10 April 2024

Contact: *Stuart Little*
Telephone: *0436 948 347*
Our ref: *D2024/24561*

Dialina Day
Senior Strategic Planner
Goulburn Mulwaree Council
Locked Bag 22
GOUBURN NSW 2580

Dear Ms Day,

Planning Proposal to Rezone Land and Amend Minimum Lot Size on Lots at 407 & 457 Crookwell Rd Kingsdale (REZ/0001/2223)(PP_2023_414).

I refer to your email of 20 March 2024 requesting pre-gateway comments on a Planning Proposal for land at 407 & 457 Crookwell Rd Kingsdale (Lots 70, 73 and 77 DP 1006688). The Proposal seeks to provide for low density and large lot residential development giving rise to predominantly sewered residential development, although a number of larger, residual unsewered lots are proposed in the north. Based on the supporting Water Cycle Management Study (WCMS), approximately 275 residential and rural-residential allotments could be created.

We understand the Proposal involves the following amendments to the Goulburn Mulwaree Local Environmental Plan 2009 (LEP):

- Rezone the land from RU6 Transition to Part R2 General Residential, Part R5 Large Lot Residential, Part RE1 Public Recreation and Part C2 Environmental Conservation. The RE1 zoning would include areas impacted by flooding and apply to significant biodiversity and Aboriginal Heritage while the C2 zoning would apply to all future private land impacted by overland flooding.
- Amend the Minimum Lot Size (MLS) from 10 ha to Part 700 m^2 (for the proposed R2 land), Part 4,000 m^2 for five proposed residual R5 lots in the west (serviced), and Part 2 ha for the unserviced R5 lots located north of the high pressure gas main pipeline. The proposed RE1 and C2 lands would be afforded no MLS.
- Including the three current lots as an Urban Release Area (URA) requiring an amendment to the relevant URA map.

The site is constrained by three drainage features occurring in the north-west, centre and south-east of the site and is affected by flooding risks from overland flow. We note that the Proposal does not drain to Lake Sooley but drains southward to the Wollondilly River.

The site is currently unserviced by sewer and water and operates on the assumption that all lots will be serviced by sewer and water except for the land north of the high pressure gas main pipeline.

We do not object to the zoning and MLS arrangement and boundaries presented in the Proposal. We also support the approach of assigning RE1 and C2 zoning to the floodrisk areas up to the Probable Maximum Flood (PMF) level.

Notwithstanding, our main concerns follow:

- The URA map will extend over unsewered land in the north potentially raising longer term expectations that the land north of the gas main pipeline could be further subdivided and connected to reticulated sewer and water. We make alternative suggestions regarding the proposed URA designation (Attachment 1).
- Further consideration needs to be given to the elevated Chromium levels found in the soil samples. This has not been discussed in the Supplementary Detailed Site Investigation Report and it unclear whether these elevated levels are naturally occurring or derived from introduced materials. We also believe that groundwater and surface water samples should be taken to ensure that there are no water quality risks from potential leaching or other contamination.
- The subdivision concept plan does not currently give due account of the C2 zoned land and associated flooding risk captured by this zoning. This affects the expected lot design and yield in proposed R2 and R5 areas. Unsewered lots in the north will also need to have dwelling footprints and Effluent Management Areas (EMAs) outside of flood-risk areas, with EMAs positioned to meet relevant EMA setback distances from watercourses and farm dams. The subdivision design is likely to require further amendment at subdivision stage.
- Whether farm dams are to be retained, removed or repurposed. We also need to understand how the farm dam in the centre south of the site, which appears to have its dam wall on an adjoining lot, will be managed. The overland flow flood risk and zoning along the central watercourse, along with stormwater controls, appears to be influenced by this dam. It is unclear whether the dam needs further protection, how proposed bioretention and detention basins will interact with the dam and whether the Proposal presents any risk to the dam and the overall stability of the central watercourse which appears to rely on it. While this is relevant to later subdivision development, it also has implications for the site to sustain the intended land use.

