

Featherston Wastewater Treatment Plant Waste Disposal

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Recommendations

1. It is recommended that South Wairarapa District Council:
 - I. **Receive** this paper
 - II. **Endorse** the revised shortlist for community engagement. This includes:
 - Option 1 – New WWTP on site with full time discharge to Donald’s Creek via a constructed wetland and
 - Option 7a – New WWTP on site with a combined discharge to land and Donald’s Creek via a constructed wetland
 - III. **Decide** if Option 5 – New WWTP with full flow to land discharge with storage should be included in the shortlist for community engagement
 - IV. **Note** that delivery of all options would need to be staged and spread over multiple LTP cycles to be affordable.
 - V. **Note** the risk of the further extension of time operating without a resource consent.

Summary

2. In 2020 we concluded consultation with the community and key stakeholders on the long list of ideas (options) available to South Wairarapa District Council (SWDC) to manage Featherston's wastewater. Following this consultation we presented the council with a recommended shortlist of options in February 2021. For various reasons, including providing SWDC with more information on the options and due to the large cost of the viable consentable options, the process was put on hold for a large portion of 2021.
3. We are now in a position to recommend a short list based of options that are likely to be consentable.
4. The results of the work undertaken on consentability have confirmed that the following options are worthy of being shortlisted:
 - I. Option 1 – New WWTP on site with full time discharge to Donald's Creek via a constructed wetland;
 - II. Option 7a – New WWTP on site with a combined discharge to land and Donald's Creek via a constructed wetland and
 - III. Option 5 – New WWTP with full flow to land discharge with storage
5. Option 5 was not previously shortlisted but it performed well when we re-tested the criteria using sensitivity analysis and strongly aligns with planning and policy requirements and with the outcomes sought by mana whenua, the community and SWDC.
6. Further details of these options can be found in [Appendix A](#).
7. The cost estimates for all of the options are outside the affordability assessment advised by SWDC Chief Financial Officer for the current LTP cycle. Council and officers need to consider options to finance such as staging, seeking government funding etc.

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Background

8. The Featherston WWTP receives wastewater from the town of Featherston, which has a population of approximately 2,500 people. The plant was constructed in 1975, and treatment consists of two oxidation ponds in series, and UV treatment.
9. An application for consent for the irrigation of treated wastewater from the Featherston WWTP was lodged with Greater Wellington Regional Council (GWRC) in 2017. In March 2020, the Council resolved to withdraw that application and lodge a new consent application.
10. Wellington Water is leading a project to identify the preferred solution for managing Featherston's wastewater. The summary project plan can be found in [Appendix B](#).
11. The option assessment criteria were developed together with key stakeholders, mana whenua and feedback from the community. The criteria can be found in [Appendix C](#).
12. In February 2021 Wellington Water issued a memorandum to SWDC outlining the shortlisted options for the management of Featherston's wastewater. The shortlist was based on a longlist developed with the community and key stakeholders and aligns with the project process presented to Council in June 2020.
13. Following that memorandum, council instructed that community engagement needed to be paused while Wellington Water provided further information and confidence in the work that has been undertaken. This pause also allowed for the community engagement / consultation on the SWDC Long Term Plan (LTP) to be completed.
14. At a Council workshop on 4 August 2021 Councilors requested further assurance on the shortlisted option, with a focus on:
 - I. Consentability, and
 - II. Affordability.

Consentability

15. This workstream focused on three key elements:
 - I. **Sensitivity** analysis of the MCA scoring,
 - II. **Peer review** of the likely consenting risks, and
 - III. Discussion with Greater Wellington Regional Council (GWRC) officers.

Sensitivity

16. A sensitivity analysis was undertaken by our consultant engineers GHD's technical team of experts.
17. Sensitivity Analysis is a tool that allows us to test whether, if we changed any of the weightings in our assessment, the outcome would be different.
18. The Te Mana o te Wai objectives have not been scored by mana whenua. To allow the sensitivity analysis to be undertaken these objectives were provisionally scored by the technical team based on feedback we have received from mana whenua.
19. This sensitivity analysis has confirmed that three of the previously shortlisted options consistently score favorably with different weighted scenarios. These are:
 - i. Option 1 - New WWTP on site with full time discharge to Donald's Creek via a constructed wetland;
 - ii. Option 7a - New WWTP on site with a combined discharge to land and Donald's Creek via a constructed wetland and
 - iii. Option 7c - New WWTP on site with a combined discharge to land and the Ruamahanga River.
20. In addition Option 5 – New WWTP with full flow to land discharge with storage also performed well in the sensitivity analysis.
21. Option 11b was previously shortlisted but following the peer review and feedback from GWRC (see below sections) we consider this option to no longer be suitable for progressing.

