

19 December 2022

Contact: *Stuart Little*
Telephone: *0436 948 347*
Our ref: *D2022/174737*

Department of Planning and Environment
Locked Bag 5022
PARRAMATTA NSW 2124

Dear Sir/Madam,

RE: Planning Proposal for Appin (Part)

I refer to the public exhibition of the Planning Proposal for Appin (Part) dated 14 November 2022, which seeks to rezone 1,378 ha of land within the Greater MacArthur Growth Area Appin Precinct to provide for approximately 12,000+ dwellings. The site is located within the Greater Macarthur Growth Area under State Environmental Planning Policy (Precincts – Western Parkland City) 2021 (WPC SEPP). The Proposal has been prepared to support a Structure Plan for the Precinct, a Precinct Plan (which is intended to contain the relevant planning controls for the site and give effect to the Structure Plan), and to facilitate the adoption of the Precinct Plan under the WPC SEPP.

The Proposal seeks to rezone land from Rural Landscape (RU2) to an 'open' Urban Development (UD) zone and Environmental Conservation (C2) and Infrastructure (SP2) zones. Changes to Minimum Lot Sizes (MLS) and other planning controls are also proposed. We understand that development of the Appin (Part) Precinct will be staged with Release Area 1 delivering approximately 3,500 dwellings plus retail and employment centres, open space, a school and transport networks.

WaterNSW has a significant interest in the Planning Proposal as the Upper Canal Corridor bisects the area through the centre, effectively creating an eastern and western section of the Appin (Part) Precinct. The Upper Canal conveys bulk raw water from Pheasants Nest and Broughton Pass Weirs through to the Prospect Water Filtration Plant and Prospect Reservoir. The Upper Canal corridor is a Controlled Area declared under the *Water NSW Act 2014* and Water NSW Regulation 2020 where public access is prohibited. The Upper Canal also has State Heritage significance and is listed under Schedule 5 of the *Wollondilly Local Environmental Plan 2011* (WLEP). The Upper Canal occurs as an open water channel through most of the Planning Proposal area except for an area in the south where it lies within the Cataract Tunnel.

The Upper Canal Corridor and an adjoining buffer area is mapped as 'affected land' under section 2.163 of State Environmental Planning Policy (Transport and Infrastructure) 2021 (T&I SEPP). Section 2.163 requires new development to be consistent with the *WaterNSW Guideline for Development Adjacent to the Upper Canal and Warragamba Pipelines* (the Guideline). This applies to land in the Planning Proposal area. While this requirement applies to new development rather than Planning Proposals, it provides key advice on urban design matters and should be considered in any strategic planning preceding a subdivision development application.

This Planning Proposal is complex involving new maps and planning controls for the area, informed by a range of numerous detailed technical studies and reports. We note and support the fact that Upper Canal corridor is excluded from the area and will retain its current SP2 Infrastructure zoning. However, the Planning Proposal affects lands immediately to the east and

west of the Upper Canal Corridor as indicated above, as well as the catchments of Ousedale, Elladale, Simpsons and Rocky Ponds Creeks which cross the Canal in the Appin (Part) area.

We are not able to support the Structure Plan or Precinct Plan in its current form. We are concerned that the Proposal is too potentially intensive in the vicinity of the Upper Canal Corridor, which is not given sufficient protection in the Proposal's design or controls.

The main issue is that the WaterNSW Guideline does not appear to have been considered in the design of the Structure Plan and planning controls proposed for the Precinct Plan. In its current form, the Proposal leaves the Upper Canal Corridor very exposed to impacts from stormwater, road crossings and potentially intensive forms of urban development.

The Structure Plan does not show the location and areas to be set aside for stormwater basins and related controls to assist protecting the Upper Canal from stormwater runoff. Most of the watercourses in UD zoned areas are proposed for removal and replacement with street drainage networks (pit and pipe networks) including areas within the 'affected land' upslope of the Canal. We are concerned that there will not be appropriate available space set aside for stormwater control measures in appropriate locations. Protection of Canal infrastructure and consideration of the capacity of its culverts and flumes do not appear to have been factored into the stormwater considerations to date. We are also concerned how Rocky Ponds Creek will be managed, particularly where it crosses above the Cataract Tunnel. It is situated in a UD zone, with existing flooding risks in and around the Upper Canal Corridor, and without any clear stormwater protection measures.

Further to the above, multiple road crossings are proposed across the Upper Canal Corridor and have not been minimised. They may not be able to meet WaterNSW's clearance and other requirements. The Structure Plan also does not distinguish between medium and low density residential development areas, leaving the Canal potentially exposed to intensive residential development, particularly as no MLS is proposed for the UD zone. Additionally, in the south, the Structure Plan appears to position schools, and retail/ commercial centres in proximity to the Corridor, which could jeopardise the Corridor and operation of the Cataract Tunnel. There is no specific requirement in the Precinct Plan for a DCP to be prepared and no particular protections for the Upper Canal. Measures for stormwater control are also unstated. On balance, we believe that there has not been effective consideration of the Canal in the designs and planning controls proposed.

