits (five test pits for the Windellama site and two test pits for Rosemont) across the respective sites. Both reports note that the sites will need to be individually assessed at a later stage. We agree with this approach and that the most appropriate means of effluent disposal, considering site constraints such as soils type, soil depths, and slopes, can be determined at DA stage.

The WEM plume map presented in the Windellama report is based on the Windellama lot as it currently stands and not the indicative subdivision layout plan. No plume map is provided in the Rosemont report. At subdivision DA stage, all effluent plumes will need to demonstrate that they can be contained within the boundaries of the individual offspring lots.

The assessments are sufficient at this stage to demonstrate the capacity of the proposed R5 areas to provide and sustain dwellings and EMAs for rural residential development.

### **Stormwater (Appendices 8c and 8d)**

The Proposal is accompanied by two MUSIC reports for the respective sites. It appears that the documents are based on earlier versions of relevant current recommended practices (CRPs). The most recent documents are: WaterNSW (2019) [Using MUSIC in Sydney Drinking Water Catchment : WaterNSW Standard](#); WaterNSW (2022) [Neutral or Beneficial Effect on Water Quality Assessment Guideline 2022](#); and WaterNSW (2020) [Developments in the Sydney Drinking Water Catchment – Water Quality Information Requirements](#). Similarly, references to State Environment Planning Policy (Sydney Drinking Water Catchments) 2011 have been superseded by the provisions contained in Part 6.5 of State Environmental Planning Policy (Biodiversity and Conservation) 2021. *The documents would benefit by updating to refer to the latest guidelines and legislation.*

The reports consider pre-development and post-development pollutant concentration parameters for 'residential, roof and unsealed road land uses'. While it is clear that roads and driveways have been considered in post-development flows, a separate category 'residual land' is also accounted for. It is not clear what 'residual land' means and the uses it comprises. At subdivision stage, the main concern is the allocation of appropriate control measures for new access roads and this is considered in the modelling.

The Windellama report proposes two large bioretention basins and drainage swales as control measures. The Rosemont report proposes two small bioretention basins and drainage swales. The reports provide a conceptual plan of the layout of the treatment measures. We have treated these as indicative of both sites ability to provide necessary stormwater treatment measures. For the Windellama site, we note that the approach of having two singular large bioretention basins burdening two individual lots may need some further consideration. The exact nature of the stormwater management measures will need to be resolved at subdivision DA stage.

### **Preliminary Site Investigation – Contamination Reports**

The Proposal is accompanied the by Preliminary Site Investigation (PSI) Contamination assessment reports for the respective sites. The assessments involved desktop reviews, site inspections, soil sampling and analysis for heavy metals, hydrocarbons, pesticides and other chemicals. Chemicals of potential concern were either below NEPC (2013) NEPM guideline values for Residential A land use or not detected above the laboratory limit of reporting. The reports conclude that the soils are suitable for development from a contamination risk perspective and that no additional investigations and assessments are warranted. However, the report notes that should unexpected finds be encountered during disposal, further assessment would be required to assess the suitability for off-site disposal. *We believe that any later DAs for the sites should incorporate an unexpected finds protocol.*

We note that groundwater investigations were outside the scope of the PSI investigations, although the report includes some comments regarding groundwater in the vicinity of the sites. On-site sampling of groundwater depths and water quality have not been undertaken.

The Windellama site reports that from historical records, the groundwater level at the site is around 2 m below ground level (page 13). However, the report also identifies groundwater

seepage at 0.6 m (page 33). For Rosemont, the report indicates that historic records near the site record groundwater at 6 m and 43 m below ground level (page 13), although there is no scale on the map to verify the distances of these historical sampling locations from the site. These sampling locations also occur south of the site. It is not clear whether the maps presented on page 13 of the respective reports have been derived from the registered groundwater bore database and whether they represent all sites within a specified radius of the sites.

We are concerned that groundwater depth high water tables may be a constraint on the Windellama site, limiting the range of wastewater treatment methods available in some areas. This will need to be further considered at subdivision DA stage. We also hold a concern that neither the PSI nor the Planning Proposal reports clearly identify whether a desktop search has been undertaken of registered groundwater bores in the vicinity of the two sites.