Peer Review

22. A Peer Review of the likely consentability risks of the shortlisted options was undertaken by Paula Hunter from Stantec.
23. Paula has been involved in a number of WWTP consenting projects including most recently the Palmerston North WWTP.
24. This review focused on the likely consenting risk profile with the original shortlisted options taking into consideration alignment with:
 - i. National Policy Statement for Freshwater Management (NPS-FM),
 - ii. Proposed Natural Resources Plan (PNRP), and
 - iii. Section 107 of the Resource Management Act (S107).
25. This review did not include Option 5 - New WWTP with full flow to land discharge with storage.
26. Of the previously shortlisted options, Option 7a - Discharge to Land and Donald's Creek has the lowest consentability risk as it generally aligns with direction from the NPS-FM and the PNRP.
27. Option 11b – Deep bore discharge has the highest consenting risk as it does not align with policy direction and would be considered a new discharge to water which is to be avoided under the PNRP.
28. A summary of findings from the peer review can be found in [Appendix D](#).

Greater Wellington Regional Council

29. We have met with GWRC officers several times since the workshop in August.
30. They have advised that they are unlikely to be able to support an application for Option 11b (deep bore discharge) as this would be considered a new discharge to freshwater.
31. GWRC want to work with us and be able to support an application. They have reiterated that their focus is on alignment with policy and positive environmental outcomes with particular focus on the solution being able to meet Section 107 of the RMA and mitigate adverse effects.
32. GWRC have also confirmed they are open to supporting a staged consent (as SWDC have for Greytown and Martinborough WWTPs) but the details of this would need to be worked through as a solution is progressed.

Affordability

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33. This information has been provided by SWDC and is based on Council's ability to borrow under existing conditions and does not include any third party funding that could be applied for (i.e. Crown Infrastructure Partners).
34. The parameters described may not apply in a situation where water reform progresses and Featherston becomes part of "Entity C" however the debt limits and funding arrangements of "Entity C" are currently unknown.
35. The current LTP has a total of \$17m allocated. \$3m in years 1-3 and a further \$14m in years 4-10.
36. With Council's current debt covenants, SWDC have advised a further \$20m could be made available in the current LTP in years 4-10. This increase would equate to an average rate rise of \$400 per year for ratepayers connected to the reticulated wastewater network.
37. This means that the maximum value that could be made available for this project in the current ten-year LTP cycle is \$37m.
38. It was noted that the current debt covenants could be increased if Council chose to seek a increased credit rating.

39. Further funding could be made available beyond this 10 year LTP period.

40. Based on the provided information:

- Option 1 - New WWTP on site with full time discharge to Donald's Creek via a constructed wetland is the most affordable option with a level one cost estimate of \$30m - \$47m.
- Option 7a - New WWTP on site with a combined discharge to land and Donald's Creek via a constructed wetland could be affordable if it is staged and additional funds are available in subsequent LTP cycles. The level one cost estimate is \$85m - \$127m.
- Option 7c - New WWTP on site with a combined discharge to land and the Ruamahanga River is considered unaffordable under current funding constraints. The level one cost estimate is \$146m - \$215m.
- Option 11b – Deep bore discharge is not recommended for shortlisting for consentability reasons outlined in the above sections.

41. Option 5 - New WWTP with full flow to land discharge with storage has a level one cost estimate of \$95m - \$139m. Much like option 7a this option could be staged and delivered over multiple LTP cycles if additional funding was available.

42. Please see diagram attached as Appendix E for an outline of the Wellington Water cost estimating process.

Risk

43. Further delays to the progression of this project could result in prosecution action by GWRC.

44. An extension to the time limit for WAR120294 (discharge to water application lodged in May 2012) was granted on 4 May 2021 by GWRC. This extension expires on 1 February 2023.

45. Although not explicit in the documentation we have sought clarification from GWRC on what this extension is intended to cover. GWRC have advised that it

was intended that a new consent application decision would be made before this extension expired

46. There is a significant amount of work to undertake before a new consent application can be lodged. Further delays with allowing this project to progress could result in this deadline being missed, which could result in SWDC being exposed to risk of prosecution for unconsented discharge.
47. If we can demonstrate that reasonable steps are being taken towards obtaining a new discharge consent, it is less likely that prosecution action would be successful.

Next steps

48. Wellington Water will prepare a communications strategy for community engagement on the shortlist of options. This will be reviewed and agreed with SWDC officers before being shared with Councilors.
49. The project plan will be re-baselined to accommodate the delays to the programme that have occurred.
50. Following approval of the communication strategy, engagement will commence with the community and key stakeholders on the shortlisted options.