The Proposal indicates that the concept subdivision plan indicates a 'staging' order that is to be disregarded. We would support any staged approach that would initially see the site subject to unsewered development (apart from the northern lots) as this risk has not been assessed in the Proposal.

WaterNSW does need to see the Proposal again before Gateway, but we do ask that the Proposal be referred to us if and when it proceeds to public exhibition.

Our detailed comments are provided in Attachment 1. We have underlined our key issues for ease of reference.

If you have any questions regarding this letter, please contact Stuart Little at stuart.little@waternsw.com.au.

Yours sincerely

ALISON KNIHA
Environmental Planning Assessment and Approvals Manager

ATTACHMENT 1 - DETAIL

The Site and Proposed Zoning

The Proposal concerns land at 407 & 457 Crookwell Rd Kingsdale (Lots 70, 73 and 77 DP 1006688) covering a combined area of 50.7 ha.

The Proposal seeks to rezone the land from RU6 Transition to part R2 General Residential, part R5 Large Lot Residential, part RE1 Public Recreation and part C2 Environmental Conservation. The RE1 zoning would include areas impacted by flooding and apply to significant biodiversity and Aboriginal Heritage while the C2 zoning would apply to all future private land impacted by overland flooding.

Minimum Lot Sizes

The Proposal seeks to amend the Minimum Lot Size (MLS) from 10 ha, which applies ubiquitously across the site, to part 700 m^2 (for the proposed R2 land), part 4,000 m^2 for R5 land in the west (serviced) and 2 ha for the unserviced R5 lots north of the high pressure gas main pipeline.

Our understanding from the MLS map (Figure 7) and information on page 35 is that the C2 and RE1 zoned land would not incorporate a MLS and that the MLS maps would need to be varied accordingly. This is not stated in the summary description (P. 11). The proposed MLS arrangement for the C2 and RE1 land should be clearly stated in the summary description on page 11.

Urban Release Area Designation

It is unclear what area will be given effect by the proposed Urban Release Area (URA) addition. The Proposal (P. 11) states it is proposed to add Lot 70, 73 and 77 to the URA map which would also include land in the north (515 Crookwell Road Kingsdale). This is demonstrated in Figure 3 (P. 9). However, the accompanying proposed URA map (Figure 9, page 14) shows that only part of the site will be incorporated into the URA, not the full area as described on page 11. This discrepancy should be resolved prior to gateway.

We are also concerned about the URA designation including the unsewered land north of the high pressure gas main pipeline. The proposed URA map (Figure 9, P. 14) does not restrict the URA designation to the proposed sewered land. While Figure 9 shows land in the west (sewered but with a larger 4,000 m^2 MLS) and unsewered land in the north-west (with a 2 ha MLS) as being excluded from the URA, some unsewered land in the north-east (2 ha MLS) is to be included within the URA.

We understand that the URA designation over the unsewered land is to resolve concerns raised by TfNSW to minimise and rationalise access roads and ensure a common access between this Planning proposal site and 515 Crookwell Road. However, we are concerned that the URA designation over unsewered land north of the high pressure gas main pipeline could raise expectations that the land will be subject to reticulated sewer and water. Our preference is for the unsewered land not to be included as a URA but still be included in a broader DCP Chapter for the Sooley Precinct if this is possible. We have raised similar

concerns regarding URA designation in our feedback on 515 Crookwell Road, which lies further north and adjoins this Planning Proposal site.

Subdivision Concept Plan

The Proposal is accompanied by a subdivision concept plan to demonstrate how the site might be developed based on the zoning and MLS arrangements proposed. We have treated the subdivision concept plan as indicative only and note that it may change.

The subdivision layout plan does not take account or respond to the proposed C2 zoning put forward in the Planning Proposal. It therefore does not give full account of the flood risk. It is likely that the subdivision plan will need to be further revised at subdivision stage and that the yield will not be as expected.

The subdivision layout plan is also limited in that the size of each lot is not provided under the Lot numbers so there is no way of verifying lot sizes against the proposed MLS. We recommend that the lot sizes are included beneath the proposed lot numbers on the conceptual subdivision layout plan to verify that the plan is giving effect to the MLSs as proposed.

