

Meeting Minutes

Rotorua RPSC

Technical Advisory Group Meeting # 2



Date: Tuesday 8 July 2014
Time: 9am – 1.30pm

Venue:	Rotorua Waste Water Treatment Plant	
Chairperson:	Jim Bradley	
Attendees:	Alison Lowe (TAG Member) Professor David Hamilton (TAG Member) Chris McBride (Waikato University) Jim Bradley (TAG Interim Chair) Dr Kepa Morgan (TAG Member) Ian Mclean (Chair of RRSSSC)	Greg Manzano (TAG Member), Riaan Rossouw (RDC) Andy Bruere (TAG Member) Hilda King (RDC administrator) Warren Webber (Chair of RPSC)

Agenda Item	Action Required
<p>1. WELCOME</p> <p>JB welcomed everyone and KM opened meeting with a Karakia. Agenda reviewed –</p> <p>AB requested to add to General business</p> <ol style="list-style-type: none"> discussion re email distribution Water quality information for Rotoma 	
<p>2. TAG #1 MINUTES</p> <p>Note taking:</p> <p>JB - mentioned that some minutes were being called notes and some minutes. To keep it formal it was agreed they be recorded as minutes.</p> <p>Hilda advised that a recorder was being used due to the complexity of the information being discussed and it was merely being used to assist with note taking.</p> <p>Committee approved</p> <p>Last TAG minutes were taken by Alison whilst in attendance of meeting.</p> <p>Various items from the TAG meeting dated 5 June 2014 were discussed.</p> <p>Item 5 – A reminder of the Goals of the Committee and the timeframe required by us to produce a Short list of options for the committee.</p> <p>Item 6 – Indigitech Presentation – AL advised she had forwarded questions that arose from the presentation and was hoping to receive replies in time for today's meeting. Alison happy to collate more questions to pass on. She will pass on replies when she receives them.</p>	

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<p>Item 7 “TAG minimum requirements”</p> <p>KM – Advised that it would be unwise not to include social / cultural issue into this minimum requirement. Kepa gave further explanation</p> <p>KM - suggested to include the following “We should avoid at all costs the transfer of para (Faecal matter) from one catchment to another” KM believes this would be universal throughout the country.</p> <p>AB – Made comment to the inclusion of this statement suggesting that this would be more of a role for the steering committee to give this sort of advice.</p> <p>KM – claims he met with Ngati Pikiao and has 100% of their backing and reinforced after the tour yesterday. He does not expect his comments to be mandated by the TAG committee as this would be inappropriate.</p> <p>JB – We are a Technical advisory group but we need to be mindful of cultural and social matters but how far do we go in terms of our requirements?</p> <p>AL – As one of the goals of the Steering Committee is to acceptably meet the cultural needs of tangata whenua we could add a statement to the TAG minimum requirements” next to the “Meets previously agreed upon principles from the Clean Water workshop (Oct 2013)” – Statement could read <i>“Minimum discharge of Para out of the catchment”</i>.</p> <p>AB –there’s likely to be when the community select what they want to do, some conflicts between cultural, technical and various different parts of the community so as a member of this committee I’d like the committee to be quite clear on whether the issues on options are technical or cultural so the community is clear on what they’re deciding on.</p> <p>AL – So minimum requirement could be “minimal transfer of para out of catchment to another”.</p> <p>KM – It should be no transfer, which is how Iwi see it.</p> <p>AL – Advised that it’s for the community to decide.</p> <p>GM – Reminded all that the TAG minimum requirement was presented to Committee and was accepted. To add another will have to go back to them for approval.</p> <p>KM – Based on conversations with Iwi leaders the statement should read “Nil transfer of para from one catchment to another”.</p> <p>AL – asked is it the transfer out of the para or the transfer into another catchment that is the issue.</p> <p>KM – Statements being made are the other catchments don’t want it so the issue is about maintaining the relationships.</p> <p>AL – Can motion be “No para is discharged or enters another catchment”</p> <p>KM – Mentioned that this should be an objective/goal and if this can’t be met, then we note it and a compromise needs to be found.</p> <p>All agreed that the statement “No para be discharged or enters another catchment and if that can’t be achieved as a goal then a compromise needs to be found” be added as a goal.</p>	

