

Meeting Minutes

Rotoiti/Rotoma Sewerage Steering Committee

- RRSSC Technical Advisory Group

Meeting # 5



Date: 29 July 2014
Time: 9.30am – 4.30pm

Venue:	Rotorua Waste Water Treatment Plant
Chairperson:	Jim Bradley (Independent Technical Advisor - MWH Consultants)
Attendees:	<p><i>TAG Members</i></p> <p>DH - Professor David Hamilton (Waikato University)</p> <p>AB - Andy Burere (BOPRC)</p> <p>KM - Dr Kepa Morgan (Independent Technical Advisor, University of Auckland)</p> <p>GM - Greg Manzano (RDC)</p> <p><i>Attendees:</i></p> <p>CB - Christopher Mc Bride ('Waikato University)</p> <p>TL - Terry Long (BOPRC)</p> <p>RD - Rob Docherty (Pattle Delamore Patners Limited PDP) 9.30am – 1.00pm</p> <p>WM - Warren Mckenzie (Pattle Delamore Patners Limited PDP) 9.30am – 1.00pm</p> <p>IM - Ian McLean (RRSSC Chair) 3.30pm – 4.30pm</p> <p><i>RDC Staff</i></p> <p>Helen Ferguson (Administrator)</p> <p>Hilda King (Administrator)</p> <p>Andy Bell (Infrastructure services Group manager) 9.30am to 11.00am</p> <p>RR - Riaan Rossouw (Hydrus Engineering consultant)</p>

1. WELCOME

JB – welcomed and introduced Helen Fergusson who will be assisting Hilda with minute taking notes.
 Kapa opened with Karakia

2. DRAFT AGENDA & ADDITIONAL ITEMS, TAG #4 MINUTES

JB – Emphasised the importance of moving through the option assessments and reviewed the agenda

AB – asked for time to clarify subsidy options and need to consider the cost implications as we start to narrow down.

KM – Asked if the comments from Ministry of Health and the Medical officer comments that are on the information sheets are on for discussion today and that the clarification of the position being taken over the Biolytix trial be noted.

JB Clarified that the following matters will be added to item 7 today. MoH and MHO comments, Rule 11, subsidies and the position of the Biolytix trial.

Meeting Minutes for RRSSC TAG # 4

In TAG #3 we had a health discussion about the depth in minutes. Our conference call discussion confirmed that minute be detailed but not every detail. Notes that reflect minutes but they do not need absolutely everything of minor nature. A bit of judgement is needed.

Page 2 Action List update:

– Greg to have the HUE numbers completed.

KM also ask to rephrase the comment he made on page 2. Rewrite to read “We should be careful that we don’t overpromise in terms of what the reticulation will do in terms of nutrients.”

Page 4 – Kepa advised that regarding his comment on the bottom of this page, he visited the lakes after that meeting and as a result took some good evidential photos of whats happening close to the lakes and how its affecting the sediments and their impacts. Asked if he could share them with the team and Chris and David today.

KM – The point is to show that there are activities occurring that could throw any desktop analysis we do right out the window.

Page 7 – Correction made to wording on last paragraph.

Page 9 – Correction made to Andys Comment 3rd paragraph. “Financial information” should read “Financial contribution”.

End of Review of Meeting Minutes for RRSSC TAG #4

3. PDP PEER REVIEW

Special Welcome to Rob Docherty (RD) & Warren McKenzie (WM) followed by a 30 second background going over the journey that the TAG has been on and where each intendee’s involvement consulting to RDC comes in, RDC have been developing costs for Rob & Warren’s benefit

GM introduced the basis of the PDP engagement.

JB with TAG hat on, took it on himself to get a PDP draft and 18 July 2014 letter out to TAG that RDC and Kepa were seeking clarification on 2-3 points. He also suggested edits/clarification to be actioned as Helen/Hilda see appropriate before next issue to TAG.

(Copy of Contract No 14/SF/30 Rotoiti/Rotoma Sewerage Scheme: Peer Review of Cost Estimates 18 July 2014 /Tabled)

RD reviewed -Shortlisted Sewerage Scheme Options 1-6 (Table 1) and gave background stating that PDP were very restrained time wise, certain assumptions were made, it was virtually a desk top exercise where WM had done the majority of the preparation along with others expertise from the Auckland office to get the basis for the reticulation pipe work and grinder prices.

JB pointed out that these 6 options are absolutely consistent with the way we presented the 6 options to the community. He also commented on the critical time frame with assumptions open to discussion.

KM very pleased with report stating that the options gave clarity.

RD agreed on the outset with KM's capex numbers and will discuss in detail later on

Capital Cost Review of Options 1, 2, & 3 - WM covered off high points identified changes made to the RDC costs as requested by JB:

- 3.1.1 Individual Property Works – Adjustments have been made to these rates to provide consistency within the cost estimates and allows for CCI increases. Some rates go back to Hamurana 2010.
- 3.1.2 Reticulation and Street Mains- Adjustments have been made to these rates to provide consistency within the cost estimates. Little change to options 1, 2, & 3.
- 3.1.3 Transfer Pump Stations – Concrete ballast has been allowed for given that a lot of these properties are low on the lake front.
- 3.1.4 Transfer Mains

AB - asked what is "sleeving" and why are we doing it?