Notwithstanding the above, we believe there is a way forward. Release Area 1, which occurs within the Appin (Part) Precinct, occurs at the headwaters of Ousedale, Elladale, Simpsons and Rocky Ponds Creeks. There is map in the Water Cycle Management Strategy that shows intended locations of stormwater detention basins. We believe that Release Area 1 could be progressed with its Structure Plan if the stormwater basin areas were integrated into the Structure Plan for that area. Relevant planning controls could be adjusted for that particular site enable the rezoning of that area to proceed with the broader Structure Plan and Precinct Plan for the Appin (Part) Precinct to be made at a later date after the matters raised in our submission have been addressed. Consideration could be given to re-exhibiting the materials pertaining to the land outside the Release Area 1.

All planning and development associated with the area must protect Canal and its Corridor to ensure the continued supply of bulk water for the benefit of Greater Sydney. We believe that the Upper Canal Corridor needs to be buffered by appropriate areas of allocated open space or road reserves, and that the Structure Plan needs to allocate sufficient land to for stormwater management measures such as detention and bioretention basins. The number of proposed crossings of the Canal Corridor needs to be minimised and their locations clarified considering the clearance and other requirements of the WaterNSW Guideline. It is also critical that the development does not increase stormwater flows into the culverts, flumes and other structures crossing the Canal. It is essential that the water quality of the Upper Canal is not polluted in

construction and later occupation of the development, and that the Corridor is protected from illegal access for the life of the development.

Our detailed comments are provided in Attachment 1.

We request a meeting with the Department to better understand how stormwater management will be addressed, how the Upper Canal will be protected, and how the issues raised in this letter will be accommodated in the final Precinct Plan and Structure Plan for the area. Please note that WaterNSW was not invited to participate in the Technical Assurance Panel despite the Upper Canal Corridor running through the centre of the Precinct. This is the first opportunity we have had to provide comprehensive input into the Stage 2 Proposal and associated zoning and urban design.

To arrange a meeting or answer any questions regarding the issues raised in this letter, please contact Stuart Little at stuart.little@waternsw.com.au.

Yours sincerely

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

Per DARYL GILCHRIST
Manager Catchment Protection

ATTACHMENT 1 – WaterNSW Comment

For ease of review, our comments have been set out in the following order:

1. Upper Canal - Context
2. Special Areas
3. Statutory Framework
4. Draft Structure Plan for Appin (Part)
5. Draft Structure Plan for Release Area 1
6. Zoning Arrangements (Versions 1 and 2)
7. Land Use Zones
8. Water Cycle Management Strategy (WCMS)
9. Riparian Corridors and Blue Grid
10. Precinct Plan
11. Biodiversity Corridors (including Koala Corridors)
12. Heritage including Cultural Heritage
13. Other - General

Our recommendations and suggestions are underlined for ease of reference.

1. Upper Canal – Context

WaterNSW owns and manages the Upper Canal Corridor. The Planning Proposal refers to the Canal as being an aqueduct except where it occurs in tunnel in the south of the Appin (Part) Area (Para 2.17, 4.162). In our submission we distinguish between the open waters of the canal (where the canal occurs as channel) and aqueducts where the Canal occurs in a pipeline over watercourses. Regarding the information contained under Para 2.17 of the Proposal (page 32), the Upper Canal does not pass through Cumberland local government area (LGA).

The Upper Canal bisects the Appin (Part) Precinct in a north-south direction creating two urban areas, one in the east and one in the west, although this is less apparent in the south where the Canal is in a tunnel. The Canal occurs as an open water channel along most of its length. Aqueducts occur over Simpsons, Elladale, and Ousedale Creeks where the Canal waters are enclosed in a pipeline. Part of the Canal occurs in the Cataract Tunnel commencing at a point about 350 m south of Brooks Point Road and extending southward to Broughton Pass.

Generally the eastern areas of the Precinct are upslope of the Canal and western areas are downslope. Stormwater passes across the Canal beneath the aqueducts or through culverts and flumes along its length. Where the Canal occurs in tunnel, Rocky Ponds Creek passes above it conveying stormwater from the east of the site to the Nepean River in the west.

Figure 2 shows Land Ownership in the area (page 31). Please note that Lots 1//1191741 and 10//1085929, in the far south, are owned by WaterNSW. They are not owned by MIR Group nor are they in private ownership. We request that Figure 2 is updated to show 1//1191741 and 10//1085929 as being owned by WaterNSW. This implicates land outside the Appin (Part) Precinct so does not compromise the Proposal or affect the proposed Precinct Plan and related planning controls.

2. Special Areas

The Appin (Part) Precinct does not extend into the Sydney Drinking Water Catchment (SDWC) nor the 'Special Area' lands declared under the *Water NSW Act 2014* and Water NSW Regulation 2020. However, the precinct comes to within approximately 130m of the SDWC and Special Area boundary on the south-west approach to the current Appin Township. This includes Release Area 1, which is proposed for the first stage of development. The Proposal will significantly increase population density on land near the SDWC and Special Areas. This in turn is likely to increase the risk of illegal access and activities occurring in the Special Areas following development and occupation.

