

2 October 2017

Paul Byrne
Lead Director, Greenfields
Victorian Planning Authority
Level 25, 35 Collins Street
Melbourne Vic 3000

Dear Paul

Exhibition of Amendment C205 to the Hume Planning Scheme (Lindum Vale Precinct Structure Plan)

Thank you for the opportunity to provide further comment on servicing requirements for the Lindum Vale PSP.

Please find attached a copy of a Drinking Water and Non-Drinking Water Supply Concept Plans and a Sewer Concept Plan confirming the Yarra Valley Water's servicing requirements for this area.

Details of required assets to service this area, include-

Drinking Water and Non-Drinking Water Mains –

- extension of external & internal distribution mains;
- installation of external & internal reticulation mains; and
- installation of pressure boosting water pumping stations
- details of the required works are defined within attachment 1

Sewerage –

- extension of Grevillia St Branch Sewer, from Mt Ridley Rd, is required to service this area
- details of the required works and the anticipated alignment of these works are defined within attachment 2

If you require any additional information regards provision of water supply and sewerage facilities to service this area, please contact either [REDACTED] to discuss further.

Yours sincerely



Kevin Dawson
Manager Urban Development

ATTACHMENT 1 - LINDUM VALE PSP – WATER SUPPLY COMMENTS

GENERAL SERVICING ADVICE

YVW drinking water (aka potable) and non-drinking (aka recycled) water supply is currently not available for the subject PSP land. Presently the nearest drinking water (DW) and non-drinking water (NDW) supply availability is limited to DW and NDW reticulation mains installed within Annadale Estate to the north.

No interim or ultimate supply is available from mains in the Mt Ridley Road area.

DW and NDW supply to the Mickleham area is from Mt Ridley DW and NDW Reservoirs at a Top Water level (TWL) of 294m. The DW and NDW supply from Mt Ridley can only be supplied generally to a maximum elevation level of RL 255m in the Mickleham area to ensure that sufficient pressure is available to meet YVW's customer charter for water supply. To provide sufficient pressures to Mickleham area above RL 255m, YVW plans to establish pressure boosted DW and NDW supply zones. DW and NDW booster pumping stations are presently being designed to meet this objective and are planned to be available in early 2019.

As an interim measure YVW is allowing development of areas in nearby Annadale, Trijena and Botanical estates up to RL 262m subject to availability of water supply improvement works such as installation of new distribution supply mains along the E14/Aitken Boulevard arterial road from Mt Ridley Road to Donnybrook Road.

The subject PSP land ranges in elevation from RL261-274m; and on this basis YVW will allow no development on the land until the pressure boosted zones are established in 2019.

DW and NDW YVW supply for the subject land requires:

- Extension of external & internal distribution mains;
- Installation of external & internal reticulation mains; and
- Installation of pressure boosting water pumping stations.

It is likely that planned development in the Trijena and Botanical estates will bring DW and NDW supply to the near the northern boundary of the subject PSP area in the next 2-3 years. However, these single source DW and NDW supplies are limited to a maximum of 500 lots in total before second sources of supply from Donnybrook Road needs to be available.

The ESC Price Determination permits YVW to charge a developer who requires a key water asset to be provided ahead of the planned time a bring-forward contribution (YVW thereby recovering the incremental financing costs of providing an asset sooner than planned). This is specified in the Determination as an "Incremental Financing Cost or IFC."

The IFC is calculated using the following formula which can be found on page 167 of the ESCs document: "Price Review2013: Greater Metropolitan Water Businesses – Final Decision" which can be found on the ESC website.

The planned timing of DW and NDW assets on the attached documents is within a 5 year "Water Plan" framework and is subject to review. For further details on exact timing planned please contact Yarra Development Liaison Manager (Mr Paul Curtis ph. 9872 1658).

YVW is continually working on and updating the water supply strategies for this area as shown on the attached plans. These strategies are based on the current Urban Growth Boundary (UGB). Any expansion of the UGB beyond the current boundary or new areas within the UGB made available for development may result in changes to the planned supply from Mt Ridley Reservoirs

or a new supply based upon another supply source or a combination of these options. The developer must ensure that any design of their development integrates with the current planned YVW water supply strategies, including provision of required key assets.

After 500 lots from a single source YVW will require an alternative source of supply.

YVW requires that key asset DW and NDW mains are located on either side of major road reserves. The design of the services within the developments major roads must allow for this requirement and if required up to 2 additional reticulation rider mains along the road (DW and NDW reticulation mains on each side of road).

