

Palmerston North Wastewater Best Practicable Option (BPO) Review

Summary of Māori Values Assessment
August 2021



Prepared for Palmerston North City Council by:



QUALITY STATEMENT

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Executive Summary

This report has been prepared to assist the Council in identifying preferred options as part of the final Best Practicable Option (BPO) assessment. This assessment forms one of seven assessments comprising the final BPO assessment process.

Technical advisors worked with Iwi to ensure all technical information was freely accessible, prior to the respective values assessments being completed by both Iwi groups.

Cultural Values Assessments have been undertaken by two Iwi within the Manawatu-Whanganui Region, including:

- Rangitāne o Manawatū, who are mana whenua for the Palmerston North area and represented on the BPO Project Steering Group (PSG).
- Hapū that are representative of Ngāti Raukawa. This group also provided representation on behalf of te Rūnunga o Raukawa. Note that Ngāti Whakareta, one of the hapū of Ngāti Raukawa, have elected to be represented independently of te Rūnunga and the hapū involved in this assessment process.

Each of the 11 shortlisted options has been assessed against a clear set of values that are representative of values of the Iwi, Rangitāne o Manawatū and the hapū representative of Ngāti Raukawa.

For Rangitāne o Manawatū, a score of 1 (least aligned) to 5 (most aligned) has been allocated to options assessed against their identified values. This is consistent with the approach used across other assessments. The assessment provided by the Iwi confirms their opposition to the discharge of treated wastewater to the ocean and land located in the coastal area. The assessment also

confirmed their preferred solution to comprise treatment to the highest proposed treatment level, with discharge to large land areas located close to Palmerston North (inland).

For Ngāti Raukawa, the Mauri Model¹ was used, allowing Iwi to clearly show where options were enhancing or diminishing hapū values. A scale of -2 (a 'Destroyed' or 'mauri awe' environment) to +2 (enhanced 'mauri ora') was used. The outcome of their assessment identified that none of the options were considered acceptable to the hapū and all options were scored at -1 or -2. However, options with inland land-based discharge and utilising the highest possible treatment of the wastewater is supported as a 'starting point' to move forward on. The hapū are fundamentally opposed to discharging to the ocean or land located in coastal areas.

Overall, both Iwi are aligned in their preference for a BPO that includes the highest proposed treatment level for the wastewater. Both Iwi are aligned in the preference for an option that includes large land areas, where wastewater can become a resource and applied to land located ideally within the Palmerston North area (inland).

With respect to the scales used (1 to 5), both Rangitāne o Manawatū and Ngāti Raukawa advise caution regarding interpretation. Caution is necessary on the basis that the Kaupapa are not all equal in weighting. This means that for some values assessed, it should not be assumed that the high (5) is a 'favourable solution' or low (1) score is only 'severe' to either Iwi. The recommendations and scoring provided for in the original cultural value assessment (CVA) documents (Appendix A and Appendix B) are the first-hand views of the respective Iwi and should be referred to in the first instance.

¹ The Mauri Model was adapted from: Morgan K 2003. The sustainable evaluation of the provision of urban infrastructure alternatives using the tangata whenua Mauri Model

within the Smart Growth Sub-Region. Technical report, Mahi Maioro Professionals, Auckland.

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1 Introduction

1.1 Overview of Assessment Process

An assessment of the short list options has been undertaken to determine levels of alignment for each option, with the respective values of two iwi potentially impacted by the wastewater BPO and involved in previous wastewater consent projects. Their assessments have been undertaken to help inform the process of determining the Best Practicable Option (BPO) for the Palmerston North City wastewater management solution. Figure 1 below illustrates how the Māori values assessments, integrates with the other assessments and processes involved in determining the BPO.

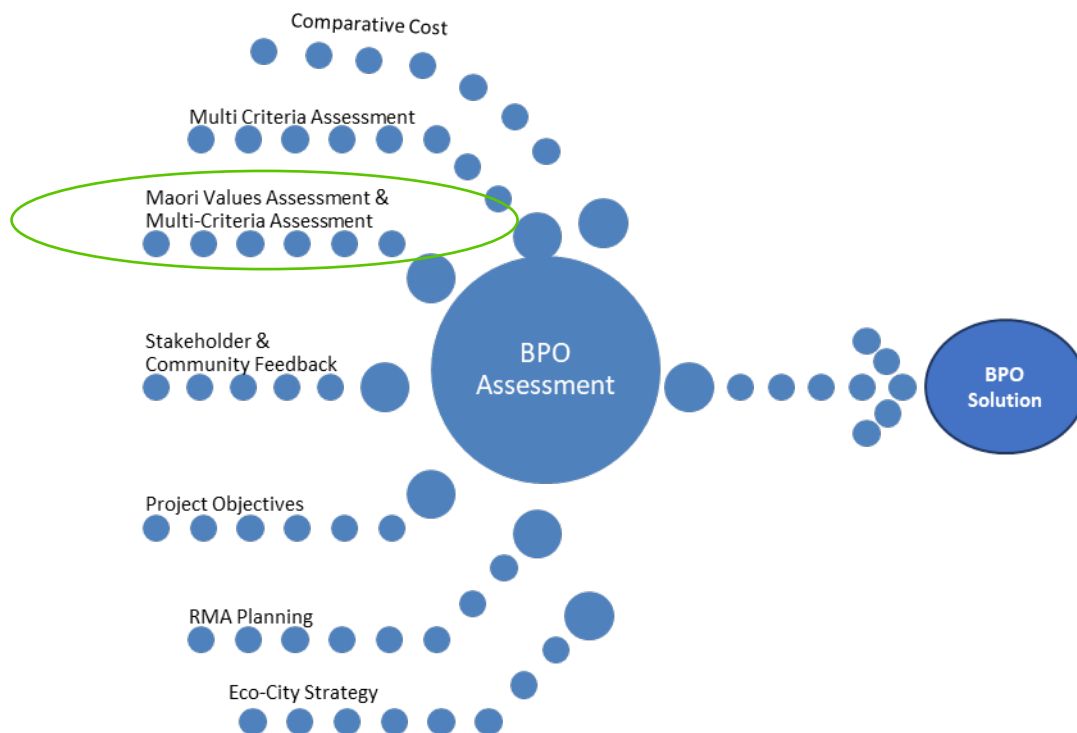


Figure 1 BPO Assessment Process

The Maori Values assessments have been undertaken by two iwi, made up of the following:

- Rangitāne o Manawatū, who are mana whenua for the Palmerston North area and representative on the BPO Project Steering Group (PSG); and
- Hapū that are representative of Ngāti Raukawa. This group also provided representation on behalf of te Rūnunga o Raukawa. Note that Ngāti Whakatere, one of the hapū of Ngāti Raukawa, have elected to be represented independently of te Rūnunga and the hapū involved in this assessment process.

The assessment processes have involved full access to all technical documentation. Each iwi has provided their own assessment and that assessment relates specifically to the unique set of values held by that iwi. An outline of the methodology used by each of the iwi to undertaking their assessments is provided in Section 3 of this Report and in detail within Appendices A and B of this Report.

1.2 Shortlist Options

The following table lists the shortlist options. Further details of the shortlist options are provided in the Shortlist Options Summary Report, May 2021.

Table 1 Options Description / Reference

Option No.	Option Summary Description
1	R2(b) River discharge with Enhanced Treatment
2	R2(b) River discharge with Enhanced Treatment, 75% ADWF to land at low River flow
3	Dual R+L(b) Two River discharge points with 75% ADWF to Land at low River flow
4	L+R (a) 97% of the time to Land (inland)
5	L+R (b) 97% of the time to Land (coastal)
6	L+R (d-1) to Land <80m³/s / 53% of the time to Land (inland)
7	L+R (d-2) to Land <62m³/s / 43% of the time to Land (inland)
8	L+R (e-1) to Land <80m³/s / 53% of the time to Land (coastal) TN = 35 mg/L
9	L+R (e-2) to Land <62m³/s / 43% of the time to Land (coastal) TN = 35 mg/L
10	O+L / Ocean with Land (coastal)
11	Ocean discharge

1.3 Supporting Project Information

The following technical documents have informed the assessment and scoring presented in this report:

- Rangitāne o Manawatū Cultural Values Assessment for Palmerston North City Council wastewater: The Best Practicable Option, June 2021
- Ngati Raukawa Hapū Evaluation of Options, July 2021

2 Methodology for this Assessment

2.1 Classification Process

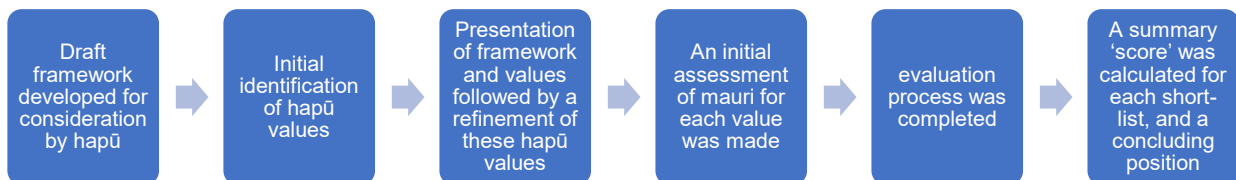
This assessment considers the extent to which a wastewater discharge to a particular receiving environment, aligns with the relevant values of Rangitāne and hapū representing Ngati Raukawa, in comparison to the other receiving environments and treatment levels (the Options).

2.1.1 Rangitāne o Manawatū

The CVA prepared by Rangitāne o Manawatū was developed “to enable the Iwi to articulate the relationship, values and aspirations that they hold for each of the receiving environments”.² Significant work was undertaken by Rangitāne in November 2020 to complete the CVA component of the Multi Criteria Assessment (MCA) for the BPO Project. However, the cultural assessment was limited in scope and it was agreed between the Council's technical team and iwi that a CVA was necessary to clearly represent the values of the iwi for consideration in the overall decision-making process.

2.1.2 Represented hapū of Ngāti Raukawa

The following steps were taken to complete the evaluation and classification process:



A total of five core values have been identified by the hapū, and these are outlined in Appendix B of this report and summarised in Section 3 of this Report.