3. Statutory Framework

Paragraph 3.66 (page 53) of the Planning Proposal report summarises the statutory framework applying to the Proposal. Other paragraphs in this section refer the reader to Chapter 7 for the relevant SEPPs. We note that the T&I SEPP is referenced in the Planning Proposal including Water Supply Systems (Division 24). However, there is no specific recognition of the requirements of section 2.163. The 'affected land' provisions of clause 2.163 of the T&I SEPP are relevant to the development of the site and require within 'affected land' to be consistent with the WaterNSW Guideline. While there is no formal Ministerial Direction requiring Planning Proposals to apply the Guideline, the Guideline will apply to the subdivision development application (DA). It is therefore relevant to the Structure Plan being proposed.

4. Draft Structure Plan for Appin (Part)

The Planning Proposal has been prepared to support a proposed Structure Plan for the site (page 21 of the Planning Proposal report) and a Proposal Precinct Plan (identified as Appendix 'XX' Draft 11/11/2022). The draft Structure Plan shows that the Upper Canal will be bordered by Residential land, Open Space, and C2 Conservation land. The Conservation lands will occur in the north and across the middle area of the Canal within the Planning Proposal area. We make the following comments:

- We agree with the exclusions of the Upper Canal Corridor from the Structure Plan. However, it is not named or distinguished on the Structure Plan, so readers are unlikely to know what this structure is. The Structure Plan shows mixed use centre (including retail/ commercial, schools and open space) as 'blue circles' of which there are three. We make the following comments:
 - We do not agree to the location of the blue circle in the south centre area of the site due to it lying adjacent to the Upper Canal Corridor. We request that the Structure Plan be updated to locate village centres (retail/ commercial) and schools away from the Upper Canal Corridor so as to minimise the risk of damage to the Upper Canal from these types of development.
 - Retail/ commercial, schools and open space are very different uses to each other and should be depicted individually to avert land-use conflicts (see Gilead Stage 2 Structure Plan). Also, due to the bulking together of these uses and the absence of their depiction as polygons across the development areas, it appears that the location of these uses has not been fully considered at this stage.
- The Appin (Part) Structure Plan does not distinguish between areas of low and medium density development. Together with the fact that there is 'no minimum lot size (MLS)' for the Urban Development (UD) zone, we are very concerned that the Proposal will deliver very intensive residential development in close proximity to the Canal.

We request that the Structure Plan be revised to distinguish between low and medium density development areas, and that the Upper Canal be buffered by open space and road reserves for perimeter roads (see WaterNSW Guideline). We request that low density residential land be applied to areas in closest proximity to the Canal.
- The Structure Plan indicates that the Canal will be traversed by two east-west collector roads, one in the north and one in the south. It also indicates that the Corridor will be crossed by what we assume to be three local roads (white roads do not have a key) and an easement for potential active and passive recreation (recreation easement). We make the following comments:
 - The urban design is fundamentally based on roads crossing the Upper Canal. WaterNSW has not been consulted on the location or number of crossing points proposed and does not provide its support.

- The Structure Plan does minimise the number of roads crossing of the Canal as required by the WaterNSW Guideline.
- The Structure Plan does not consolidate the recreation easement crossing with a road crossing to minimise crossing points.
- The two local roads and collector road in the north, and the recreation easement in the south are all proposed over areas where the Upper Canal occurs as an open water channel.
- There are no existing road crossings of the Canal at the locations proposed.
- Water NSW must be closely consulted regarding the location of the proposed crossings. Any and all new crossings will need to be clearly justified and meet the clearance and other requirements of the WaterNSW Guideline. Construction of any proposed crossing will also require access consent from WaterNSW. The elevations required for bridges over the Upper Canal Corridor are likely to affect the proposed local road connections and urban design.

We advise that the location and design elements, as required by the WaterNSW Guideline, may affect the location of the crossing points and expected dwelling yields on and near the approaches to the crossings. The WaterNSW Guideline should be consulted and these matters factored into the urban design before the Draft Structure Plan is approved.

- The Planning Proposal (page 49) states that Transport for NSW has advised the TAP to protect an alternative route configuration for the OSO within the Appin (Part) Precinct for a north-south connection to Picton Road. This does not appear to be shown on the Draft Structure Plan or considered further in Planning Proposal.
- The Structure Plan shows a green link in the south of the Planning Proposal Area. This coincides with part of the Canal that is used as a ventilation shaft or survey marker (TBC). This area will need to be fenced off and protected from damage to ensure the Upper Canal can be effectively maintained. The link should instead cross WaterNSW-owned land at the narrow part of the cadastre. Further discussions will be required with WaterNSW.

5. Draft Structure Plan for Release Area 1

The Planning Proposal includes a Draft Structure Plan for Release Area 1 for the first stage of development in the Precinct. Release Area 1 occurs in the south-east of the site but includes land diagonally across the north-west. The urban areas of Stage 1 are located away from the Upper Canal Corridor. While Stage 1 interfaces a small portion of the Upper Canal in the north-west corner, this interface area is to be open space or C2 Conservation land.