Due to the extensive DW and NDW water supply works required to deliver supply to any development of the subject land it is recommended that the landowner/developer contact Yarra Valley Water's Development Liaison Manager (Mr Paul Curtis ph. 9872 1658) to discuss this issue at an early stage of their development planning.

DRINKING WATER (DW) ADVICE

YVW plans to service the Lindum Vale PSP area from the future MICKELHAM DW PRESSURE BOOSTED (PB) Water Supply Zone at a TWL of 312 m. Under normal operating conditions the maximum applicable HGRL for the proposed development is 312 (m) AHD and the minimum Dry Summer Day HGRL is 302 (m) AHD. For the purpose of water hammer, an additional 20m pressure is to be allowed for in the design of all DW assets, including fixtures and thrust blocks.

The maximum allowable flow for the design of fire services is 25 L/s on single direction supply DN100 mains, 40 L/s on dual direction supply DN100 mains, 60 L/s on DN150 mains, and 75 L/s on DN225 mains and above, unless further limited by available pressure and flow. Fire services may not be directly supplied by mains smaller than DN100. A separate application for Pressure and Flow Information is required for design of fire services.

Properties in the Mickleham DW PB Supply Zone may require a domestic Pressure Reducing Valve (PRV) to be installed to ensure compliance with the plumbing code.

Ultimate development of subject land requires the construction of key water supply assets as described below:

1. (DW) Donnybrook Road West Main S3 (YVW ref. PWGW0530), (Developer design and construct, size: DN300 and planned timing: 2022).
2. (DW) WPS631 Inlet Main (YVW ref: TBD), (Developer design and construct, size: DN300 and planned timing: 2018)
3. (DW) Mickleham PB Zone Main S1 (YVW ref. PWGW0529), (Developer design and construct, size: DN300 and planned timing: 2018) Alignment: along future Brossard Rd.
4. (DW) Mickleham PB Zone Main S2 (YVW ref. PWGW0027), (Developer design and construct, size: DN300 and planned timing: 2022-2023). Alignment: along future Brossard Rd.
5. (DW) Donnybrook Rd West Pumping Station (YVW ref. PWGW0391), (YVW design and construct, size: 73L/s@25m and planned timing: 2019).
6. (DW) Lindum Vale Main (YVW Ref: PWGW0526), (Developer design and construct, size: DN225 and planned timing: 2024 and post 2025).

Notes:

A – key assets 1, 2, 3, 4 and 6 are required to be provided by developer/s.

B – key asset 5 will be provided by YVW.

Functional Design Statements will be provided by YVW for these key DW assets. The Lindum Vale Main, Mickleham PB Zone Mains, Donnybrook Rd West Main and WPS631 inlet mains will be provided by developers for development of existing land parcels and YVW will install the and

the water pumping station for creation of the PB supply zone. The developer provided DW key assets are subject to bring-forward costs (see relevant comments in General above). A separate development deed/s must be applied for to undertake these key DW asset works.

Also DN150 and DN100 DW reticulation mains extended from the key asset DW mains will be required to be provided at the Developer's cost to provide DW supply service to all new allotments within the subject properties and surrounding development as required.

The DW pumping station is planned within a site in the northwest corner of Annadale Estate and the land requirements has been agreed with the Annadale Estate developer. YVW is still to acquire the land for the pumping station. YVW has completed a functional design of the pumping station

Refer to attached Water Supply Concept Plans 1 and 2 showing existing and proposed DW mains for this area and the subject land.

Note that the above details of these DW assets in this advice and on the plans provided is preliminary at this stage and is subject to confirmation at design stage.

NON-DRINKING WATER (NDW) ADVICE

YVW has mandated NDW for residential use in this area. Whilst NDW pipes are installed in the Mickleham west area within existing estates along Donnybrook Road, NDW supply is not yet available and supply is provided in the NDW network with DW via a cross connection to the DW network.

The cross connections are planned to be removed in late 2017 with NDW supply becoming available.

Please note mandatory inspections of NDW plumbing for each dwelling/lot will be required for this development should it proceed.

YVW plans to service the Lindum Vale PSP area from the future MICKLEHAM DW PRESSURE BOOSTED (PB) Water Supply Zone at a TWL of 308m. Under normal operating conditions the maximum applicable HGRL for the proposed development is 308 (m) AHD and the minimum Dry Summer Day HGRL is 292 (m) AHD. For water hammer, an additional 20m pressure is to be allowed for in the design of all DW assets, including fixtures and thrust blocks. For the purpose of water hammer, an additional 20m pressure is to be allowed for in the design of all water assets, including fixtures and thrust blocks.