2.2 Scoring of Options

The following table highlights the scoring classifications used by both iwi. The approaches differ however it is important to recognise that the values have a general (while not direct) alignment, the scale was applied in the same way as the 1 to 5 scoring has been used across each of the other BPO assessments.

² Section 1.3 of the CVA Report prepared by Kahu Environmental, refer Appendix A.

Table 2 Scoring Criteria by Iwi

Rangitāne o Manawatū		Ngāti Raukawa		Revised
Alignment	Score	Alignment	Score	Score
Negligible Impact	5	Enhanced	2	5
Minimal Impact	4	Maintaining	1	4
Major Impact	3	Neutral (mauri tau)	0	3
Significant Impact	2	Diminishing	-1	2
Critical Impact	1	Destroyed (mauri awe)	-2	1

Clear direction is provided by both iwi in their respective assessments (refer Appendix A and B). These assessments individually represent the position of Iwi across their values set, for each of the shortlisted options. The scores applied across the values assessments are to be interpreted with caution, on the basis that options with a score of '5' are not necessarily supported and may not be interpreted the same as in other assessments, which are representing 'strong alignment'. Rangitāne have clearly expressed the need to refer to the values assessment with caution for this reason.

In consultation with Ngāti Raukawa, no options are considered to have achieved strong alignment with the values presented by Ngāti Raukawa. However, there is the opportunity for some options with further refinement to receive limited support, with continued involvement of the Iwi. This specific refinement has yet to be confirmed, however the ongoing relationship is important in progressing the BPO option through refinement and to consent stage.

With respect to the scale applied by Ngāti Raukawa to the scoring of options, the values of -1 and -2 are consistent with the values of 1 and 2 used in the scoring by Rangitāne o Manawatū and also consistent with the overall assessment approach on other assessments. However, scores from '0' to '+2', were not used in the assessment completed by Ngāti Raukawa. We have therefore, not considered the application of values '3' to '5' in the overall assessment, as contrary to the scoring process by Ngāti Raukawa.

Based on the above, the scale applied by Ngāti Raukawa has been converted to the '1' to '5', to allow the scoring process across all assessments to be consistent in measure.

As noted earlier in this report, the values assessments provided in the assessments by both Iwi, provided in Appendix A and B of this report, are to be referred to in the first instance to ensure clarity of interpretation.

3 Assessment & Scoring

3.1 Rangitāne o Manawatū

Table 3 summarises the scores allocated to the options for each of the values recognised by Rangitāne o Manawatū. Appendix A provides the full description of values and rationale for the scores.

Table 3 Scoring of options against the values of Rangitāne o Manawatū

Potential Impacts	Kaupapa		Options Scoring										
			1	2	3	4	5	6	7	8	9	10	11
Rangitāne Values	1	Mana whenua	1	1	1	4	2	3	3	2	2	1	1
	2	Taonga (wāhi tapu)	1	1	1	3	3	2	2	2	2	1	1
	3	Mauri	1	1	1	4	4	3	3	3	3	1	1
	4	Wairua	1	1	1	4	4	3	3	3	3	1	1
Rangitāne Landscapes	5	Manawatū Awa	1	1	1	4	4	3	3	3	3	5	5
	6	Wetlands	1	1	1	3	3	3	3	3	3	1	5
	7	Coast	1	1	1	4	2	3	3	2	2	1	1
	8	Dunes	5	5	5	5	2	5	5	3	3	3	3
	9	Mountains	5	4	4	1	1	2	2	2	2	5	2
Rangitāne atua	10	Ranginui	2	2	1	4	4	4	4	4	4	2	1
	11	Papatūānuku	5	4	4	4	4	4	4	4	4	4	1
	12	Tangaroa	1	1	1	4	4	3	3	3	3	1	1
	13	Haumia-tiketike	5	4	4	4	4	4	4	4	4	4	5
	14	Rongomatane	5	5	5	3	3	4	4	4	4	5	5
Nga uri o Rangitāne	15	Tangata whenua	1	1	1	5	1	3	3	1	1	1	1
Total Score (out of 75)			36	33	32	56	44	49	49	41	41	36	34
Average Score (total)			2	2	2	4	3	3	3	3	3	2	2

3.2 Ngāti Raukawa

Table 4 summarises the scores allocated to the options for each of the values recognised by Ngāti Raukawa. As advised in Section 2 above, the scores below are modified to align with the scoring categories used across all assessments. For completeness, the scores in the CVA (Appendix B) and the scoring applied to the assessments are both included for reference.

Table 4 Scoring of options against the Values Ngāti Raukawa

Values of Ngāti Raukawa	Options Scoring																			
	1	2	3	4	5	6	7	8	9	10	11									
Whakapapa Atua and Whakapapa Tupuna	-2	1	-2	1	-2	1	-1	2	-2	1	-1	2	-1	2	-2	1	-2	1	-2	1
Te Kai Pūpuru Maori	-2	1	-2	1	-2	1	-1	2	-1	2	-1	2	-1	2	-1	2	-2	1	-2	1
Hapai O	-1	2	-1	2	-1	2	-1	2	-1	2	-1	2	-1	2	-1	2	-2	1	-2	1
Manawaroa	-2	1	-2	1	-2	1	-1	2	-2	1	-1	2	-1	2	-2	1	-2	1	-2	1
He ringa miti tai heke	-1	2	-1	2	-1	2	-1	2	-1	2	-1	2	-1	2	-1	2	-2	1	-2	1
Total Score (out of 25)	7	7	7	10	8	10	10	8	8	5	5									
Average Score (total)	1	1	1	2	2	2	2	2	2	1	1									

4 Recommendation

4.1 Weighting

The opportunity to weight specific values across the range presented by both Iwi has been considered. Both Iwi have confirmed there is no merit in weighting specific values over others. Therefore, all values have been considered equal in weight.

4.2 Recommended Options

The recommended scoring uses a scale of 1 to 5 to compare how well options align with values identified by Rangitāne o Manawatū and Ngāti Raukawa. Technical advisors and Iwi have been involved in the assessment of these options throughout the process.

Both Iwi confirmed that options including a significant discharge of treated wastewater to water, including the Manawatū River and ocean, are considered fatally flawed. Options 1 and 2, include enhanced treatment, however this was not considered a sufficient mitigating factor. Options 10 and 11 are considered seriously flawed out of all the options, as identified by both Iwi.

Options considering large land areas near the coast (coastal sands), are not scored highly by either Iwi, on the basis the values are not met.

Overall, those options with the largest land areas on fluvial soils (inland), achieved a higher ranking based on the highest alignment to both sets of values. The scoring does not recognise that the highest treatment level is desired by both Iwi, no matter which receiving environment is being considered.

Table 6 below shows the ranked order of options based on the two Iwi assessments.

Table 5 Options ranking against Rangitāne and Raukawa values

Option Description	Treatment Level	Ranking
1 R2(b) River discharge with Enhanced Treatment	4	7
2 R2(b) River discharge with Enhanced Treatment, 75% ADWF to Land at low River flow	4	8
3 Dual R+L(b) Two River discharge points with 75% ADWF to Land at low River flow	2	9
4 L+R (a) 97% of the time to Land (inland)	1	1
5 L+R (b) 97% of the time to Land (coastal)	3	4
6 L+R (d-1) to Land <80m ³ /s / 53% of the time to Land (inland)	2	2
7 L+R (d-2) to Land <62m ³ /s / 43% of the time to Land (inland)	2	2
8 L+R (e-1) to Land <80m ³ /s / 53% of the time to Land (coastal) TN = 35 mg/L	2	5
9 L+R (e-2) to Land <62m ³ /s / 43% of the time to Land (coastal) TN = 35 mg/L	2	5
10 O+L / Ocean with Land (coastal)	1	11
11 Ocean discharge	1	10

It is recommended that all options are considered in conjunction with the wider assessment approach, before being recommended for assessment through the BPO Criteria. This will be determined in the BPO Recommendation Report.

**Appendix 1: Cultural
Values Assessment –
Rangitāne o Manawatū**



Memo

CVA SCORING

TO MELAINA VOSS

FROM SIOBHAN KARAITIANA

DATE JULY 30TH, 2020

SUBJECT CULTURAL VALUES ASSESSMENT (CVA) SCORING FOR PALMERSTON NORTH CITY COUNCIL BEST PRACTICABLE OPTION (BPO).

Tēna koe Melaina

Within the CVA document some Kaupapa or scoring criteria are grey/unscored options because the proposed option does not relate to the Kaupapa. For example, when considering ocean discharge options, the impact on the Manawatū River is not relevant and thus left grey. You have advised it would be helpful to score these items to be consistent across all the assessments under the BPO criteria. Rather than change the CVA, a memo has been provided that includes the scoring table with the updated scores. Attached within this memo is the updated scoring system. I advise caution regarding interpretation. The Kaupapa are not all considered equal in weighting and it should not be assumed that because a high or low score is now included within a Kaupapa, previously in grey, that it means Rangitāne o Manawatū are any more or less favourable to this option. Thus, Rangitāne o Manawatū (RoM) recommendations contained within the CVA still form RoM overall position.