Appendices

- [Appendix A – Details of potential shortlist options](#)
- [Appendix B – Project Plan](#)
- [Appendix C – Assessment Criteria](#)
- [Appendix D – Peer Review Consentability risk summary](#)
- [Appendix E – Wellington Water Cost Estimation Process Diagram](#)

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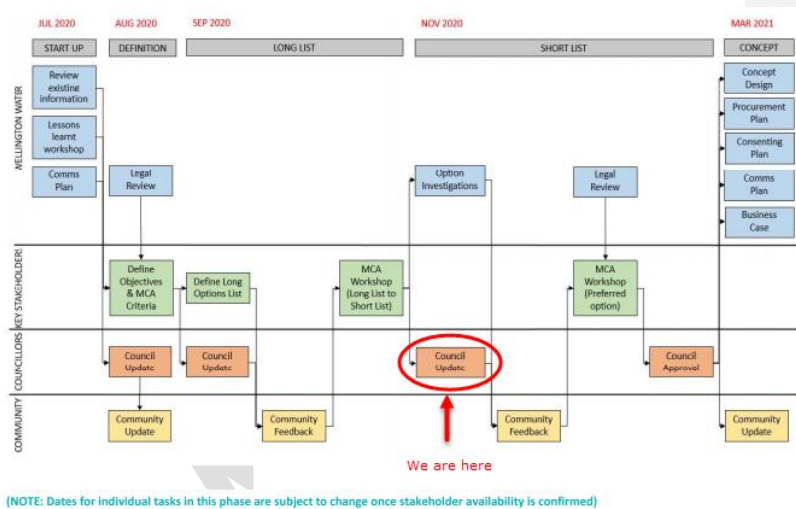
Appendix A - Details of potential shortlist Options

Option	Wastewater Treatment	Treated Wastewater Discharge
Option 1 New WWTP onsite & Discharge to Donald's Creek	Replace ponds with a new WWTP onsite, achieving good removals of nitrogen, phosphorus and pathogen	100% to Donald's Creek, a constructed wetland within existing site
Option 7a Upgraded WWTP onsite & combined land & water discharge to Donald's Creek	Somewhat similar to Option 1, new WWTP replace ponds, likely a MBR followed by additional UV treatment for consistent QLD Class A recycled water	Discharge to land via irrigation of 60ha (mainly sub-surface) and discharge to Donald's Creek via a new constructed wetland when irrigation is not possible/no capacity
Option 5 Upgraded WWTP onsite & full flow to land (large storage)	Add a membrane filtration plant after pond for solids and pathogens removal	100% to land, require 135 ha land (surface irrigation) and 380,000 m3 storage, assume land <10km away

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Appendix B - Project plan

1. The project plan is summarised in the following diagram and was approved by the Assets and Services Committee on 17 June 2020.



2. The option development and evaluation process being used follows the NZ Treasury guidelines for Multi Criteria Assessments (MCA). This reduces risk, ensures that we identify the best possible solution to manage Featherston's wastewater and that we meet the process requirements of the RMA.
3. There is not a strong emphasis on cost or affordability at the early stages of this process as we are focused on achieving the best outcomes possible. Further emphasis will be placed on affordability of the options at the next stage of assessment and in delivery of a concept design. This is where options such as staging and alternative funding opportunities will be further investigated.
4. Following the review and lessons learnt from the previous application there has been increased community and stakeholder engagement. This means that community and stakeholder ideas, thoughts and values are fully considered by the project team and experts as the options are refined and assessed from the longlist through to identifying the preferred option.

Appendix C – Assessment Criteria

Investment objectives

- The principles of Te Mana o te Wai (Freshwater National Body Statement)
- The health and wellbeing of water bodies
- Avoiding harm to public health related to wastewater treatment and return to the environment
- Supporting sustainable use of water, land and energy resources
- Catering for the community's needs now and in the future

Cultural, Environmental and Social Impacts

- Enhancing landscape and visual amenity
- Minimising aerosols and odour impacts on people
- Providing for natural processes (plant growth or wetlands) to have contact with wastewater
- Providing for discharges to land over discharges to water
- How might it affect adjoining land uses?

Cost, Constructability and Operations

- How feasible is the option?
- How complex would the operation and maintenance be?
- Will it provide resilience against operational failures and negative environmental impacts if it did fail?
- How resilient is it to earthquakes and natural hazards?
- Can it get resource consents under the Resource Management Act?