Urban and Fringe Housing Strategy

The site lies partly within the Sooley Precinct of the Urban and Fringe Housing Strategy (UFHS) Consequently, only part of this land is flagged for future growth. Specifically, the Strategy identifies Lot 73 (in the north) as a development opportunity for rural residential (MLS 2 ha) following site investigations regarding ecological and water constraints. The Strategy considers R2 Low Density Residential opportunities for the south-east of the site only. This Proposal expands the R2 further westward and over a wider area, although it is contiguous with the area in the south-east identified by the Strategy.

Servicing

The site is not currently serviced by reticulated water and sewer.

The Planning Proposal (P. 70) notes that all future lots would be serviced by mains water and sewer with the exception of the future large residential lots located north of the high pressure gas main pipeline. This northern area is to be assigned a R5 zoning but with a broad 2 ha MLS for provide sufficient room for on-site sewage management. We note that while the R5 large lot residential land in the west of the site will be assigned a 4,000m^2 MLS, that area will be serviced with sewer and water.

Watercourses and Water Features

The site drains southward towards the Wollondilly River and not towards lake Sooley in the west.

The site is affected by three natural drainage features (see Figure 12, page 29; Figure 22, page 50). In the north-west, two first order drainage features merge to create a 2nd order drainage features on current Lot 70. A first order drainage feature also occurs in the middle of the site, draining from the north across the middle of Lot 73 and Lot 70 and flowing into a

large farm dam that appears to have its dam wall on an adjoining property in the south. Lot 70 is further constrained by a first order drainage feature flowing east to west in the south-east corner of the site. That drainage feature converges with the central drainage line south of the site.

Farm dams

Based on the Preliminary Site Investigation (PSI) contamination report, there are three farm dams on site and a further part of a neighbour's dam located on the land. As indicated above, the dam wall for that fourth dam area appears to be located on the adjoining property immediately south. All existing dams are located in the drainage features associated with the site and will lie within the RE1 or C2 zoning.

Our main concern is regarding the dam in far south of the centre of the site that has its dam wall located on the neighbouring property. The Water Cycle Management Study (WCMS) does not discuss the role or function of the farm dams including this dam. It is unclear if overland flow modelling and stability of the central drainage feature is reliant upon this dam, or how and whether the stormwater treatment and control measures rely on it. It is also unclear if runoff from the Planning proposal site can or will adversely affect the stability of the neighbouring farm dam wall in extreme storm and flooding events. The Planning proposal needs to include greater consideration regarding how the Proposal and intended uses and development of the land will interact with this farm dam and whether additional measures are needed to protect it or repurpose its function.

The Proposal is also currently silent as to whether the farms dams are proposed to be removed, retained or repurposed. This should be clarified in the Proposal. If some or all of these farm farms are to be decommissioned, this would presumably require dewatering, possible sediment removal, and infilling. Dewatering plans would be required although this aspect is more a consideration at subdivision development application (DA) DA stage.

Bores

Two bores occur on site. These are used for domestic stock purposes. Supporting information in the Planning Proposal notes that one bore could not be located while the other had been capped and disconnected (P. 65). The bores do not appear to present a site constraint to development.

There are also 28 other bores located within 1 km of the site with the closest of these being 114 m from the site (see PSI report). These also do not appear to constrain the proposed development.

Flood Risk

The site is affected by flooding risks from overland flow but not riverine flooding. The Proposal does not currently include a Flood Impact and Risk Assessment Report (FIRA) but relies on Goulburn Mulwaree Overland Flow Study 2022 to address flood risks.

Our main concern in relation to flooding is the associated water quality risks that can arise during flood events.

The Planning Proposal includes a flood risk map (Figure 13, P. 30) based on four Flood Planning Constraint Categories (FPCCs) derived from the Goulburn Mulwaree Overland Flow Study 2022. The Proposal (P. 52) states that as there is no defined Flood Planning Area (FPA) for the site, the entirety of the FPCCs will be rezoned RE1 or C2 (for private land). Comparison of Figure 5 (Proposed zoning, P. 12) to Figure 13 (Extend of Overland Flooding, P. 30) confirms this. The approach effectively ensures that all flood-prone land will be restricted from development up to the Probable Maximum Flood (PMF) limit. We support this zoning approach to address the flood risk.

