

Meeting Minutes

Rotoiti/Rotoma Sewerage Steering Committee

- RRSSC Technical Advisory Group

Meeting # 4



Date:	Tuesday 8 July 2014
Time:	1.40pm -

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) <i>*Ian Mclean (Chair of RRSSC)</i> <i>*Attended for later part of TAG</i>	Greg Manzano (TAG Member), Riaan Rossouw (RDC) Andy Bruere (TAG Member) Hilda King (RDC administrator) <i>*Warren Webber (Chair of RPSC)</i>

Agenda Item	Action Required
1. WELCOME - Completed with RPSC TAG meeting that was held prior to this RRSSC TAG.	
2. TAG #1, 2 & 3 MINUTES Agreed to TAG 1 minutes with the inclusion, the minority view clause that came in on the TAG 2 minutes. There had been email discussion on the TAG 2 minutes between Andy and Craig. Jim had asked them to email dialogue in terms of the nutrient questions and discussions, as Craig thought they weren't well recorded. These 2 pages are now attached to the updated TAG 2 minutes. TAG 3 was a conference call which worked well especially as it was an Action List agenda. Craig and Kepea advised that these minutes were much better. Celia updated the Action list sheet based on this. All agreed to have these minutes signed off.	
3. PROJECT POSITION / TIMELINE OVERVIEW We had pressure on us as of last Friday to get consultation material out, Ian has made the decision to hold the consultation material until immediately after the 15 th when the peer reviews of costs estimates comes in, which Greg and Riaan have a deadline date. Will discuss this further with Ian this afternoon.	Ian has been back to his Committee and has proposed next meeting for the 18th August
4. CONSULTATION MATERIAL AND PROGRAMME UPDATE (Refer to record noted later in the minutes)	

Agenda Item	Action Required
<p>5. ACTION LIST – UPDATE (Andy had to leave meeting after lunch, so will attend to his action points on his return)</p> <p><u>Action List Items:</u> Item 3 – Discussion talk place around land and land use. Item 4 – Phosphorus - Discussed Jims tables found on Palmerston North CC website showing there are very low amounts of phosphorus in detergent & washing powders. <i>Appendix 1 – Laundry and Dishwashing detergent tables.</i></p> <p>DH advised that the way the amount of P coming from wastewater sources is not as simple as measuring nutrients in and out. Further discussion took place regarding the reduction of Phosphorus.</p> <p>AL - Are we trying to meet the nutrient reduction targets or are we trying to select a sewerage option that is the best one that we can do?. So if its relative to each other then that eliminates all of the needs for reducing at source, because we're just looking at the best options for removing nutrients from sewerage.</p> <p>KM - We should be careful that we don't overpromise in terms of what the reticulation will do in terms of nutrients. "We need to make our goals clear when we communicate.</p> <p>Item 5 – Date of reticulation and wall installation at Okawa Bay date was 2006. Item 6 – cover in Item 4.</p> <p>Item 7- CMB has received data off Jo. Item 9 – HUE numbers are still be updated. Greg says they will change. Discussion took place regarding cluster numbers. GM – we have a reticulation system where we've designed the overall trunk/main to cater for the present HUE. We do a projection of the future HUE, then we check the system that we've put in and ask, "Will this cater for the ultimated HUE's?"</p> <p>With the Plant. What are the simple structures that need to be put in place to cater for the ultimated HUE. We'll design this and ask what is the existing HUE and what process do we need</p> <p>The current debate at the moment is, Who will pay for infrastructure? esp at Rotoma and Rotoiti. There are many properties there that are not rateable. So costs cannot be recovered. ie" What do you do with Marae? Community facilities? Schools? This debate is currently in progress. No decisions made yet. Peer review of the costings are underway and will be finished next Tuesday.</p> <p>Item 10 – RDC does not have a policy on keeping this information unless its in the District Plan. KM – believes it was in the Iwi management plan that Ngati Pikiao submitted in 1997 to 98. If it's in the Iwi management plan that's been submitted formally to Council then it's a volume requirement. Item 11- Confirmed as read</p>	<p>Chris to incorporate Data into the nutrients graph/table?</p> <p>Greg to ask Mauriora about sensitive site information.</p>

