

15 December 2022

Contact: *Stuart Little*  
Telephone: *0436 948 347*  
Our ref: *D2022/173598*

Department of Planning and Environment  
Locked Bag 5022  
PARRAMATTA NSW 2124

Dear Sir/Madam,

**RE: Planning Proposal for Gilead Stage 2**

I refer to the public exhibition of the Planning Proposal for Gilead Stage 2, which seeks to rezone land at Gilead to facilitate approximately 3,300 dwellings supported by open space and conservation lands. The site is located within the Greater Macarthur Growth Area under State Environmental Planning Policy (Precincts – Western Parkland City) 2021 (WPC SEPP).

WaterNSW understands:

- the Planning Proposal has been prepared to support a proposed Structure Plan for the site,
- the Precinct Plan is intended to contain the relevant planning controls for the site and give effect to the Structure Plan, and
- the Precinct Plan is to be given effect under the WPC SEPP.

WaterNSW has an interest in the Planning Proposal as the Upper Canal Corridor bisects the area through the centre, effectively creating an eastern and western section of Gilead. 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 CLEP.

Land adjoining the Upper Canal Corridor is mapped as 'affected land' under section 2.163 of State Environmental Planning Policy (Transport and Infrastructure) 2021 (T&I SEPP) which requires development to be consistent with the *WaterNSW Guideline for Development Adjacent to the Upper Canal and Warragamba Pipelines* (the Guideline). While this 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 lodgement of a subdivision development application.

This is a complex Planning Proposal, involving numerous technical reports and delivering changes to maps and planning controls for the area. 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 corridor as indicated above. To this end, the Upper Canal Corridor presents a significant planning consideration for development of the area. Most of the Upper Canal occurs as open waters in the Planning Proposal Area, making water quality protection a critical issue. It is essential to ensure that the Upper Canal and associated Corridor are protected from the impacts of the development and the security of water supply is not compromised by the development.

The Proposal places significant development pressure on the Canal and Corridor. Planning and development associated with the area must not result in any impacts to either the Canal structure or the Corridor, to ensure the supply of bulk water for Greater Sydney can continue. Mitigation against impacts includes for the culverts and flumes conveying stormwater across the Canal, noting that open waters occur along most of the Canal's length. It is essential that the development ensures that post-development flows into and across the Corridor do not exceed pre-development flows in terms of both velocity and volumes of stormwater. It is also 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.

We believe that there is insufficient space allocated in the Draft Structure Plan for stormwater management measures such as detention basins. The planning controls of the proposed Precinct Plan (Appendix S) do not specifically link open space to stormwater management nor specifically require the Structure Plan to allocate appropriate land (including open space) for stormwater management purposes. The Precinct Plan's reliance on the DCP alone to provide stormwater and water quality controls is not sufficient to ensure that stormwater control measures will be located in appropriate areas to protect the Upper Canal from adverse stormwater impacts.

The Draft Structure Plan does not show the locations of the stormwater detention basins and related measures as presented in the Stormwater Management Strategy in Appendix P. Additionally, the proposed Open Space network of the Structure Plan and the proposed SP2 zoning for new Infrastructure excludes the location of these structures (Figure 7 of the Precinct Plan and Appendix T). Allowing flexibility to locate and position stormwater management areas within the proposed 'open' Urban Development Zone (UDZ) places the areas required for stormwater basins in competition with land desired for urban development. It leaves little guarantee that stormwater management measures will be appropriately allocated and at risk of being undersized or being allocated insufficient land area.

The need for sufficient space for stormwater detention is critical to allow appropriate sizing of detention basins. Without this, the culverts, flumes, and other means of transferring stormwater across the Canal will be at risk of failure from increased flows. Unmanaged or excessive flows also pose a significant risk to contaminating the open waters being transferred to Prospect Water Filtration Plant due to overland flow paths or overtopping of the flumes.

In light of the above, we request that:

- the Structure Plan is amended to show the location and size of these structures as presented on page 2 and Figure 11 and 12 of the Stormwater Management Strategy (Appendix P), and
- the Proposal and Precinct Plan specify a minimum area required for detention and bio-retention basins calculated on the size of the area allocated for stormwater management measures as depicted in the Figures above (Appendix P).

We also request that the above maps and requirements be carried across to the Masterplan to ensure adequate stormwater management measures are carried forward in the planning process.