Effluent Management Areas

The unsewered areas in the north will require on-site wastewater management systems and associated Effluent management Areas (EMAs). All areas of flood-prone areas on private land are proposed to be rezoned to C2. As EMAs would be ancillary to residential development, the zoning approach ensures that EMAs will not be located within areas inundated by flooding.

In terms of EMA buffer distances, it is unclear whether the subdivision lot design for the north of the site is based on EMAs achieving the required setback distance from watercourses and farm dams. To this end, the unsewered land in the north is affected by drainage features and farm dams in the east and west of the site. EMAs for watercourses with incised channels require a 100 m buffer distance while EMAs for farm dams and drainage depressions require a 40 m buffer. Related to the above, there is no accompanying plan showing how the subdivision responds to water-related constraints (e.g. EMA buffer distances for watercourses & farm dams, and for EMAs to be located outside flood liable land). The later subdivision will need to demonstrate how the unsewered lots can meet the required EMA buffer distances. This will likely require further refinement of the subdivision design at subdivision DA stage.

As indicated earlier, the presence of disused bores does not appear to be a constraint to the development including buffer distances for unsewered areas.

Water Cycle Management Study

The Proposal includes a supporting Water Cycle Management Study (WCMS), which canvasses water quality issues and presents a Water Cycle Management Plan and MUSIC Modelling for stormwater runoff. The WCMS is based on the subdivision concept plan which accompanies the Proposal. As indicated earlier, the plan does not currently accommodate the proposed C2 zoning for the flood-prone land (up to the PMF) for private land.

The WCMS includes a map (Figure 3, P. 6) that shows the location of watercourses and farm dams and existing infrastructure occurring on the site. Unfortunately, there is no composite plan showing the subdivision layout showing how the proposed subdivision layout is responding to existing water-related constraints.

The WCMS notes that five proposed new lots (in the north) would not be connected to the sewer and therefore require onsite treatment and disposal systems for onsite effluent. This

aspect is addressed further in the Effluent Disposal – Site and Soil Evaluation report (see below).

The WCMS (P. 9) identifies that the change in land use would give rise to an increase in impervious surfaces and thereby increase the quantities of pollutants entrained in stormwater runoff. Stormwater management issues are then considered in more detail in Section 5. The WCMS notes that detailed stormwater analysis would be conducted as part of the DA process.

For stormwater treatment, the WCMS advocates sediment basins and construction-related soil and water management structures during the construction phase. Over the longer term, grassed swales are proposed in conjunction with six (6) bioretention basins (WCMS, P. 14). Post development flows are proposed to be reduced through an on-site detention basin as part of each bioretention basin located at the end of each catchment and within a dedicated drainage reserve (WCMS, P.13). Pits and pipes would also be used with inlet pit baskets and Gross pollutant traps. The WCMS also advocates lot-specific erosion and sediment controls during construction phase. It also commits to an Operational Environment Management Plan being provided at construction certificate stage detailing the proposed stormwater management maintenance schedule and actions (WCMS, P. 17). The indicative location of the respective basins is depicted in Figure 2 (P. 4) and Figure 10 (P. 25).

The role of existing farm dams in the stormwater treatment modelling and associated assumptions is unclear, however. Two central bioretention basins lie in close proximity to an existing farm dam, which appears to have its dam wall on an adjoining property (discussed earlier). The relationship between the existing farms dams and proposed bioretention basins will need to be clearly explained in the more detailed modelling required for the subdivision DA.

Pre- and post-development sediment and pollutant loads are modelled using MUSIC. The document refers to the 2019 version of Using MUSIC in Sydney's Drinking Water Catchment. The latest version of this document is 2023 (see: https://www.waternsw.com.au/water-services/catchment-protection/building-and-development).

