

TO Stefan Corbett, South Wairarapa District Council

COPIED TO James Witham, South Wairarapa District Council
Russell O'Leary, South Wairarapa District Council
Steve Hutchison, Wellington Water Limited
Charles Baker, Wellington Water Limited
Adam Mattsen, Wellington Water Limited
Mohammed Hassan, Wellington Water Limited

FROM Matthew Hall, Head of Growth and Land Development, Wellington Water Limited

DATE 21st April 2023

Martinborough WWTP capacity – growth and new service connections

The purpose of this memo is to provide South Wairarapa District Council (SWDC) with advice on the capacity of Martinborough's wastewater networks to accept new service connections and service growth.

Background

The local Martinborough wastewater network is piped to the Martinborough wastewater treatment plant (WWTP) where it is treated and disposed to land and water (Ruamāhanga River) via a consent granted in 2016.

Wellington Water commenced responsibility for operating the Martinborough WWTP in 2019 and has since been developing an understanding of the asset's condition and capacity. In December 2021, Wellington Water provided preliminary advice to SWDC of the scale of upgrade required at the Martinborough WWTP.

The site at 3 Roberts Street, Martinborough has been identified for future growth in the South Wairarapa Spatial plan and is identified in the future urban zone in the Wairarapa Combined Draft District Plan. The landowners, Jay and Peggy Short from Canoe Wines Limited Partnership, are seeking to have this site rezoned to residential through the district plan review process (a submission was made to the Draft Combined District Plan seeking rezoning). Their intent is to provide for 48 residential new lots.

The landowner's agent, Kahu Environmental has been liaising with Wellington Water's land development team since mid-2022 regarding three waters related constraints and/or requirements that will need to be addressed to enable the site's development. A summary of the correspondence is provided in *Appendix A*.

Debbie Donaldson, from Kahu Environmental emailed Harry Wilson on 24 February 2023 seeking clarity regarding the status and capacity of the Martinborough's wastewater system; in particular the Wastewater Treatment Plant (WWTP), and the implications for the future development at 3 Roberts Street.

Current status of Martinborough wastewater network

- The Martinborough WWTP is subject to an abatement notice (issued August 2022) from Greater Wellington (GW) for non-compliant discharges of wastewater to land and water.
- The Martinborough WWTP requires significant investment to resolve the current consent non compliances, and to enable growth to be serviced.

- Wellington Water and SWDC have proposed a staged upgrade approach to address the non-compliances. The WWTP upgrade plan includes pond desludging, new inlet works, new outlet pump station and UV system, development of a second irrigation site and other ancillary works. Details on the proposed programme and funding arrangements are outlined in the memo from Tonia Haskell to Harry Wilson dated 30/11/22 '*Corrective action plan for Martinborough WWTP in response to abatement notice A1020*'.
- Pond de-sludging is a key next step and will allow the pond treatment process to operate within standard design and operating criteria to achieve compliant performance for the currently connected population (noting that de-sludging doesn't provide capacity for additional connections). The timing of this work is subject to confirmation of OPEX funding from SWDC.
- The WWTP upgrade plan has been shared with GW, however discussions remain ongoing between Wellington Water, SWDC and GW regarding the priority and timing of work aspects and a final proposed programme is expected to be submitted by 31st May 2023.
- The discussions with GW have not included the potential for additional connections for the plant.
- The total works plan requires significant expenditure and is expected to require several years to implement (currently proposed completion is 2030 for some work elements).
- Funding for the plan is not yet confirmed and additional CAPEX funding from either the Long-Term Plan or via new Entity post Water Reform will be required.
- On 17th April, GW advised Wellington Water and SWDC (via email) that further enforcement action remains possible until they see concrete actions towards bringing the plant into full compliance with its consent.
- The wastewater pipe network is subject to high levels of inflow and infiltration (I&I) which adversely impact on the plant's treatment and disposal capacity, particularly during wet weather.

Martinborough WWTP operational constraints

The WWTP does not currently produce resource consent compliant treated effluent with the existing connected population and the volume and strength of wastewater arriving at the plant is above its design treatment capacity.

The currently connected population is the maximum permitted for the WWTP pond as per standard design criteria. The 2014 resource consent application for the WWTP assumed zero growth but noted that there was 'inherent provision' for some growth provided by future land-based disposal and flow reduction resulting from the infiltration and inflow rehabilitation. According to SWDC provided data, over 500 new lots were approved in Martinborough since 2014 (as part of subdivision consents). However, the anticipated land-based disposal (Pain Farm) has yet to be implemented and no flow reduction via infiltration and inflow rehabilitation has occurred.

Wellington Water is committed to support the Martinborough community by returning the WWTP to full compliance as soon as possible. Continuing to add connections to the plant without implementing measures to manage these connections will further overload the WWTP, exacerbate existing operational issues, and cause the production of further instances of non-compliant effluent. It is likely to adversely impact the resolution of the non-compliances with Greater Wellington. This includes a risk of future enforcement action and or fines. GW have noted in their most recent correspondence from 17th April that

enforcement action remains on the table if they are unsatisfied that sufficient progress is being made towards compliance.

