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**PALMERSTON NORTH CITY COUNCIL**

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**AGENDA  
COUNCIL  
LATE ITEM**

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**9AM, MONDAY 24 JUNE 2019**

COUNCIL CHAMBER, FIRST FLOOR, CIVIC ADMINISTRATION BUILDING  
32 THE SQUARE, PALMERSTON NORTH

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## MEMBERSHIP

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**Grant Smith (Mayor)**

**Tangi Utikere (Deputy Mayor)**

**Brent Barrett**

**Susan Baty**

**Rachel Bowen**

**Adrian Broad**

**Gabrielle Bundy-Cooke**

**Vaughan Dennison**

**Low Findlay QSM**

**Leonie Hapeta**

**Jim Jefferies**

**Lorna Johnson**

**Duncan McCann**

**Karen Naylor**

**Bruno Petrenas**

**Aleisha Rutherford**

**Agenda items, if not attached, can be viewed at:**

[pncc.govt.nz](http://pncc.govt.nz) | Civic Administration Building, 32 The Square  
City Library | Ashhurst Community Library | Linton Library

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**Heather Shotter**

**Chief Executive, Palmerston North City Council**

**Palmerston North City Council**

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## **COUNCIL MEETING**

24 June 2019

### **LATE ITEM**

#### ***REPORTS***

**28. Wastewater BPO Recommended Short List Options**

Page 5

Report, dated 5 June 2019 presented by the Transport and Infrastructure Manager, Robert van Bentum.



## REPORT

**TO:** Council

**MEETING DATE:** 24 June 2019

**TITLE:** Wastewater BPO Recommended Short List Options

**DATE:** 5 June 2019

**PRESENTED BY:** Robert van Bentum, Transport and Infrastructure Manager,  
Infrastructure

**APPROVED BY:** Tom Williams, Chief Infrastructure Officer

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### RECOMMENDATION(S) TO COUNCIL

1. That the Council receive the report and endorse the selected shortlist options, as listed in the report dated 5 June 2019 and titled "Wastewater BPO Recommended Short List Options," proceeding to more detailed assessment in the next phase of the BPO Project.

## 1. REPORT PURPOSE

- 1.1 The purpose of the report is to provide an overview of the progress made on the Wastewater BPO Project and seek endorsement of the recommended shortlist options to proceed to more detailed assessment in the next phase of the BPO Project.

## 2. BACKGROUND AND PREVIOUS COUNCIL DECISIONS

- 2.1 The Totara Road Wastewater Treatment Plant (WWTP) services the entire wastewater network of Palmerston North city and satellite communities. A resource consent application was granted in 2006 for the discharge of treated wastewater into the Manawatu River from the WWTP. A review of this resource consent was undertaken in 2013, and in 2015 the Council and Horizons Regional Council agreed that an application for a new resource consent would be lodged by 30 June 2022. This new resource consent must meet certain criteria as the Best Practicable Option (BPO).
- 2.2 The BPO Project was initiated in 2017 by Council and has progressed in line with the Project Programme adopted in mid-2018 (refer Attachment 1). To date, all milestones have been met for the Project deliverables.
- 2.3 Since 2017, the Project Steering Group (PSG), comprising selected elected Council members, representatives of the executive management team and three Rangitāne representatives, have met monthly to provide project direction and accountability. The reporting is provided by the BPO Project Manager who is supported by the Council's lead technical consultants.
- 2.4 The 2018/28 Long Term Plan confirmed an annual budget of \$1,244,000 for the 2018/19 Financial Year. Work Packages were defined and budgets allocated with the involvement of Council officers and the lead technical advisors. Work has been delivered largely in line with the allocated budget.
- 2.5 As part of the options development and assessment process, various workshops have been held, involving technical experts, Council officers, stakeholders and Councillors. These workshops were carried out at key milestones and decision points in the project.