Ngā mihi maioha

Siobhan Karaitiana
Kaupapa Taiao Specialist

Potential Impacts	Kaupapa	1	1a	2	3	3a	4	4a	5	5a
Rangitāne values	1. Mana Whenua	1	1	1	4	3	2	2	1	1
	2. Taonga (tapu)	1	1	1	3	2	3	2	1	1
	3. Mauri	1	1	1	4	3	4	3	1	1
	4. Wairua	1	1	1	4	3	4	3	1	1
Rangitāne landscapes	5. Manawatū Awa	1	1	1	4	3	4	3	5	5
	6. Wetlands	1	1	1	3	3	3	3	1	5
	7. Coast	1	1	1	4	3	2	2	1	1
	8. Dunes	5	5	5	5	5	2	3	3	3
	9. Mountains	5	4	4	1	2	1	2	5	2
Rangitāne atua	10. Ranginui	2	2	1	4	4	4	4	2	1
	11.	5	4	4	4	4	4	4	4	1
	12.	1	1	1	4	3	4	3	1	1
	13.	5	4	4	4	4	4	4	4	5
	14.	5	5	5	3	4	3	4	5	5
Nga uri o Rangitāne	15.	1	1	1	5	3	1	1	1	1

Rangitāne o Manawatū Cultural Values Assessment

PALMERSTON NORTH CITY COUNCIL WASTEWATER: THE BEST PRACTICABLE OPTION

FOR PALMERSTON NORTH CITY COUNCIL

JUNE 2021



www.kahuenvironmental.co.nz
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Rangitāne o Manawatū Cultural Values Assessment



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1 Executive summary

The Cultural Values Assessment has five key findings:

1. PNCC must remove wastewater from all waterbodies to uphold Rangitāne o Manawatū mana, rangatiratanga and lore. Rangitāne are open to a discussion how this can be progressed over time.
2. Tikanga requires that wastewater must be treated to the highest degree prior to being discharged to any part of the environment. Papatūānuku, Ranginui, and Tangaroa are living beings and ancestors that must maintain balance to protect the mauri, wairua, health and wellbeing of Te Ao Māori.
3. Rangitāne prefer land-based discharge, and this must be a key feature of the BPO. The discharge of wastewater on land will have residual impacts on wāhi tapu and significant landscapes that will require the use of buffer zones and other appropriate mitigation.
4. The current location of wastewater processing and discharge is within a significant wāhi tapu and should be moved to another location to align with Rangitāne aspirations for cultural and ecological revival of the river corridor.
5. Rangitāne strongly believe that the city should deal with wastewater within its own geographic area, minimising impacts on iwi with overlapping areas of interest and adjacent communities.

1.1 Introduction

Palmerston North City Council (PNCC) is seeking resource consent for the discharge of human wastewater from Palmerston North City and small surrounding communities like Ashurst and Bunnythorpe.

Rangitāne o Manawatū (Rangitāne) is working alongside PNCC to develop the Best Practicable Option (BPO) to include in the consent application. The discharge permit will allow PNCC to operate infrastructure to collect, treat and discharge wastewater to the environment. Discharge environments that are considered include Rangitāne o Manawatū tūpuna awa (the Manawatū Awa), tūpuna whenua (Manawatū landscape), and tūpuna moana (Manawatū coastline)¹.

PNCC BPO project managers must bring together all technical assessments so that they are positioned to recommend the adoption of a BPO to Palmerston North City Councillors. This Cultural Values Assessment (CVA) has been undertaken to ensure that the BPO chosen

¹ Bridgman, A. (2021). *Palmerston North Wastewater Best Practicable Option Review: Work Package 15.6/7 Shortlist Options Summary Report*. Palmerston North: Stantec, Pattle Delamore Partners Ltd, Aquanet Consulting Ltd.

has comprehensively considered Rangitāne values and aspirations as mana whenua. Thus, as Treaty Partners Rangitāne hope their values and aspirations are honoured. Rangitāne want to ensure that Te Tiriti o Waitangi is reflected in the planning, delivery and operational phases of the BPO.

1.2 Current State

Wastewater discharge to the Manawatū Awa has been ongoing for over 100 years² and the mauri of the awa has been significantly impacted and degraded as a result. The discharge of Palmerston North wastewater to water does not align with Rangitāne lore. Water is the lifeblood of the land and people, it is of fundamental importance to life, a key source of spiritual, cultural, mental and physical wellbeing. Rangitāne firmly believe that polluting the Manawatū Awa is tantamount to polluting oneself.

The PNCC wastewater discharge creates a critical and abrupt impact on the mauri of the entire river ecosystem and on the mauri of Rangitāne people. This impact is described in Tūtohi 1 (Table 1).

Tūtohi 1: Palmerston North Wastewater Impact on the Mauri of the Manawatū Awa.

Upstream	Downstream
1. Water has high visual clarity.	9. Water is murky with lots of detritus.
2. Smells fresh.	10. Smells musty.
3. More natural levels of algae and sediments.	11. Thick slimes bright green and brown, interstitial spaces full of sediment and slime.
4. Quality tuna food availability with diverse macroinvertebrate communities.	12. Poor tuna food availability, typical communities are choronomids, snails and worms.
5. Swimmable and harvestable during parts of the year.	13. Contact and harvesting unsafe at all times.
6. Wāhi tapu freely accessible including Turitea, Kuripaka, Ahimate, and Mokomoko.	14. Wāhi tapu access require special permission.
7. Pockets of moderate and high-value riparian vegetation present.	15. Riparian vegetation is highly degraded and weedy.
8. Active kaitiakitanga including planting, pest and weed control. Rangitāne host festivals, lead education initiatives, and undertake and install mahi toi.	16. Kaitiakitanga is only just being revitalised and this includes inter alia developing a bid to secure funding for Marae Tarata ecological and cultural restoration.

² White, J. (2007). *An uneasy relationship: Palmerston North City and the Manawatū River 1941-2006*. Massey University, Palmerston North.

1.3 Methodology

This CVA has been designed to enable Rangitāne to articulate the relationship, values and aspirations that they hold for each of the receiving environments under consideration: awa, whenua and moana. The intent of the CVA is to enable Rangitāne to compare the potential impacts and benefits of each of the shortlist options.

The document builds on the Multi Criteria Analysis (MCA) mahi undertaken in November 2020 by Rangitāne and the wider BPO project team. Rangitāne used a series of questions about important values to frame the comparison of options using a 1-5 scoring system³. These values-based questions are set out in Tūtohi 2. The assessment of the shortlist options against Rangitāne values will follow this same MCA process, but the values-based questions will be analysed in greater detail. The assessment explains the extent to which the discharge of wastewater could impact or benefit values in each receiving environment, and it also highlights critical issues.

Tūtohi 2: Rangitāne o Manawatū assessment criteria

Potential Impacts	Kaupapa
Rangitāne values	1. Mana Whenua - will the activity uphold Rangitāne mana?
	2. Taonga (wāhi tapu) - does the activity impact our taonga and significant cultural sites in a negative way?
	3. Mauri - does the activity negatively impact mauri in our rohe?
	4. Wairua - if there are effects from an activity will they negatively impact whānau ora, health and well-being?
Rangitāne landscapes	5. Manawatū Awa - is the activity impacting or impeding our ability to exercise kaitiakitanga over our taonga, the awa, and its role to nourish our rohe and people?
	6. Wetlands - is there a negative impact on our wetlands?

³ Bradley, J. & Voss, M. (2021). Palmerston North Wastewater Best Practicable Option Review: Alternative Assessment- MCA Process Report. Palmerston North City Council: Palmerston North.

Potential Impacts	Kaupapa
	7. Coast - is the activity negatively impacting on the (hauora) cultural health of our coastlines?
	8. Dunes - will the sand dune landforms be disrupted?
	9. Mountains - will the activity impact on our sacred peaks?
Rangitāne atua	10. Ranginui - Is Ranganui being respected?
	11. Papatūānuku - is Papatūānuku being cared for?
	12. Tangaroa - is Tangaroa still connected and in balance?
	13. Haumia-tiketike - is Haumia-tiketike still productive?
	14. Rongomatane - is Rongomatane still cared for?
Nga uri o Rangitāne	15. Tangata whenua - is this acceptable to our people?

The BPO Shortlist described in Tūtohi 3 includes options to discharge Palmerston North wastewater to three broad environments: Rangitāne tūpuna awa, tūpuna whenua and Manawatū tūpuna moana.

A number of shortlist options include:

- Significant ongoing discharges to the Manawatū Awa from the Tōtara Road Wastewater Treatment Plant;
- Periods of time when the discharge would go to land and river;
- An option to discharge wastewater to the awa at Opiki;
- Two 97% discharge to land options (including inland and coastal land locations), with the final 3% of discharges (about 10 days per year) to the Manawatū Awa; and
- Full discharge to moana and a variation of some wastewater to coastal land.

A five-tier scoring system in Tūtohi 4 is used to analyse the potential impacts the Palmerston North wastewater discharge may have on Rangitāne values, significant landscapes and sacred sites.

Tūtohi 3: Palmerston North BPO shortlist options.

Option	Overall Score and Option Description
1	Awa discharge with enhanced treatment
1a	Awa discharge with enhanced treatment, and a small % to land
2	Two awa discharge points (Totara Road and Opiki) and a small % to land
3	97 % applied to an inland land application site and a discharge to awa in exceptional circumstances
3a	45-55+ % applied to an inland land application site and an awa discharge for the remainder of the time
4	97 % applied to a coastal land application site and a discharge to awa in exceptional circumstances
4a	45-55+ % applied to a coastal land application site and an awa discharge for the remainder of the time
5	Moana discharge, with a small % to land
5a	Moana discharge

Tūtohi 4: Scoring used to assess potential impacts on Rangitāne values from the shortlist options.

Scoring	Effect status
	Critical impact
	Significant impact
	Major impact
	Minimal impact
	Negligible impact

2 Ko Manawatū te awa

2.1 Whakapapa

Ancestors of Rangitāne o Manawatū arrived in Aotearoa aboard the Kurahaupō waka over 30 generations ago. Whatonga was a captain of the waka and is the eponymous ancestor whom the people of Rangitāne trace their lineage. He settled in the Heretaunga area (Hawkes Bay) and explored a large part of Aotearoa. Rangitāne was the grandson of Whatonga whose descendants occupy the Manawatū and other areas of the lower North Island and the top of the South Island today. At the turn of the 19th century Rangitāne and Rangitāne whānaunga held mana over nearly the entire drainage basin of the Manawatū Awa for many hundreds of years.

Life centred around the Manawatū Awa, its tributaries, lakes and wetlands, which came to shape the worldview and values system of Rangitāne today^{4,5}

2.2 Mahinga kai

The Manawatū Awa provided the primary form of sustenance to support Rangitāne people in the Manawatū. In the past, water levels of wetlands, lakes and rivers were highly variable seasonally and from year to year, the environment supported diverse ecological systems and a wide range of plants and animals. Rangitāne was self-sustaining, only needing to harvest that which could be naturally replaced⁶.

“This land contained some of the richest supplies of food....., for crops of kumara and other root vegetables could be cultivated with ease on the fertile alluvial soils of the riverbanks, while a variety of birds and berries could be gathered from the trees of the surrounding forest. However, the most desired items of food in this area were the tuna (eel) that could be caught in huge quantities from the waters of the swamps adjacent to the riverbanks”.

