

MEMO

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FROM

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DATE

27 June 2024

SWDC GREYTOWN NEW DEVELOPMENT CONNECTIONS ADVICE

Purpose

The purpose of this memorandum is to provide South Wairarapa District Council a technical assessment of wastewater system constraints, risks, and opportunities to enable new development connections to support growth in Greytown. The memo also provides guidance on the assumptions and conditions under which new connections may be approved until the required remedial works are completed.

Background

Greytown population was estimated at 2,202 in 2013 census, 2466 in 2018 census and is projected to increase to 3674 by 2051. The existing population is estimated at 2,720. This memo provides more detailed advice following a recent pre-application from a significant development and should be read

in conjunction with the high level statement on capacity of SWDC wastewater treatment plants to support growth prepared by WWL for SWDC in late May 2023. The Greytown WWTP was designed to service approximately 2200 people and the existing population exceeds this by around 500 people. In addition, through the 2021 spatial planning works South Wairarapa District Council (SWDC) has identified additional land that could be developed. This change in land use is estimated to provide for another 1080 persons to the Greytown population over time.

Greytown Wastewater System Constraints

The current consent WAR6080254 which the treatment plant operates under requires SWDC to operate in accordance with the application made in 2014. At the time, no additional growth was expected, based on Statistic NZ projections, with a small buffer expected from existing observed loading. The consent required initial upgrades for ultraviolet disinfection and an initial land disposal field, a further stage of land disposal from 2030 and finally winter storage from 2039 to effectively remove discharge of treated wastewater from Papawai Stream. Management of any small increase in hydraulic flows for land disposal were proposed to be based on an inflow & infiltration reduction plan to reduce known stormwater and groundwater loading on the wastewater system.

GWRC have issued several “Please Explain” letters to date, with a focus on concerns on ecological effects on the Papawai Stream. The current treatment ponds do not provide effective treatment of nutrients, particularly as they are operating beyond their original design basis of 2,200 population. The actual capacity is dependent on several factors including temperature, flow rates and actual loadings (due to the nature of Greytown as holiday destination) which are not well understood at this time and further investigation is recommended to quantify these. GWRC are expected to make a decision on any further enforcement action in regard to ecological impacts following submission of an Efficacy Report which is due to be completed in July 2024.

The 2023/24 summer irrigation was successful, however it highlighted that future summer irrigation seasons are very much weather dependent. SWDC have leased part of the irrigation land area to a Gliding Club, which has effectively constrained the wastewater irrigation operation. It is understood this lease arrangement will continue, despite WWL advice to the contrary due to the constraint it places on efficacy of the land discharge operation into the future as the land disposal pathway becomes more critical.

There is a discrepancy of the measured inflow to outflow from the ponds, likely due to leakage from the clay lined ponds. This was assessed in the consent application to be having no more than minor effects on surface waters however it is likely to require further assessment and possibly remedial works in the future. Reducing leakage would place further pressure on land discharge, thereby limiting growth due to hydraulic loading limits in the consent.

The network pipes to the plant are understood to have some hydraulic constraint along Papawai Road. There was a previously identified project to increase this capacity which was only partially completed due to cost escalation requiring planned scope to be reduced. Completion of the final

stage of that pipe upgrade will be required at some stage for growth, however implications of further growth are not sufficiently understood at this stage and would need hydraulic modelling to assess.

New Connections scenario assessment

No further connections

Accepting no further, or a minimal further number of connections would maintain the current level of borderline treatment process overloading. There would likely be non-compliance to some degree from the treated effluent quality and/or land discharge capacity. This is expected to be weather dependent. There is a moderate risk of enforcement action from current GWRC considerations of ecological impact assessments.

Additional treatment process capacity by augmentation of the pond-based treatment system, such as additional aeration and/or supplementary nutrient reduction process could reduce the treatment process risk. Design and implementation of Stage 2A will quantify whether the existing SWDC land area is adequate to manage current hydraulic capacity to meet consent compliance, and the degree of risk from wetter than average seasonal conditions.

Permitting existing sub-divisions and smaller scale development

SWDC need to consider and assess the impact of existing consented subdivisions as well as any small scale (i.e. 1 to 2 lot subdivision) as they will marginally increase the risk that the treatment process will become progressively overloaded to the point that effluent non-compliance, periodic odour and discharge volumes exceeding consented limits will become significant, with GWRC enforcement action very likely. Application for a variation to the existing resource consent may well be required.

Further augmentation of the pond-based treatment system will be possible to a point, or augmentation of the existing ponds with a side stream high-rate treatment process for a portion of the influent wastewater may be required, depending on the scale of development. Significant inflow and infiltration reduction measures would be required to maintain treated effluent discharge within the consented Stage 1B and 2A land area.

Growth outside existing urban area

Enabling growth to the extent anticipated in the 2021 spatial planning would require a major variation to the existing resource consent, as it would add 40-50% over the permitted operation. The treatment process would require significant augmentation, and potentially move to a new treatment process using the existing ponds for buffer storage. Further land area for irrigation would be required unless there was a change in strategy to request more discharge of highly treated wastewater to freshwater, which would be contrary to current regional plan policy settings. This would require detailed consideration, particularly of the resource consent implications.

Summary

- The primary system constraint to allowing new connections is the current capacity of the wastewater treatment plant which does not reliably meet the required water quality standard for discharge to the Papawai Stream and is operating beyond the existing consent.
- The secondary system constraint is the capacity for land discharge in accordance with existing consents and disposal area.

Recommendation

Wellington Water recommends to South Wairarapa District Council that:

- An immediate stop to approving *all* new connection applications to the public wastewater network in Greytown, until treatment plant capacity is increased.
- A programme of improvements are completed before new connections are accepted. This requires a range of testing and studies, including influent monitoring, pond capacity analysis and a treatment plant growth study to be completed in advance. This programme of improvement works is also dependant on council funding and may require variation to GWRC consent.
- The scheduled desludging the treatment ponds is undertaken, to allow the plant to perform more reliably with the current number of connections (i.e. operating beyond its design capacity).
- Continuing to accept any new connections (this includes both new applications, and existing applications approved, but not yet physically connected) without undertaking the above recommendations continues to increase the risk of enforcement action from Greater Wellington Regional Council and negative environmental impacts.

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