The WCMS notes that a construction phase Soil and Water Management Plan (SWMP) would be prepared for the site based on the Landcom 2004 "Blue Book". We note this commitment. This is more a matter for the subdivision DA stage of the development and consideration in the assessment of consent and concurrence.

Overall, we believe that there is sufficient room on the site for stormwater management and for the development to be able to achieve a neutral or beneficial effect (NorBE) on water quality at later subdivision DA stage. However, further refinements to modelling, and the nature and location of stormwater treatment controls may be required, and the relationship to farm dams clarified.

Effluent Disposal – Site and Soil Evaluation

The WCMS is accompanied by an 'Effluent Disposal – Site and Soil Evaluation' report to demonstrate how the lots in the north, which will remain unsewered, have the capacity to provide EMAs. The Planning Proposal (P. 30) notes that some alteration will be required to the subdivision design to ensure that all development including wastewater management systems are located outside overland flooding risk areas. This equally applies to EMAs. We note that conceptual subdivision layout and the Site and Soil Evaluation report do not respond to flooding risk (i.e. the C2 zoned areas) nor show how EMAs can meet the required buffer distances from waterways and farm dams.

There are some significant limitations in the Site and Soil Evaluation report. This includes references to lots sizes smaller than the 2 ha MLS being advocated, that soil samples were not collected from Lot 73 which occupies the bulk of the proposed unsewered area, presenting a different subdivision design to the concept plan, and deferring relevant EMA buffer distance requirements as a matter to be consulted with Council. Importantly there is no constraints map showing how EMAs can be located outside flood-prone areas and meet required EMA buffer distances (see earlier comments).

The Subdivision DA will need to include a subdivision layout plan for the unsewered area that shows how and where EMAs can be located taking into account flood-risk and required buffer distances. This is required to support the proposed 2 ha MLS. While five (5) new lots are anticipated for this area, the yield may be lower given the constraints of two watercourses and flood-prone land.

The Proposal notes that a future DA will require further detailed water quality assessment in accordance with Water NSW guidelines as well as requiring concurrence from WaterNSW. We agree with this statement. The applicant is advised to consult the Water NSW (2023) Water Sensitive Design Guide for Rural Residential Subdivisions (Rural Residential Guide) regarding development designs for those areas of the site that will remain unsewered.

Contamination Risk

The Planning Proposal is accompanied by a Preliminary Site Investigation (PSI), Detailed Site Investigation (DSI), a Supplementary Report to the DSI, and a Remedial Action Plan (RAP). The PSI identified seven (7) Potential Areas of Environmental Concern (PAEC).

We raise the following issues:

- In relation to the Supplementary DSI Report, elevated levels of Chromium are present for a number of samples with one sample (329032-3) exceeding the HIL A (residential) criteria. The sample result is not highlighted nor explained, nor are the location and potential sources of elevated Chromium identified. This aspect warrants further consideration and explanation including the potential sources of the elevated Chromium levels and whether the levels present are a constraint to residential development. The neighbouring property at 515 Crookwell Rd had similar elevated

Chromium in the soil. That site included analysis for leaching and groundwater sampling. We believe a similar approach should be adopted here.

- None of the contamination reports have sampled or evaluated the risk of groundwater contamination, bore water, surface water or sediments associated with the farm dams on site. Correspondence dated 1 September 2023 from CSH Consulting notes that the assessment of water was not required given the lack of contamination on site and as no bores were being used on site and as dams were for livestock only. Presumably the existing house is also serviced by an on-site sewage management system. The risk of contamination from the existing septic system has not been canvassed, nor decommissioning of the system covered in the Remediation Action Plan. We believe that there needs to be supplementary sampling of surface and groundwater.
- The DSI report, Table1 (P.9), indicates that the 'animal carcasses were disposed of in a pit', with the 'Further requirements' column indicating that 'no further investigation is required'. Information on page 6 indicates that the area containing the carcasses is a rock formation approximately 100 m east of the central dam. The Proposal needs to clarify whether the pit housing the animal carcasses is in the same location as the rock formation, and whether the effectiveness of disposal has been considered against the NSW Department of Primary Industries 'Animal Carcass Disposal' Fact Sheet dated March 2021 as recommended in the PSI report.
- From the DSI report, it is apparent that fill material was observed in a gully including concrete blocks and tyres that have been used to inhibit erosion (Table 1, P. 9 of the DSI report). The report notes that there was no evidence of hazardous material present. Under 'Further requirements', the table states 'fill was removed from site'. It is unclear whether this means that a sample of fill was taken for testing or that all the fill (including the tyres and concrete) has been removed. If the latter, it is unclear if the fill material was tested and transferred to an appropriate facility for disposal. It is also unclear if the gully is also now prone to further erosion or whether the area of removal has been revegetated and stabilised. The Planning Proposal should clarify whether fill material remains in the gully and the erosion status of the gully. The status of this material and the gully may also require further consideration at subdivision DA stage.
- If farm dams are proposed for decommissioning, there will need to be a dewatering plan and water sampling prior to decommissioning. This can be dealt with a DA stage for the subdivision.