RD - responded, basically it is a small pipe inside a larger pipe so that if there is a leak in the smaller pipe the leak can be contained within the larger pipe.

GM. - The sleeve pipe works were put in place on road crossings and in some areas where concerns have been identified related to surveyed water near a stream or tributary going into the lake and areas where it was initially identified as Waahi tapu sites.

AB - queried the costs which should read, (3.1.4) - around \$110 for 160 OD PE inside a 280 OD PE sleeve) and requested a rough quantum of the cost of the sleeving that has been allowed, WM suggested \$500,000. KM stated that this was an instance where the assumptions have changed things.

KM - The approach to the clusters has always been to avoid intrusion to Waahi tapu as the areas have not been specifically defined but there are a lot of caves that tend to be in rock, and a lot of parts of reticulation along both lakes where you are in the vicinity of those things and this is one reason that stopped the previous proposal as not knowing about this and avoiding streams. I don't believe that it is reasonable to have a sleeve cost associated with these clusters.

3.2 Cost Summary - to provide overall consistency between options

3.2.1 Principal Supplied Low Pressure Grinder Pumps- reviewed at approximately \$4835 per unit.

AB: Our design brief was based on 706 household units, with 908 household units being the ultimate number allowed for.

3.2.2 Capital Contributions (Option 1)

JB - As discussed at yesterday's Consultation, Rotorua Plant are paying a contribution to the proportion of main and a proportion of the plant which can stand and be counted, pro rata, standard practice.

KM/JM/A (\$358 ex GST RDC wastewater annual rate) raised the MBR based type solution being reticulation, conveyance and treatment discharge throughout the whole waste water system, not just plant, based on operational costs being a proportion of the total waste water scheme.

3.2.3 Geotechnical Works (Option1)

RD - \$35K allowed for design fees – it is purely a "thumb suck" given the length of pipelines that are involved. The cost will not truly be known until the geotechnical investigation has been undertaken.

3.2.4 Pump-station and Rising Main to Local WWTP (Options 2 and3)

WM - \$925K allowed for by RDC for pump station/s.

3.2.5 Wastewater Treatment and Disposal (Options 2 & 3)

WM – Agree with Option 3, with Option 2 having a slight increase from \$6.5K > \$7K.

JB - Raised differences of what we have with the consultation in the consultation arena.

1. PDP have allowed for chemical dosing for DRP removal, it's little capital, we could do better with the Phosphorous and that comes back to the Rotorua project were we are talking about Alum dosing to reduce DRP.
2. Total Nitrogen: The work and Nitrogen bar charts which were put out in the public arena were based on a TN of 5 following the NBR here using Ethanol for dosing, you have corrected and put in an Ethanol cost in Option 1, but currently do not have an Ethanol costing in Option 2 & 3 in the operating of 20,000 which would change the operating a bit which is not in the cost table. The Nitrogen information we have taken to the community is based on a 5 TN.

WM - The ethanol dosing costings for option 2 & 3 have been allowed for in (Table 8 – wrapped up in Item 7 but not itemised) with quantum of 40,000.

JB – Agreed and apologised for not see it in this item.

KM - Commented, that you are working out the areas on a (nutrient) Nitrogen loading basis, what happens for options 4, 5 & 6 (it's a double whammy) where you can have the same area and use drip irrigation removing a huge amount of cost associated with aerial spraying. Aerial spraying is one of the main issues facing Ministry of Health due to aerial spraying in nine different locations as opposed to 1 or 2, we have not proposed aerial spraying, this being a significant difference.

AL - Would you factor that this would make the options higher though?

KM - No because there are other implications.

JB – We will probably need to revisit this one.

RD - To answer Kapa's point -Yes we have sized the effluent irrigation land disposal system based on kgs of Nitrogen ÷150 kgs of TN/ year= so many hectares and the added on buffer of 20% onto that land for perimeters etc. for spray irrigation potential.

KM - The thinking is that we are not keen on spray irrigation in the forests because of the issues that have occurred with whatever is associated with logging operations as you can have, pointing and all sorts of issues.

RD – Naturally there are pros and cons for spray and drip irrigation, we have tried to cost what we thought would work.

KM – This is a starting point.

RD – Warren & I took a drive around the lakes and down around Hinehopu where the land is about a metre above the level of the lake and you look at some of those properties and wonder how are we going to get the pipes in the ground at a depth without dewatering there and how are we going to get pumps stations in the ground.

KM – Apparently the lake is tilting, (but we can't wait that long as it is tilting the wrong way), open the gates fully and the level will come down.

RD - There will be some very high ground levels to contend with.