We do not object to the Draft Structure Plan for Release Area 1 subject to the inclusion of stormwater control (detention) measures on the Structure Plan (discussed later). However, the proposed Open Space and Conservation Areas will need to be managed to minimise bushfire risk to the Upper Canal Corridor. The development will also need to ensure security fencing is in place to protect the Upper Canal Corridor from trespass and security risks.

We are concerned regarding how Stage 1 will interplay with urban designs further south in the residual southern Appin area within the Greater Macarthur Growth Area, but which lie outside the scope of this Planning Proposal. The Proposal Area comes to within approximately 130 m of the SDWC and Special Area designated land, and about 160 m of WaterNSW land. So this residual area in the south and on the southern side of Wilton Road starts to become very important in relation to managing the Special Areas. We would like more clarity regarding how future Planning Proposals will address the remaining southern areas of Appin outside the Appin (Part) Planning

Proposal area. It is southernmost area of Appin which will directly interface with WaterNSW-owned lands and implicate edge areas of the SDWC and Special Areas.

6. Zoning Arrangements (Versions 1 and 2)

Two versions of proposed zonings are put forward for the site: Version 1 which complies with the current CPCP mapping and version 2 associated with a proposed amendment to the CPCP mapping. The intention is for Version 1 to be initially approved and that Version 2 would replace it subject to changes in the CPCP mapping being finalised. Version 2 only affects land in the northern part of the Precinct (approximately 1.5%).

There is virtually no difference to the land areas interfacing the Upper Canal Corridor except in the far north where Version 2 results in a very slight decrease in residential zoning and increase in C2 Conservation Zoning adjoining the Corridor. WaterNSW is therefore supportive of Version 2 zoning arrangement should changes to the CPCP proceed.

7. Land Use Zones

The Land Zoning Map – Version 1 (subtitled Draft 28.10.2022 Rev 2) excludes the Upper Canal from zoning associated with this Planning Proposal. The Upper Canal will retain its current SP2 zoning. We support this approach.

The Appin (Part) site is currently zoned RU2 Rural Landscape. It is to be rezoned with an ‘open’ Urban Development’ (UD) zone, a C2 Environmental Conservation zone, and a SP2 Infrastructure zone. All three zones adjoin the Upper Canal.

The UD zone borders most of the Upper Canal Corridor. The UD zone is where the approximately 12,000 dwellings will be provided. C2 Environmental Conservation zone borders the Upper Canal Corridor in the east and west in the centre of the Appin (Part) Area. The C2 zones are associated with Simpsons, Elladale and Ousedale Creeks. SP2 Infrastructure is associated with a road corridor travelling loosely east-west across the Upper Canal Corridor in the north.

There is no separate ‘Open Space’ zone.

Specific comments on the zoning controls applying to the individual zones provided below.

Urban Development (UD)

This is an ‘open zone’ that provides for a broad range of development types. Development will also be controlled by other provisions in the Precinct Plan and a future DCP. The Precinct Plan specifies that a range of uses will be prohibited from the UD zone including uses such as camping grounds and caravan parks, cemeteries, crematoria, extractive industries, heavy industries and heavy industry storage establishments, open cut mining, resource recovery facilities and rural industries. We agree with these proposed prohibitions.

The UD zone will not be afforded a MLS, effectively meaning that development can be of any size and intensity subject to other planning controls such as height restrictions. We request low density development with a specific MLS is applied to residential land in closest proximity to the Upper Canal. This is to minimise disturbance, structural damage, and risk of trespass to the Upper Canal Corridor.

Based on the Structure Plan, numerous linear features including what appear to be local roads as well as green links and easements for recreation appear to cross the Upper Canal Corridor within the UD Zone. These issues are discussed elsewhere.

If ‘Open Space’ is to be included within the UD zone, then ideally the objectives of the UD zone, as specified in the Precinct Plan, should be expanded to accommodate the delivery of ‘Open Space’ as an objective.

SP2 Zoning

SP2 Infrastructure zoning is proposed at the location of the east-west connection road which crosses the Upper Canal in the north. Comparison with the Structure Plan reveals that the east-west connection road proposed in the south is not afforded SP2 zoning and is located within the UD zone. It is unclear why this is the case. Our requirements for crossings are provided in our discussions on the Structure Plan (as discussed above).

More generally we note that stormwater detention and bioretention basins are neither proposed for SP2 zoning nor included within the 'Open Space' network as depicted in the Structure Plan. The issue of stormwater management is discussed below.

C2 Environmental Conservation Zone

A C2 zone is proposed for conservation areas. These lands generally accord with Ousedale, Simpsons and Elladale Creeks as well as the Nepean River in the west. Permissible uses for the C2 zone include oyster aquaculture, environmental facilities, environmental protection works and flood mitigation works. It is unclear why oyster aquaculture would be considered as a permissible use given that the Proposal is only affecting the upper reaches creeks and river tributaries.