Biodiversity and Conservation SEPP

The Proposal takes into account Part 6.5 Sydney Drinking Water Catchment of State Environmental Planning Policy (Biodiversity and Conservation) 2021 (the B&C SEPP). The response notes that the site is currently unserviced by reticulated water and sewer and confirms that the site does not drain towards Sooley Dam. The Proposal refers to the presence of drainage paths and overland flow corridors and the associated flooding risk. Reference is made to the WCMS and Site and Soil Evaluation (previously discussed), noting

that some alteration to the concept design will likely be required for the unsewered land in the north to better respond to flooding risk. We support this statement. Future subdivision development will be required to have a NorBE on water quality, meet the requirements of the NorBE Guideline, and require the concurrence of WaterNSW.

Ministerial Direction 3.3 Sydney Drinking Water Catchment.

The Proposal includes a comprehensive response to Direction 3.3 Sydney Drinking Water Catchment. The response refers to the flooding risk and key outcomes of the WCMS and Site and Soil Evaluation (previously discussed). It flags that the subdivision design will likely require alteration at the DA stage to ensure the unsewered lots in the north can accommodate residential development and ensure that wastewater systems are located outside the overland flood risk areas. The response further notes that overland flooding areas are to be zoned C2 to ensure these areas are protected. As mentioned earlier, the subdivision concept plan may also require further redesign to accommodate the C2 zoned land.

The Ministerial Direction requires consideration of waterways and groundwater risks. These matters have been considered in our comments above including with regard to the contamination assessment. The Direction also requires consideration of the outcomes of Strategic Land and Water Capability Assessments (SLWCAs). Relevant SLWCA outcomes are described below. The Special Area considerations required under the Direction are not relevant here as the land is not a declared Special Area.