Agenda Item	Action Required
<p>Action List Items continued:</p> <p>Item 12 – Completed but need to revisit this due to dilemma in option 5 and the use of the word DRASTIC in option 4.</p> <p>Item 13 & 14 – Discussion around the MauriOmeter and its use.</p> <p>Item 15 – GM - PDP reports was the basis for RDC to conclude that the sewerage scheme was affordable (1998). RDC then decided to take the project a stage further and prepare a detailed design. When this detailed design was done another consultant group found that the cost estimates in the PDP report were found to be significantly lower by around 137% to 230%. Because of this a claim was made against PDP. Claim proceedings were in process approximate 2002 until such time that PDP insurers agreed to settle the issue with RDC</p> <p>Item 16 – Yes we acknowledge this was a pilot exercise only for Rotoma.</p> <p>Item 17 – Need to come back to this.</p> <p>Item 18 – as above</p> <p>Item 19 – Biolytix Cluster</p> <p>KM – Gave further explanation about the Biolytix Cluster.</p> <p>Discussion took place around the diagrams that were initially distributed and showed one disposal area for each Biolytix unit servicing three houses. Emails were sent confirming cluster numbers.</p> <p>JB – Would like to confirm with KM in this Saturday 4.45pm email you suggested the words for option 5 as (Environmental Court Solution). Is the Biolytix Option you are putting forward now one that was put up in court? KM stated there isn't much difference.</p> <p>JB – asked if he was expecting to use the words “Environmental Court Solution” in here.</p> <p>KM – No, but in terms of our process if this did end up back in the Environmental court and we hadn't considered the alternative that was put up in the environmental court that defeated the original proposal, then we'd be questioned as to why we didn't look at it.</p> <p>JB – Can we accept in terms of your email and in terms of what we put out in the first consultation draft, that we're now talking about something different and we all understand. (Clarification note – Approx 240 Biolytix units each serving 3 houses and nine clusters land disposal areas).</p> <p>Item 20 to 22 – GM has already talked about these.</p> <p>Item 23 – Craigs paper received with an optional of urine separation. Cost estimating and showing both. Alison's graphs show both.</p> <p>More discussion took place around Option 5. On paper it looks messy having 5a & 5b and can be confusing. Asked if we should package as a separate option. It was suggested that we'll leave it for Ian to make the call.</p> <p>Item 24 – done</p> <p>Item 25 – done</p> <p>Item 26 – Still under investigation</p> <p>Item 27 – KM</p> <p>Item 28 – AL referred to Nitrogen and Phosphorus graphs.</p>	<p>David H to add text to Alisons graph.</p>

Agenda Item	Action Required
<p>Action List Items continued:</p> <p>Further discussion took place on how to relay this back to members.</p> <p>Item 29 - covered</p> <p>Item 30 – covered in the graphs, without stating options 2 and 3 are MBR</p> <p>Item 31 – RR explained that the spreadsheet is a tool that can be used as a look up list for all the options.</p> <p>Item 32 & 33 – KM – Have someone looking at this potentially to Paengaroa.</p> <p>Item 35 – Lakes Action Plans will discuss this with the Chairman today.</p> <p>Item 36 – Proceeding with delivery of 17/7. KM suggested to talk to Joe Tahana as he is the secretary for the Ngati Pikiao environmental protection society.</p> <p>Item 37 & 38 – next item.</p> <p>Item 39 – Discuss with Ian</p> <p>Item 40 – Reviewing Action list.</p> <p>Drop dead date is 28/7, we need to keep things moving by minimising emails and meet about this date. How can we go about pulling things together?</p> <p>This will be us pulling together the outputs of the investigations of the 7 Options and taking them through to a preferred option or preferred subject to subject too.</p> <p>GM – There are 2 parallel processes happening. 1 is the public consultation where we are putting everything out there for the public and saying these are the 6 or 7 options and ask for their feedback. In Parallel is us put this whole thing together and coming up with a preferred option if we can and making a recommendation to the project steering committee. The RRSSC will take all the information coming from the consultation put in our recommendation then come to an agreement.</p> <p>In Summary – We'll have the outputs circulated, minimise the number of separate emails - RDC to Co-ordinate</p>	<p>Riaan to email spreadsheet to all members when he has updated it.</p> <p>Suggestion made to talk to Joe Tahana</p> <p>Next TAG meeting now confirmed. Tuesday 29 July 9.30am at Rotorua WWTP (Not Hamilton)</p>
<p>6. 2.45pm: DISCUSSION WITH RRSSC and RPSC Chair</p> <p>Debrief with Ian Maclean – Chair for RRSSC and Warren Webber Chair for RPSC</p> <p>DH – Gave a general review on the “<i>Statement of the Significance of Phosphorus and Nitrogen in the Management of the Rotorua Lakes</i>” <i>Statement</i>” Appendix 2</p> <p>Advised that its very similar statement that was done for Lake Rotorua & Rotoiti approximately 5 years ago.</p> <p>DH advised that this Statement has been reviewed by the Water Quality TAG and Andy will potentially formally release it.</p> <p>It will be a living document until the next TAG meeting but it won't alter greatly.</p> <p>KM had some good suggestions this morning around climate change impacts and geothermal flows(ie: natural nutrient inputs) and around sediments and their impacts.</p>	