The Proposal includes provision to establish a 40 ha MLS for subdivision for C2 land and is to be given effect by an associated Lot Size Map. We support the MLS arrangement proposed as it will minimise the risk of subdividing C2 land in proximity to the Upper Canal Corridor.

Open Space

Based on the Structure Plan, the only areas of Open Space bordering the Upper Canal are the areas along Elladale Rd, east of the Upper Canal, and a small semi-circular area of open space at the southern boundary of the Appin (Part) Precinct. The latter is where the Upper Canal lies underground in the Cataract Tunnel. Note that this part of the Upper Canal Corridor cannot be used for cycleways, landscaping, walking paths and transport corridors. It may be able to be used for passive uses as occurs at Wonson Street, Wilton. The area of Open Space at Elladale Road will need to have security fencing at its interface with the Canal Corridor to protect the Upper Canal from illegal access.

As 'Open Space' is not afforded its own land use zone, there are no planning controls or land use table for 'Open Space' in the Planning Proposal. The allocation of Open Space is reliant on its delineation on the Structure Plan, with permissibility and prohibitions left to the discretion of developer and the scope of the uses allowed under the UD zone. The requirements for open space in the Precinct Plan are minimal and the allocation of 69.21 ha of open space mentioned in the Planning Proposal report is not a specific requirement of the Precinct Plan. Combined, these matters potentially allow greater development opportunities in 'Open Space' areas than would otherwise be permitted under an 'Open Space' zoning arrangement, and greater flexibility in terms of where Open Space may and may not be allocated. It also means that 'Open Space' areas may be subject to greater impervious areas for stormwater management than envisaged.

When read in conjunction with the Structure Plan, we observe the following:

- The location and design of the open space lands may change in the process of finalising the Planning Proposal and Structure Plan, increasing the exposure of the Upper Canal to even further urban development than suggested by the Structure Plan.
- We can find no specific requirement in the Precinct Plan for the developer to provide 69.21 ha of Open Space.
- There is little open space allocated in the vicinity of the Upper Canal. Areas required for stormwater management are likely to be allocated separately and above the 69.21 ha Open Space requirement.

We request that:

- the extent of open space currently interfacing the Upper Canal as presented in the Draft Structure Plan is not reduced in the finalisation process post-exhibition
- the requirement of 69.21 ha of open space is included as a requirement of the Precinct Plan.

We would prefer to see a separate zone allocated for open space rather than it being flexibly incorporated under the UD Zone arrangement. We request that the Department consider affording 'Open Space' its own zoning and land use table to ensure that permissible and prohibited uses are readily known.

8. Water Cycle Management Strategy (WCMS)

The Planning Proposal Report relies on a supporting Water Cycle Management Strategy (WCMS) Report with respect to addressing riparian corridors, water quantity and quality, and flooding, as well as potential impacts on ecology and habitat. We have focused our consideration on the potential impacts to the Upper Canal Corridor.

Watercourses

The Upper Canal crosses Ousedale Creek in the north, Elladale and Simpsons Creeks in the centre, and Rocky Ponds Creek in the south. The Canal occurs in pipeline with aqueducts passing over Ousedale, Elladale and Simpsons Creeks. In the south, Rocky Ponds Creek passes over the Cataract Tunnel. The above areas are zoned C2 except for Rocky Ponds Creek which occurs in the UD zone.

Figures 4-2 to 4-4 of Appendix B of the WCMS adopt the Strahler Stream Order system to categorise watercourses in the Precinct. Based on those Figures, at the Upper Canal crossing locations, Ousedale Creek occurs as a 4th order watercourse while Elladale, Simpson and Rocky Ponds Creeks occur as 3rd order watercourses. Figures 4-2 to 4-4 also identify those watercourses (and their relative Stream Order) proposed for removal. We observe the following:

- In the proposed UD Zone in the north where the Canal is in open waters, all the watercourses flowing towards and crossing the Upper Canal are proposed for removal (including in locations where they cross the Canal Corridor). This includes five 1st order watercourses (one of which doesn't fully cross the Corridor but flows north into Ousedale Creek) and one 2nd order watercourse and its 1st order tributaries. Other 1st order tributaries of Elladale and Ousedale Creeks are also proposed for removal. We do not support the removal of these watercourses without understanding how stormwater will be managed holistically across the site (see below). We also do not agree to changing drainage structures across the Upper Canal or with developments that will require this to occur.
- In the southern area, where the Canal is underground, Rocky Ponds Creek (a 3rd order watercourse) is proposed for removal along with its 1st and 2nd order tributaries (including the 3rd order area where it crosses the Canal Corridor). Other 1st order watercourses are also proposed for removal. We do not agree to the removal of these watercourses, and particularly Rocky Ponds Creek, without knowing how and where stormwater control measures will be located. As this land is to be all UD zone, we are also concerned about the development's potential effect on overland flows towards and over the Canal Corridor (see also our comments on Flooding below). We also do not agree to changing the drainage across our land without understand how the stormwater control measures will operate holistically.
- The proposed layout of detention ponds is only provided for Release Area 1 in the east of the site and at the headwaters of Ousedale, Elladale, Simpsons and Rocky Ponds Creeks. Plans showing the location of proposed stormwater detention ponds have not been developed for

the other areas of the Appin (Part) Precinct beyond Release Area 1. This includes an absence of maps showing detention basins for the UD zone areas in closest proximity to Upper Canal.