Tuna thrived in waterways throughout the Manawatū. Rangitāne ancestors were able to harvest large numbers and a diverse range of tuna without reducing the stocks because each site was visited in rotation and according to the season and occasion. Tuna were caught for immediate use, for live storage in watercourses near pā (fortified settlements) and dried for long-term storage⁶. With the transformation of the Manawatū landscape through deforestation, land intensification and drainage, most tuna hunting sites have been lost to Rangitāne. Amongst those remaining, some are managed by permits under the Department

4 McEwen, J.M. (1986). Rangitāne: A tribal History. Reed Books: Auckland.

5 Wai 182, Rangitāne o Manawatū. Tanenuiarangi Manawatū Incorporated Office of Treaty Settlements.

6 Tanenuiarangi Manawatū Inc (1999). Rangitāne Mahinga Kai Project,. Palmerston North.

7 Dixon, Maren & Ngaire Watson (1983), 'A History of Rangiotu. published by Dunmore Press Ltd., Palmerston North.

of Conservation and others are inaccessible because they are now located on privately owned land.

Rangitāne work proactively with a range of partners in recovering their mana whenua rights to original tuna hunting grounds in the Manawatū.

“We were renowned - absolutely renowned - for our eels, and we had very special eels. We had silver-bellied eels that are so hard to come by now. They’re not the real big coarse eels. They were just very fine, and they sort of melted in your mouth⁸”.

2.3 Mātauranga ā Rangitāne

Several sites along the Manawatū Awa were of fundamental importance to Rangitāne: Otangaki, Te Wī, Hokowhitu, Te Kuripaka, Mekomoko, Te Kairanga, Te Motu o Poutoa, Marae Tarata and Puketōtara to name a small few⁹. The Manawatū Awa features prominently in Rangitāne lore. This mātauranga links Rangitāne to the spiritual world. It creates an inseparable bond and a responsibility to protect and enhance the environment physically and metaphysically from misuse and further degradation.

Haunui a Nanaia and the naming of the Manawatū Awa

The wife of Haunui, Wairaka, ran away with a man named Weku/Weka. Haunui set off in pursuit of the runaways who had gone southward along the coast from Whanganui. As Haunui followed them he named many of the rivers he had to cross on his journey. One morning he came to a river so cold, wide and deep that it made his breath stand still. He called it Manawa-tū, meaning still breath. Haunui overtook Weku/Weka and Wairaka at Pukerua Bay, and on his return journey invoked the god Rongomai to return him to his home on the west coast¹⁰.

Okatia and the creation of the Manawatū Awa

There once lived a giant tōtara tree on the slopes of Puketoi Range, Wairarapa. The tōtara tree became possessed by a supernatural being called Okatia which settled from the sea breeze of the west coast winds. Under the influence of the spirit, the tree gouged a channel north-westward, before arriving at the Ruahine-Tararua Mountain Belt. Okatia in the form of the tōtara tree hammered its way through the mountain chain creating Te Apiti, or the Manawatū Gorge. Exhausted, Okatia meandered across the Manawatū plains reaching the Foxton river mouth. He floated

8 Previous Oral History Interview with Ruth Harris, former CEO of Tanenuiarangi Manawatū Inc.

9 Lange, R. (2000). The social impact of colonisation and land loss on the iwi of the Rangitikei, Manawatū and Horowhenua Region, 1840-1960. Crown Forestry Rental Trust.

10 McEwen, J.M. (1986). Rangitāne: A tribal History. Reed Books: Auckland

out to sea and came to rest off the coast of Kāpiti. His name is known as Te Waewae Kapiti o Taraika rāua ko Rangitāne, or Kapiti Island¹¹.

3 Ko ngā uri o Rangitāne ki te whenua

3.1 Whānau, Hapū, Iwi

Traditional entry to the Manawatū interior was gained by paddling and poling waka along the Manawatū Awa. At each major river bend a permanent or seasonal village or pā existed within Rangitāne history^{12,13}. The awa linked hapū (family groups) together, to form who we now know as Rangitāne o Manawatū. Rangitāne is a collective of six hapū. Hapū members work closely together and each hapū has representation on the Rangitāne o Manawatū Settlement Trust. This collaboration forms one avenue of mandate for Rangitāne as an iwi authority^{14,15}. The six hapū are set out below in no particular order:

Ngāti Mairehau (also known as Ngai Tuahuriri)

Descend from the land on the east bank of the Manawatū Awa between Turitea and Tokomaru, including over the Tararua Ranges to Pahiatua.

Ngāti Te Kapuarangi

Descend from the land surrounding the current city of Palmerston North.

Ngāti Hineaute

Descend from the land above Te Apiti to the northern area of Palmerston North City.

Ngāti Rangitepaia (also known as Ngāti Rangī)

Descend from the land from the southern boundary of the city to the confluence of the Oroua and Manawatū Awa.

Ngāti Rangiaranaki

Descend from the land above Te Apiti to Palmerston North City with Ngāti Hineaute.

11 McEwen, J.M. (1986). Rangitāne: A tribal History. Reed Books: Auckland

12 Taylor & Sutton (1999). Inventory of Rangitāne Heritage sites in Palmerston North City, 1999. Palmerston North City Council.

13 Tanenuiarangi Manawatū Inc (1999). Rangitāne Mahinga Kai Project. Palmerston North.

14 Treaty of Waitangi Claims: Wai 182 the Manawatū Claim.. Retrieved on June 1st, 2021 from <https://www.tmi.maori.nz/Treaty.aspx>

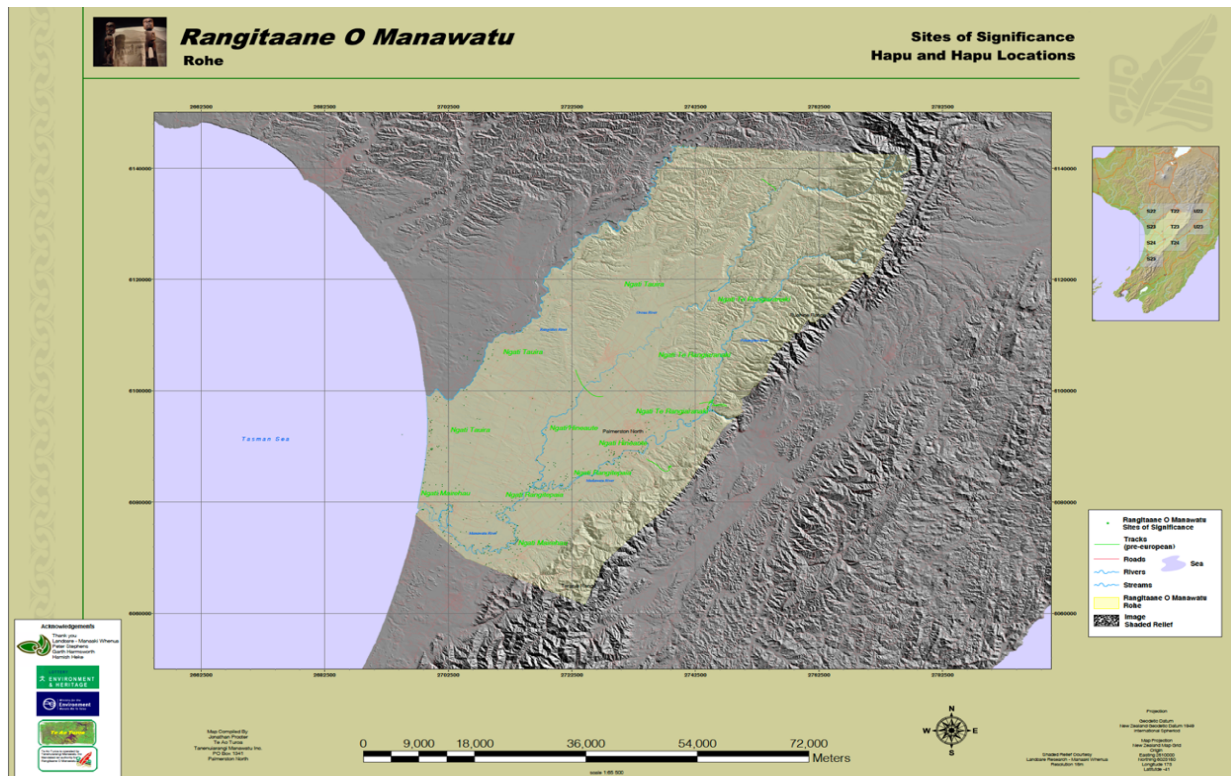
15 Rangitāne o Manawatū: Deed of Settlement documents (2021). Retrieved on June 1st, 2021 from <https://www.govt.nz/browse/history-culture-and-heritage/treaty-settlements/find-a-treaty-settlement/Rangitāne-o-Manawatū/>

Ngāti Taura, Rangitāne – Ngāti Apa hapū

Descend from the land around the upper Oroua River between Ohungarea and Awahuri.

Rangitāne maintain further resource collection areas shared with Ngāti Apa including coastal areas, and in the upper catchments of the Oroua and Pohangina Rivers.

Tūtohi 5: Rangitāne o Manawatū area of interest



3.2 Wāhi tapu

Wāhi tapu are sacred places of whenua (land) and natural features important to Māori in the traditional, spiritual, ritualistic and mythological sense.

Rangitāne maintain the knowledge and relationship with hundreds of wāhi tapu across the Manawatū. They are highly interconnected features generating connection to the landscape, waterways and moana. These wāhi tapu support Rangitāne position as mana whenua in the Manawatū; manifesting a link between the past and present, ancestors, and the surrounding landscape¹⁶. Wāhi tapu are an imprint of Rangitāne on the whenua, and they include but are not limited to:

¹⁶ Procter, J.P. (2021). Rangitāne o Manawatū GIS dataset. Confidential collection.

- urupā ie burial grounds;
- places where significant ancestors lived and/or died;
- locations where significant events occurred (both battle grounds and peace-making sites);
- travelling tracks;
- resource collecting areas;
- cultivation clearings;
- ritualistic areas;
- temporary and permanent shelters;
- fortified pā sites;
- entry to the realms of kaitiaki and taniwha;
- mountains and mountain peaks; and
- rivers, wetlands, lakes and forest areas.

