

www.nesd.com.au

PO Box 882 Wangaratta VIC 3676 Ph 0407 216 710 Fax 03 5721 6701 matt@nesd.com.au PO Box 2223 **Echuca** VIC 3564 Ph 03 5480 0688 Fax 03 5480 0788 nick@nesd.com.au

### **Clarkes Lane Servicing Report**

## 7<sup>th</sup> February 2024

### Sewerage

Wastewater from Wangaratta is transferred by a pumped network to the treatment plant at North Wangaratta. It is understood that limited capacity in the transfer infrastructure is impacting housing affordability and availability. North East Water Authority (NEWA) has advised that a substantial upgrade in infrastructure is required to enable housing land to be released.

It is proposed to service the residential development of the land, utilising a 'Whole of Water Cycle' and 'Integrated Water Management' (IWM) strategy.

The IWM strategy will include a sealed onsite wastewater treatment plant to meet the water quality requirements of the relevant agencies and water storage for summer irrigation (Figure 1). The immediate proximity of open space and recreation areas provides ample opportunity to utilise a new water resource to displace current high-value water sources and create community benefit.

The IWM strategy proposes to treat and reuse wastewater from the Clarkes Lane project and enhance the environment through substituting recycled water for other sources. This approach has the most potential to meet the requirements for wastewater infrastructure for this project and provide a long-term source of alternate water supply for surrounding passive and active open space to the benefit of the community.

The IWM concept aims to utilise available water resources to do the following;

- 1. Create immediate capacity in the wastewater network by constructing a package wastewater treatment plant on public land, to treat wastewater for irrigation of community open space, sourced from adjacent wastewater networks.
- 2. Enable the development of the Clarkes Lane land to alleviate the current shortage of titled lots, by treating the wastewater from the project in the package treatment plant as development proceeds.
- 3. Substitute high-value water (potable water and groundwater) currently used for irrigation of community open space with lower quality recycled water.

The IWM solution for the management of wastewater from the development has been presented to the Rural City of Wangaratta and North East Water Authority. Both agencies have supported the concept (Appendix 1).

It is anticipated that this Integrated Water Management model will set the benchmark for other similarly stressed wastewater systems in regional Victoria, allowing flexibility to address the needs of the agencies and community to support housing provision.



Figure 1. IWM Infrastructure Concept Layout

### Water

There are existing water mains surrounding the site. Recent advice from NEWA on the 13<sup>th</sup> August 2021 from Russell Sunderland indicated the following:

In regards to the water reticulation network there is likely to be no issues with the serving of the land if it was to be rezoned. NEW may have some requirements to create a ring main within /through the development and the upsizing of the water main that exists on Clarkes Lane.

There is an existing 150ø UPVC reticulated water main that services the land along the Wangaratta Whitfield Road and Milnes Creek Drive. There is also an existing 100ø UPVC main that runs along Clarkes Lane.