- The above gives rise to the fact that there are commitments to remove virtually of all of the drainage features in the UD zoned land (to be replaced by pits and pipes per Para 5.61 of the Planning Proposal report) and no commitment for retention or detention ponds beyond Release Area 1.
- The above needs to be read in context with the Planning Proposal report (Para 4.59) which states that a small number of watercourses on the site were reclassified based on their poor condition to exclude them from waterfront land. It is in fact most of the watercourses within the UD zone lands are being removed. We are unsure which areas are being 'reclassified', although this needs consideration as it may affect 'controlled activity approval' requirements.
- The Planning Proposal (Para 4.61) notes '1st order watercourses on mapped CPCP – Certified Urban Capable land' (i.e. the UD zone) 'are proposed to be removed and replaced by street drainage networks (pit and pipe networks)'. As indicated, it is not just 1st order watercourses being removed but 2nd and 3rd order watercourses. Para 4.61 also says that 'any watercourse within 50m of Certified Urban Capable land is also proposed to be replaced by street drainage where suitable'. This would seemingly include proposed 'Open Space' and possibly C2 lands within 50m of the UD zone, extending the 'pit and pipe' network further across the Precinct.
- The above approach appears to work against a Water Sensitive Urban Design (WSUD) approach for urban development in the area.

In terms of the Upper Canal, the WCMS has the following limitations:

- It misidentifies the Upper Canal as being the 'Sydney Water Upper Canal' rather than being owned and managed by WaterNSW.
- The WCMS does not depict the location of the existing culverts, flumes and aqueducts on the Upper Canal. While drainage crossing points are identified in Figures 4-1 to 4-3 in Appendix B of the report, it is unclear if these are comprehensive or align with the location of existing flumes, culverts and aqueducts.
- Significantly, there is no evidence that the stormwater management requirements of the WaterNSW Guideline have been considered or met. Specifically:
 - The Guideline (page 8) requires that post-development flows that enter or are conveyed across the Corridors is equal to or less than the pre-development flows and velocity for each storm event up to and including the 1% AEP event. This is a critical consideration for WaterNSW because if post-development flows are greater than pre-development flows, then the Canal and its associated flumes and culverts will be at risk of failure. There is no evidence that this performance criteria, as required for the Corridor area interface, has been considered or met. On the contrary, based on the above analysis, the current Proposal would give rise to significant increases in flows and without adequate stormwater control measures in place.
 - Also, the key locations for determining flow impacts (as depicted on Plate 6-1 of the WCMS) occur some distance away from the Upper Canal Corridor and don't relate to flows where they cross the Corridor. For water quality, the Guideline (pages 7 and 8) establishes a 'neutral or beneficial impact (NorBI) on water quality' requirement for land identified as 'affected land' near the Upper Canal Corridor. The Guideline further advises there is to be no adverse impact on water quality flowing *onto or within the Upper Canal Corridor*, and advocates for demonstrated improvement to water quality (page 8). This is not included in the water quality objectives of the WCMS (section 2.1). Also, without knowing where and how bioretention basins will be placed, there is no evidence that

there is sufficient space for appropriate stormwater detention and bio-retention basins, nor that NorBI performance requirement will be met.

Allocation of Space for Stormwater Basins

Of primary concern to us is that the Structure Plan does not allocate land for stormwater basins. Even if this was undertaken, based on the current information, such mapping is only available for Release Area 1 (per Figure 6-4 of the WCMS). Without mapping across the whole Precinct, there is no guarantee that there will be sufficient area available and set aside for stormwater management purposes.

Given the absence of a 'zoning' approach to set aside 'Open Space' or 'SP2 Infrastructure' land for *stormwater management purposes*, land required for adequate stormwater measures will need to come from the UD zone. This will pitch stormwater control measures against residential development in the competition for available land under a UD zone designation that favours urban development. This risks stormwater measures not having sufficient land and such measures being undersized or underperforming, placing the Upper Canal at risk of failure or contamination.

There needs to be a clear map of appropriate 'space' for the stormwater detention basins in the Structure Plan to help protect and buffer the Upper Canal and to ensure that there is sufficient land area available for these measures when the Appin (Part) Precinct is developed. There should also be some buffer in the allocation calculation to ensure there is sufficient space should additional measures be required when the Strategy is finalised closer to DA stage.

We also believe that there should be a land area allocation for stormwater management measures specified in the Precinct Plan. However, in the absence of the above maps, this is not readily available to calculate.

We also note that the Precinct Plan make no provisions for stormwater management or its control.

Management and maintenance

The WCMS identifies that a site specific Operation and Maintenance (O&M) Manual be prepared as part of future DA requirements for the long-term operation of treatment devices. We support this approach but note that the WCMS does not indicate who would own and operate the control structures. Presumably larger detention and bioretention basins would fall to Council to manage? Again, this comes back to having available space for stormwater control measures and for these areas to be better secured through the Structure Plan and appropriate zoning.