Agenda Item	Action Required
<p>DH – Gave hand out on “<i>Lake Rotoma water quality and catchment nutrient sources</i>” – Appendix 3</p> <p>Advised that Rotoma has the highest water quality of the 12 Lakes. Referring to the Statement you will note that CM has used 2 different methods to work out what reductions are required to meet the targets that are in the action plans for the catchment phosphorus load. There is an In Lake method and a Catchment base method.</p> <p>The Caveats that we should put on these are a) they’re not perfect, in some cases they’re calculations in other cases they’re best estimates we can come up with enabling us to come up with what are the current loads from catchment and how much do we need to reduce those loads based on the amounts that we need to reduce the phosphorus in particular in the lake itself.</p> <p>We’re continuously revising these figures</p> <p>Paragraph on page 4 in <i>italics</i> advises that <i>preventing discharge the lake of nutrients from septic tanks is vital to the management of the Lake....etc</i></p> <p>By doing this you can get the majority of Phosphorus reduction Target particularly as the septic tank drainage fields are relatively in local proximity to the Lakes.</p> <p>JB – As discussed earlier regarding the action plan I believe we’ve come to an agreement that our focus as TAG amongst other things is on Nutrient Removal and looking at options from what they achieve and what achieves the most.</p> <p>AL to IM – Rather than each option comparing the amount of nutrients that’s reduced the load to the lake that’s reduced or whether we’re achieving the target for the action plan, its just comparing one option against the other in terms of removing nutrients from raw sewage and where it ends up. Ultimately what options chosen will be put into the action plan, and the reductions associated with it calculated.</p> <p>AL – The Water Quality TAG is saying prevent the discharge from septic tanks as much as possible and then we’re looking at the best way of doing it.</p> <p>KM – Asked about the NIWA report.</p> <p>CM - explained that the report specifically related to 3 points in the Rotorua Lakes. One was Rotorua near the Ohau Channel inlet, Lake Okareka and another. One of the reasons they say it wasn’t so important was because the systems were nitrogen limited. This is certainly NOT TRUE for Rotoma, so totally different issue. Another point was the fact it was based on dry periods (after days of no rain), another point was the actual analytical measurements that they got in the sampling was quite different to recent sampling by Bay of Plenty which showed quite elevated levels of dissolved phosphorus in ground water around the Rotoma Community.</p> <p>So although it was a good piece of work, CM believes it wasn’t quite relevant to the Rotoma area.</p>	<p>A comment to Greg from David H. - we need certainty on figures rather than revising and reworking in terms of these calculations.</p>

Agenda Item	Action Required
<p>KM – Regarding the upwards trend of phosphate levels in the Lakes which we've had previous discussions about and the different possibilities, has there been more information on this?</p> <p>CM – Replied that the Rotoma water quality is very high and the nutrient concentrations are very low and there is an issue around the analytical detection limits. In a way we're restricted to the last 4 years of data to make any inference about long term trends and water quality. So we need to be quite careful in saying phosphorus is going up. Although in our graph it does appear to be this way couple more years of data would give a better indication.</p> <p>KM – Talked about the current land use and the effects of harvesting and erosion of the soil. Further discussion took place with input from Ian who advised that the land that Kepa is referring to did not undertake a very heavy harvesting operation. More discussion took place about the history.</p> <p>KM – Asked how does the phosphate get into the soil of this catchment Rotoma in the first place?</p> <p>DH – Rainfall, dust, land clearance and predominately the number of animals and the fertilisation regimes, although it may be low intensity its still an addition in this catchment.</p> <p>CM – the atmospheric deposition of phosphate is nearly equivalent to phosphorus export from native forest.</p> <p>JB – Going back to the RRSSC meeting in discussion with Ian</p> <p>TAG have gone through the 40 actions – Confirmed drop dead date for costs estimates – 15 July 2014</p> <p>Have reviewed Option 5 with Kepa who has suggested instead of having a 5a and 5b we have an Option 5 & 6 making OSET Option 7.</p> <p>Question to Ian, How would this sit with your committee?</p> <p>Members of the TAG feel that the urine separation part of the Biolytic should still be there and ties in still with some differences that was put up previously, but try not to mix it on one of the summary sheets ie: do not have Options 5a and 5b on one sheet. The purpose is trying to make it clearer to the people we are consulting.</p> <p>We've clarified that the Biolytix now has a Biolytix unit for 3 houses on average but 9 clusters for that treated waste stream of faecal and urine or just faecal depending on those 2 options.</p>	<p>DH, AB to include the italic paragraph from the TAG Water quality Lake Rotoma statement into Ians consultation package Ensuring clarity to the reader of the source of this information.</p> <p>Greg to get Cost Estimates for RRSSC asap.</p>