Agenda Item	Action Required
<p>Item 8 – The Long List to be discussed further today.</p> <p>Item 9 – Hikoi happened yesterday with a busload of approximately 35. A very successful day and gave great insight to some of the schemes.</p> <p>Further discussion took place regarding some of the schemes viewed yesterday.</p>	
<p>3. RPSC Activities update</p> <p>COMMENTS FROM THE HIKOI</p> <p>Jim mentioned at the hikoi Tauranga City visit to the Chapel St plant in the opening presentation wastewater manager Marion Sheldon was asked by Warren what the TN level was in the Te Maunga Plant treated wastewater. She replied it was 2mg/L. Warren made further comments that seemed below technology minutes on what he had been told. Marion further stated that the plant had been designed by MWH. Jim commented that he has just check with MWH designer who had check with Marion and it was a TKN of 2mg/L and not TN. Infact the TN is approx. 5mg/L. Similar to the Bardenpho Rotorua plant in the 4-5 range.</p> <p>Kepa also commented on the costs of the Matata/Maketu Scheme and the \$70 per year capital charge per property. Jim noted the very significant subsidies of the approx. \$15M total cost, approx \$13M was from subsidy's leaving around \$2M for the community.</p>	
<p>4. Project position / timeline / milestone</p> <p>GM – CNI and RDC agreement requires us to have land treatment system Mobile by Dec 2019.</p> <p>The project steering committee held meeting on June 10 2014 and were provided with a long list of options. From here milestones dates were presented to comply with the 2019 commitment with CNI. (as below). Today we aim to have shortlist ready to present to the steering committees.</p> <p>Gregg reviewed milestones and advised there will be several TAG meetings during this time too.</p>	

Project Milestones

Activity	Timelines
Long list presented to RPSC	10 June 2014
Shortlist developed by TAG	11 June to 15 July 2014
Stage 1 Consultation-Shortlist agreed by RPSC	16 July 2014
Detailed Feasibility of shortlisted option	August to Nov 2014
Stage 2 Consultation-Public Consultation	August to November 2014
Stage 3 Consultation	December 2014 to March 2015
Agreement on Preferred Option	April 2015
Preliminary Design and AEE Preparation	April to November 2015
Resource Consent application and approval	December 2015 to December 2016
Detailed Design and Tendering	January 2017 to March 2018
Construction and Commissioning	April 2018 to Oct 2019
Decommission Existing LTS	June 2019 to December 2019

<p>KM – Advised that out of the Environment Court decision for the original application regarding waste water came a review of Council and its government procedures. A report was produced recommending a statutory board arrangement similar to what Auckland has. It is all relevant because if this comes in it changes the whole situation, and it is possible to proceed. Kapa asked if this comes in, will it impact on this?</p> <p>GM – If this comes in we'll need to review timelines and if it affects bottom line then we'll have to go back to CNI advising them of the issues.</p>	
<p>5. UPDATE ON LAKES WATER QUALITY MANAGEMENT</p> <p>AB – Back in 2010 the Water Quality TAG put together a statement around the importance of addressing phosphorus and nitrogen reduction around our lakes. Due to a lot of changes they've recently decided to update this statement.</p> <p>Appendix 1 – “A Statement of the Significance of Phosphorus and Nitrogen in the management of the Rotorua lakes June 2014”.</p> <p>DM – Gave summary of Statement and AB gave further discussion regarding the change in land use.</p> <p>Further discussion also took place regarding climate change and geothermal.</p>	
<p>6. CONFIRM/MODIFY MINIMUM AND KEY TECHNICAL REQUIREMENTS PROPOSED BY TAG TABLE.</p> <p>Already discussed with previous minutes.</p>	
<p>7. LONG LIST OF OPTIONS</p> <p>JB – Target is to prepare a short list.</p> <p>2 Points I like to Table.</p> <ol style="list-style-type: none"> 1. From and RMA point of view RMA consents are effects driven. So we need to be driving from a receiving environmental point of view, then work back to the technology point of view and cultural point of view. 2. To develop a waste water strategy that underpins the actual consent solution that we're aiming for but it keeps open and puts on the Councils agenda things to go forward with in the future with more sustainable ways to look. <p>Effects driven approach in terms of partly the way we package it and the possibility of going through the committee in due course with some of the more futuristic things that could go into waste water strategy.</p> <p>Further explanation took place regarding the 2nd point.</p> <p>AL – Referred to the table of the long-list of options.</p> <p>Appendix 2 “Long-list of options”</p> <p>She reminded all that calculations are all still very rough as there are other main issues that can affect each option.</p> <p>GM – Reminder that the idea is to look at a short list of options so we can undertake a detailed feasibility of all the options and look at the issues that may arise from this forum.</p> <p>Discussion took place regarding nitrogen output and the pros and cons of water metering.</p>	

We'll agree on a short list today with an agreement that as part of the investigation we add Wastewater Inputs Management Options that include water conservation, wet water flow and infiltration management and Trade-waste management.

AL – Referred back to the “Long-list of options” In particular the ex-LTS which is the minimum requirement (Base) in order to move out of the forest.

Discussion took place regarding costs and how the figures were calculated.

All agreed that table needs to be made user friendly for both the Steering Committee and the public with the addition of addition columns with text explaining the exclusions of some costs.

Discussed UV options as an add on.

Team had in-depth discussion around the options.

Alison explained that the table she is referring to was merely designed to show the nutrient production estimates and the CAPEX column was added on to give us a bit of an idea and to help us analyse our discussion today.

Lengthy discussion took place regarding Dual discharge.

Regarding Geothermal aquifer further information required.

Question to be forwarded GNS.

“We TAG recommend that a high level consulting assessment is undertaken by GNS to address the feasibility in the pros and cons which would include the following but not be limited???”