The maximum allowable flow for the design of fire services is 25 L/s on single direction supply DN100 mains, 40 L/s on dual direction supply DN100 mains, 60 L/s on DN150 mains, and 75 L/s on DN225 mains and above, unless further limited by available pressure and flow. Fire services may not be directly supplied by mains smaller than DN100. A separate application for Pressure and Flow Information is required for design of fire services. Yarra Valley Water's current policy does not permit the use of non-drinking water to supply internal firefighting systems such as sprinklers and internal fire hose reels.

Properties in the Mickleham NDW PB Supply Zone may require a domestic Pressure Reducing Valve (PRV) to be installed to ensure compliance with the plumbing code.

Ultimate development of subject land requires the construction of key water supply NDW assets as described below:

1. (NDW) Donnybrook Road West Main S3 (YVW ref. PWGW0543), (Developer design and construct, size: DN225 and planned timing: 2021).
2. (NDW) RPS007 Inlet Main (YVW ref: TBD), (Developer design and construct, size: DN225 and planned timing: 2018)

3. (NDW) Mickleham PB Zone Main S1 (YVW ref. PWGW0469), (Developer design and construct, size: DN225 and planned timing: 2018) Alignment: along future Brossard Rd.
4. (NDW) Mickleham PB Zone Main S2 (YVW ref. PWGW0544), (Developer design and construct, size: DN225 and planned timing: 2022-2023). Alignment: along future Brossard Rd.
5. (NDW) RPS607 Donnybrook Rd West Pumping Station (YVW ref. PWGW0386), (YVW design and construct, size: 40L/s@25m and planned timing: 2019).
6. (NDW) Mickleham PB Zone Main S3(YVW Ref: PWGW0417), (Developer design and construct, size: DN225 and planned timing: 2024).

Notes:

A – key assets 1, 2, 3, 4 and 6 are required to be provided by developer/s.

B – key asset 5 will be provided by YVW.

Functional Design Statements will be provided by YVW for these key NDW assets. The Mickleham PB Zone Mains, Donnybrook Rd West Main and RPS607 inlet mains will be provided by developers for development of existing land parcels and YVW will install the RPS607 water pumping station for creation of the PB supply zone. The developer provided NDW key assets are subject to bring-forward costs (see relevant comments in General above). A separate development deed/s must be applied for to undertake these key NDW asset works.

Also DN150 and DN100 NDW reticulation mains extended from the key asset NDW mains will be required to be provided at the Developer's cost to provide NDW supply service to all new allotments within the subject properties and surrounding development as required.

The NDW pumping station is planned within a site in the northwest corner of Annadale Estate and the land requirements has been agreed with the Annadale Estate developer. YVW is still to acquire the land for the pumping station. YVW has completed a functional design of the pumping station