The importance of wāhi tapu does not diminish with the passing of time or succession of generations and their status has not been overturned by Crown policy. Rangitāne wāhi tapu still exist today even though deforestation, drainage and stop-banking schemes may have removed their physical evidence. Rangitāne remain mana whenua within the Manawatū today through their continued connection with the awa, whenua and moana.

4 Te Tai o Rehua te moana

4.1 The Tasman Sea

The Tasman Sea is known to Rangitāne as “Te Tai o Rehua” or “the sea of Rehua”. Rangitāne believe the star cluster Matariki is personified as the wife of Rehua. Matariki and Rehua had eight children representing eight different areas of wellbeing.

1. Pōhutukawa- is connected to death and those who have passed on;
2. Tupuānuku- is connected to Papatūānuku and food grown in the ground;
3. Tupuārangi- is connected to Ranginui and food that comes from the sky such as birds;
4. Waitī- waitī means to be sweet and is connected to freshwater;
5. Waitā- waitā means to be salty and is connected to the moana;
6. Waipunarangi- is connected to the rain;
7. Ururangi- is connected to the winds of the sky; and

8. Hlwa-i-te-rangi- is connected to growth and hope for the coming year.

Matariki and Rehua guided early navigators such as Whatonga across the Pacific Ocean to reach Aotearoa.

4.2 Himatangi- Awahou

On the west coast of Rangitāne rohe there are dune lands and lagoons that sit between the Manawatū and Rangitikei Awa. The sand hills that we see today are however a recent development. The area was originally covered in native vegetation that included manuka and tutu, native grasses and bracken fern on ridges, and clumps of flax, toetoe and raupō in wetter areas. The entire foreshore was once covered with sand-binding plants that restricted the flow of sand inland and the build-up of sand hills.

Beyond the foredune, extensive flats covered in native grasses and shrubs extended almost along the entire coastline. Wetlands developed over time as dune lands slowly shifted through wind and sea action, blocking the run-off of water¹⁷.

4.3 Taonga

Pīngao was an important dune binder, being relatively tolerant of salt water, wind and the seaward face of dunes. Pīngao is a taonga species highly valued by Rangitāne for its uses in weaving. The dune hollows were (and in some instances remain) the habitat of some nationally rare and threatened plant species.

Kaimoana was also plentiful and included tohemanga/toheroa, pipi, cockles, tuatua, surf crabs and clams, kahawai, freshwater and saltwater flounder/patiki, and shark¹⁸.

Kararaina Te Wera Tait recalled pipi were particularly plentiful on Himatangi Beach¹⁹

“(The kai moana) was plentiful. There was pipis, toheroas - and you never had to go in the season - the season was the whole year.

Eels - plenty of tuna. Whitebait, flounders and cockles. Even our pīngao and all that you got for weaving was plentiful. They were worth picking. Today they're only babies - they're not very tall. Actually, there was a lot of stuff that we used to get out there.

The flax out there would have been one of the best varieties of flax for kete and piupiu's. This was told to me by expert weavers, even today.

17 Esler, A. E. (1978). Botany of the Manawatū District New Zealand (Vol. 127, Ser. 127). Wellington: Government Printer.

18 Tanenuiarangi Manawatū Inc (1999). Rangitāne Mahinga Kai Project. Palmerston North.

19 Previous Oral History Interview with Kararaina Te Wera Tait

We used to get a meal just sitting out there. Put a piece of bread in one (hand) and pipi in the other - or mainly toheroa – because they were big and they were filling.”

Rangitāne managed and sustained their fishery resources for generations. Seasonal settlements were located along the entire west coast of their rohe. In old times Rangitāne from inland and upriver settlements travelled to the west coast on a seasonal basis to gather shellfish to consume immediately, dry and remove for storage. Although the west coast was an occasional travel route for other iwi, many of the archaeological sites can be accurately associated with Rangitāne and Rangitāne whānaunga based on their dating and locations. Shellfish parties would come down to the coast on occasions when a whale was stranded to harvest resources from the beautiful taonga²⁰.

²⁰ Tanenuiarangi Manawatū Inc (1999). Rangitāne Mahinga Kai Project. Palmerston North.


5 Rangitāne o Manawatū values system

Rangitāne o Manawatū values, described in Tūtohi 6, apply traditional tikanga and mātauranga to contemporary environmental issues. The description of values assists the reader to interpret the analysis of shortlist options in Section 5.

Tūtohi 6: Description of Rangitāne o Manawatū values.

Values	Definition
Te Ao Māori	Te Ao Māori is a worldview based on the holistic principle that all elements are interrelated. Every part of the environment is understood to have a common genealogy, descending from a common ancestor. The principle ancestors being Io matua te kore (Io the Parentless), Ranginui and Papatūānuku (Sky Father and Earth Mother) and their atua tamariki (Including Tāne Mahuta God of the Forest, Tangaroa God of the Moana and waterways, Haumia-tiketike God of Cultivated Foods, and Rongomātāne God of wild foods).
Mana whenua	The concept of mana whenua is key to understanding the environmental management philosophies of Māori. Mana whenua as defined by the Resource Management Act 1991 (RMA) is the customary authority exercised by an iwi or hapū in an identified area. It is the authority to control and manage a traditional area or resource in relation to prescribed customary and cultural practices. The authority is obtained through the relationship of the people and their ancestral connection to the land. Rangitāne o Manawatū have maintained their position as mana whenua within the Manawatū area for over 500 years.
Tino rangatiratanga	Tino rangatiratanga is absolute sovereignty and self-determination; having ownership, rights, control and authority over original mana whenua lands, waters, and taonga. Article Two of Te Tiriti guarantees Māori tino rangatiratanga, which is fundamental to wellbeing and prosperity.

Mātauranga a Rangitāne	<p>Mātauranga a Rangitāne is the knowledge, comprehension and execution of actions Rangitāne undertake based on their knowledge of their history, values and culture.</p> <p>This knowledge is embedded within pūrākau, waiata, whānau korero and increasingly documented form. It requires tangata whenua to protect and enhance all aspects of the natural world.</p>
Tikanga	<p>Tikanga is a requirement to be achieved, rather than a bottom line found in western science and resource management.</p>
Mauri	<p>Mauri is the life force of all living and non-living things. Mauri is the essential quality and vitality of a being or entity which can be assessed by Rangitāne using qualitative and quantitative tools to detect practices causing damage to the environment and people.</p>
Kaitiakitanga	<p>Kaitiakitanga is the act of guardianship, control of resources and protection of mauri. The process and practices mana whenua undertake to use, protect and celebrate the environment include cultural monitoring, environmental education and restoration, mahi toi, celebrations and ceremonies, participation in planning and RMA matters, management partnerships and co-governance agreements.</p>
Wairuatanga	<p>Wairuatanga is the recognition of the interconnectedness of physical and spiritual dimensions. Wairua is the energy force that connects all aspects of life including the environment. Mana whenua continue to support and uplift the essence of wairuatanga through karakia, rituals and cultural practices.</p>

<p>Whānau ora</p>	 <p>The image shows a horizontal row of seven green rectangular boxes. Each box contains a white icon at the top and a short paragraph of text below it. The icons are: 1. Three stylized human figures. 2. A heart with a pulse line. 3. A sprout with two leaves. 4. A group of four stylized human figures. 5. Three coins. 6. Two hands holding a globe. 7. A mountain range.</p>
<p>Ritenga</p>	<p>Ritenga are everyday rituals and practices that sustain the wellbeing of people, communities and natural resources. Everything is balanced between regulated and de-regulated states; tapu is to be restricted or sacred; rāhui is temporary restriction; and noa is relaxed or unrestricted.</p> <p>Tapu is an ancient concept that can be interpreted as holy or sacred. It can be defined as a ‘spiritual restriction,’ or supernatural condition. It involves rules and prohibitions that were central to traditional society to keep everyone safe. Tapu was used to control how people behaved towards each other and to the environment to ensure that society flourished.</p>
<p>Mana-aki-tanga</p>	<p>Manaakitanga is the way in which care, generosity, and respect is expressed towards manuhiri (guests) at the marae and kainga, and towards the environment and atua. Mana of people and places is uplifted when people behave in a manner that aligns with their collective values.</p>
<p>Taonga</p>	<p>Taonga are tangible and intangible components of te ao Māori. Taonga are anything that is of value or treasured including places, people, language, objects, flora and fauna. Taonga are understood through mātauranga a Rangitāne. They are to be cherished, protected and enhanced.</p>

6 Analysis

Tūtohi 8 contains an analysis of how Rangitāne values and significant landscapes could be impacted by the various shortlist options. In some instances, it has been appropriate to advise how the impact could be appropriately addressed by following a hierarchy approach to avoid, reduce, mitigate or compensate for detrimental effects. Critical effects and bottom lines are highlighted. Each shortlist option is then given a score according to the proposed effects status after the effect's mitigation hierarchy has been followed. A summary of the BPO shortlist and effects assessment scoring is included again for the readers ease (Tūtohi 7).

Tūtohi 7: Summary of PNCC BPO shortlist options and assessment scoring

Option	Overall Score and Option Description
1	Awa discharge with enhanced treatment
1a	Awa discharge with enhanced treatment, and a small % to land
2	Two awa discharge points (Totara Road and Opiki) and a small % to land
3	97 % applied to an inland land application site and a discharge to awa in exceptional circumstances
3a	45-55+% applied to an inland land application site and an awa discharge for the remainder of the time
4	97 % applied to a coastal land application site and a discharge to awa in exceptional circumstances
4a	45-55+% applied to a coastal land application site and an awa discharge for the remainder of the time
5	Moana discharge, with a small % to land
5a	Moana discharge

Scoring	Effect status
	Critical impact
	Significant impact
	Major impact
	Minimal impact
	Negligible impact

Tūtohi 8: Analysis of the potential impact of shortlist options against Rangitāne o Manawatū values and significant landscapes.