Agenda Item	Action Required
<p><u>Other TAG Key points on RRSSC</u></p> <p>Riaan has produced a first cut of the risk sheet.</p> <p>Kepa's 9 cluster siting work is proceeding on target for the required target date of the next TAG being 29/7.</p> <p>Comments and discussion on the Draft consultation material requires Ians Input, in particular how we build in MoH and Medical Officer of Health comments.</p> <p>IM - Accept the 7 Options, although it appears to be worse. The separation is reasonable and clarifies the reason. My concern is the complexity, the more options put forward is becoming less like a short list.</p> <p>Regarding dates: The Peer review material is due on the 15/7 and after discussion with Greg it appears sensible not to put out figures particularly as the TAG was still working through some of the information.</p> <p>Ian confirmed if we don't get all information the consultation material is still required to go out. As Chair, Ian will take responsibility for getting it through.</p> <p>Further discussion took place regarding some of the diagrams particularly around the Biolytics and some of the statements in the material.</p> <p>IM - With the MoH we're relying on their professional judgement as we rely on Davids professional judgement when he tells us how much phosphorus is going in and out.</p> <p>Kepa's concerned with MoH statement is that they are not here to question and clarify their statement. TAG have no choice but to rubber stamp what the statements are saying.</p> <p>Greg confirmed that the statements won't be attributed to TAG, they will be attributed to the source.</p> <p>AB – arrived back to meeting.</p> <p>KM – Believes the risks associated with the options need to be more clearly stated In terms of some of the other issues we have, in terms of progressing solutions through to implementation. Ie: Options 1, 2 & 3 rely on more extensive reticulation of wastewater that will transfer para through waahi tapu – this should be stated. The reason this should be stated is because we know it's the case, but there are a lot of people who can't read maps.</p>	<p>Next TAG meeting 29/7 (Look to keep it here in Rotorua)</p> <p>Deadline date to have material produced (NOT NUMBERS COMING IN) by Friday week. 18/7/2014</p> <p>JB confirmed 15/7/2014 as deadline for TAG input.</p>

Agenda Item	Action Required
<p>Further discussion took place regarding the Maps and wording.</p> <p>JB – As TAG we’ve listened to Kepa, we’ve made note in the Risks and other Issues. There is a consultation and hui process going on and Ians Committee with representatives on this. So as a TAG and with your input, we’ve put the position as we’ve heard it, which is clearly stated. For this TAG to go further than that I believe we would be going outside our Terms of Reference.</p> <p>AL – Maybe we haven’t identified specifically where they are and stated where it could be avoided. le: For Option 1 it can’t be avoided because everything’s coming back, but for option 2 and 3 there are ways around it. But we don’t actually say the issues around Waahi Tapu could actually be avoided by doing this and this.</p> <p>IM - Explained that we’ve got so much material for public consultation that we’re in danger of losing them. When the risk of waahi tapu comes up they’ll have their chance to have their say.</p> <p>JB – We’ll have the risk register, High level and the planning assessment, high level. AL – As a TAG are we saying that parts of Option 2 or 3 could not be included in the scheme and could be dealt with as a cluster?.</p> <p>JB – What we are saying and again in the lead up, there are various combinations of these for specific localities. So there are 2 important statements that go in before that.</p> <p>Action JB – The simplest of sentence leading into the part of the document about the selection of options that there will be risks associated with various options and a stage of development of options that are coming through is the mitigation measures. So we flag this in one sentence prior to these.</p> <p>Action KM – Suggestion of wording for option 5, if its just the Biolytics based on the 9 clusters, then description could be as simple as “Each group of 3 houses has a biolytics treatment unit for toilets. Each biolytics treatment unit connects to cluster community pipe network, treated influent pumped to single small land disposal sight for each community cluster. Grey water treated using existing septic tanks if serviceable and existing land.</p>	<p>IM - This is not the time to go into the mitigation of the various risks. You can do this at your meeting on the 29th July.</p>

9

4.05PM - RPSC DEBRIEF TO COMMITTEE CHAIR WARREN WEBBER COMMENCED.