Flooding Risk

The WCMS considers flooding risk based on the 'Wollondilly Shire Flood Study – Broad Scale Assessment' (the Flood Study). The WCMS identifies that, based on the Flood Study, the flood extents are contained in well-defined creeks. Based on Plate 8-1 which provides the 1% AEP Flood Depth Mapping, we note that flood risk is greatest around Rocky Ponds Creek. This includes along land crossing the Cataract Tunnel. The flood depth exceeds 2.0 m in areas crossing the Upper Canal. As described earlier, Rocky Ponds Creek is proposed to be removed and replaced with street drainage. Rocky Ponds Creek occurs in the UD zone and is likely to be heavily influenced by increases in impervious areas upstream in UD area.

We are concerned that development upstream of Rocky Ponds Creek will both increase the flooding risk the area where the creek crosses the Upper Canal Corridor and the areas immediately adjacent. We are also concerned that this may require additional new drainage infrastructure to occur across the Upper Canal Corridor. This may disturb or damage the Cataract Tunnel. We would also expect this to be at the developer's cost. We require more information regarding how the flooding risk will be managed in this area and what infrastructure is proposed over the Upper Canal Corridor before we can agree to such a major change in drainage above the Cataract Tunnel (see also other comments below).

9. Riparian Corridors and Blue Grid

We support the C2 zoning proposed to protect Ousedale, Elladale and Simpsons Creeks.

Figure 61 (page 141) shows the Proposed Blue Grid and Riparian Corridors. Riparian corridors are meant to be shown in black hatching, but no areas are demarcated.

Paragraph 5.24 (page 141) of the Planning Proposal proposes recreation and cycle trails along Ousedale Creek. We do not support public access along the Upper Canal Corridor due to the need to safeguard the Canal and Sydney's water supply. As indicated elsewhere, the Upper Canal is a Schedule 1 Controlled Area where public access is prohibited, including in this vicinity. Any public access along Ousedale Creek will need to be outside the Upper Canal Corridor.

Our main concern with the Blue Grid is Rocky Ponds Creek which appears to be unprotected and flagged for removal as discussed earlier. Based on the Structure Plan, the creek is not proposed for protection by 'Open Space'. Also, Rocky Ponds Creek is proposed to be zoned UD along its length, except in the far west where C2 zoning is associated with the Nepean River corridor. Figure 61 shows Rocky Ponds Creek as being 'water management' where it crosses the Upper Canal Corridor and on land either side. It is unclear what is intended here although we note that this coincides with the area of greatest flooding risk (discussed above). Information on page 61 indicates that Rocky Ponds Creek is the only creek which is publicly accessible. It notes that the central part is degraded at the centre and advocates for a new "natural style" drainage corridor. Combined, the above leaves the intended outcome of Rocky Ponds Creek very uncertain.

Given the intensity of urban development proposed in the southern part of the Appin (Part) Precinct, and to better protect the Upper Canal, we request more information clarifying what is proposed for Rocky Ponds Creek. It may be better to afford Rocky Ponds Creek C2 zoning outside the Upper Canal Corridor or allocate 'open space' along its length, with a view of protecting and rehabilitating the creek or adding additional stormwater controls where required. We also request that the highest risk flood-prone areas of Rocky Creek be excluded from development. Any zoning or planning controls will need to allow environmental protection, flood mitigation and stormwater management works. WaterNSW will need to be consulted on any work proposed over or adjacent to the Upper Canal.

10. Precinct Plan

The Appin (Part) Precinct will be afforded a new Precinct Plan that will be include as a new appendix to the WPC SEPP. Further to our comments elsewhere, we request that the Precinct Plan:

- Include requirements for a DCP to be prepared for the Appin (Part) Precinct and a further DCP for Release Area 1
- Include the range of measures that the DCP must address include to:
 - provide detail for infrastructure such as stormwater management
 - include safeguards to protect the water quality and infrastructure of the adjoining Upper Canal Corridor.
- Specify a minimum area (ha) for 'stormwater' management purposes as well as for 'open space' so that the purposes and area allocations are clear and set as minimum requirements.

11. Biodiversity Corridors (including Koala Corridors)

Biodiversity corridors run through the site and include Nepean River, Simpsons Creek, Elladale Creek and Ousedale Creek. These areas are to be afforded C2 zoning (see pages 137 and 166). The Nepean River Corridor does not intersect with the Upper Canal area and is not discussed

further. We strongly support the C2 zoning proposed along Elladale, Simpsons and Ousedale Creeks which will help protect them from urban development and related impacts.

The biodiversity corridors along Ousedale, Elladale and Simpson Creeks cross beneath Upper Canal where the water is in pipeline and transferred across the creeks by aqueducts. We acknowledge the principle of trying to utilise existing crossing points where there is an aqueduct. However, we also note that fencing to prevent illegal access into the Upper Canal Corridor impedes native fauna passage (e.g. koalas). Relevant to this Proposal, WaterNSW is currently working with the Department in a pilot program trialling different fauna (koala) crossing structures at the Ousedale Creek aqueduct. The intent of this trial is to facilitate movement over or under obstructive infrastructure and determine different application options. The information gained from this project will inform the ability of other areas to service fauna movement.