WaterNSW is only able to support the Planning Proposal and the Structure Plan if the stormwater management issues are reconciled and given increased strength and certainty in terms of available land area through the Planning Proposal process. Stronger provisions are also required in the Precinct Plan.

We are also concerned regarding the content of the Planning Proposal, the expectations of the Upper Canal to accommodate the development, and the potential impacts on the Canal. Our detailed comments on those matters and the stormwater issue are provided in Attachment 1. Comments on all other Appendices are provided in Attachment 2.

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](mailto:stuart.little@waternsw.com.au).

Yours sincerely

A handwritten signature in black ink, appearing to be 'Daryl Gilchrist', with a stylized, flowing script.

**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. Setting
2. Draft Structure Plan
3. Stormwater Management
4. Flooding
5. Waterways and Riparian Areas
6. Precinct Plan
7. Land Use Zones
8. Conservation Lands and Biodiversity Corridors
9. Heritage

Our recommendations and suggestions are underlined for ease of reference.

### **1. Setting**

The Planning Proposal applies to Lot 2 DP 1218887, Lot 2 DP 249393, Lot 2 DP 603674, Lot 1 DP 603675 and part of Lot 5 DP 1240836 Appin Road and Medhurst Road, Gilead. The Upper Canal Corridor effectively splits the site creating two urban areas: one in the east and one in the west.

WaterNSW's concerns relate to the development proposed in the large Lot 2 DP 1218887 (448.9 ha) in the south where the urban development is proposed, and smaller Lot 5 DP 1240836 in the north proposed for conservation only (7.662 ha), as these adjoin the Upper Canal. The two lots are separated by Mt Gilead Homestead, which is excluded from this Proposal. Both the lots have land within the buffer area of the 'affected land' provisions of s 2.163 of the T&I SEPP (discussed later). Two points are relevant here:

- The eastern section of Lot 5 appears to be associated with Figtree Hill and is not included in the current Proposal based on the Figures and Maps presented (e.g. Figure 5). The Planning Proposal would benefit by clearly articulating that it only applies to part Lot 5 (i.e. west of the Corridor) and not all of Lot 5.
- Our main concern is with respect to the southern lot which, together with Lot 2 DP249393 (in the west and away from the Upper Canal), is to be zoned for urban development and facilitate the 3,300 homes.

### **2. Draft Structure Plan**

A draft Structure Plan for the site is provided in Figure 7 (page 20) of the Planning Proposal. The Structure Plan shows that some conservation lands will occur in the north and south of the lot and a ribbon of conservation land is provided along Nepean Creek. We make the following comments:

- For the large southern lot where most of the development is to occur, the Upper Canal is proposed to be adjoined by predominantly urban areas, including medium density urban development in some locations. We do not agree with medium density housing and related development occurring directly adjacent to the Upper Canal. As the medium density areas are given shown in a variable shading, it appears that medium density housing may directly front the Upper Canal Corridor. We request that the Structure Plan be adjusted so that light pink low density housing is depicted in areas adjacent to the Upper the Canal. Also, any proposed urban development will need to incorporate open space or road reserves, associated with perimeter roads, at the interface with the Canal Corridor, as per the WaterNSW Guideline.
- The Plan includes a new potential transport corridor crossing the Upper Canal halfway along its length. Presumably this is associated with a new road. There is no existing road or crossing of the Canal at this location. WaterNSW must be consulted early in the design and location

of this crossing. Any new crossing will need to meet the clearance and other requirements of the WaterNSW Guideline. The elevations involved to provide the required clearance over the Upper Canal Corridor are likely to affect the proposed local road and urban design.

We advise that the location and design elements, as required by the WaterNSW Guideline, may affect the location of the crossing point, the proposed location of medium density urban areas, and expected lot yield in this vicinity. The Guideline should be consulted and these matters factored into the Draft Structure Plan before it is approved.

- Lot 5 in the north adjoins the Upper Canal and is intended as a conservation area. We acknowledge the location of this and the other conservation areas and note that the Biodiversity Corridors align with points in the Upper Canal corridor where the canal water is contained within an aqueduct.
- Small areas of open space are planned along some of the boundaries to the Upper Canal Corridor in the west. We support the use of public open space as an interface to the Canal Corridor, although it will need to be designed to facilitate passive security.
- There are no locations of public open space adjoining the Canal in the east despite stormwater detention basins being planned for these areas. Figures 11 and 12 of the Stormwater Management Report (Appendix P) should be consulted and stormwater detention basin areas afforded public open space zoning. This is of prime concern for WaterNSW and is discussed separately.
- We note and support the location of village centres and schools away from the Upper Canal Corridor.
- The term 'Sydney Upper Canal' is used to refer to the Canal. The Canal is owned and managed by WaterNSW. While we are concerned that use of the prefix 'Sydney' may be misunderstood to mean Sydney Water, we understand that this conjures an association of the Canal being for broader purposes than the Planning Proposal area.

