

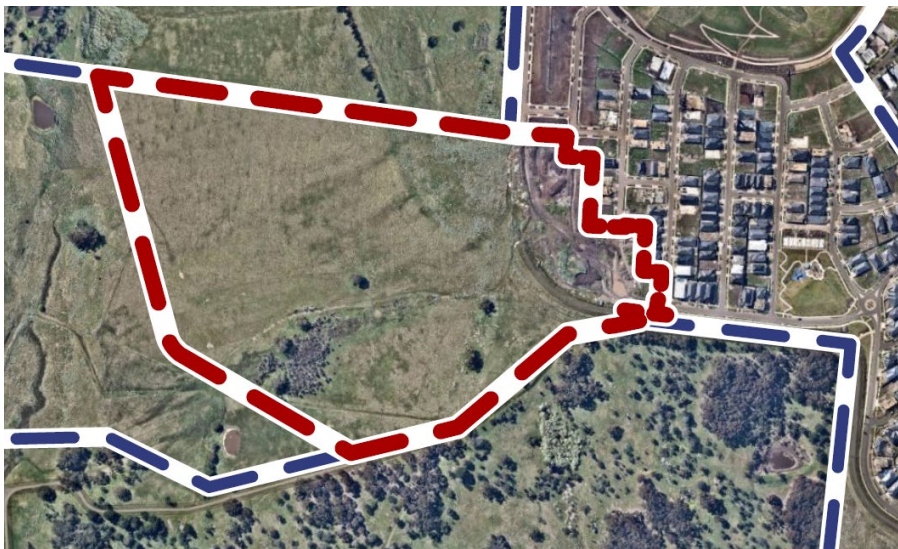
Infrastructure Servicing Report (Revised)
Neighbourhood 4 – True North - Greenvale
Sewer, Water, Stormwater.
Project: 302169

Date: March 2021 (Revised May 2023)
Prepared for URBIS.



1 Site Description and Context

The subject site is known as Neighbourhood 4 (NH04) and is owned by Satterley Greenvale and developed by Satterley Property Group. It is located in Greenvale to the west of the existing True North NH03 area.



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The developable site area is approximately 25 hectares and bounded by the Melbourne Water Corporation (MWC) Greenvale Reservoir to the south, Yuroke Creek to the west, True North NH03 to the east and the Aitken Hill Conference and Events Venue (AHCEV) to the north.

The property generally falls towards the west with small areas falling towards the Greenvale Reservoir. The site falls approximately 35m from the north east corner to the west at an average grade of 1 in 17. The steepest section of the site is around 1 in 4.

The property is vacant land with a small number of existing trees. Four trees are proposed to be retained in reserves in NH04.

The NH04 development area will include approximately 2 ha of NH03 that was delayed so it could be included in NH04 in order to obtain the optimum road and lot configuration. This is effectively Stage 24.

2 Servicing Requirements

This servicing report is based on preliminary servicing information provided by authorities during investigations into the development of the subject land.

2.1 Yarra Valley Water

2.1.1 Sewerage

Spiire has reviewed and discussed options to service the developable area with Yarra Valley Water (YVW). Crossing the retarding basin/creek is a significant obstacle and preliminary designs and investigation followed by discussions with YVW have determined that there is only one possible solution.

The sewer proposal is to grade pipes within the NH04 site along the southern/western boundary and north through the AHCEV site, around the top of the proposed retarding basin, and then south to connect to the existing Horizon Bvd Branch Sewer (HBBS) on the west side of the Yuroke Creek.

YVW have previously advised that the full NH04 site was allowed to be serviced into the branch sewer. However with the extended length of the sewer around the retarding basin the existing branch sewer is not deep enough to control the NH04 area. Therefore a section of the branch sewer will need to be duplicated or re-laid. YVW preference is to re-lay the HBBS, but the cost for this work is yet to be resolved with YVW.

The continuation of the HBBS to the north and into the True North estate needs to satisfy YVW shear stress design parameters. The crossing of the existing YVW M658 water pipeline could be problematic and require considerable liaison with YVW on how to achieve their requirements. Options include going over or under the M658, extending the length of re-laid HBBS or reducing the shear stress requirements.