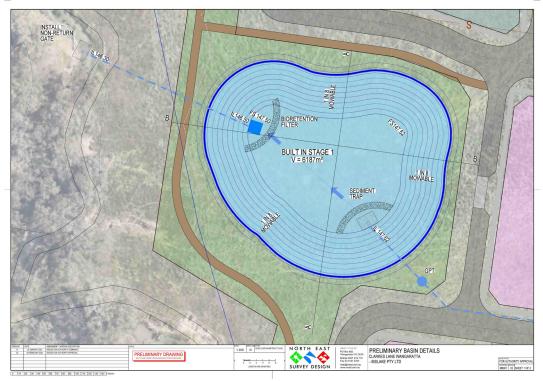
Page 2 of 5

### Drainage

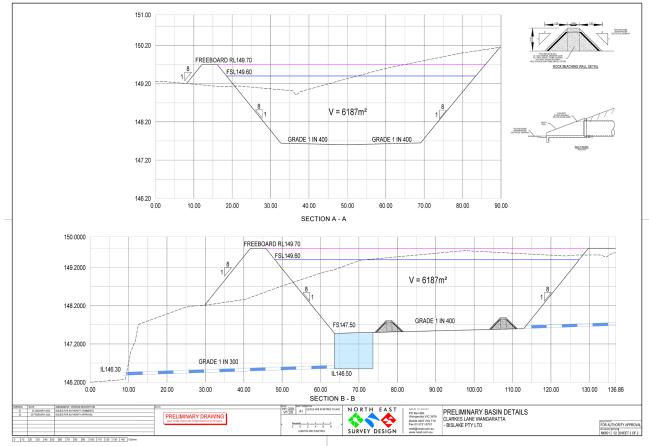
Cl 56 of the planning scheme requires all stormwater to be treated in accordance with Best Practice Environmental Management Guidelines. This can be achieved through various methods some of which may include Bio-retention Basin and Retarding Basins / Sedimentation Basins. *Refer to Stormwater Report.* 



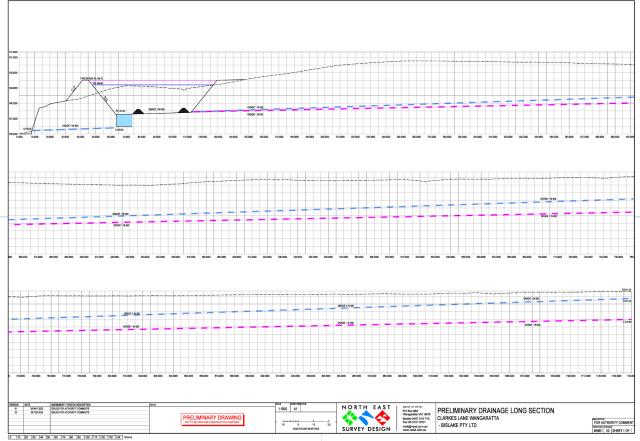
The development will be required to install a full kerb & channel and underground pipe system to a bioretention basin.







The site will drain to the west to the One Mile Creek and is capable of operating as a gravity system. See Below.



NORTH EAST SURVEY DESIGN

# Whilst there is high-pressure gas in Wangaratta Whitfield Road in the vicinity of this development and there is a 63ø gas main in Clarkes Lane and Milnes Creek Drive, however due to the recent state government decision gas not be made available to this development.

### Telecommunications

There is Telstra / NBN infrastructure in the vicinity of the development. The developer is required to install pit and pipe networks in accordance with NBN requirements.

### Power

There is a large high voltage power line crossing the eastern boundary of the site. This will need to be re-routed underground and it is assumed that several new substations will be required to service the development via underground power and street lighting in accordance with Australian Standards. There is also access to underground power in Milnes Creek Drive.

#### Appendix 1 – NEWA Correspondence

 From: Craig Heiner <<u>CHeiner@newater.com.au</u>>

 Sent: Monday, 25 October 2021 9:02 AM

 To: Simon Reed <<u>sreed@luxmoore.com.au</u>>

 Cc: Rebecca Jhonston <<u>RJhonston@newater.com.au</u>>; Brendan McGrath <<u>b.mcgrath@wangaratta.vic.gov.au</u>>

 Subject: RE: Clarkes Lane , Wangaratta

Hi Simon

Thanks for the scoping letter confirming your intended development in Wangaratta as outlined at the meeting of the 13 of October.

North East Water is supportive of the proposed innovative approach and will work in partnership with the developer and Council to achieve the outcome.

While there will be a significant level of detail to work through our main priorities are:

- · The quality of the infrastructure to be gifted to, and subsequently operated by NEW
- The fit for purpose reclaimed water product, uses and pricing
- · Ensure the commercials are not a negative outcome for our customers

This is an opportunity to showcase Integrated Water Management in Wangaratta and enhance the drought resilience of key community assets.

Kind regards,



Every drip, drop & splash counts



P. 02 6022 0594 PO Box 863, Wodonga Victoria 3689 83 Thomas Mitchell Drive, Wodonga Victoria 3690

Target your water use | newater.com.au

# Gas

NORTH EAST SURVEY DESIGN