	Kaupapa	Kōrero (comments)	1	1 a	2	3	3 a	4	4 a	5	5 a
Rangitāne o Manawatū values	1. Mana Whenua Will the activity uphold Rangitāne mana?	<ul style="list-style-type: none"> The discharge of wastewater, including treated wastewater, to Manawatū waterways will diminish the mana of Rangitāne and the Manawatū Awa. Discharging wastewater into the rohe of other iwi will also diminish the mana of Rangitāne and heavily impact those other iwi. 100 % moana and awa discharge options are likely to have the same type and scale of effects if wastewater treatment levels were the same. Discharge of wastewater to land has the least impact on Rangitāne. 									
	2. Taonga (wāhi tapu)	<ul style="list-style-type: none"> The discharge of wastewater within wāhi tapu is completely inappropriate. Wāhi tapu include the Manawatū Awa, Te Tai o Rehua and sites of significance. 									

	Kaupapa	Kōrero (comments)	1	1 a	2	3	3 a	4	4 a	5	5 a
	Does the activity impact our taonga and significant cultural sites in a negative way?	<ul style="list-style-type: none"> • There are hundreds of interlinked known, unknown and lost wāhi tapu and taonga across the Manawatū landscape. • Known wāhi tapu could at least be protected if buffer zones were incorporated into land-discharge designs. Buffer zones are ineffective if the discharges are to water. Unknown/lost wāhi tapu will be impacted. • Buffer zones could link together to become contiguous areas where wastewater cannot be applied, these situations are likely to apply to land directly adjacent to the Manawatū Awa and the coastal marine area. • Rangitāne are extremely concerned about eutrophication of the moana foreshore in coastal land discharge options, including the physical, perceived and spiritual impacts on mahinga kai within the foreshore. • Any eutrophication impacts on wāhi tapu must be mitigated and offset. This could include planting mānuka and harakeke to remove nutrients, provide shading and habitat. Iwi should be spiritually reconnected by renewed access to significant areas. 	Red	Red	Red	Yellow	Orange	Yellow	Orange	Red	Red
	3. Mauri Does the activity negatively impact mauri in our rohe?	<ul style="list-style-type: none"> • Any discharge of wastewater to waterways will impact the mauri (life force) of the environment. The amount of wastewater discharged to waterways is exponentially related to mauri. • Treatment must be to the highest standard in all discharge environments to protect the mauri of waterways, land and their cultural values. 	Red	Red	Red	Green	Yellow	Green	Yellow	Red	Red

	Kaupapa	Kōrero (comments)	1	1 a	2	3	3 a	4	4 a	5	5 a
		<ul style="list-style-type: none"> Wastewater discharge must not have any negative impact on local waterways, including ecological health indices such as macroinvertebrate community Indices and oxygen dynamics. The mixing of contaminants in waterbodies is totally unacceptable and inappropriate way to reduce impact on mauri. The impact on mauri can only be mitigated by removing wastewater from waterways. Discharge of wastewater to expansive land areas is also undesirable but is less repugnant than to the awa and moana. 	Red	Red	Red	Green	Yellow	Green	Yellow	Red	Red
	<p>4. Wairua</p> <p>If there are effects from an activity, will they negatively impact whānau ora, health and well-being?</p>	<ul style="list-style-type: none"> Wairua is inextricably linked to te whare tapa and all dimensions of wellbeing and whanau ora. Whānau spiritual health and wellbeing is linked to the health of their waterways and lands. The effects from wastewater discharges to the awa and moana has a direct detrimental effect on the health and wellbeing of whānau because it prevents them from practicing their traditions of supporting their economic, social, cultural, spiritual and physical needs. Land-based discharge is preferable and could support the protection the wairua, health and wellbeing of Rangitāne whānau. A small portion of land-based discharge is unlikely to protect the wairua of Rangitāne or their waterways. 	Red	Red	Red	Green	Yellow	Green	Yellow	Red	Red

	Kaupapa	Kōrero (comments)	1	1 a	2	3	3 a	4	4 a	5	5 a
Rangitāne o Manawatū landscapes	5. Manawatū Awa Is the activity impacting our kaitiakitanga over our taonga the river and its role to nourish our rohe and people?	<ul style="list-style-type: none"> Awapuni has carried the burden of Palmerston North waste and wastewater for over 100 years. The activities have destroyed a place of significant historical and cultural value to Rangitāne, forming a significant part of Rangitāne Treaty Settlement. The resource recovery park and wastewater discharge in the current location continues to prevent Rangitāne from accessing the awa, awa margins and Marae Tarata to undertake cultural and ecological restoration to exercise their kaitiakitanga. The discharge of wastewater to the awa eliminates the ability of Rangitāne people to bathe and collect mahinga kai in traditional hunting and gathering grounds downstream of the discharge because of the tapu nature of wastewater. This in turn impacts Rangitāne in exercising their kaitiakitanga and the role of the iwi to nourish their people. 									
	6. Wetlands Is there a negative impact on our wetlands?	<ul style="list-style-type: none"> The discharge of wastewater to land will have negative impacts on local wetlands and open water bodies. The potential impact of further land intensification and nutrient loading on wetlands is significant. Everyone has a duty to protect the few natural remnant wetlands remaining. Rangitāne support the use of plant-based land uses including native forestry, cut and carry/zero grazing and retiring marginal land. The cultural health of wetlands must be protected and enhanced through the BPO and best management practice like stock exclusion, fencing, planting, pest and weed control. 									

	Kaupapa	Kōrero (comments)	1	1 a	2	3	3 a	4	4 a	5	5 a
		<ul style="list-style-type: none"> Rangitāne do not believe that the discharge of wastewater through artificial wetlands will restore the mauri of the wastewater and protect the Manawatū Awa. Rangitāne are focused on the provisioning of high-water quality discharge standards and treatment levels, including discharge to land and native forestry. Artificial wetlands for wastewater treatment can reduce water quality and are difficult to maintain. 	Red	Red	Red	Yellow	Yellow	Yellow	Yellow	Red	Grey
	<p>7. Coast</p> <p>Is the activity negatively impacting on the (Hauora) cultural health of our coastlines?</p>	<ul style="list-style-type: none"> The discharge of wastewater to the Manawatū Awa continues to impact the mauri of the estuary and coastal waters as wastewater becomes part of the riverine and coastal food web. Discharge of wastewater to the moana will transfer the rāhui on bathing and kai gathering from the awa to the coastal area for Rangitāne. This will create widespread uncertainty about where and when it is safe to swim and collect kai. There is a high risk whānau will abandon traditional kai gathering grounds due to the tapu nature of wastewater. Coastal wastewater discharge will impact on the values of other iwi and Rangitāne relationships. In certain conditions wastewater can be swept back to the coastline directly risking health and wellbeing during bathing and mahinga kai collection. Water quality impacts have contributed to the steady decline of coastal mahinga ka. Further stressors on coastal water quality and mahinga kai stocks must be avoided. 	Red	Red	Red	Green	Yellow	Yellow	Yellow	Red	Red

	Kaupapa	Kōrero (comments)	1	1 a	2	3	3 a	4	4 a	5	5 a
	8. Dunes Will the sand dune landforms be disrupted?	<ul style="list-style-type: none"> Riverine and inland discharge options do not impact coastal landforms. A large pipe or network of pipes will be required for coastal moana and coastal land discharge. Impacts will vary depending on choice of route. Potential impacts include destruction of archaeology, impacts on endangered habitat, taonga, and natural character of coastal landforms. 									
	9. Mountains Will the activity impact on our sacred peaks?	<ul style="list-style-type: none"> The installation of new infrastructure has the potential to influence natural character and visual values, flights paths of manu (birds) and connectivity between maunga to moana. These values will be addressed in the BPO consent application as further details are understood. 									
Rangitāne o Manawatū atua	10. Ranginui Is Ranganui being respected?	<ul style="list-style-type: none"> The highest treatment levels and land discharge options protect Ranginui²¹. There is the potential to protect both Ranginui and Papatūānuku through the BPO by ensuring treatment to the highest high standard and directing land-use towards native forestry and habitat revitalisation. 									
	11. Papatūānuku	<ul style="list-style-type: none"> Papatūānuku can cleanse and revitalise polluted water within limits. Tāne māhuta is a critical part of this process, ngahere (forest) helps to 									

²¹ Stantec (2021). Palmerston North Wastewater Best Practicable Option (Review): Draft Carbon Footprint Assessment. Palmerston North City Council: Palmerston North.

	Kaupapa	Kōrero (comments)	1	1 a	2	3	3 a	4	4 a	5	5 a
	Is Papatūānuku being cared for?	<p>soak up nutrients and water cleansing the water. The discharge of well treated wastewater to land in native forestry that does not create any eutrophication of local waterways and wetlands ensures Papatūānuku is being cared for.</p> <ul style="list-style-type: none"> Indigenous ecosystem development is preferred because it is closer to the realm of Te Ao Māori, species such as kanuka and manuka have been demonstrated to absorb nutrients and e.coli to a higher degree than exotic forestry, they also improve the mauri of the whole system creating habitat for other taonga species. Wastewater discharge to land coupled with animal agricultural will create land intensification issues and significantly impact Papatūānuku. Wastewater discharges to water reduce the impact on Papatūānuku but cause significant adverse effects on other interrelated realms of Te Ao Māori realms. 									
	12. Tangaroa Is Tangaroa still connected and in balance?	<ul style="list-style-type: none"> Wastewater discharge to water significantly increases the risk of local sedimentation issues, algae blooms and impacts on ecological communities. When this happens Tangaroa, other realms of Te Ao Māori and aquatic environments become disconnected and out of balance. Aquatic plants, invertebrates, and fish have intrinsic value, they are part of Te Ao Māori and are related to people. 									