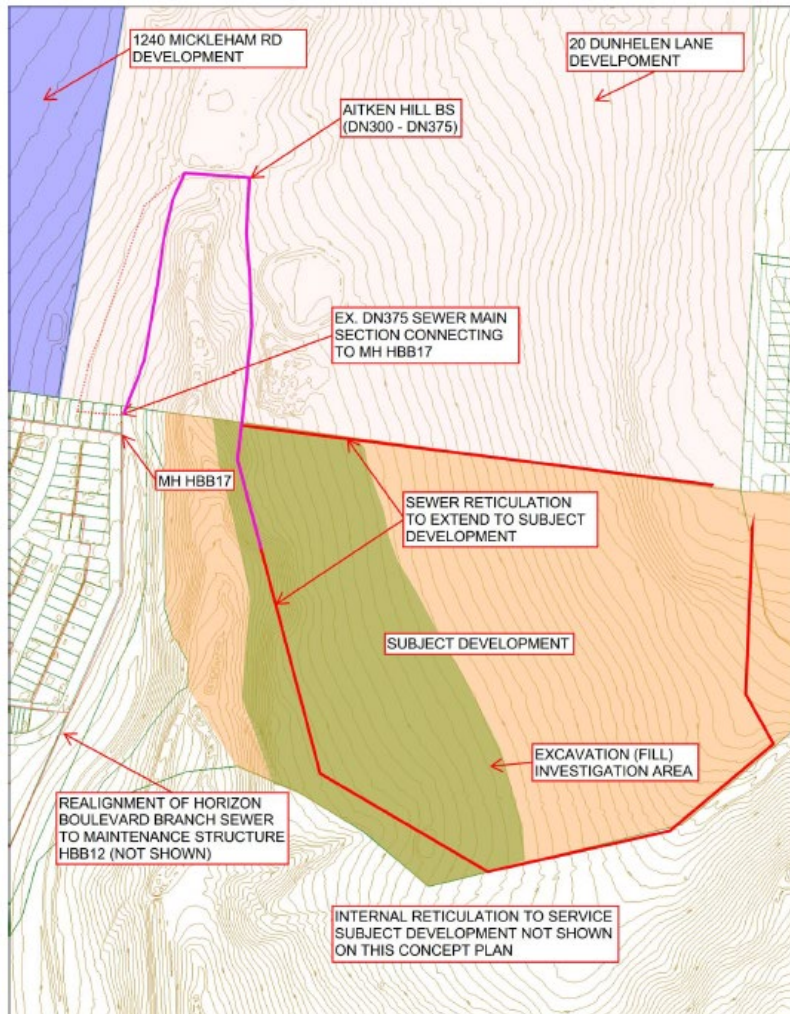
The MWC/YVW bund protection measures with respect to sewer will be continued from the previous True North precincts.

The proposed Stage 24 can be serviced to the east via NH03.

The sewer strategy plan from YVW is shown below.

Application ID:519768 Sewer Concept Plan

Note that details of the required works and/or connection point as shown on the plan are outlined in writing below.



**Main alignments and other details shown are indicative only. All assets to be in accordance with WSAA (MRWA Edition).*

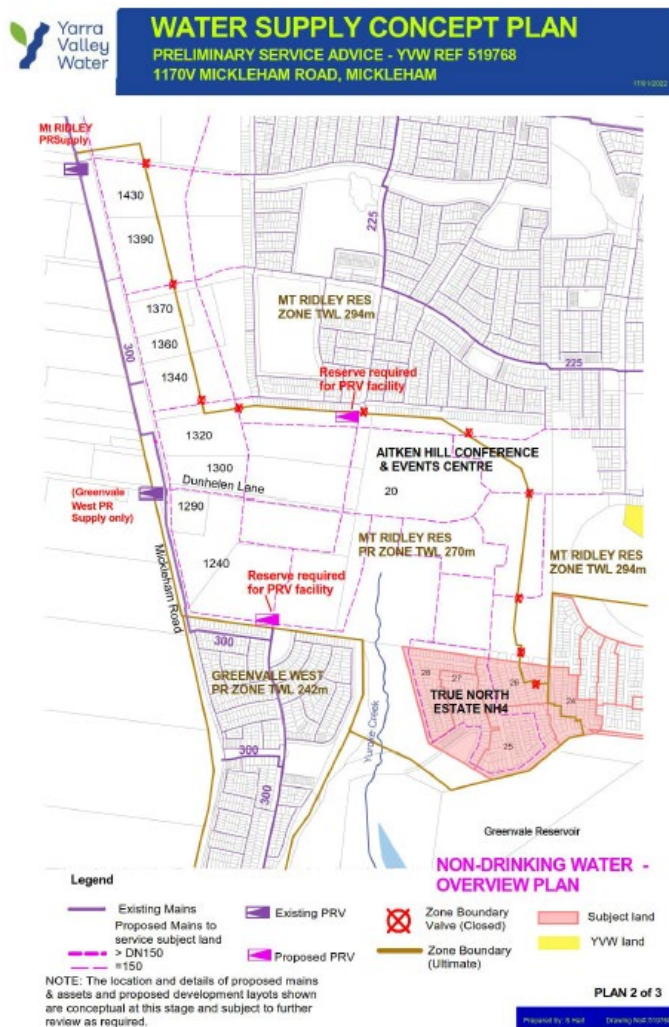
2.1.2 Non-Drinking Water Supply

Yarra Valley Water have advised that the NH04 area is serviceable with a 270m HGRL within the Mt Ridley Pressure Reduced zone. (Note that some eastern parts of the site cannot be supplied with NDW). The NH04 area shall be serviced from the north through AHCEV from one of YVW's two Pressure Reducing Valve (PRV) stations. The PRV's in Mickleham Rd have both been built, but the other two have not been built.