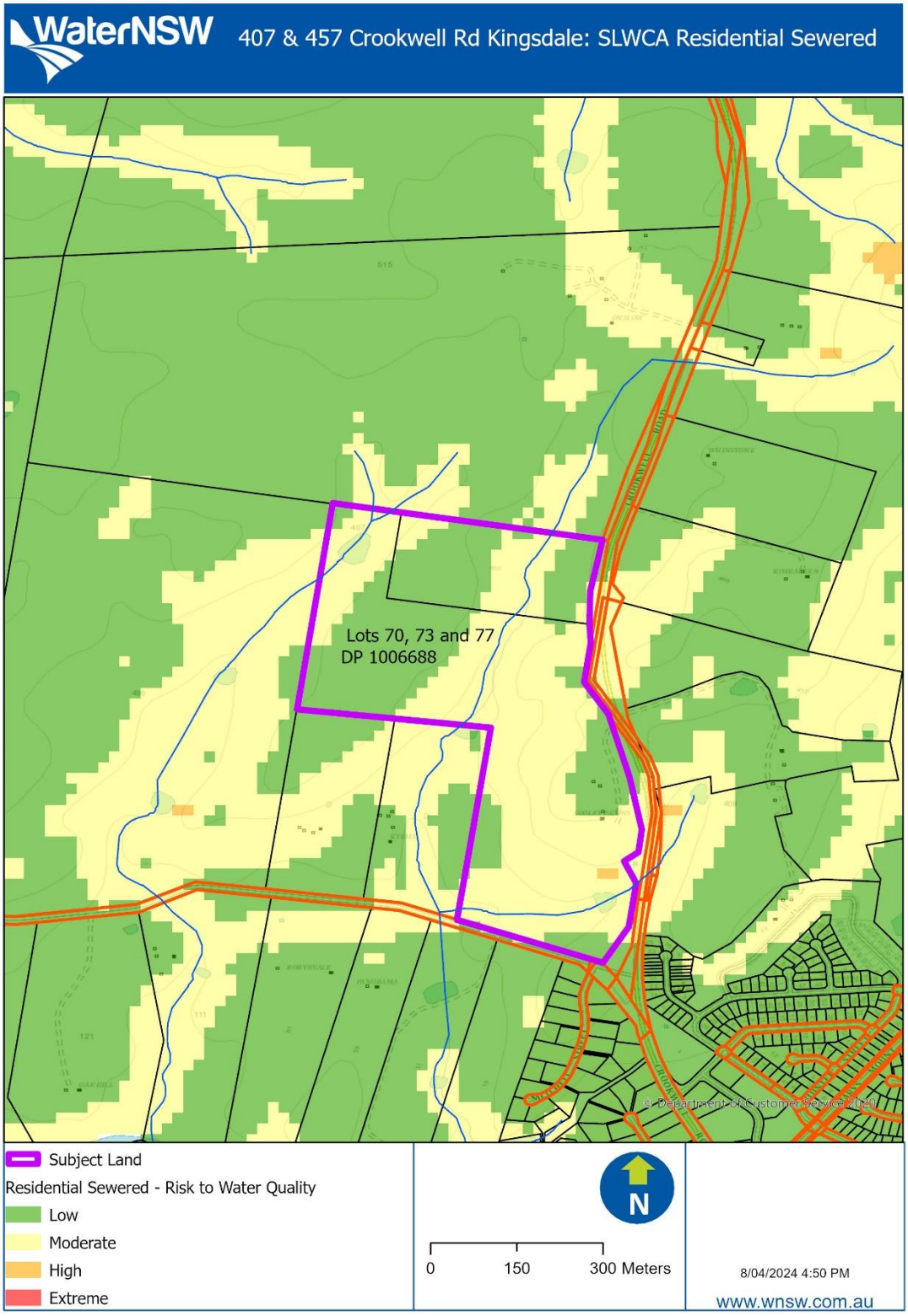
Strategic Land and Water Capability Assessments

We include relevant Strategic Land and Water Capability Assessments (SLWCA) for the site in Attachment 2. The SLWCA for Residential Sewered Lots is relevant to those areas proposed to be sewered and zoned R2 (or R5 in the west). The SLWCA for Residential Unsewered Lots: 4000 m^2 to 2 ha is relevant for the R5 land in the north, which is to be unsewered and afforded a 2 ha MLS. Please note that the SLWCA modelling does not take into account flooding risk.