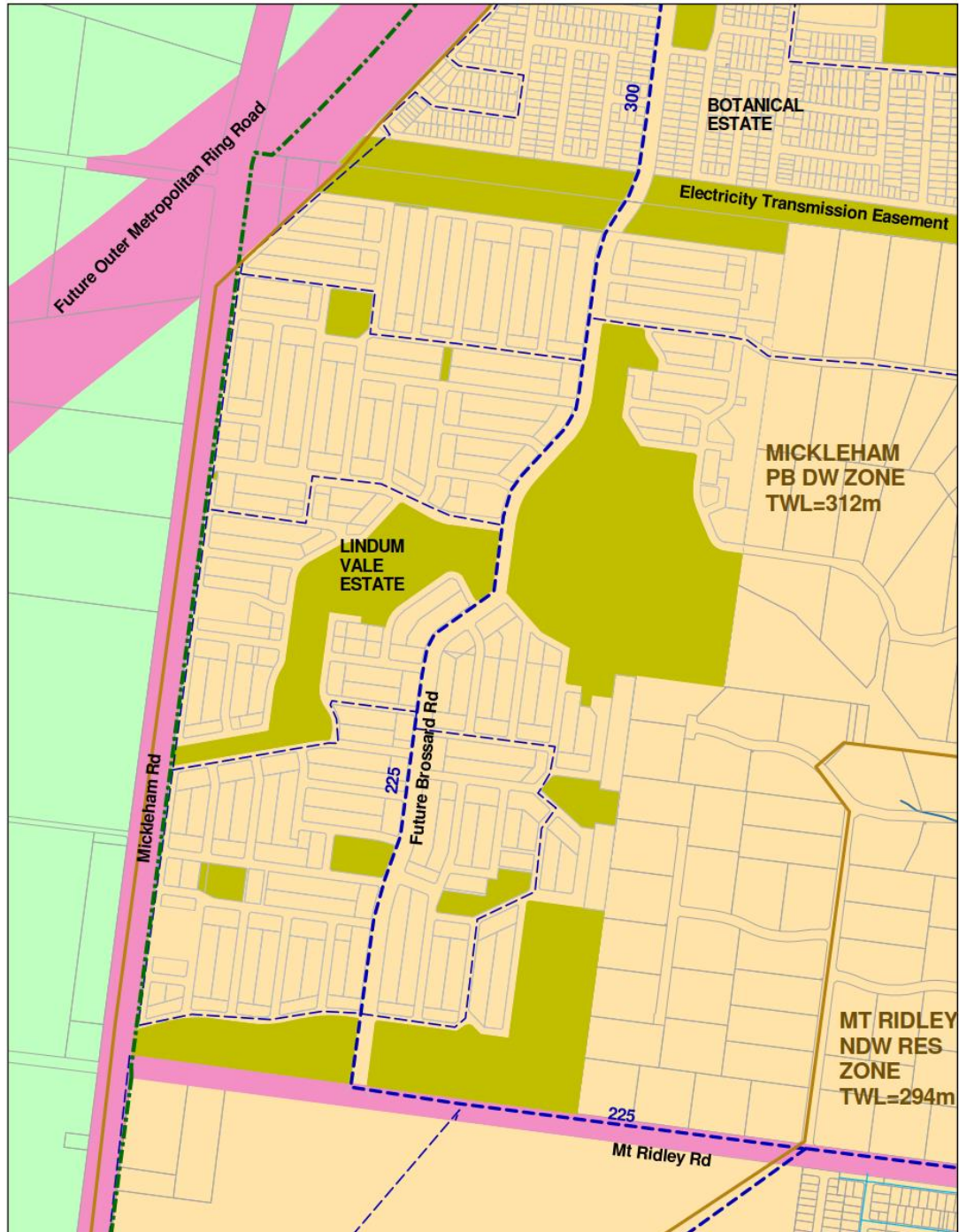
Refer to attached Water Supply Concept Plans 3 and 4 showing existing and proposed NDW mains for this area and the subject land.

Note that the above details of these NDW assets in this advice and on the plans provided is preliminary at this stage and is subject to confirmation at design stage.

YVW is responsible for the preparation of an Environmental Management Plan (EMP), covering the provision of non-drinking water to this development. The developer must ensure that proposed designs comply with the requirements in the EPA Guidelines for Dual Pipe Water Recycling Schemes – Health and Environmental Risk Management (Publication 1015), and in particular adherence to the regulations applicable to dual pipe developments. The developer may contact the Water Quality Specialist, Asoka Jayaratne on (03) 9872 1398 for clarifications of these requirements prior to the scheme design.

All non-residential NDW customers must be assessed to determine whether a Recycled Water Agreement (RWA) and Environment Improvement Plan (EIP) are to be completed before supply of NDW can commence to the site. The EIP is required to demonstrate that NDW use will be managed in compliance with EPA Victoria, Department of Health and Department of Primary Industries requirements (refer EPA guidelines 464.2 and 1015 for full details), to ensure risks to human health and the environment are minimised. The RWA is YVW's contract with the customer which sets out pricing and terms of supply. If required, the RWA and EIP must be approved by YVW before supply can commence. Should the developer not provide an RWA or EIP as part of development works, the contract of sale document for allotments is to include a requirement for the new owner to provide an RWA or EIP. Please contact YVW's Commercial Services Division on (03) 9872 1240 to arrange for an assessment and/or for further information on this process.