Any use of the Canal Corridor crossing areas as proposed biodiversity corridors will need to ensure that works to facilitate fauna movement do not result in unacceptable changes to our own internal fencing and access and operational requirements. WaterNSW requests that we are consulted regarding proposed fauna crossings and biodiversity corridors on our land. WaterNSW's responsibilities for security and operational management of the Upper Canal Corridor cannot be compromised when looking to service Biodiversity corridor functions.

The Planning Proposal does not clearly distinguish biodiversity corridors from Koala Corridors. However, clause 7.5 of the Precinct Plan requires the concurrence of the Planning Secretary for development identified as 'Koala Corridor' on the clause application map. The Koala Corridors depicted on the map only include land along the Nepean River (which does not concern us) and land along Ousedale Creek (known as Koala Corridor E). The Koala Corridor along Ousedale Creek relies upon fauna movement being facilitated across the Upper Canal Corridor where the canal is enclosed in pipeline and occurs as aqueduct. The above comments apply.

We note that in areas mapped as 'affected land' under clause 2.163 of the T&I SEPP, applicants would also need to be consistent with the WaterNSW Guideline in terms of protecting the Upper Canal Corridor. The Guideline advises that the boundaries of our land are to be fenced. This may cause some conflict if the concurrence authority requires an area to be unfenced for fauna movement. We need a situation whereby a subdivision application cannot be lodged (or alternatively determined) unless it reconciles fauna movement and fencing arrangements in areas where the Upper Canal Corridor intersects with biodiversity corridors.

- We request a requirement be added to the proposed Precinct Plan for C2 lands, requiring developers to consult with WaterNSW where the development adjoins the Upper Canal and is being designed to facilitate biodiversity movement across the Upper Canal. The objective here should be to protect critical water supply while optimising opportunities for fauna movement across biodiversity corridors (including Koala Corridor E).

12. Heritage including Cultural Heritage

Upper Canal

The Planning Proposal (Para 4.162, page 106) recognises that the Upper Canal as a State-listed heritage item. The Proposal should also reference that the Canal is listed as 'Upper Nepean Scheme – Upper Canal' and associated with the suburb of Appin under Schedule 5 of the *Wollondilly Local Environmental Plan 2011* (WLEP). We observe that the Precinct Plan Heritage Map excludes the Upper Canal (as the Canal is excluded from the Appin (Part) Area). This is logical. However, there appears to be no controls to ensure that the heritage of the Upper Canal is conserved when development is proposed adjoining the Canal.

We request that the heritage provisions under Proposed clause 5.10 of the draft Precinct Plan include a provision requiring consultation with WaterNSW where development is on land that adjoins the Upper Canal Corridor and that the WaterNSW Guideline be complied with. We also

ask that a note be added clause 5.10 or Schedule 5 of the Precinct Plan indicating that the Appin (Part) Precinct site adjoins the State-listed Upper Canal and directing readers to Schedule 5 of the WLEP.

We observe that the proposed Heritage Map also extends to include land further south than the Appin (Part) Precinct, including areas around the Upper Canal. This appears to be associated with the Appin Massacre Cultural Heritage Landscape and provides an indication of what additional areas may need to be set aside from development in the future. Areas outside the Appin (Part) Precinct may be beyond the scope of the Planning Proposal.

Appin Massacre Cultural Landscape State Listing

Listing of the Appin Massacre Cultural Landscape was gazetted on 25 November 2022 and implicates five areas within the Appin (Part) Precinct. Two of these five areas involve the Upper Canal and immediately adjoining lands. The Proposal considers the listing as far as it had advanced as at September 2022, depicting the nominated areas in Figure 41. This Figure appears to accord with the final curtilage of the listing.

The Proposal notes that the Precinct Plan and Structure Plan responds to the recommended listing of the Appin Massacre Cultural Landscape by including ‘five (5) areas in the proposed open space and incorporate view lines, linkages and movement corridors between the five (5) areas’ (Para 4.149). We note that the Structure Plan shows the five areas as ‘Planned State Heritage Listing Sites’ and depicts all but one of these as open space. The area not identified as Open Space lies north of Rocky Ponds Creek and implicates land either side of the Upper Canal Corridor. It is unclear from the Structure Plan what is intended here. We note that a north-south connection road is planned on the southern border of this area which also crosses the Upper Canal (discussed separately). To assist with cultural heritage and reduce development pressure on land adjoining the Upper Canal, we request that the State Heritage Listed Area in the vicinity of Rocky Ponds Creek be allocated as ‘Open Space’ in the Structure Plan and depicted accordingly.

13. Other - General

- We request that the WaterNSW Guideline is applied, and that WaterNSW is consulted, in the preparation of any detailed masterplan, DCP and Planning Agreement processes so that the Upper Canal is afforded appropriate protection.
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