### **3. Stormwater Management**

Most of the Upper Canal is an open water channel through the site. External stormwater flows pass across the Upper Canal Corridor by means of culverts (beneath the structure) or flumes (box-like channels above the structure). Stormwater can also pass beneath the Canal in a natural drainage feature below an aqueduct (where the Canal water is enclosed by a pipeline). For the Planning Proposal site, most of the drainage is conveyed by flumes carrying stormwater over the open waters of the Canal.

Stormwater control measures on the upslope side of the site must be appropriately designed to not increase water volumes or decrease water quality entering the Canal Corridor based on pre-development flows. This is to ensure that the Canal's culverts and flumes operate as intended and within their design capacity, and to protect the water quality in the Canal. To not do so risks structural failure, overspilling or blocking of flumes and culverts, leading to potential pollution of the Upper Canal waters or flooding of the Upper Canal Corridor and potential structural failure of the Canal itself. On the downslope side of the Canal Corridor, stormwater needs to be able to flow freely away. Drainage from flumes and culverts, as well as from the Canal Corridor itself, must not be impeded causing overtopping of flumes, flooding of the Corridor, or structural risks to the Canal, and must be accommodated in any stormwater management measures within the development site.

The Proposal includes a separate Stormwater Strategy that has been designed to mitigate impacts (flow, velocity, quality) on the Nepean River. Stormwater issues are addressed in the Planning Proposal and in supporting Stormwater Management Strategy (Appendix P). Some mention is also made in the Urbis Urban Design Report (Appendix A).

The Stormwater Management Strategy (Appendix P) addresses water quantity and quality management issues. It identifies that 24 basins are required to manage stormwater and that with

the 'surface areas nominated for stormwater infrastructure at this strategic planning phase is capable of supporting the Gilead development' (Appendix P, page 1). A map of the required areas is provided on page 2 depicting the locations where basins are required. The required infrastructure is to be located within land identified for urban development and areas proposed for conservation. Post-development peak flows are to be managed through detention basins, while water quality improvements are to be managed through rainwater tanks, gross pollutant traps and bio-retention basins. We make the following comments:

#### *Performance Requirements – Quantity and Quality*

The performance requirements for the Upper Canal draw from the WaterNSW Guideline (as well as other reports and plans) and eliminate or minimise the impact on the existing WaterNSW Upper Canal' (page 10). Impacts must be eliminated or avoided, rather than minimised.

With regard to water flows (quantity), the Strategy aims to ensure that post-development discharge flow rates and velocities do not exceed pre-development discharge flow rates and velocities for typical storm events between the 1EY (1 year ARI) to 1% AEP events. We support this approach, noting this is as per the WaterNSW Guideline. 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.

With regard to water quality, we are concerned that the stormwater quality targets do not accord with the WaterNSW Guideline. 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 water quality targets of the Stormwater Strategy adopt a 90% reduction in average annual GP loads and 40% reduction in average annual TSS loads based on flume discharges from water transferred across the Canal Corridor (page 22). Presumably this means that the water entering the flumes would be subject to the same performance criteria for water quality. This is a lower standard than the NorBI requirement. More extensive water quality control measures may be required, including larger bioretention basins over wider areas.

#### *Alternative Detention Strategy*

The Strategy recommends that the impact of a reduced detention strategy should be investigated to determine if detention of environmental impact flows (e.g. 50% of AEP event only) will have detrimental impacts on existing waterways and downstream lands. The statement neglects consideration of the Upper Canal and we do not support any strategy that reduces the scale, number and area of basins required due to concerns over the water quality outcome being already relaxed and contrary to the Guideline (see above).