DRINKING WATER



Legend

- | | | |
|-----------------------------------------------------------|----------------------------|----------------------------------------------|
| Existing Mains | Urban Growth Boundary | urban use |
| Proposed Key Asset Distribution Mains | watercourse | non-urban use - conservation, open space etc |
| Proposed 150 reticulation mains (smaller mains not shown) | water supply zone boundary | non-urban use - farming etc |
| | | Future major roads |

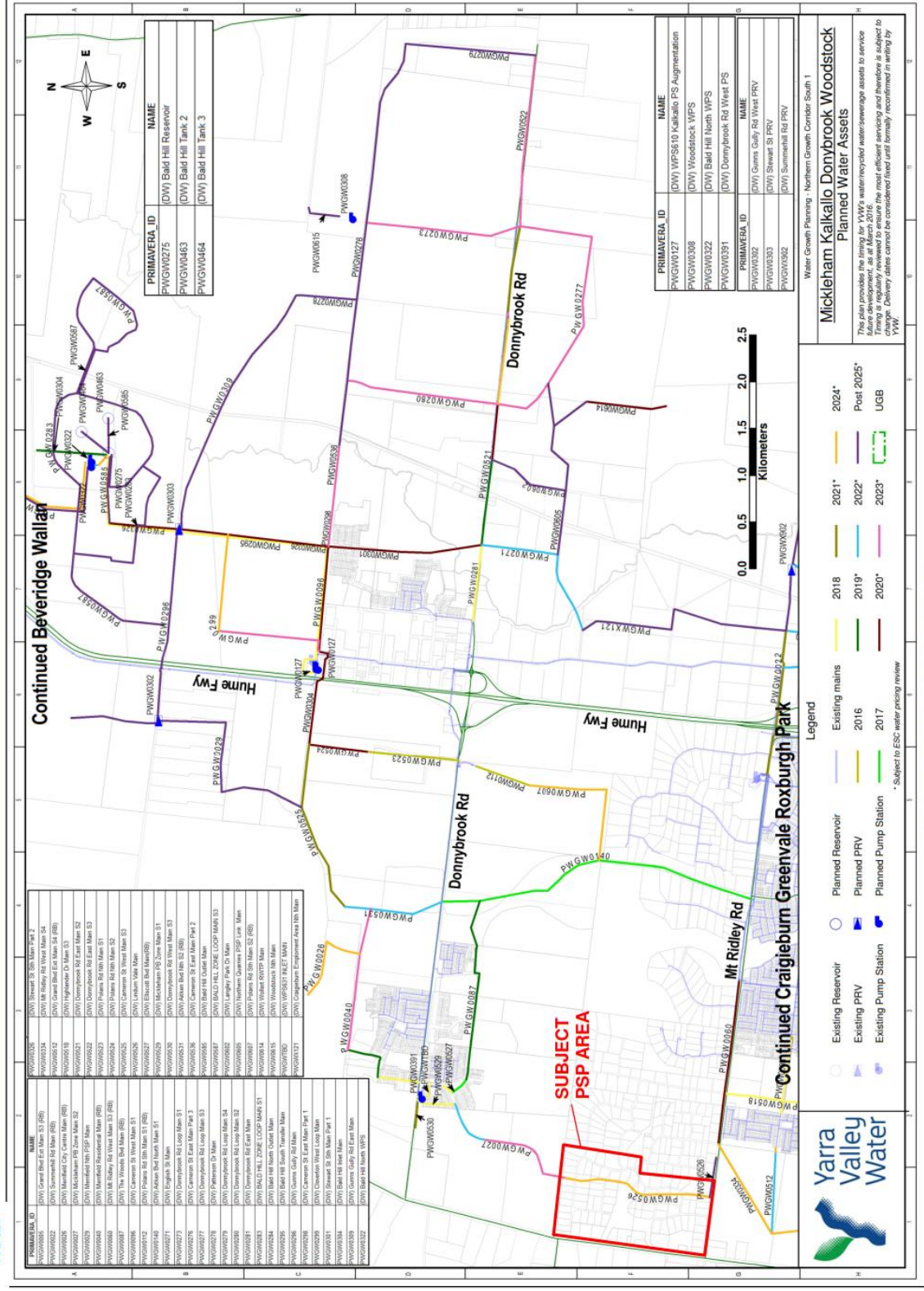
PLAN 1 of 4

NOTE: the attached details of main alignments are conceptual only and based on presently available details, including development layouts.