*In light of the above, we believe that the Planning Proposal needs to include an additional desktop examination of the location of registered bores occurring in the vicinity of the two sites to identify whether groundwater bores also operate as a site constraint and whether these affect the buffer area requirement for EMAs. The information should identify the bore ID, authorised purpose and year, location relative to the site, depth and standing water level if available. This will help demonstrate that EMAs can be accommodated without risking groundwater contamination.*

### **Biodiversity & Conservation SEPP**

Section 3.5.1 of the Planning Proposal considers the Sydney Drinking Water Catchment (SDWC) provisions of Part 6.5 of Chapter 6 of the B&C SEPP. The Proposal includes reference to the objectives of the SEPP for the SDWC and notes that development in the SDWC is required to have a NorBE on water quality. The Proposal identifies that the site is and will remain unserved by water and sewer and that the Proposal will give rise to approximately 15 lots from the existing three lots across the two sites. Section 3.5.1 discusses the outcomes of the Onsite Wastewater Management Assessment and MUSIC modelling reports (for stormwater) as well as how the C2 zoning will encompass the drainage channels and largely meet the EMA buffer distances. We generally agree that the sites have sufficient area for later subdivision developments to deliver a NorBE on water quality although some readjustment to the indicative lot layouts may be required.

Section 3.5.1 notes that any future DA would require the concurrence of WaterNSW. It also notes that future development should ensure the incorporation of WaterNSW's CRPs. Please note that CRPs are now given effect through the WaterNSW 2022 [Neutral or Beneficial Effect on Water Quality Assessment Guideline](#) which is called up under section 6.63 of the B&C SEPP.

### **Section 9.1 Ministerial Direction 3.3 Sydney Drinking Water Catchment**

Section 3.6.6 (pages 35-41) of the Planning Proposal provides a comprehensive response to Direction 3.3. The requirements of this Direction were updated on 21 November 2022 and the most current version of the Direction should be included. In summary, the updated objective of Direction 3.3 is to provide for healthy catchments and protect water quality in the Sydney drinking water catchment. It also requires Planning Proposal authorities to:

- consult with Water NSW, describing the means by which the planning proposal gives effect to the water quality protection principles set out in the direction, and
- ensure that the proposal is consistent with Part 6.5 of Chapter 6 of the State Environmental Planning Policy (Biodiversity and Conservation) 2021, and
- identify any existing water quality (including groundwater) risks to any waterway occurring on, or adjacent to the site, and
- give consideration to the outcomes of the Strategic Land and Water Capability Assessment prepared by WaterNSW, and
- zone land within the Special Areas in particular ways (not relevant to this Proposal).

The principles of the Direction are that:

- new development within the Sydney drinking water catchment must have a neutral or beneficial effect on water quality (including groundwater), and

- future land use in the Sydney drinking water catchment should be matched to land and water capability, and
- the ecological values of land within a Special Area should be maintained (not relevant to this Proposal).

The requirement for Planning Proposals to identify any existing water quality (including groundwater) risks to any waterway occurring on, or adjacent to the site, is new.

The current response notes that the sites are and will continue to be unserved by water and sewer. It refers to the farm dams of the area (we note that the Rosemont site appears to have two farm dams not one) and that neither site has existing groundwater bores, EMAs or dwellings. Please refer to our earlier comments regarding groundwater.

The response summarises the overland flow flooding risk to the sites and how the most flood-constrained areas are proposed for C2 zoning. It notes that this will prevent the C2 areas from being development and ensure water quality is protected. Reference is made to the indicative subdivision plans and supporting Onsite Wastewater Management and MUSIC Modelling (Stormwater) reports. The section notes that WaterNSW has yet to be consulted and consideration given to the outcomes of any Strategic Land and Water Capability Assessment (SLWCA). The outcomes of the relevant Strategic Land and Water Capability Assessment are discussed below. *Section 3.6.6 will need to be updated to consider our comments made herewith.*

### **Strategic Land and Water Capability Assessment**

WaterNSW has prepared a SLWCA for the two sites. The most applicable SLWCA is unsewered residential lots (4,000 sqm – 2 ha) (see Map 1 in Attachment 2). The SLWCA shows that the water quality risk for each of the sites varies from LOW to EXTREME, with the areas of EXTREME risk being associated with the watercourses. Areas of EXTREME risk have a VERY LOW capability for unsewered residential development. The areas of EXTREME risk generally accord with the location of the proposed C2 zoning, thereby quarantining these areas from unsewered rural residential and ancillary development. We agree with this approach.

The remaining land areas carry either a LOW or MODERATE risk to water quality. Areas of LOW risk have a HIGH capability for development while areas of MODERATE risk have a MODERATE capability for unsewered development, respectively. Most of the Windellama site has a LOW risk while the remaining land areas in the Rosemont site have a LOW and MODERATE risk.