KM – Talked about the TAG minimum requirements that were discussed at today's meeting this morning.

In terms of the Options that require out of catchment disposal of the para/faecal material – the basis was that anything that required a transfer out of catchment will become a big problem. It's not about the amount that's transferred out, it's actually about the transfer. He then referred to members at the Hikoi who made clear statements about this issue and talked about the effects of Kaituna River issue.

JB – Advised Warren that as TAG (Not the Committee) it was appropriate to acknowledge the cultural requirements and include the following 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”***

WW – Regarding the Cultural issue, it was my understanding that the TAG was advising on Technical issues to the committee and that the Cultural aspects would actually be attended to by the committee. Why are we getting cultural advice from TAG?

AL – Explained that this is defining the extent of the para that would be transferred in that option so that they can then make a decision about.

AB- explained that we're not really giving cultural advice we're just pointing out possible cultural issues they may need to be dealt with, as we're aware the steering committee would have the expertise on these matters.

WW – We have representatives from the Kaituna catchment and would listen to the advice they have to offer in terms of what the impact might be.

AB – From discussions this morning, our view was that it would be remissive of us not to at least red flag it, if we think there might be issues there, but we understood that the steering committee would make a decision on that.

KM – Our goal is to try and find an option that resulted in zero transfer of para out of catchment, and to list it as a goal makes it clear.

Further discussion took place regarding this matter.

WW – Advised that he'd like to see the wording that will go to the steering committee before it goes to the table.

JB – Talked about the packaging and presenting for your Committee of the revised short lists derived from the long list of options which is very important.

We are looking to develop simple little graphics of showing how the not too short list fits together and how it's a bit of a building block option in some back end of the options. This is a phase 1 of our discussion, acknowledging the receiving environment and the RMA.

The 2nd point, is there are a number of more sustainable, more culturally acceptable, socially acceptable, principals and processors that could be use that a) Its outside the TAG to some degree

b) There may not be the money now

c) we don't know enough about but could be identified as part of the overall RDC wastewater management strategy.

So we're coming to an approach that's been used very successfully in a number of other projects like this that we'll be promoting to the Committee and through to RDC development of the Wastewater strategy that have a number of sustainable things in it that would be up on the radar and would be periodically and looked at could be used and implemented over time.

That helps us underpin the consensus being applied for ie: the solution.

JB – then described further how the diagrams and graphs will be built into the presentations and how some options will have add ons.

AL – Gave summary around the revised long list to Warren

Item 1 - Is still in. Instead of calling it EX-LTS we're calling it the Base Case.

Item 2 - Base + cleanwater 1(carbon bed)

Item 3 - Base + cleanwater 2(Denitrifying filter)

Item 4 - Base +filtration (not including denitrigying)

Item 5 – Base + indigitech add on

Item 6 – dual disposal, disposing of the MBR influent in one way, with land treatment to do the final removal.

Item 7 – a New LTS completely within the catchment, with possible enhancement to modify the soil. All agreed we couldn't eliminate this.

Item 8 – Discharge to an aquifer. (geothermal +)

Item 9 – Best for Lake – flagged due to the effects on the Rotoiti water quality and cultural considerations.

Items to be removed from list.

New LTS out of catchment - main issue – costs ie: Piping cost approx. \$500pm.

Treated water back to domestic use –

Algae –

Zeolite –

Amminox -

Struvite – Viable but not with TERAX

GNS to be contacted for more information on the aquifer.

WW – Made comment to the list, still being quite long and the reaction he may get from the committee at the next meeting on 16 July. As they've been primed to dealing with a list of 2 to 3 options, which they were told at the last meeting.

Also surprised at the amount of LTS options that are still on the table. From the Symposium and from Committee feedback I thought it was clear that LTS was off the table.

AL – suggested that they items could be packaged up under treatment plant upgrade with the finer things being worked out to exactly what they are.

WW – If there is an option list of 5 or 6 there needs to be some pretty firm words/caveats around the likes of the indigitech, there needs to be a very clear statement that the LTS which were not favoured by the initial discussion and a justification about why they're there.

AL - As a TAG we thought we would eliminate options based on the minimum requirements.

AB – remember that even though another option might be cheaper ie: discharge direct to the lake might be cheaper, there's still the rule 11 issue around how are you going to offset the increase of say 10 to 20 tons of nitrogen. These are costs to be factored into options.

Apologies – Recorder left this meeting at 5.15pm.

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

Appendix 1



Laundry and
Dishwashing Detergei

Appendix 2



A Statement of the
Significance of Phospl

Appendix 3



Rotoma nutrient
targets WQTAG (Fin