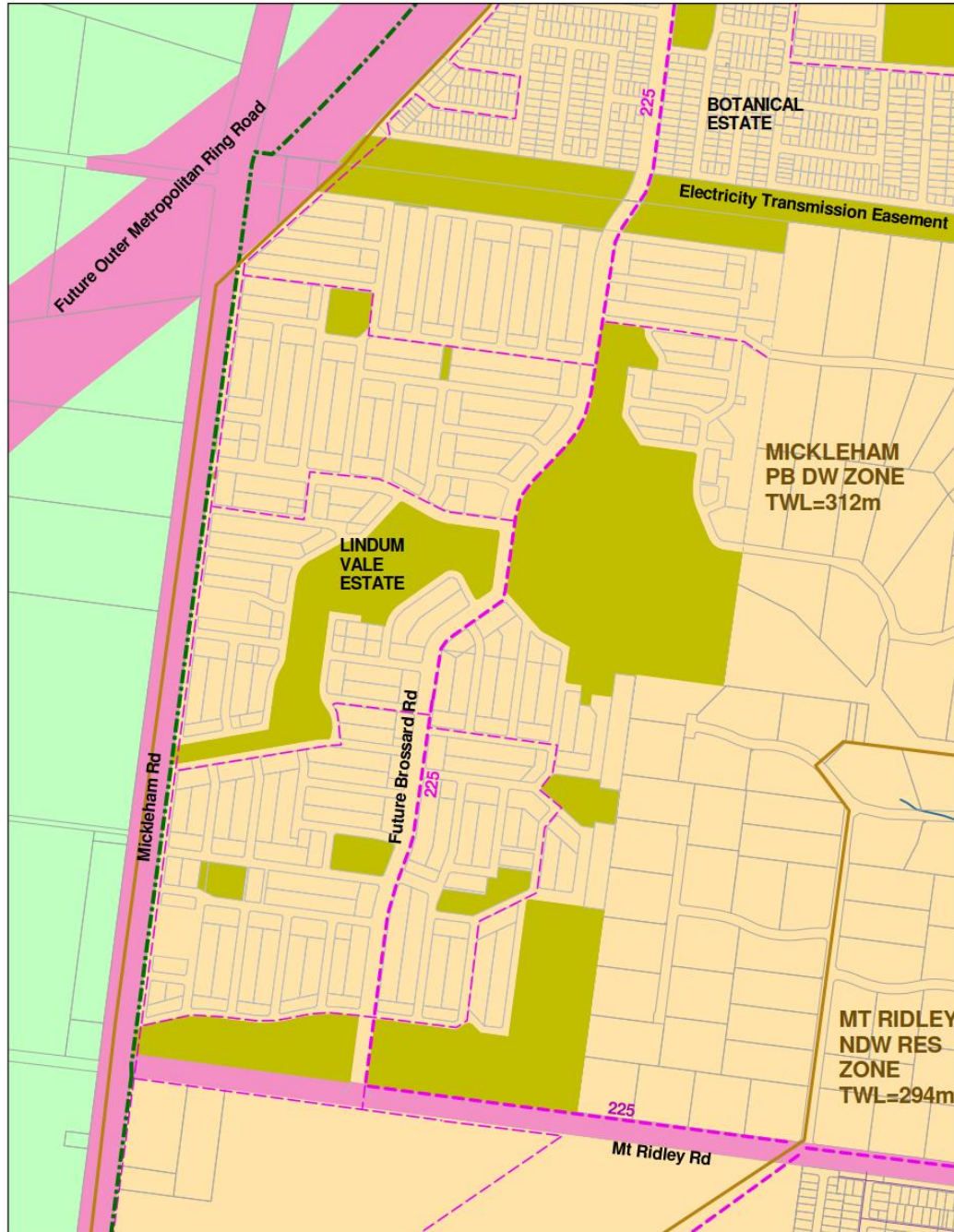
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MICKLEHAM WEST AREA - ASSET PLAN LINDUM VALE ESTATE PRECINCT STRUCTURE PLAN



DRINKING WATER

NON-DRINKING WATER



Legend

- | | | |
|-----------------------------------------------------------|----------------------------|----------------------------------------------|
| Existing Mains | Urban Growth Boundary | urban use |
| Proposed Key Asset Distribution Mains | watercourse | non-urban use - conservation, open space etc |
| Proposed 150 reticulation mains (smaller mains not shown) | water supply zone boundary | non-urban use - farming etc |
| | | Future major roads |

NOTE: the attached details of main alignments are conceptual only and based on presently available details, including development layouts.

PLAN 3 of 4

Prepared by: S Hart Drawing No#:LVLEPSP-03

ATTACHMENT 2 - LINDUM VALE PSP – SEWERAGE SERVICING COMMENTS