## 3. ALTERNATIVES ASSESSMENT PROCESS

- 3.1 In August 2018 the PSG confirmed the methodology for the options assessment process. On 17 September 2018 the Council adopted the recommended methodology to develop the Best Practicable Option (BPO) (refer Attachment 2). This methodology was endorsed by Council at the September 2018 workshop.

#### 4. LONG LIST OPTIONS

- 4.1 Between September and December 2018, the Projects Technical Team worked with stakeholders to develop a preliminary list of options (Draft long list). A total of 34 options were developed across 6 categories. These categories included: Land, River, Groundwater, Ocean, Direct to Water Supply, Land and River combined. Sub-regional schemes and alternative treatment plant locations were options considered for all categories (refer Attachment 3).
- 4.2 This longlist was assessed by the technical team to determine options that had a 'Fatal Flaw'. The fatal flaw criteria included:
1. Significant increase in public health risk
  2. Significant increase in adverse environmental, cultural, social effects on the River
  3. Unproven technology
  4. Prevents growth and economic development in Palmerston North
  5. Absolutely un-consentable under the RMA
  6. Whole-of-life costs are absolutely unaffordable
- 4.3 An assessment of the longlist options was undertaken by the projects Technical Team and Rangitane resulting in the identification of 8 options which it was considered should be fatally flawed. A Councillor workshop was held on 11 November 2018 and in addition to a briefing on each of the options, the initial assessment of the technical team and Rangitane was also presented to Councillors.
- 4.4 Councillors confirmed in principle a longlist of 26 options and endorsed the proposed removal of the 8 fatally flawed options. The longlist options were subsequently further refined and adjusted following the workshop during December 2017 and presented to the Council for adoption in February 2018 (refer Attachment 3).
- 4.5 The Project Team has completed technical analysis to develop comparative assessments of the following eight criteria:
- Public Health;
  - Natural Environment;
  - Maori Cultural Health;
  - Social and Community Considerations;
  - Financial Implications;
  - Technology and Infrastructure;
  - Resilience; and

- Economic Growth and Development.
- 4.6 The assessments have been used to inform each of the subsequent steps in the long list assessment, i.e. the traffic light assessment, the identification of the draft short list and the BPO test of the draft short list.
- 4.7 On 3 May 2019 a one-day workshop was undertaken. The workshop used a traffic light approach to score the eight (8) criteria agreed by the PSG and Council in February 2019. Comparative assessments were presented by technical experts at the workshop on all 26 options. Following the comparative assessment process, attendees worked collaboratively to agree a draft shortlist of options.
- 4.8 The Draft shortlist options were then assessed against the BPO criteria, listed in the condition 23B of the current resource consent. In summary, these criteria include:
- Receiving environment sensitivity;
  - Comparison of the effects on the environment;
  - Comparative financial implications;
  - Technology;
  - Exceedances of standards or targets; and
  - RMA Part 2 and Section 104, 105 and 107 Considerations.
- 4.9 The recommended shortlist was reported to the PSG in May 2019. A workshop with Councillors was carried out on the 17th June 2019 to review and confirm the recommended short list options.

## 5. STAKEHOLDER ENGAGEMENT

- 5.1 Consultation and engagement with key stakeholders commenced in August 2018 and has been ongoing. To date this has been limited to introducing the objectives, focus and process being followed by the project and initial establishment of relationships.
- 5.2 An initial project launch occurred in February 2019 and there has been an on-going programme of communication and engagement with the wider community. This has generally comprised information presented via website and social media channels, but been supplemented by print, radio and a wastewater treatment plant open day. With each stage and key milestone in the project, the web and communication content has been refreshed and amended.