	Kaupapa	Kōrero (comments)	1	1 a	2	3	3 a	4	4 a	5	5 a
		<ul style="list-style-type: none"> • There are significant negative impacts on Rangitāne whānaunga (freshwater and saltwater plants, fish and invertebrates) when wastewater is being discharged into their living environment. • The wastewater treatment processes must be resilient and provide the highest treatment standards to eliminate impacts on Tangaroa in all discharge environments. 	Red	Red	Red	Green	Yellow	Green	Yellow	Red	Red
	<p>13. Haumia-tiketike</p> <p>Is Haumia-tiketike still productive?</p>	<ul style="list-style-type: none"> • Wastewater discharge to land is unlikely to impact what is left of the realm of haumia-tiketike within the Manawatū. The agricultural land under survey for discharges include very little uncultivated foods. • Small patches of original and planted bush blocks do not support sustainable harvest and mostly contain only seasonal food quality for taonga. These areas must be protected through the use of buffer systems and best management practices. • The realm of haumia-tiketike must be enhanced through the BPO project through offset and compensation mechanisms. 	Grey	Green	Green	Green	Green	Green	Green	Green	Grey
	<p>14. Rongomātāne</p> <p>Is Rongomātāne still cared for?</p>	<ul style="list-style-type: none"> • It is inappropriate to discharge wastewater onto fields of cultivated foods. • Rangitāne aren't in a position to assess the impact that the BPO may have on foods currently cultivated in the Manawatū landscape or for the potential diversification of horticulture into the future. This information will need to be considered in the development of the consent application. 	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey
<p>Nga uri o Rangitāne</p>	<p>15. Tangata whenua</p>	<ul style="list-style-type: none"> • Rangitāne vehemently oppose the continued discharge of wastewater to waterways and the moana. 	Red	Red	Red	Green	Yellow	Red	Red	Red	Red

	Kaupapa	Kōrero (comments)	1	1 a	2	3	3 a	4	4 a	5	5 a
o Manawatū	Is this acceptable to our people.	<ul style="list-style-type: none"> Rangitāne require their values and lore incorporated into any future wastewater management in their rohe. Rangitāne lore requires the city must deal with wastewater within its associated geographic area, reducing impacts on iwi with overlapping areas of interest and adjacent communities. 									

7 Next steps

Tikanga and lore has a vital place in traditional and contemporary societies to keep whānau, hapū and communities safe physically, emotionally, mentally and spiritually.

Rangitāne urge Palmerston North City Council to uphold the Treaty relationship that Rangitāne and council have been working hard to mature over the past years by recognising and providing for the traditional lore and tikanga of the land within BPO decision making.

Rangitāne will need to undertake at a minimum a Cultural Impact Assessment against the BPO as detailed information is developed. Rangitāne look forward to walking alongside council as Treaty partners as we move through to the BPO development, consenting and execution phases.

Disclaimer

We have used various sources of information to write this report. Where possible, we tried to make sure that all third-party information was accurate. However, it's not possible to audit all external reports, websites, people, or organisations. If the information we used turns out to be wrong, we can't accept any responsibility or liability for that. If we find there was information available when we wrote our report that would have altered its conclusions, we may update our report. However, we are not required to do so.

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Rangitāne o Manawatū Cultural Values Assessment: BPO for Palmerston North City Council
Wastewater

VERSION	DATE	AUTHOR	REVIEWER	COMMENTS
1	28 June 2021		Vanessa Tipoki	
2	2 July 2021		Danielle Harris	
3	5 July 2021		Peter Te Rangi	
4				

Appendix 2: Multi-Criteria Assessment – Ngati Raukawa

PALMERSTON NORTH CITY WASTEWATER TREATMENT PLANT

Hapū evaluation of options July 2021

1. Evaluation process

The five short-list options for the Palmerston North City Council's Wastewater Treatment Plant (WWTP) consent application were evaluated using the assessment framework developed for this purpose¹. The assessment framework includes the Mauri Model² which is used to indicate whether each of the proposed short-list options for WWTP is enhancing or diminishing hapū values.

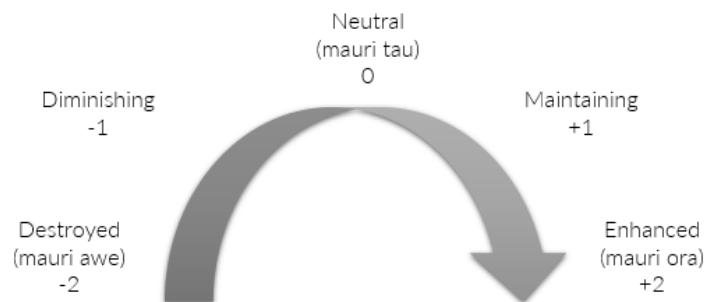


Figure 1: Assessment of mauri using the Mauri Model²

The evaluation process taken to date includes the following five steps:

1. Draft framework developed by The Catalyst Group for consideration by hapū
2. Initial identification of hapū values by Hayden Turoa on behalf of hapū
3. Presentation of framework and values at Tumatakahuki hui³. Based on this kōrero:
 - a. The list of hapū values to include in assessment was refined (from six to five⁴)
 - b. An initial assessment of mauri for each value was made against several of the short-list options
 - c. A general steer on general position for several of the short-list options was provided
4. Supported by The Catalyst Group, the evaluation process (scoring of mauri for each value for each of the short-list options) was completed
5. A summary 'score' was calculated for each short-list, and a concluding position for each short-list option based on the outcome of the assessment identified

¹ See 'Draft framework for assessing the impacts of PNCC wastewater treatment plant shortlist options on Ngāti Turanga values'. Memo from The Catalyst Group to Hayden Turoa on behalf of Ngāti Turanga dated 21 April 2021

² The Mauri Model was adapted from:

Morgan K 2003. The sustainable evaluation of the provision of urban infrastructure alternatives using the tangata whenua Mauri Model within the Smart Growth Sub-Region. Technical report, Mahi Maioro Professionals, Auckland.

³ Held at the Raukawa Whanau Ora Ltd offices, 152 Bath St, Levin 5 pm on Wednesday 30 June 2021

⁴ A sixth value, Ma Maru (leave an offering for Maru), was initially identified to be included in the assessment framework. On further consideration it was decided this value did not lend itself well to the framework and is better addressed outside of this process. Ma Maru remains relevant to the wider consenting process and can be reintroduced elsewhere in the process.

2. Summary of assessment outcomes

The core values and hapū principles to assess each of the short-list wastewater treatment options against were confirmed as:

Core values/principles	
Whakapapa Atua, and Whakapapa Tupuna	Each hapu and iwi have a whakapapa to the whenua which is an inalienable association to all elements associated (for example, mountains, rivers, lakes, swamps, forests, geothermal activity, oceans, animals – as well as tangata (people)).
Te Kai Pupuru Mouri	Hapu and iwi are the Kai Pupuru Mouri of their taonga, both tangible and in-tangible. Hapu and iwi are integrated, sustainably across the options through a procedural standard that ensure options ‘whangai’ the ‘Mauri’.
Hapai O	What level of abundance can be achieved for hapu and iwi mahinga kai.
Manawaroa	How does the option provide for the environmental resilience and addresses the loss through time, and nutrient deficiencies of waters.
He ringa miti tai heke	Spiritual, customary and recreational use of the Taiao.

The summary of assessment for each-list option is provided below. The **total score** is calculated as the score for each value (-2, -1, 0, +1, +2) divided by five (number of values). However, a score of ‘-2’, mauri awe (destroyed) for **any value** indicates a fatal flaw for that short-list option regardless of scores for other values for the same short-list option.

Following this assessment, short-list options have been colour-coded; **red** for options that are fundamentally unacceptable to hapū (fatally flawed), **orange** for options that are unacceptable in their current form, but which are not fatally flawed (at this stage), and **green** for options that are acceptable to hapū.

The full assessment (including scoring and explanation) for each short-list option is presented at the end of this document.

Summary of hapū assessment against each of the short-list options. Colour code: **red** = fatally flawed; **orange** = currently unacceptable (no fatal flaws); **green** = acceptable to hapū

Option	Variant	Total score	Colour code	Conclusion
<u>Option 1:</u> Full River discharge – Full discharge to the Manawatū River at Totara Road with enhanced treatment	(b) 100% discharge to river with enhanced treatment	-1.6	Red	Fundamentally unacceptable to hapū
	(b-2) 100% discharge to river with 75% discharge to land during dry water flow with enhanced treatment.	-1.6	Red	Fundamentally unacceptable to hapū
<u>Option 2:</u> Full River discharge (two locations), with low flow land discharge (Dual L+R) – Full discharge to Manawatū River at two locations (Totara Road in high flow and below Oroua confluence in medium flow), with discharge to land in low flow	(a) Full discharge to Manawatū River at Totara Road in high flow; full discharge to Manawatū River below Oroua confluence in medium flow; full discharge to land in low flow.	-1.6	Red	Fundamentally unacceptable to hapū
	(b) Same as (a) but only 75% discharge to land in low flow (to keep wetlands alive).	-1.6	Red	Fundamentally unacceptable to hapū
<u>Option 3:</u> Combined land and river discharge (L+R) – Combined discharge to land and Manawatū River, with discharge to land 97% of the time and discharge to river at Totara Road only in very high flow	(a) Treated WW applied to land 97% of the time, with discharges to the Manawatū River at Totara Road 3% of the time (11 days of highest discharge when river also expected to be high). Land discharge will be inland, fluvial soils.	-1	Orange	Currently unacceptable to hapū
	(b) Same as (a) but land discharge to coastal, sand country soils. Additional treatment also required compared to fluvial soils as there is less uptake of nutrients by forestry on sand country, and leaching needs to be managed	-1.4	Red	Fundamentally unacceptable to hapū

Option	Variant	Total score	Colour code	Conclusion
<u>Option 4:</u> Combined land and river discharge (L+R) – Combined discharge to land and Manawatū River at Totara Road, with discharge to land in low or medium to low flow (43-54% of the time).	(d-1) Treated WW discharged to land when Manawatū River less than 80m ³ /s (approx. 53% of the time), with discharge to River when >80m ³ /s and highest 3% of days by WWTP flow. Land discharge will be inland, fluvial soils	-1	Orange	Currently unacceptable to hapū
	(d-2) Treated WW discharged to land (fluvial) when Manawatū River less than 62m ³ /s (approx. 43% of the time), with discharge to River when >62m ³ /s and highest 3% of days by WWTP flow. Land discharge will be inland, fluvial soils	-1	Orange	Currently unacceptable to hapū
	(e-1) Same as d-1 but land discharge to coastal, sand country soils	-1.4	Red	Fundamentally unacceptable to hapū
	(e-2) Same as d-2 but land discharge to coastal, sand country soils	-1.4	Red	Fundamentally unacceptable to hapū
<u>Option 5:</u> Full discharge to ocean	Full discharge to ocean	-2	Red	Fundamentally unacceptable to hapū

FULL ASSESSMENT OF EACH SHORT-LIST OPTION:

Option 1: **Full River discharge** – Full discharge to the Manawatū River at Totara Road with enhanced treatment.