Desludging the pond will enable the pond treatment process to operate within standard design & operating criteria to ensure it is capable of producing compliant effluent. However, the site would require additional treatment capacity to allow for further connections. Additional connections will also ultimately require a resource consent variation to account for the increased volume required to be discharged on an annual average basis.

Requirement for a Martinborough growth study

Wellington Water’s ‘South Wairarapa District Council Spatial Planning – Wellington Water Inputs’ report, 2019, stated that wastewater system growth modelling and analysis would be required to confirm both the existing situation and requirements to service growth in Martinborough. The report noted that the wastewater network will likely require upgraded capacity to avoid blockages and overflows and that the WWTP capacity will need to be reviewed against new growth scenarios and consent limitations, currently sized ~2000 population.

In accordance with South Wairarapa District Council’s master plan prioritisation, Wellington Water has scheduled a detailed growth planning assessment for Martinborough for 23/24. As previously agreed with Council, the three waters growth study will feed into a South Wairarapa District Council’s master planning exercise for Martinborough (yet to commence).

The Wellington Water growth study is critical to inform Council’s growth strategy and fully understand the network upgrades required to facilitate the planned growth in Martinborough. The Wellington Water study will define the expected population in Martinborough to 2051 (the remaining WWTP consent term). The growth projection will be used to inform the WWTP upgrade requirements needed to service the expected number of new connections.

Scenarios and risks

The following table outlines SWDC’s present scenarios, the associated risks, and comments on potential mitigation strategies.

Scenarios	Risks	Comments/Mitigation
Incremental connections continue be added to the Martinborough WWTP system.	<ul style="list-style-type: none"> • SWDC potentially subject to compliance enforcement action from GWRC (including Environment Court enforcement) • WWTP likely to experience additional operational problems, causing some OPEX increases • Possible additional adverse environmental impacts from poorly functioning infrastructure 	<ul style="list-style-type: none"> • GW perception may be that insufficient measures are being taken to address non-compliances and/or non-compliances are being exacerbated. • Mitigation would be an agreed remediation plan with GW to address WWTP compliance issues and completion of growth study to understand requirements service of growth longer term.

<p>Significant new growth enabling measures are approved (prior to completing 3 waters growth assessment and without an agreed plan for remedial/upgrade work on WWTP)</p>	<ul style="list-style-type: none"> • SWDC very likely to be subject to compliance enforcement action from GWRC • WWTP highly likely to have additional significant operational problems • Additional adverse environmental impacts will occur from the poorly functioning infrastructure. • Additional OPEX costs will be incurred to manage non-compliance events. 	<ul style="list-style-type: none"> • Zone change deferred to after 3 waters growth work complete and recommended measures planned for/implemented • Growth study brought forward as part of current 3 Roberts Street plan change assessment
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Wellington Water Recommendations

To support the sustainable compliant growth of the Martinborough area, Wellington Water recommends SWDC:

- prioritises the return of the Martinborough WWTP to full operational functionality and consent compliance to support the current population. The first step of this for SWDC, Wellington Water and GW is to urgently confirm the proposed programme of works to address the present compliance issues with the Martinborough WWTP (including funding).
- prioritises the completion of the Martinborough growth assessment study (currently planned for 23/24) to inform what additional plant upgrades are required.
- not approve additional connections to the Martinborough wastewater network until the Martinborough WWTP is compliant and there is a plan in place to provide sufficient treatment capacity.

Appendix A – Summary of correspondence from WWL on 3 Roberts Street wastewater

Date	Key correspondence/advice regarding wastewater
14 th July 22	Debbie from Kahu emailed Mohammed requesting some initial feedback on network capacity
26 th July 2022	<p>Mohammed emailed Debbie from Kahu Environmental advising:</p> <ul style="list-style-type: none"> • WWL had no network performance data for the area • By looking at the validated dry water run and by applying design flows-based approach of 4 times ADWF the WW pipes would be surcharged but overflow was not predicted • A more detailed assessment would be required during the detailed design phase to confirm whether existing network upgrades were required including onsite mitigation such as wastewater storage and discharge of peak hours
7 th November 2022	<ul style="list-style-type: none"> • Sisra Jayanatha from Pattle Delamore (PDP) emailed Mohammed Hassan with a proposed master plan for 3 water services for the proposed development at 3 Roberts St. • Sisra asked for confirmation whether the existing (public) 3 water services in the area could service the proposed new development as indicated in the master planning basis report. Sisra also sought advice re any considerations or provisions that they should incorporate into 3 water designs for the proposed development once appropriate consents/approvals have been granted. • The proposed masterplan noted that further liaison with WWL was required to verify the downstream capabilities of the existing wastewater network to receive the new connections from the proposed development.
11 November 2022	<p>Mohammed emailed Sisra and advised:</p> <ul style="list-style-type: none"> • The wastewater treatment plant currently did not have any additional capacity • Further discussions with the SWDC planning team and Wellington Water were required to resolve key three waters constraints.