Further consultation with YVW shall better define the detailed strategy with PRV station locations and supply routes to NH04. The supply will need to be brought to NH04 through land to the north of NH04.

The proposed Stage 24 is partly situated within the NDW zone and partly outside.

The NDW strategy is shown below.

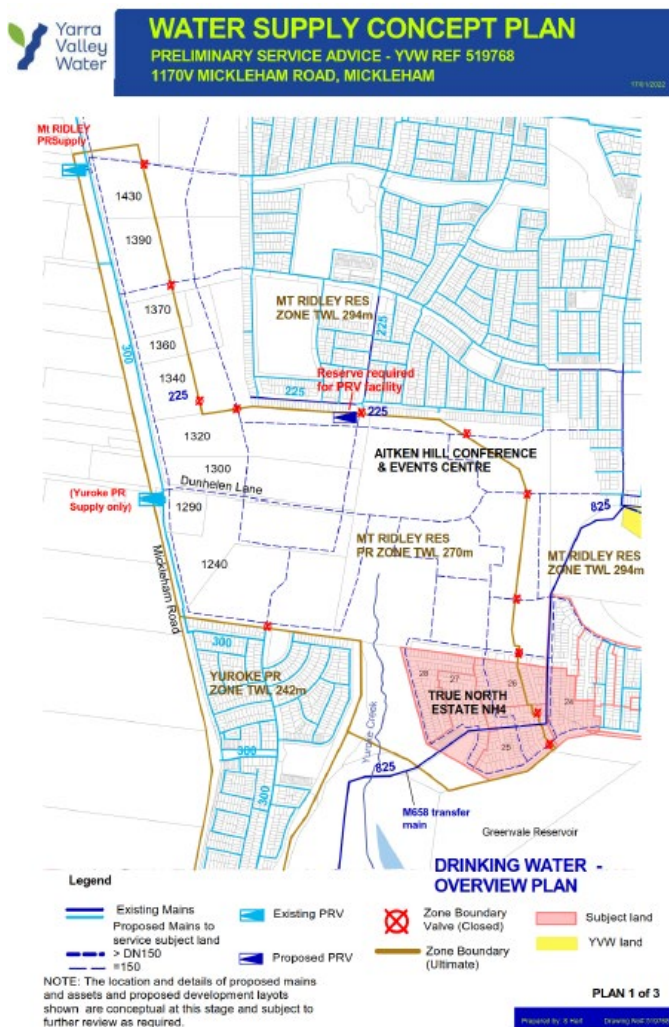


2.1.3 Drinking Water Supply

Yarra Valley Water have advised that the NH04 area is serviceable with a 270m HGRL within the Mt Ridley Pressure Reduced zone. The NH04 area shall be serviced from the north through AHCEV from one of YVW's two Pressure Reducing Valve (PRV) stations. The PRV's in Mickleham Rd have both been built, but the other has not been built.

Further consultation with YVW shall better define the detailed strategy with PRV station locations and supply routes to NH04. The supply will need to be brought to NH04 through land to the north of NH04. The proposed Stage 24 can be serviced from the east via NH03.

The drinking water strategy is shown below.



2.1.4 825 Water Main.

Yarra Valley Water's existing M658, 825dia water supply transfer pipeline runs through the NH04 development. The main is a non-tapping main and is not available for any reticulation off-takes or property connections and requires to be in a dedicated reserve through any development. Yarra Valley Water have met and discussed the existing infrastructure with Spiire and Satterley. The main has been located by Spiire Survey geographically and the depth has also been obtained.

Conditions for building over the asset have been discussed with YVW. The Greenvale Reservoir protection bund and the developments reticulation sewer crossing of the M658 main requires YVW consultation and approval of protection measures.

The watermain deviates outside the existing easement in places and YVW requires a new 11m reserve to cover the watermain on the correct alignment. This will be provided within the proposed layout for NH04. YVW may allow shared paths and landscaping in the reserve following further consultation with VPA and Council.

YVW require that roads and driveways crossing the watermain be minimised and negotiations have commenced on the number and location of these crossings. YVW conditions will also be met with respect to road and stormwater drainage crossings of the watermain and will need detailed investigation and design.

All interactions with the M658 825dia watermain shall be detailed within the design phase of NH04 and approved by YVW.