#### *Modelling*

Pre-development catchments for Upper Canal flumes have been represented on plan only and have not been modelled. In the catchment modelling, post-development total impervious percentages include external un-developed catchments. We are unclear what has occurred here. Does this mean the modelling includes catchment areas outside the Planning Proposal area that are flagged for development but which have been included in the modelling as undeveloped land? If such areas are flagged to be developed, then it would appear the modelling has underrepresented the discharge that will occur from upstream areas. Also, based on the 'affected land' mapping of s 2.163 of the T&I SEPP, some upslope catchment area of the Upper Canal catchment lies outside Lot 2 DP 1218887 (i.e. the development site). If outside areas are developed, the modelling may underestimate the flows affecting the development site and the Upper Canal Corridor. This may make it more difficult to achieve a NorBI and the flow standards required to protect the Canal.

### *Detention basins and Bio-retention basins*

Figures 11 and 12 depict Stormwater Quantity and Stormwater Quality Infrastructure Plans and present 24 'basins' as stormwater control mechanisms (Appendix P). As the figures present the same 'Basin' numbers in the same locations, it is unclear whether detention basins (for water quantity control) and bioretention basins (for water quality) are proposed individually or together. If serving dual functions (retention for quality and detention for volume), they may need to be increased in size or redesigned. It is therefore unclear how much land area will be required for the structures. Larger or multiple structures may be required taking up a larger area than anticipated.

We are also concerned that structure D16 is proposing to consolidate runoff currently entering three flumes into a single flume. As indicated, part of the detailed design may need to split the basin or its discharge routes towards all three existing routes. Additional space may need to be allocated for stormwater control measures in this regard. The design capacity of the flumes must be used in determining the design solution for all basins.

### *Location and Management of Basin Areas*

Presumably the basins are being positioned in strategic locations and at lower points in the landscape. The basins coincide with some, but not all of the culverts and flumes crossing the Canal (Figure 11). Some flumes and culverts directly abut proposed development areas while some lie behind or in close proximity to the proposed basins. In areas near culverts and flumes, the basins will need to be managed to minimise risks of overtopping and spillage into the flumes and culverts. These design matters will need to be clarified. WaterNSW should be consulted in the development and finalisation of stormwater management measures for the site.

We assume that the basins would be in public ownership and transferred to Council. This is not made clear in the report. Maintenance and management responsibilities are also not clearly identified beyond the developer looking to work with Campbelltown Council to achieve the necessary performance outcomes and Council's maintenance requirements. Ownership and maintenance responsibilities require resolution to ensure that the Upper Canal is protected from stormwater impacts.

### *Allocation of Space for Stormwater Basins*

Of prime concern to us is that the Structure Plan does not allocate land for stormwater basins outside of conservation lands. This is clear when Figure 7 (Structure Plan) of the Planning Proposal is compared to the Figure on page 2 and Figures 11 and 12 of the Stormwater Strategy (Appendix P). In other words, there is no current allocation of land for stormwater detention and bio-retention basins in the urban areas identified. This issue is of particular concern for land on the upslope/ upstream side of the Upper Canal (see basins D11, D12, D13, D16, D18, D19). The Canal is an open water channel in the locations where the six detention basins are proposed. If these land areas for stormwater management are not allocated now at Planning Proposal stage, there is a risk that appropriate areas will not be allocated at later stages of the planning process.

There needs to be a clear allocation of appropriate 'space' for the stormwater detention basins to help protect and buffer the Upper Canal and to ensure that there is sufficient land area available for these measures at the time the Gilead site is developed. We request that the stormwater basin sites (per page 2 and Figures 11 and 12 of the Stormwater Management Strategy in Appendix P) be included on the Structure Plan and the land area calculation (in term of hectares) is included under clause 5.1A(3)(a) of the Precinct Plan. This will then ensure that the Structure Plan will set aside the required space for Stormwater Management.

In addressing the above, we request that the area (both as layout on plans and land allocation calculation) is identified considering the size and number of detention basins required, *and* requirements for management and maintenance. There should also be some flexibility in the land

allocation to ensure there is sufficient space should additional measures be required when the Strategy is finalised closer to DA stage.

#### **4. Flooding**

The Stormwater Management Strategy (Appendix P) includes a map showing the existing and local 1% AEP and PMF extent (Figure 9, page 14). The map shows current overland flow flooding risks prior to development. With respect to the Upper Canal, overland flow paths and flooding risks occur in the south-west corner of the site and west of the Canal. The Figure indicates that the overland flow path is to be conveyed in the post-development scenario through a pit and pipe system. It is unclear whether the proposed pit and pipe system will affect the Upper Canal Corridor. We request further clarification regarding how this overland flow path will be managed considering potential impacts on the Upper Canal and associated Corridor.