## 6. RECOMMENDED SHORTLIST OPTIONS

6.1 The following options comprise the recommended the shortlist:

- 6.1.1 R2(b) All wastewater discharged to the Manawatu River, with increased TP & TN Removal
- 6.1.2 Dual R + L Manawatu River discharge at Opiki Bridge, with some land application
- 6.1.3 L + R (a) & (b) Approximately 97% of the treated wastewater applied to land
- 6.1.4 L + R (d) & (e) Treated wastewater applied to land below intermediate/high flows in the Manawatu River
- 6.1.5 GW – 2 Base flow to land application, with remainder to high rate infiltration
- 6.1.6 O + L Most of the treated wastewater discharged to the ocean and some to land.

6.2 Key features to note in respect of the recommended short list include:

- 6.2.1 The options cover the full range of receiving environments, being the Manawatū River, land (fluvial soils & coastal sands), groundwater and the ocean;
- 6.2.2 Notwithstanding point 6.2.1 all options, apart from R2(b), include a component of land application;
- 6.2.3 All options apart from R2(b) involve shifting the location of the discharge of part or all the City's treated wastewater; and
- 6.2.4 All discharges to the Manawatū River will pass through a wetland/ land passage system prior to reaching the river. Preliminary design work on wetlands or land passage systems will be undertaken during the short list development phase.

6.3 In determining the recommended short list options, the PSG and invited stakeholders were cognisant of the following key issues:

- 6.3.1 The preliminary nature of the longlist assessment processes and the significant assumptions required to develop each option, makes it inappropriate to exclude any of the broad option categories from the short list development phase.
- 6.3.2 Consultation on the options selection has been limited with limited opportunities for detailed engagement with the community and stakeholders.

Again for this reason it is considered inappropriate to exclude any option category with the exception of those which were clearly shown to be infeasible through the fatal flaw process.

6.3.3 The short-listing process identified that no option was optimal across all the selection criteria. Some options appear at this preliminary stage to better align with natural environment, public health and Māori cultural health criteria while other options better align with the financial implications' criterion. In all cases because the criteria assessment is considered interim, more detailed assessments are required to arrive at a more definitive comparative assessment. It is therefore appropriate that all option categories are retained.

6.3.4 Whichever shortlisted options are selected to be advanced to more detailed assessment, the BPO process provides for a discarded option to be reconsidered at any stage up to the point of confirming the Best Practicable Option.

## 7. CONCLUSION

7.1 The options within the draft short list have been selected as they are representative of the range of receiving environments and option categories included in the longlist. All the recommended short-listed options align with a majority of the BPO criteria although not all, and none of the options are fatally flawed.

7.2 Each of the options have been evaluated on 'high level information'. Those involved in the selection process as well as the project team recognise that further investigation is necessary to understand the definitive scope and extent of environmental, social, cultural and economic impacts each of these options may have. This further investigation process will provide the additional more robust information, that will allow the key project stakeholders and Council to understand the viability of the recommended shortlist options.

7.3 It is important to recognise the methods used (fatal flaw, traffic light comparative assessment and BPO test) are only tools used to facilitate the refinement of options from the very long list to the preferred option (the BPO). Further investigation supported by consultations and detailed assessment tools will be applied to the short list options once confirmed.

7.4 The next stage of the BPO Project involves robust investigation, analysis of information and community and stakeholder engagement to develop each of the options further, to inform a focussed and intensive consultation with the community and stakeholders in early 2020.