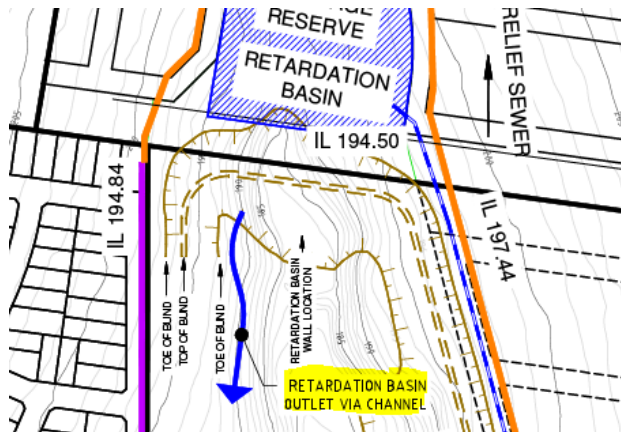
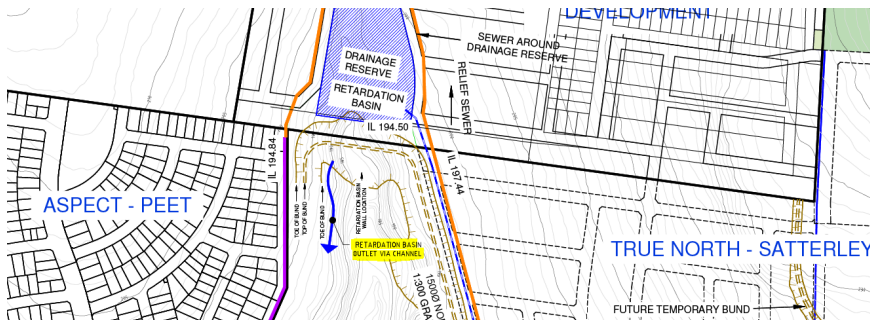
2.2 Main Drainage.

Hume City Council is the responsible authority for drainage facilities where the catchment size is less than 60ha so will deal with drainage internal to the NH04 site. Melbourne Water Corporation (MWC) are the responsible authority for the overall catchment which contains the greater than 60ha Yuroke Creek that is located in a drainage reserve to the west of the NH04.

The proposed Stage 24 can be serviced to the east via NH03.

2.2.1 Retarding Basin

A retarding basin is proposed to be located in the existing Yuroke Creek contoured valley north of the NH04 land. The water discharged from the retarding basin will flow via a concrete channel south of the reservoir water catchment into the Yuroke Creek drainage scheme. The retarding basin will be a major construction undertaking and MWC want to retain control of the design. The tendering and construction process will be managed by Melbourne Water.



Preliminary advice from MWC indicates a sediment pond will be located on AHCEV land directly to the north west of NH04 to treat water flowing into the retarding basin and creek. The Stormwater Quality assets proposed within the Yuroke Creek DSS area are subject to change based on the detailed design and consultation with Melbourne Water's Drinking Water Quality team.

2.2.2 Bund C

MWC require that developers provide a 1 in 1,000,000 year ARI protection plus 600mm freeboard for stormwater runoff potentially discharging into the Greenvale Reservoir. To provide this protection earthen bunds have been constructed around much of the reservoir to allow housing within the reservoirs natural catchment. These bunds direct the stormwater around the reservoir into the surrounding waterways. Bunds A, B and D have previously been built and NH04 contains the last of the bund (Bund C) constructions that will finalise the required protection around the reservoir.

Melbourne Water engaged AECOM to undertake the functional design of the 1 in 1-million year retarding basin embankment, Bund C and the outfall works. The functional design project has recently been completed.

2.3 Gas

Ausnet Services is the responsible authority for gas services in the area. Gas mains are reticulated throughout the directly adjacent True North development and could be extended into the site to supply a gas service.

2.4 Electricity

Jemena is the responsible authority for electricity services in the area. There are existing High Voltage mains and substations in the directly adjacent True North development that can be extended into the site to supply electricity.

2.5 Telecommunications

NBNCo is the responsible authority for telecommunications services in the area. Developers are able to choose approved telecommunications providers other than NBNCo in many areas. The directly adjacent True North development is serviced by Opticomm for telecommunications. A search of Before You Dig Australia records a Telstra service in the order of 500m away and available for the connection of telecommunications

3 Summary

The Servicing Plan has been prepared to reflect current information available and to enable clarity on land use and the shape of the subdivision. The plan generally complies with Council guidelines as currently known and we believe that the proposed layout generally reflects a viable development solution. Further discussion with Council and other authorities will be required to finalise their conditions. The NH04 site is serviceable for the authorities as stated above.

Appendix 1 – Sewerage Infrastructure Servicing Plan.

(Note that the lot layout for NH04 may be superseded)

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