We observe that Nepean Creek is also subject to overland flow and localised flooding near where it passes beneath the aqueduct. Based on the scale of these maps, it is unclear if this flooding risk area extends south to include areas of the Canal that are open waters. Also, the risk extends to cover a small area south and beyond the current conservation land mapping.

#### **5. Waterways and Riparian Areas**

The Upper Canal crosses both the Nepean Creek in the south and Woodhouse Creek in the north (Figure 19). In both these locations, the Canal is piped and conveyed as an aqueduct across the creeks. A further aqueduct, where the Canal is again enclosed in a pipeline, occurs in the east of Lot 5, but here the aqueduct crosses an existing access road, not a creek. The locations of the aqueducts are depicted in Figure 7.

We note and support the proposed C2 zoning for riparian lands (page 61 of the Planning Proposal report). We note that the Riparian Plan (Appendix N) provides for the management regime of the watercourses and likely works required at creek crossings, stormwater management basins, and points of discharge. This will inform the preparation of the detailed masterplan with Council.

The Riparian Plan (Appendix N) briefly discusses the Upper Canal. Information on page 15 requires amendment as the Canal is owned and managed by WaterNSW (not Sydney Water) and the Canal Corridor is not retained or managed as open space as indicated. The Plan also suggests that planting and habitat augmentation will be undertaken within the Corridor. It is unclear what areas of the Corridor are envisaged for planting by this statement. The Upper Canal Corridor cannot generally be used for revegetation as it is required for operational purposes. Any riparian works proposed within the WaterNSW Upper Canal Corridor will require an access consent and approval from WaterNSW. Other matters may need to be factored in such as bushfire risk and operational serviceability of the Upper Canal and associated Corridor. WaterNSW requests that the above changes are made to the Report and that WaterNSW is consulted on the content of the Riparian Plan before it is fully incorporated into the Masterplan.

The Riparian Plan indicates that stormwater detention basins must be planted with locally native species. If the purpose of the basin is detention, then we are concerned that riparian planting may reduce the water volumes held by the basins. If the basins are proposed for bio-retention and water quality treatment, then plantings are likely to be appropriate. This returns to the fact that the Stormwater Management Strategy does not currently distinguish between detention (for quantity) and bio-retention basins (for water quality). Greater clarity is required on the intended purpose of basins and ensuring they are appropriately sized and fit-for-purpose.

We note and support the Urbis Urban Design Report's (Appendix A) approach to the Upper Canal with respect to riparian areas. This identifies that the Upper Canal is a fenced area not accessible to the public and not connected with the natural water system within the site. It is distinguished from the riparian zones that are associated with Menangle, Woodhouse and Nepean Creeks.



## 6. Precinct Plan (including comments on Appendices S and T)

The Gilead Area will be afforded a new Precinct Plan that will be added to Chapter 3 of the WPC SEPP and provide a new appendix (new Appendix 9 Gilead Precinct). The proposed planning controls are provided in Appendix S of the Planning Proposal with relevant maps provided in Appendix T. The Precinct Plan will give effect to the land use zoning and planning controls including requirements to conform with the Structure Plan for the Precinct.

We support the proposed inclusion of a cap of 3,300 lots and note that the location of the lots is guided by other planning controls.

### *Structure Plan Amendments*

The Precinct Plan provisions do not outline the process of how the Structure Plan can be amended.

- We request that the Precinct Plan establish a public exhibition and community consultation process for any changes proposed to the Structure Plan.
- We also request clause 5.1A (3)(a) is expanded to include a minimum area for stormwater basins based on the extent of area covered by these features as depicted on page 2 and in Figures 11 and 12 of the Stormwater Management Strategy (Appendix P).

### *Infrastructure Services Delivery Plan*

The Planning Proposal (page ix) makes passing reference to the fact that an Infrastructure Services Delivery Plan will be prepared to identify the range of local infrastructure required including roads, transport, stormwater management, open space and community facilities. This is an important part of the planning process. Given the current planning flexibility for stormwater and open space arrangements, we believe that this Plan should be a requirement of the Precinct Plan.

- We request that the Precinct Plan includes a requirement for the preparation of an Infrastructure Services Delivery Plan to identify the range of local infrastructure required for the Precinct including roads, transport, stormwater management, open space and community facilities.