**8. NEXT ACTIONS**

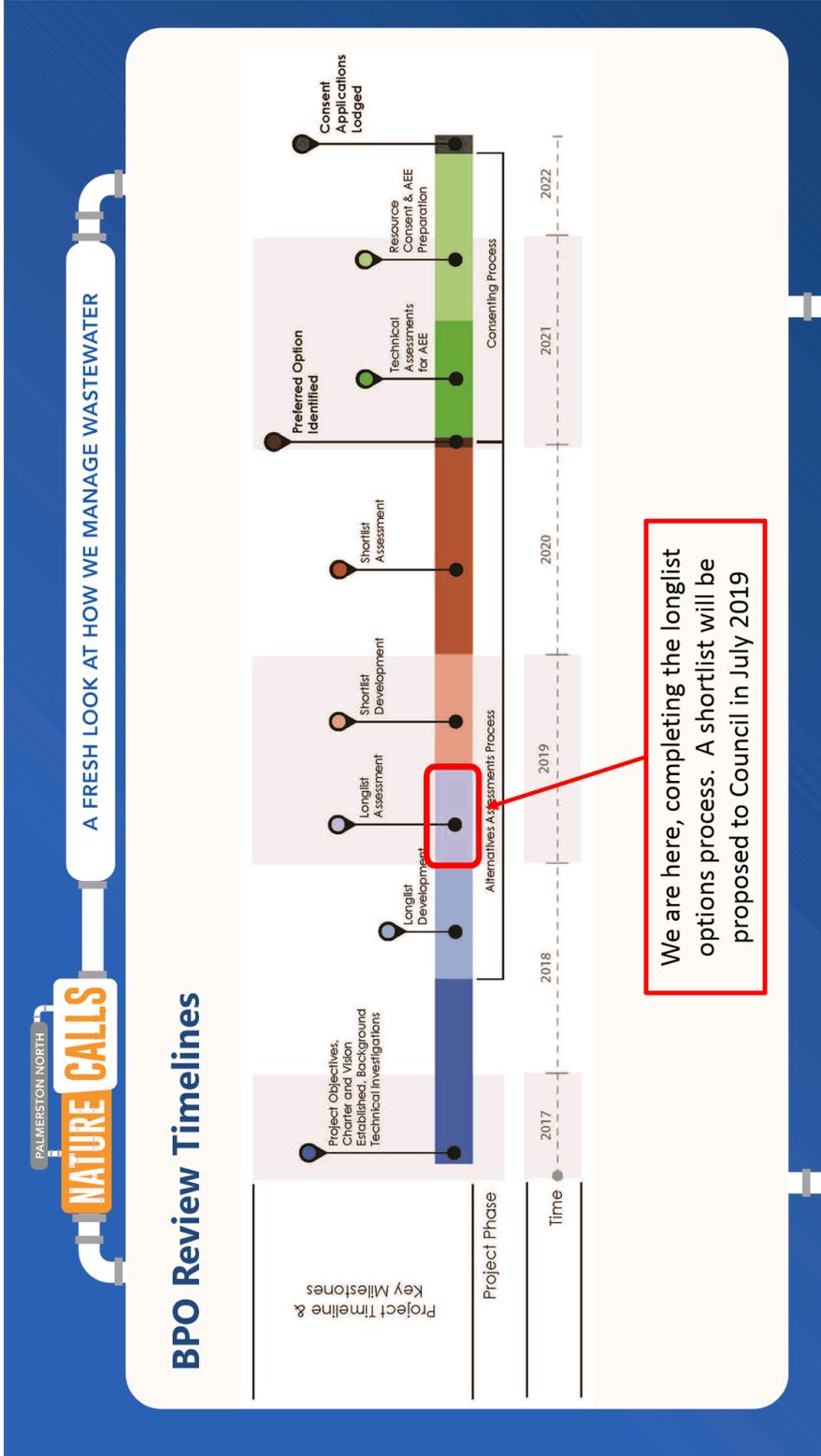
- 8.1 After confirmation of the short list options, the BPO Project Team will progress with scoping and implementing the detailed technical assessments to determine the options in more detail. The investigation work will focus on physical, environmental and economic elements that will then allow the key features including possible discharge locations for the proposed shortlist options to be identified.
- 8.2 A detailed programme is currently being developed for the Project.
- 8.3 An intensive and focussed consultation process with the community and key stakeholders is proposed for early 2020, when the detail for each of the proposed shortlist options has been sufficiently developed.