Variant	Values assessment	Score (-2 to +2)	Explanation and conclusion
(b) 100% discharge to river with enhanced treatment.	Whakapapa Atua, and Whakapapa Tupuna	-2	Undermines the mana of the awa and provides no avenue for te mana o te iwi
	Te Kai Pupuru Mouri	-2	As the kai pupuri mouri for the lower reaches of the awa this plan offers no solutions to the cumulative impacts
	Hapai O	-1	Unsatisfactory level of treatment to encourage the collection of kai
	Manawaroa	-2	Fails to provide for environmental resilience or addresses the loss through time, and nutrient deficiencies of waters.
	He ringa miti tai heke	-1	Unsatisfactory level of treatment to encourage the collection of kai
	Total score		-1.6
(b-2) 100% discharge to river with 75% discharge to land during dry water flow with enhanced treatment.	Whakapapa Atua, and Whakapapa Tupuna	-2	Undermines the mana of the awa
	Te Kai Pupuru Mouri	-2	As the kai pupuri mouri for the lower reaches of the awa this plan offers no solutions to the cumulative impacts
	Hapai O	-1	Unsatisfactory level of treatment to encourage the collection of kai
	Manawaroa	-2	Fails to provide for environmental resilience or addresses the loss through time, and nutrient deficiencies of waters

Variant	Values assessment	Score (-2 to +2)	Explanation and conclusion
	He ringa miti tai heke	-1	Unsatisfactory level of treatment to encourage the collection of kai
	Total score:	-1.6	Fundamentally unacceptable to hapū

Option 2: Full River discharge (two locations), with low flow land discharge (Dual L+R) – Full discharge to Manawatū River at two locations (Totara Road in high flow and below Oroua confluence in medium flow), with discharge to land in low flow.

Variant	Values assessment	Score (-2 to +2)	Explanation and conclusion
(a) Full discharge to Manawatū River at Totara Road in high flow; full discharge to Manawatū River below Oroua confluence in medium flow; full discharge to land in low flow.	Whakapapa Atua, and Whakapapa Tupuna	-2	Undermines the mana of the awa and provides no avenue for te mana o te iwi
	Te Kai Pupuru Mouri	-2	As the kai pupuri mouri for the lower reaches of the awa this plan offers no solutions to the cumulative impacts
	Hapai O	-1	Unsatisfactory level of treatment to enable the collection of kai
	Manawaroa	-2	Fails to provide for environmental resilience or addresses the loss through time, and nutrient deficiencies of waters.
	He ringa miti tai heke	-1	Unsatisfactory level of treatment to enable the collection of kai
	Total score	-1.6	Fundamentally unacceptable to hapū
(b) Same as (a) but only 75% discharge to land in low flow (to keep wetlands alive).	Whakapapa Atua, and Whakapapa Tupuna	-2	Undermines the mana of the awa and provides no avenue for te mana o te iwi
	Te Kai Pupuru Mouri	-2	As the kai pupuri mouri for the lower reaches of the awa this plan offers no solutions to the cumulative impacts

Variant	Values assessment	Score (-2 to +2)	Explanation and conclusion
	Hapai O	-1	Unsatisfactory level of treatment to encourage the collection of kai
	Manawaroa	-2	Fails to provide for environmental resilience or addresses the loss through time, and nutrient deficiencies of waters.
	He ringa miti tai heke	-1	Unsatisfactory level of treatment to encourage the collection of kai
	Total score	-1.6	Fundamentally unacceptable to hapū

Option 3: **Combined land and river discharge (L+R) – Combined discharge to land and Manawatū River**, with discharge to land 97% of the time and discharge to river at Totara Road only in very high flow.

Variant	Values assessment	Score (-2 to +2)	
(a) Treated WW applied to land 97% of the time, with discharges to the Manawatū River at Totara Road 3% of the time (11 days of highest discharge when river also expected to be high). Land discharge will be inland, fluvial soils.	Whakapapa Atua, and Whakapapa Tupuna	-1	Provides limited avenue for te mana o te iwi
	Te Kai Pupuru Mouri	-1	As the kai pupuri mouri for the lower reaches of the awa this option offers limited solutions to the cumulative impacts to the awa, noting that the awa will receive some discharge
	Hapai O	-1	Unsatisfactory level of treatment to encourage the collection of kai
	Manawaroa	-1	Fails to adequately address the loss over time, or build resilience of the awa by allowing some discharge to the awa to remain
	He ringa miti tai heke	-1	Unsatisfactory level of treatment to encourage the collection of kai

Variant	Values assessment	Score (-2 to +2)	
	Total score	-1	Currently unacceptable to hapū
(b) Same as (a) but land discharge to coastal, sand country soils. Additional treatment also required compared to fluvial soils as there is less uptake of nutrients by forestry on sand country, and leaching needs to be managed.	Whakapapa Atua, and Whakapapa Tupuna	-2	Undermines the mana of the moana and provides no avenue for te mana o te iwi
	Te Kai Pupuru Mouri	-1	This option offers limited solutions to the cumulative impacts to the awa and moana, noting that the awa and moana will receive some discharge from sandy soils
	Hapai O	-1	Unsatisfactory level of treatment to encourage the collection of kai
	Manawaroa	-2	Fails to address the loss over time, or build resilience of the awa and moana as some discharge to the wai will remain as seen with other discharges on sand country
	He ringa miti tai heke	-1	Unsatisfactory level of treatment to encourage the collection of kai
	Total score	-1.4	Fundamentally unacceptable to hapū

Option 4: Combined land and river discharge (L+R) – Combined discharge to land and Manawatū River at Totara Road, with discharge to land in low or medium to low flow (43-54% of the time).

Variant	Values assessment	Score (-2 to +2)	Why
(d-1) Treated WW discharged to land when Manawatū River less than 80m ³ /s (approx. 53% of the time), with discharge to River when >80m ³ /s and highest 3% of days by WWTP flow. Land discharge will be inland, fluvial soils.	Whakapapa Atua, and Whakapapa Tupuna	-1	Provides limited avenue for te mana o te iwi
	Te Kai Pupuru Mouri	-1	As the kai pupuri mouri for the lower reaches of the awa this option offers limited solutions to the cumulative impacts to the awa, noting that the awa will receive some discharge
	Hapai O	-1	Unsatisfactory level of treatment to encourage the collection of kai
	Manawaroa	-1	Fails to adequately address the loss over time, or build resilience of the awa by allowing some discharge to the awa to remain
	He ringa miti tai heke	-1	Unsatisfactory level of treatment to encourage the collection of kai
	Total score	-1	Currently unacceptable to hapū
(d-2) Treated WW discharged to land (fluvial) when Manawatū River less than 62m ³ /s (approx. 43% of the time), with discharge to River when >62m ³ /s and highest 3% of days by WWTP flow. Land discharge will be inland, fluvial soils.	Whakapapa Atua, and Whakapapa Tupuna	-1	Provides limited avenue for te mana o te iwi
	Te Kai Pupuru Mouri	-1	As the kai pupuri mouri for the lower reaches of the awa this option offers limited solutions to the cumulative impacts to the awa, noting that the awa will receive some discharge
	Hapai O	-1	Unsatisfactory level of treatment to encourage the collection of kai
	Manawaroa	-1	Fails to adequately address the loss over time, or build resilience of the awa by allowing some discharge to the awa to remain

Variant	Values assessment	Score (-2 to +2)	Why
	He ringa miti tai heke	-1	Unsatisfactory level of treatment to encourage the collection of kai
	Total score	-1	Currently unacceptable to hapū
(e-1) Same as d-1 but land discharge to coastal, sand country soils.	Whakapapa Atua, and Whakapapa Tupuna	-2	Undermines the mana of the moana and provides no avenue for te mana o te iwi
	Te Kai Pupuru Mouri	-1	This option offers limited solutions to the cumulative impacts to the awa and moana, noting that the awa and moana will receive some discharge from sandy soils
	Hapai O	-1	Unsatisfactory level of treatment to encourage the collection of kai
	Manawaroa	-2	Fails to address the loss over time, or build resilience of the awa and moana as some discharge to the wai will remain as seen with other discharges on sand country
	He ringa miti tai heke	-1	Unsatisfactory level of treatment to encourage the collection of kai
	Total score	-1.4	Fundamentally unacceptable to hapū
(e-2) Same as d-2 but land discharge to coastal, sand country soils.	Whakapapa Atua, and Whakapapa Tupuna	-2	Undermines the mana of the moana and provides no avenue for te mana o te iwi
	Te Kai Pupuru Mouri	-1	This option offers limited solutions to the cumulative impacts to the awa and moana, noting that the awa and moana will receive some discharge from sandy soils
	Hapai O	-1	Unsatisfactory level of treatment to encourage the collection of kai

Variant	Values assessment	Score (-2 to +2)	Why
	Manawaroa	-2	Fails to address the loss over time, or build resilience of the awa and moana as some discharge to the wai will remain as seen with other discharges on sand country
	He ringa miti tai heke	-1	Unsatisfactory level of treatment to encourage the collection of kai
	Total score	-1.4	Fundamentally unacceptable to hapū

Option 5: **Full discharge to ocean**

Variant	Values assessment	Score (-2 to +2)	Why
(a) Full discharge to ocean	Whakapapa Atua, and Whakapapa Tupuna	-2	This is a considerable impact to whenua, waahi tapu and the moana
	Te Kai Pupuru Mouri	-2	As the kai pupuri mouri for the whenua, waahi tapu and coastal region this plan offers no solutions to the cumulative effects. A number of hapu are also MACA Claimants.
	Hapai O	-2	Unsatisfactory level of treatment to encourage the collection of kai within already at risk food species
	Manawaroa	-2	Fails to provide for environmental resilience or addresses the loss through time, and nutrient deficiencies of waters
	He ringa miti tai heke	-2	Unsatisfactory level of treatment to encourage the collection of kai
		Total score	-2