### *Development Control Plan*

We note that clause 6.3 of the Precinct Plan requires the preparation of a DCP. The DCP is required to provide for stormwater and water quality management controls, but it is unclear how and where these will be delivered and whether the Upper Canal will be adequately protected from stormwater impacts. This alone is not sufficient to ensure that stormwater control measures will be provided in appropriate locations across the development site and that the Upper Canal will be protected.

- We request that subclause 6.3(3) is modified to include an additional requirement for the DCP to include safeguards to protect the water quality and infrastructure of the adjoining Upper Canal Corridor.

We note that subclause 6.3(4)(b) switches off the requirement to prepare a DCP if any of the lots to be created are to be dedicated as public open space or for environmental protection purposes. We do not agree with this provision as any subdivision that nominates one lot for open space or environmental protection would be free of the obligation, despite the subdivision giving rise to hundreds of residential lots.

- We request that the wording of subclause 6.3(4)(b) is re-examined so as not to create a loophole for developers to waive the need to comply with the DCP requirement by providing one or more areas of open space or environmental protection in conjunction with urban development. The wording of 6.3(4)(b) and (c) may need to be examined in this regard and

tied back to the purpose of the subdivision or otherwise make it clear that the provisions cannot apply if the subdivision is giving rise to one or more dwelling entitlements.

## **7. Land Use Zones**

The Upper Canal Corridor has been excluded from the Proposal and retains its SP2 zoning. We support this approach. The majority of the site, including those areas adjoining the Upper Canal Corridor, is currently zoned RU2 Rural Landscape. A Minimum Lot Size of 100 ha applies across the site (page 16).

The Proposal involves rezoning the land with a new 'open' Urban Development Zone (UDZ), an Environmental Conservation (C2) zone and a small area of SP2 Infrastructure for a road crossing of Menangle Creek. Land adjoining the Upper Canal is to be zoned either UDZ or C2.

We note that Open Space (as depicted in the Structure Plan) is not afforded its own zoning but incorporated under the UDZ.

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

### *Urban Development Zone (UDZ)*

The Proposal includes adoption of the UDZ for land identified for future development, consistent with rezonings that have occurred within the Wilton Growth Area. This is an 'open zone' that provides for a broad range of development types. This will be supplemented by specific site provisions in the WPC SEPP and a future DCP.

Appendix S specifies that a range of uses will be prohibited including camping grounds and caravan parks, cemeteries, crematoria, heavy industries and heavy industry storage establishments, rural industries. We agree with these proposed prohibitions.

### *SP2 Zoning*

An SP2 Infrastructure zone is proposed for the location of the vehicle crossing of Menangle Creek that will provide the northern entrance to the development (page 25 and Table 5, page 31). We have no issue with this zoning. However, we note that proposed stormwater detention basins are neither proposed for SP2 zoning nor included within the 'Open Space' network as depicted in the Structure Plan (Figure 7 of the Planning Proposal).

### *Open Space*

Based on the Structure Plan, various areas of open space are proposed across the Planning Proposal area including land adjoining the Upper Canal. There are no planning controls or land use table for open space areas in the Planning Proposal and in the Precinct Plan controls of Appendix S. The allocation of Open Space appears to be reliant on its delineation on the Structure Plan and with permissibility and prohibitions left to the discretion of developer and the scope of the uses allowed under the UDZ. Additionally, there are very limited planning controls proposed for 'Open Space' in the Precinct Plan (Appendix S) beyond a requirement for a minimum of 29.1 ha of Open Space be allocated in the Final Structure Plan. Together these matters potentially allow greater development opportunities in 'Open Space' areas than would otherwise be permitted and greater flexibility in terms of where Open Space may and may not be allocated. It also means that 'Open Spaces' area may be subject to greater impervious areas for stormwater management than envisaged in the stormwater modelling.

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

- None of the open space areas of the Structure Plan coincide with the location of the required stormwater detention basins.
- 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 urban development.

- The requirement to provide 29.1 ha of Open Space is separate to land required for stormwater control. Areas of land for stormwater management will need to be allocated above the 29.1 ha Open Space requirement.

We request that the extent of open space currently interfacing the Upper Canal as presented in Figure 7 (Draft Structure Plan) is not reduced in the finalisation process post-exhibition.

We would prefer to see a separate zone allocated for open space rather than it being flexibly incorporated under the UDZ 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 known and transparent.