Appendix D -Peer Review consentability risk summary

Option	Comments
<p>Option 1</p> <p>Wetland discharge to Donald's Creek</p>	<p>The initial review considers this option to have a high consenting risk for the following reasons:</p> <ul style="list-style-type: none"> • <u>NPS-FM</u> – a 100% discharge to water may not be considered enhancing the health and wellbeing of the water. <p>Having said that with support from mana whenua this may not be an issue</p> <ul style="list-style-type: none"> • <u>PNRP</u> –If it is considered a discharge to water then we will need to demonstrate reduced volume and reduced contaminates <p>If this option is considered a discharge to land the consenting risk is reduced.</p> <ul style="list-style-type: none"> • <u>S107</u>- GHD have noted that this option may not meet all requirements of section 107. A consenting authority <u>cannot grant consent</u> for a discharge if it will result in any of the effects in S107. <p>If this option is considered a discharge to land and the requirements of s107 can be met the consenting risks would be significantly reduced.</p>
<p>Option 7a</p> <p>Discharge to Land and Donald's Creek</p>	<p>The initial review considers this option to have a low consenting risk for the following reasons:</p> <ul style="list-style-type: none"> • <u>NPS-FM</u> – With a combined land and water discharge this option aligns with the NSP-FM as the volume of discharge to water will be reduced from existing. • <u>PNRP</u> –This option reduces the volume of discharge to water and with improved treatment will reduce contaminates.

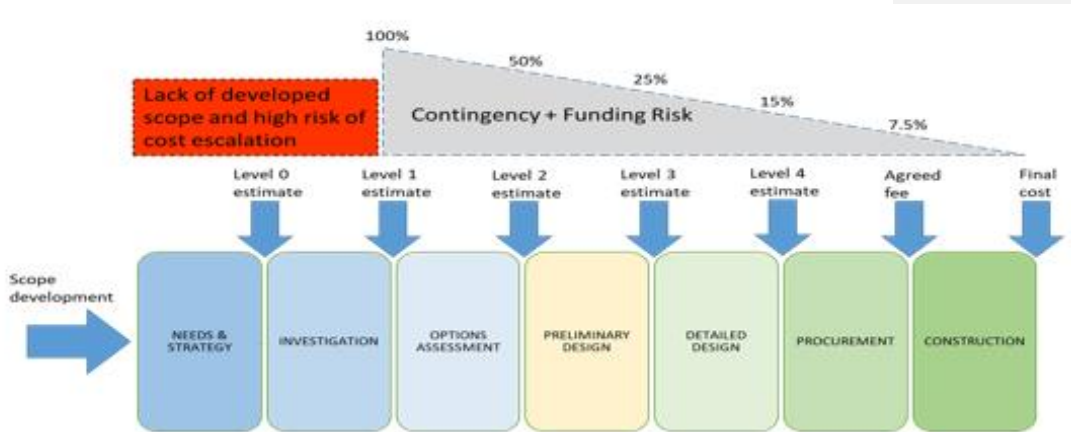
	<ul style="list-style-type: none"> • <u>S107</u>- The GHD information did not include commentary on the ability for this option to meet s107 requirements. <p>This option generally aligns with the NPS-FM and the PNRP. More information is required to comment on s107 alignment.</p>
<p>Option 7c</p> <p>Discharge to Land and Ruamahanga River</p>	<p>The initial review considers this option to have a high consenting risk for the following reasons:</p> <ul style="list-style-type: none"> • <u>NPS-FM</u> – With a combined land and water discharge this option aligns with the NSP-FM as the volume of discharge to water will be reduced from existing, although it is noted that Rangitane o Wairarapa do not support this option • <u>PNRP</u> – This option reduces the volume of discharge to water and with improved treatment will reduce contaminates, however this option would be considered a “new wastewater discharge”. The PNRP Policy P83 states that new wastewater discharges are to be avoided. • <u>S107</u>- The GHD information did not include commentary on the ability for this option to meet s107 requirements. <p>Because the PNRP requires new wastewater discharges to be avoided and that Rangitane o Wairarapa do not support this option this option has a high consenting risk</p>
<p>Option 11b</p> <p>Deep bore discharge</p>	<p>The initial review considers this option to have a very high consenting risk for the following reasons:</p> <ul style="list-style-type: none"> • <u>NPS-FM</u> – a 100% discharge to water may not be considered enhancing the health and wellbeing of the water. Ngati Kahungunu ki Wairarapa are concerned with this option and the impact it could have while Rangitane o Wairarapa expressed interest in this option. • <u>PNRP</u> – This option would be considered a “new wastewater discharge”, PNRP Policy P83 states that new wastewater discharges are to be avoided.

- S107- The GHD information did not include commentary on the ability for this option to meet s107 requirements.

Because the PNRP requires new wastewater discharges to be avoided and that Ngati Kahungunu ki Wairarapa have concerns with this option it is considered to have a high consenting risk

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Appendix E – Wellington Water Cost Estimation Process



We are currently working with Level 1 estimates. As demonstrated in this diagram this means that the estimate has 100% contingency and funding risk added. This is because of the level of uncertainty we have at this stage of the project. As we know more about the design of the solution the level of contingency and funding risk reduces