**COMPLIANCE AND ADMINISTRATION**

Does the Committee have delegated authority to decide? If Yes quote relevant clause(s) from Delegations Manual <Enter clause>	<b>Yes</b>
Are the decisions significant?	<b>No</b>
If they are significant do they affect land or a body of water?	<b>No</b>
Can this decision only be made through a 10 Year Plan?	<b>No</b>
Does this decision require consultation through the Special Consultative procedure?	<b>No</b>
Is there funding in the current Annual Plan for these actions?	<b>Yes</b>
Are the recommendations inconsistent with any of Council’s policies or plans?	<b>No</b>

**ATTACHMENTS**

- 1. BPO Programme [!\[\]\(1d72120bc1277939d5ca9babd8c91e20\_img.jpg\) !\[\]\(1976b97cef93489cd418060cab42c56e\_img.jpg\)](#)
- 2. BPO Options Development & Assessment Methodology [!\[\]\(26a5cdb726fddb4299add688a35a9df9\_img.jpg\) !\[\]\(85a650f0e53dadfa36b43e6c36419fac\_img.jpg\)](#)
- 3. Long List Options Description [!\[\]\(3e69ccf4fdc199632da54bf5e73f5cec\_img.jpg\) !\[\]\(b32ebffa4111e5b8f00138868dcb4c52\_img.jpg\)](#)