### *C2 Environmental Conservation Zone*

A C2 zone is proposed for land areas where existing vegetation is to be conserved as well as for habitat recreation. Permissible uses for the C2 zone include oyster aquaculture, environmental facilities, environmental protection works and flood mitigation works (page 25). 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 MLS for subdivision for C2 land to allow for the registration of Biodiversity Stewardship Agreements in line with the Biodiversity Certification application. This issue does not appear to have been carried through as we cannot find relevant provisions in Appendix S. We do not object to the intention here so long as the change in MLS does not increase opportunities for building entitlements in C2 land.

### *Additional Permitted Uses*

Additional permitted uses are proposed in the Conservation Area along Nepean Creek which is outside of the Koala Corridors (see Appendices S and T). The Additional Permitted Uses include permissibility for building identification signs, business identification signs, eco-tourist facilities, information and education facilities, roads, kiosks, recreation areas and water supply systems. Based on the Additional Permitted Use map in Appendix T, these additional uses would be allowed along Nepean Creek both upstream and downstream of the Upper Canal Corridor.

**Additional Permitted Uses**



We are concerned that these additional uses may result in additional difficulties in stormwater management for the UDZ areas upslope/ upstream of the Upper Canal. They may also be subject to flash flooding. We are also concerned that many of these uses (notably, eco-tourist facilities, information and education facilities, roads, kiosks, recreation areas) may themselves generate additional impervious areas warranting stormwater management measures. We ask that these uses (except perhaps water supply systems) are prohibited in the area east of the Upper Canal (i.e. upslope of the Upper Canal Corridor). This may require removing the Environmental Conservation hatching from the Additional Permitted Uses map as indicated above.

## **8. Conservation Lands and Biodiversity Corridors**

Biodiversity corridors are shown in Figure 2 of the Planning Proposal. The northern most corridor, (Koala Corridor A) affects Lot 5 and the adjoining Upper Canal area. This corridor traverses under the Upper Canal where it is in an aqueduct. This Biodiversity corridor is challenged in that the aqueduct is not over a natural landscape feature (such as a gully) and will direct fauna into an area of low traffic, but nonetheless used for operational servicing of the Corridor. Any use of the use of the area as a proposed Biodiversity corridor 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.

A further biodiversity corridor, known as Koala Corridor B, occurs further south running along Woodhouse Creek, as depicted in Figure 2. This is also reliant upon fauna crossing beneath the Upper Canal along the deeply incised Woodhouse Creek and requires fauna to move below the aqueduct.

We note that no biodiversity corridor is proposed along Nepean Creek, although the existing aqueduct in this area may operate passively in allowing some fauna movement across the Canal Corridor. These areas are marked for conservation zoning (C2) but will be afforded additional permitted uses.

An apparent further corridor (Fauna Corridor/ Nepean River) occurs in the west and intersects with the Upper Canal in the south of the Planning Proposal area. This Fauna Corridor appears to be for north-south movement along the Nepean River in the west with the Upper Canal forming a boundary in the east. This is an open water section of the Canal and presents a significant barrier. It appears that the intention is not to try and accommodate a fauna corridor across the Canal in this area.

- WaterNSW requires clarification regarding the relationship of the Upper Canal to the southern-most fauna Corridor.

Facilitating biodiversity corridors and enabling terrestrial fauna passage across the Upper Canal Corridor is a major challenge for development. We acknowledge that fencing to prevent illegal access also impedes native fauna passage (e.g. koalas), and the principle of trying to utilise existing crossing points where there is an aqueduct.

WaterNSW is currently working with the Department in a pilot program trialling different fauna (koala) crossing structures at the Ousedale Creek aqueduct, south of the Gilead site. 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 the above areas to service fauna movement.

- WaterNSW requests that we are consulted regarding the 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.

We note that proposed clause 7.6 of the Precinct Plan (Appendix S) requires the concurrence of the Planning Secretary for development identified as 'Koala Corridor' on the clause application map. This applies to the northern most corridors (Koala Corridor A and B). 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. We do not want a situation arising where the Guideline advises that the boundaries of our land are to be fenced and then the concurrence authority requires an area to be unfenced for fauna movement. How is this issue best resolved strategically?

We need a situation whereby a subdivision application cannot be lodged (or alternatively determined) unless it is accompanied by a strategy that reconciles fauna movement and fencing arrangements along the Upper Canal Corridor in areas where the Canal Corridor intersects with Koala Corridors A and B.