AL – In terms of cultural issues we need to know where it flows and goes so we can make a call.

It could be called a preliminary assessment.

DH – Gave briefing on Zeolite and struvite options.

AL – suggested that in the presence of TERAX struvite can be disregarded. With our latest figures should we run this back through the Canadian People with Struvite and Terax integrated into the treatment plant.

She then talked further about the Aminox option. Unfortunately our current treatment plant can't support this, you'd need a whole new treatment plant.

JB – talked about MicroV and believes it would go in the same category as Aminox.

So to summaries they're not really options, but are slight improvements if you were starting from scratch.

AL – Remember this list doesn't show how we do the discharge its all about pre discharge. To be considered is where it's a direct discharge to water or whether it goes through some diffuse discharge like rapid infiltration.

LUNCHBREAK – 12.20

AL – Review of Shortlist so far.
 Those to be taken off.
 Stuvite is an extra. We are going to confirm with the Canadian People whether it's a feasible alternative to Alum dosing,
 Zeolite is off.
 Geothermal Aquifer to be investigated.
 Algae is off.

Dual Discharge – further investigation required as new land would be required to proceed.

AL – We'd need costing up of a land treatment system for the Bardenpho volume. If it's a dual system where the MBR goes to the lake and just the Bardenpho goes to a land treatment system, then we'd want to look at costing this.

Dual System for the discharge disposal reuse. The other or the split one is in the waste water management strategy package.

GM – confirmed Costings can be done.

KM – suggested when making short list could we include Columns with "In Changes" "Plant changes" and "out change" options,?

JB – Also include Graphics as positive feedback was received regarding the use.

Treated Water back to homes option is off.

Ex-LTS to be renamed BASE CASE to remain and after further discussion it was agreed that UV and DRP stay in the equation. TERAX is not listed because its in the base case.

Best for Lake option has been flagged with comments.

New-OUT catchment – Need to define the \$40m cost and put in the extra costs (ie Pipes depending on the distance) then will eliminate based on these costs.

New-IN catchment – Although we should Eliminate based on the same reasoning as the OUT catchment, it should stay in.

The 4 WWTP options are only treatments they assume a discharge to water the discharge needs to be considered in conjunction with the 4 other WWTP options.

More discussion took place about these options and in particular wetlands. Looked at how TAG should package these.

JB – Proven on this scale, on-going operational sustainability and questions around greenhouse gases.???

JB – referred to Schipper article (Appendix 3)

WWTP – cleanwater 2 option – same as Cleanwater 1 – ineffective

WWTP + filtration – from a cost efficiency point of view, it needs to stay in.

WWTP + Indigitech - this is currently being used with Ngai Tahu.

Greg to obtain costings for carbon beds

<p>Discussion took place regarding the presentation to the Committees and the grouping of the options.</p> <p>Agreed to have Column's showing IN , PLANT/TREATMENT, AFTER with room for add ons, and using graphics.</p> <p>GM – Summarised the following; Options clearly taken out: Treated water back to homes for use: Algae Zeolite.</p> <p>Options Flagged: Struvite – with Terax Geothermal aquifer – with further consideration a high level report from GNS Dual Discharge that involves the current land treatment system is out. Dual Discharge ex LTS that involves the new sight is in. Es-LTS + best for lake is flagged New-OUT catchment – Out but Greg needs to define the full costings. WWTP+cleanwater 2 – In WWTP+indigitech - In WWTP+filtration – In WWTP+cleanwater 1 - In New-IN catchment – Flagged need to define costings.</p> <p>KM – Suggested an order to make it more user friendly.</p> <ol style="list-style-type: none"> 1. Ex-LTS 2. WWTP+cleanwater 1 3. WWTP+cleanwater 2 4. WWTP+filtration 5. WWTP+indigitech 6. New-IN-catchment or Dual discharge 7. struvite, geothermal 8. ex-LTS+best for lake <p>This sequence starts with the base case (due minimum), then you can add on different things but still going into the lake, then you're looking at going partly into the lake and into the land, then you can think about going into ground (geothermal) and then out of catchment (best for lake). In terms of people's thinking it makes it easier to work through the options.</p> <p>JB -This ties in with the receiving of environment issues at the end.</p> <p>CM – suggested to go a step further and set up a spreadsheet with a flowchart where you can select your add ons and possibly calculate your costs. Using the suggested order above but something a little more quantitative</p>	<p>AL & CM to work on user friendly spreadsheet</p>
<p>More discussion took place regarding Re-entry and rapid infiltration and wetlands.</p> <p>This Part of TAG meeting ended 1.40pm</p>	<p>Information on how the options are to be packaged and presented to be ready for RPSC Committee meeting 16/7/14</p>

Attachments to Minutes of Rotorua RPSC Technical Advisory Group Meeting Monday 8 July 2014

Appendix 1



A Statement of the
Significance of Phosphorus

Appendix 2



Long List Options.pdf

Appendix 3



Schipper.pdf