
INFRASTRUCTURE REVIEW - ELLESMERE
PREPARED BY MURRAY ENGLAND – ASSET MANAGER WATER SERVICES
SELWYN DISTRICT COUNCIL

Introduction

1. My name is **MURRAY RUSSELL ENGLAND**. My qualifications are BE (Environmental) and NZCE (Civil).
2. I am the Asset Manager – Water Services for the Selwyn District Council (“the Council”) and I am authorised to present this statement on its behalf. I have been employed by the Council since March 2009 initially holding the position of Stormwater Engineer and since May 2012 the position of Asset Manager Water Services.
3. I have the responsibility of managing Council’s 5 waters which include Potable Water, Wastewater, Stormwater, Land Drainage and Water Races.
4. This report considers the impact of re-zoning land, as part of the District Plan review, in relation to the water supply, wastewater system, and stormwater network operated by Council.

DPR-0162 – 461 Drain Road, Doyleston

5. **Water** – The Doyleston water supply is sourced from Leeston, a water supply which provides treated groundwater to the community.
6. In response to the accelerated growth within the Selwyn District, hydraulic models have been used to plan for future water infrastructure for a number of water supplies including Leeston and Doyleston. The master planning provides an assessment of the sizing and timing of new infrastructure.
7. Leeston and Doyleston is expected to see growth over the next 30-years. Capacity upgrades are proposed to meet this growth including additional water sources (bores), storage and pipeline infrastructure. Recently Council developed the 2021 – 31 Long Term Plan which included budget for further development funded, capacity upgrades on the water supply.
8. I consider that additional capacity within the network, to service the rezoning can be made

available with further capacity upgrades proposed and planned for. It is noted that development contributions are payable for any additional lots developed.

9. **Wastewater** – Doyleston is serviced by a reticulated wastewater network. Influent is treated at the Ellesmere Wastewater Treatment Plant (WWTP) by means of multistage maturation ponds with effluent disposed to ground via centre pivots. During periods of high ground water, effluent is diverted to infiltration basins.
10. Existing growth predictions will result in exceedance of current resource consent conditions and require additional capital expenditure.
11. To continue to meet environmental standards and provide for growth in Ellesmere, Council confirmed in the 2021/31 Long Term Plan (LTP) to pipe wastewater to the Pines Wastewater Treatment Plant (WWTP) in Rolleston. This project is scheduled to commence construction in 2023/24 with completion planned 30 June 2024. The work will be funded by a combination of the sewerage district-wide targeted rate and development contributions.
12. Due to the capacity constraint at the current WWTP, a 'no subdivision for the purpose of residential use shall occur until such time that the Ellesmere Wastewater Treatment Plant has been connected to the Pines WWTP and is capable of servicing the lots within the rezone area.
13. **Stormwater / flood mitigation** –
14. The Outline Development Plan proposed for this rezoning shows the stormwater management areas and reserve space within the low-lying areas of the site and along identified secondary overland flowpaths. This area is historically shown to be susceptible to flooding. To ensure future stormwater management devices are not overwelled by backwater effects and high groundwater levels, the stormwater management areas may need to be enlarged and extended upgradient.
15. Detailed hydraulic modelling of the catchment and existing waterways will be required prior to lodging for subdivision resource consent and engineering approval. Modelling will be needed to ensure downstream flooding is not worsened by the development and suitable floor levels are set.
16. I consider that prior to any resource consent being lodged, detailed modelling of the catchment and existing waterways is required to ensure that the sizing and location of stormwater management areas for this re-zoning is appropriate. Resource consent for stormwater discharge from Environment Canterbury will be required before any subdivision consent can be approved.

DPR-0436.1 & DPR-0436.2 – Dunsandel

17. **Water** – The Dunsandel Water Supply provides treated groundwater to Dunsandel township.
18. As the township grows, the consented water allocation for this supply will be put under pressure.
To ensure that growth is appropriately integrated with the provision of infrastructure, and planned growth can be serviced, priority of water allocation needs to be given to those areas already zoned for development.
19. In my opinion, there is potential for this zone change request to be recommended for decline due to water availability limitations. In this instance however, if existing consent CRC 980139.1 held by P.B Nahkies is vested in Council, I am satisfied that sufficient water can be made available to service this rezoning.
20. **Wastewater** – The applicant proposes that the rezoning area is serviced on-site treatment and disposal systems. I confirm that this is appropriate and that consent will need to be sort from Environment Canterbury prior to subdivision consent.
21. **Stormwater** – The applicant proposes that stormwater disposal would be to soak pits within the subdivision. I confirm that this is appropriate.

DPR-107 – Country Garden Group Ltd, Dunsandel

22. **Water** – The Dunsandel Water Supply provides treated groundwater to Dunsandel township.
23. As the township grows, the consented water allocation for this supply will be put under pressure.
To ensure that growth is appropriately integrated with the provision of infrastructure, and planned growth can be serviced, priority of consented water allocation needs to be given to those areas already zoned for development.
24. In my opinion, there is potential for this zone change request to be recommended for decline due to water availability limitations. Should the re-zoning application be approved in whole or in part, consented water needs to be made available to Council from the developer.
25. **Wastewater** – The applicant proposes a number of options for wastewater servicing including on-site wastewater and connection to the Pines Wastewater Treatment Plant. Consent will need to be sort from Environment Canterbury prior to subdivision consent.

26. **Stormwater** – The applicant has not provided an assessment on how stormwater will be managed within this proposed development. It is likely that stormwater will be collected, treated, and disposed to ground. Resource consent for stormwater discharge from Environment Canterbury will be required before any subdivision consent can be approved.

DPR-364.001,002,003 and DPR-0414.429 Requests for Changing LRZ to GRZ in Leeston and Southbridge

27. I confirm that the Change from LRZ, which requires an average lot size of 750m², to GRZ, which requires an average lot size of 650m², can be serviced. This change would reflect the existing density provisions of the Operative District Plan. So, in that sense, it's not an additional load on the infrastructure beyond that which is planned for.

Murray England
Asset Manager Water Services, Selwyn District Council

8 December 2022