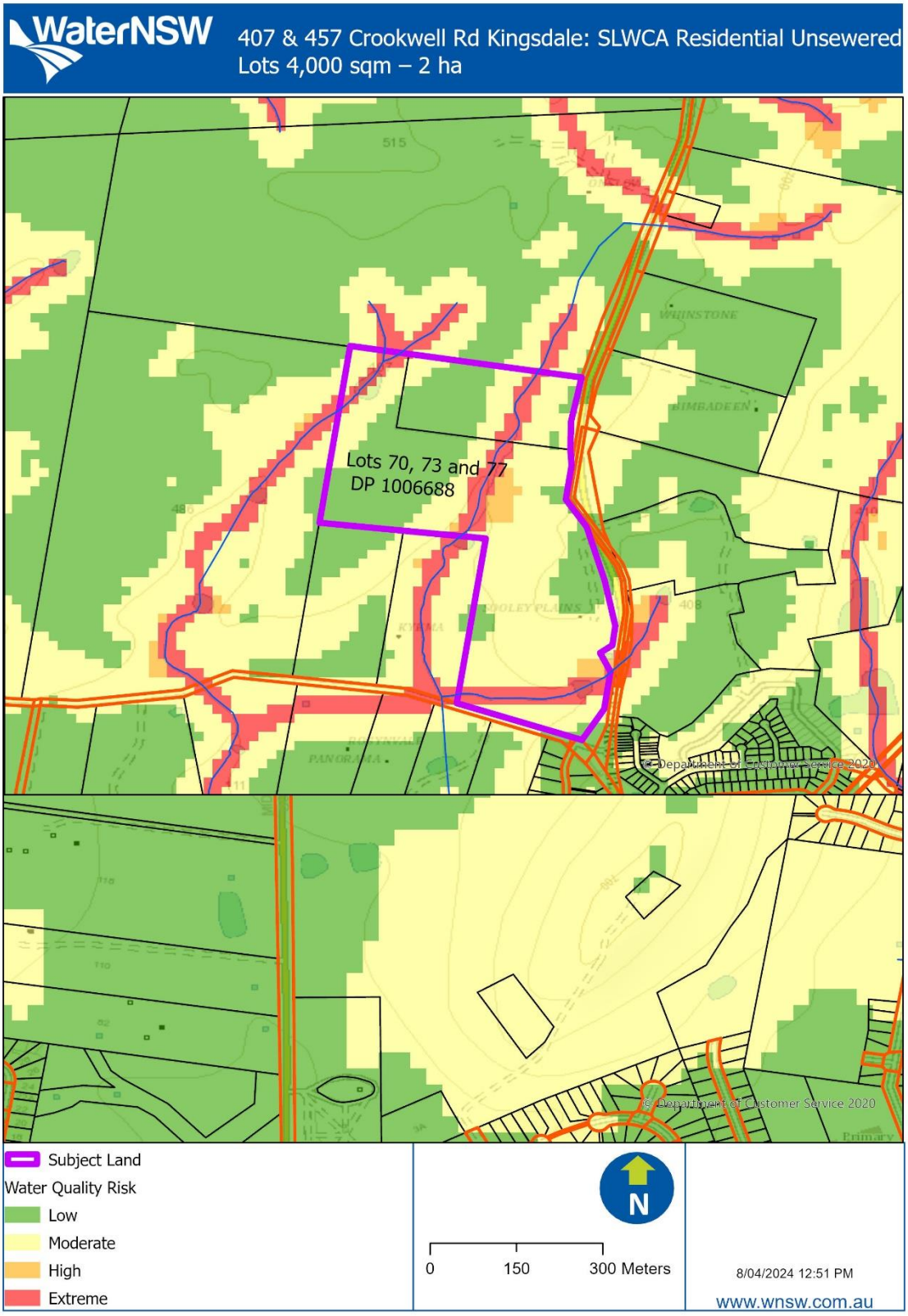
The SLWCA for Residential Sewered Lots indicates that the water quality risk varies from LOW to HIGH across the site. The area of HIGH risk is small. Most of the land has a MODERATE or LOW risk to water quality. Areas of HIGH risk have a LOW capability, areas of MODERATE risk have a MODERATE capability, while areas of LOW Risk have a HIGH capability for the relevant land use. Areas of HIGH and MODERATE risk are generally associated with the watercourses and lower lying areas on the site.

The SLWCA for Residential Unsewered Development indicates that the water quality risk varies from LOW to EXTREME across the site, including in the north where the unsewered lots are to be located. Areas of EXTREME risk are associated with the location of watercourses. Areas of EXTREME risk have a VERY LOW capability for unsewered development while areas of HIGH risk have a LOW capability. Areas of EXTREME and HIGH risk should be avoided. Areas of MODERATE risk have a MODERATE capability while areas of LOW Risk have a HIGH capability for unsewered development.

ATTACHMENT 2 – STRATEGIC LAND AND WATER CAPABILITY ASSESSMENT MAPS



Map 1. SLWCA Map for Residential Sewered Development.



Map 2. SLWCA Map for Residential Unsewered Development: Lots 4000m^2 – 2 ha.