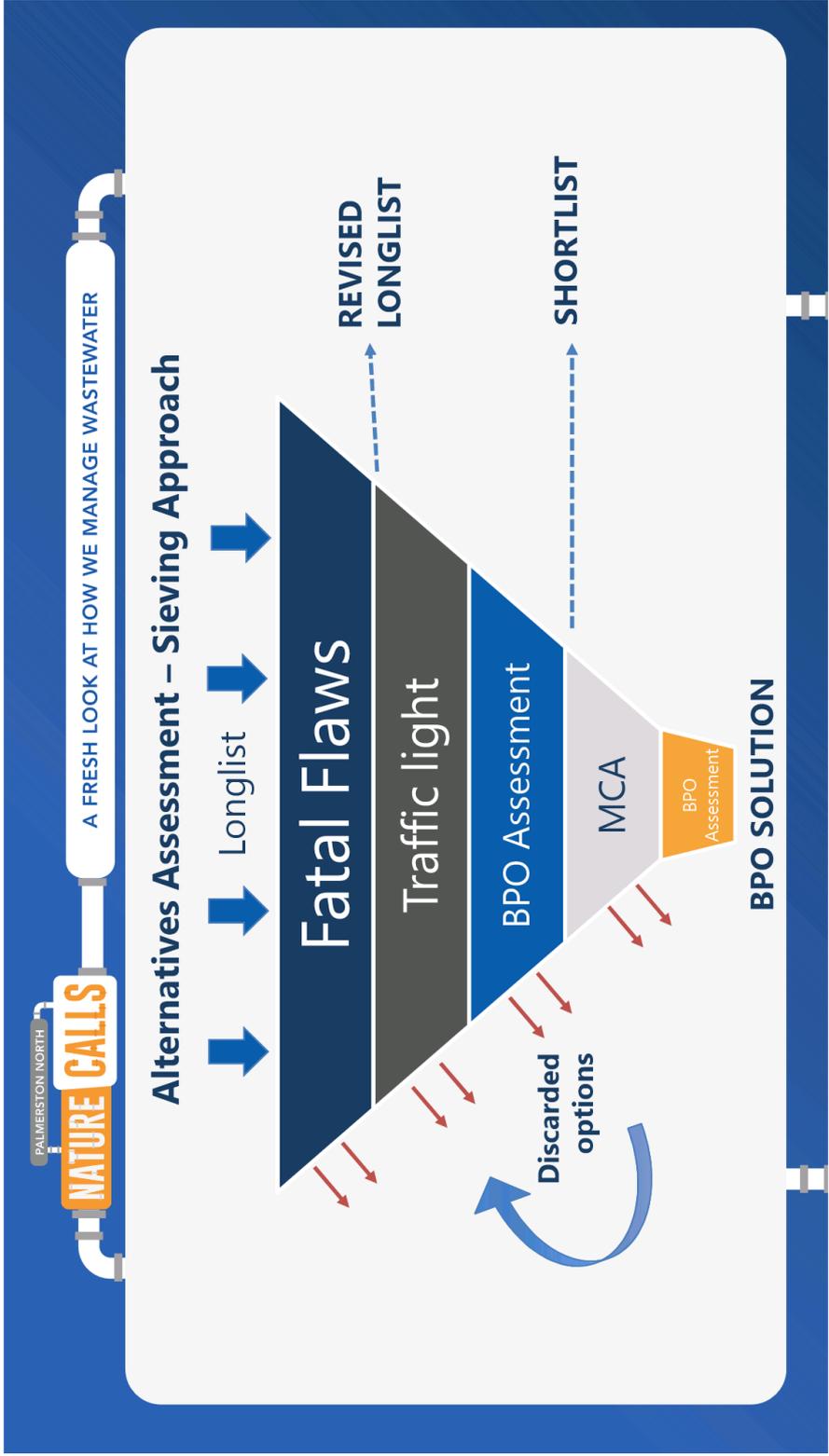


Figure 2 - Summary of the Long list Options			
<b>100% to Land Options (2)</b>			
 <p>LAND All the time</p>	L-1 All to Land - Local Fluvial Soils	L-2 All to Land - Coastal Sand Country	
	<b>100% to River Options (7)</b>		
 <p>SURFACE WATER (MANAWATO RIVER) All the time</p>	R2(a) All to River - Progressive TP and TN removal as River drops below twice median flow (approx. 150 m <sup>3</sup> /s)	R2(b) All to River - TP & TN removed as River level drops below 60m <sup>3</sup> /s	R2 (c) All to River - TP & Extensive TN removed as River level drops below half median flow of 37m <sup>3</sup> /s
	R3(b) All to River below Opiki Bridge	R4 (b) All to River - Dual Discharge Points	
	R + S (a) River + storage at low River flow	R + S (b) River + daily storage – Night-time discharge	
<b>Land and River Combinations (7)</b>			
 <p>MIXED SCHEME Land and surface water</p>	L + R (a) To Land - Local Fluvial Soils (approx. 97% of time) + River at Very High Flows	L + R (b) To Land - Coastal Sand Country (approx. 97% of time) + River at Very High Flows	
	L + R (d) To Land - Local Fluvial Soils approx. 73% of time + River at High Flows	L + R (e) To Land - Coastal Sand Country approx. 73% of time + River at High Flows	
	R + L (a) To River at intermediate flows and greater, to Land - local fluvial soils - at lower River flows	R + L (b) To River at intermediate flows and greater, to Land - coastal sand country at lower River flows	
	Dual R + L Dual River discharge + some to land		
<b>Groundwater Options (4)</b>			
 <p>TO GROUNDWATER</p>	GW - 1 100% by high-rate infiltration	GW - 3 Base flow to high rate infiltration, remainder to River	GW - 4 Mixed high rate infiltration & deep bore aquifer injection
	GW - 2 Base flow to land, remainder high rate infiltration		
	<b>Ocean Options (4)</b>		
 <p>TO COASTAL WATER (SOUTH TARANAKI BIGHT, TASMAN SEA)</p>	O - 1 All to Ocean, existing treatment except no P removal	O - 2 All to Ocean - less treatment	
	O + R To Ocean + some to River at high flows	O + L To Ocean + some to Land	
<b>Water Supply Option (1)</b>		<b>Air Option (1)</b>	
 <p>DIRECT TO WATER SUPPLY</p>	WS - 1 Direct discharge to potable water supply - balance to River	 <p>Discharge to Air</p>	A - 2 To River + evaporation of a proportion at low River flows