- We suggest a requirement be added to the proposed DCP seeking for biodiversity corridors to be addressed and requiring developers to consult with WaterNSW if the development implicates biodiversity corridor on lands adjoining or on the Upper Canal. The objective here should be to protect critical water supply while optimising opportunities for fauna movement across Koala Corridors A and B.

## **9. Heritage**

The Planning Proposal identifies the Upper Canal as a State-listed heritage item in Table 11, identifying it as occurring as Lots 1-3 in DP 730136 (page 69). The Proposal indicates that the proposed interface will be a combination of residential separated by perimeter roads and vegetation conservation area. The information also states that there will be limited crossings of the Canal to enable through road links as identified in Greater Macarthur 2040. We agree with these approaches.

As the Upper Canal is excluded from the area covered by the Proposal, it is also excluded from Schedule 5 listing in the Precinct Plan (Appendix S) and the heritage provisions of the proposed WPC SEPP Amendments. This risks the heritage values of the Upper Canal Corridor not being considered in development and planning under the Precinct Plan and when development borders the Upper Canal Corridor.

- We ask that the heritage provisions under Proposed clause 5.10 of the 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 to Schedule 5 indicating that the Gilead site adjoins the State-listed Upper Canal.

## **Attachment 2 – Comments on Other Appendices**

### **Appendix A – Urban Design Report**

We are concerned that Figure 8 of the Urban Design Report shows seven potential bridge crossing points for the Upper Canal. We do not support this number of crossings. These crossing points are not depicted on the Structure Plan (Figure 7 of the Planning Proposal), so it is unclear what is intended. We ask that these crossing points are removed. It is imperative that vehicular and pedestrian crossings of the Canal Corridor are kept to an absolute minimum to ensure the Corridor remains unencumbered for operational and strategic augmentation purposes. Based on the information contained in the Planning Proposal, only one road crossing is proposed in the Structure Plan. Further, any crossing will need to comply the clearance and other structural requirements of the WaterNSW Guideline.

The Report shows indicative stormwater basins are positioned hard up against the Upper Canal Corridor and at times occupy parts of the Corridor (Figure 9 of the Urbis report). Elsewhere, the report (page 42) states that boundary conditions are to be met and no stormwater is to enter the Canal lands. Any stormwater control measures such as basins are to be wholly contained within the development site. Stormwater management measures must be located and designed so as to not impact on the Upper Canal or place its open waters at risk of pollution. Please see our other comments and refer to the WaterNSW Guideline for more detail.

### **Appendix W (Alignment with Campbelltown Local Strategic Planning Statement)**

We are concerned that references in Appendix W (Alignment with Campbelltown Local Strategic Planning Statement) position the Upper Canal as part of the open space network. Specifically, Planning Priority 5 (Embracing our unique landscape setting) states that ‘The Structure Plan and Urban Design Report identify the opportunity to establish the Upper Canal as a regional pedestrian and cycle link with only critical vehicle crossings proposed to achieve appropriate connectivity through a Site of this scale’. We do not support this statement as public access to the Canal Corridor is prohibited. To open the Canal Corridor for public use would present a significant risk to Sydney’s drinking water supply and water quality, as well as WHS risk for the public (risk of drowning), compromise maintenance and security, and risk the overall structural integrity and heritage values of the Canal. Information under Priority 3 (embracing our heritage and cultural identity) indicates that, in reference to European heritage outside the site (e.g. Upper Canal), a further masterplan that will identify ‘appropriate opportunities for integration within the open space networks or through interpretation strategies’. While the Upper Canal can provide scenic amenity, and passively assist in urban cooling, it cannot provide public open space and cycleways as stated. References to the Upper Canal Corridor being included as public open space must be deleted.

### **Appendix X – Consistency with SEPPs**

Appendix X of the Planning Proposal discusses consistency with SEPPs. The Transport and Infrastructure SEPP is referenced here and indicates that as part of the preparation of a detailed masterplan and DCP, the WaterNSW Guideline will be considered to inform appropriate development controls. It also notes that the controls and the guideline will also require consideration in future DAs for development adjacent to the Upper Canal. Similar commitments are made in Appendices U and V including with ensuring both quality and security of the Canal is maintained and for the WaterNSW Guideline to be consulted in the DCP and masterplan process. We support this inclusion of this information and statements made.

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