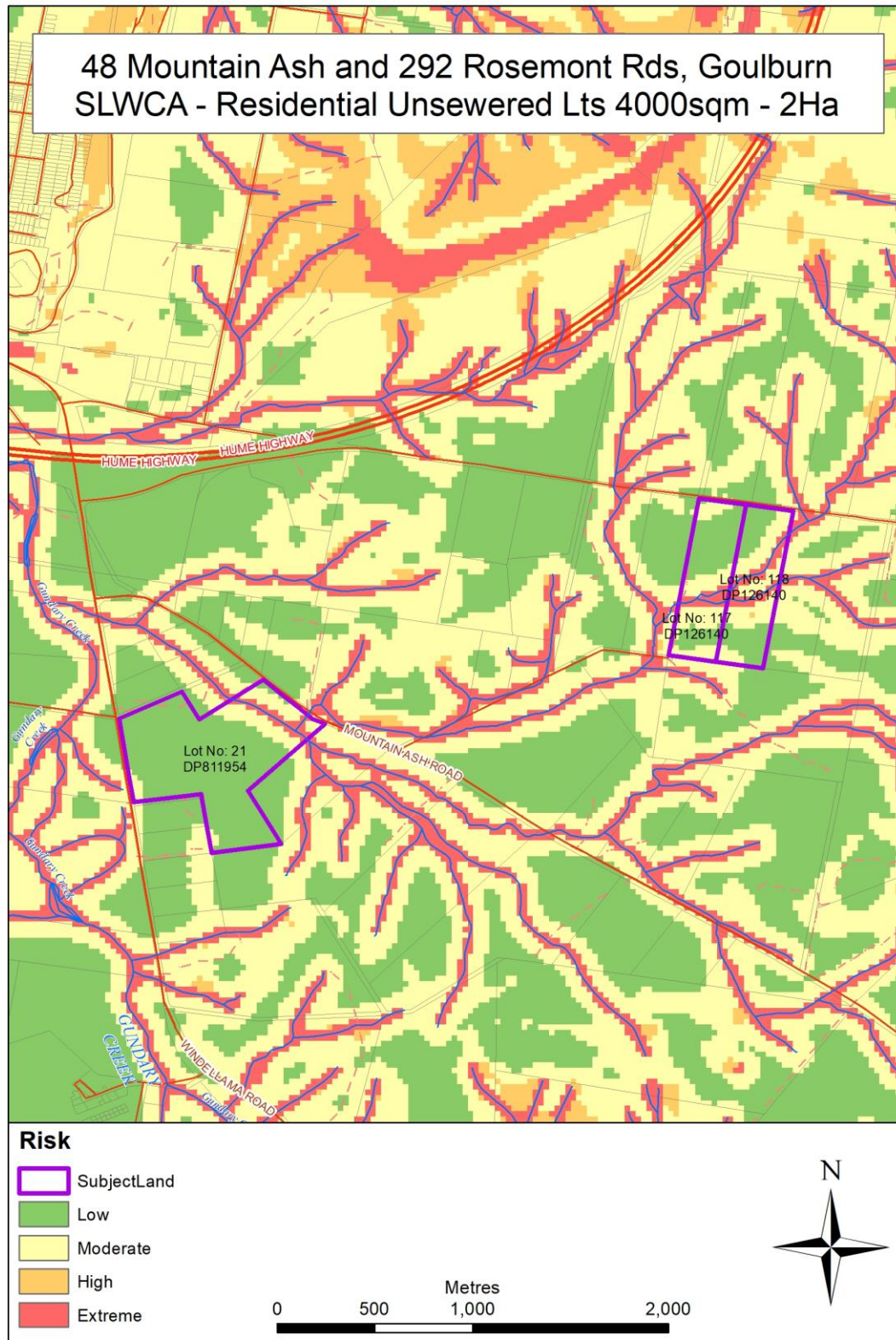
Having regard to the configuration of the risk categories on each of the sites, it is apparent that the Windellama site has a large contiguous land area of LOW risk that may be capable of sustaining unsewered rural residential development within the proposed R5 zone. However, the SLWCAs are not based on flooding risk. As identified elsewhere, parts of the Windellama site are affected by flooding under a PMF scenario which requires separate consideration (see earlier comments).

### **Other**

The Planning Proposal refers to the Windellama site as being 48 Mountain Ash Rd and in other places, 46 Mountain Ash Rd. The street address needs to be confirmed and kept consistent throughout the document.



**ATTACHMENT 2 - MAP**



**Map 1.** Strategic Land and Water Capability Assessment for unsewered residential lots (4000 sqm – 2 ha) for land at 48 Mountain Ash Road and 292 Rosemont Road, Goulburn.