WM - \$values used were based on previous tenders and how many metres of pipe

KM -We are going to put in trial areas as you know with one trial location immediately across from the lake at Ruato that will be a similar situation and we will let you know the outcome.

Items excluded from CAPEX costings:

- a. Land purchase – allowed for leasing of land
- b. Consents costs or land negotiations
- c. GST Contractor Preliminary and General Costs (P+G) Costs, Contingencies and Engineering Fees
- d.

3.2.6 Contractor Preliminary and General Costs (P + G) Contingencies and Engineering Fees

P & G: We allowed 12% across all options on top of all Construction Costs.

Options 1, 2 & 3 we have allowed 20% and 4, 5 & 6 options 30%.

Engineering/Design Fees we have allowed 15% on top of each option.

KM – Queried 25% Engineering Fees for Options 4, (which is complicated) but 5, & 6.

RD – Being waste water treatment disposal costs for central collection costs

KM - The engineering design is primarily with Central collection tanks and the effluent pumping.

3.2.7 Additional Contingencies

We are going to need to excavate trenches in hard rock material in some places requiring additional contingency of between \$100 > \$300K for Options 1, 2 & 3. We have also added dewatering costs for options 4, 5 & 6 (to be discussed later).

KM – Engineering Design Fees –Would that not be better applied to the capital costs of those items rather than the total?

WM – That would depend on how you wanted to break it down.

JB –Kepa can I just confirm that you are happy with the 3.26 % fee in line with your discussions in the weekend, as they do add up and are these costs for a community scheme being taken into account?

KM – There are actually alternatives and if we just move it all without an engineer centralised from the beginning, with separate lines for the engineer solution disposal site it is still reticulation. The thing that I would say is that given that there was a lot of feedback around the costs and if we have significant engineering design costs associated with the project, then the community is going to go after that as an example when they challenge the economic implications for themselves, as there are several retirees in both of these catchments. The cost is a “biggy” for them. I am happy with the 25 % being applied to the collection tanks and the rising main aspects.

3.2.8 Consenting Fees (Difficult to get middle ground)

Option 1 - allowed \$1.5K

Option 2 – allowed \$1.0K

Option 3 – allowed \$2.0K

Option 4, 5 & 6 – allowed \$1.8K

KM – Option 4 is going to be difficult anyway as it is culturally sensitive so I believe that the allowable costs are fair, but I am not convinced that it is appropriate for 5 & 6 as they are distinctly different situations as far as iwi would perceive them.

TL – My experience tells me that the costs accrue as you assimilate the information it is not whether it is good or acceptable information or bad information the costs associated going through the process and the process is essentially similar.

KM – I do not agree, who would challenge? If EBOP wouldn't challenge then where would the challenge come from.

RD – I agree with TL, there is still a base cost for both 5 & 6 sites

TL/KM – agreed to disagree

TL – Quoted Councillor Donaldson saying that costs associated with this project are already accruing, are there carry-over costs associated?

Andy Bell - The costs of this project so far with the Steering & TAG group are not light and I was going to address them here today. We are coming to a crunch time with only 8 weeks essentially to get a preferred option out of Council which actively gives us up to 6 weeks to get a preferred option to Council and I will stand up and support whatever option goes to them. But we have got not a lot of time people and the cost of this process of each Steering & TAG committee is not cheap. We need to make progress in rapid time and I believe that we have a long way to go before we have a consensus and we are far from that even in the notes here we are talking about Environment Court Appeals and to be perfectly honest as the sponsor of this project I have got to advise Council if the proposal is good or not. I do not care which project goes ahead, nor do Greg or Riaan and I do not like the Options RDC 1, 2 & 3 (being called RDC options), they are not Council options as we have no biased view point as to what option goes out there, but at the end of the day I am going to struggle unless I have some kind of consensus view point to take to Council from the Steering Committee, TAG group and the community to go to Council and say this is what the community want and what the community want to pay for and this is what the authorities aka Bay of Plenty Regional Council accept as reasonable solution to the lake water quality programme for the waste water community and I think that we have a long way to go in 6 weeks, it does really concern me. But the costs that Dave Donaldson is talking about for both the Steering and TAG forums are not cheap and 6 weeks out from a recommendation to Council we are not in very good shape, so I hope that we can make some really rapid progress in the next couple of weeks.

TL asked for some idea of the accrued costs to date so that we can see if these numbers are realistic.

GM – Not much change from \$0.5 million.

Andy Bell – the whole idea of putting together the Steering Group and the TAG group was to categorically avoid the Environment Court. With a solution coming from the community going to the board showing that we are all on the same page. If we are going to repeat the exercise of 3 -4 years back, what is the point. At the end of the day it is the gain in the lakes that we are looking for in the community, we can't keep literally chucking water down the drain and making no progress.

Individual Property Works

4.1.1 Option 4 - Unit process is 6000L tank (with baffle and two pumps) and the boundary kit installation. The total cost per property for toilet replacement and plumbing becomes \$4.125 (reduced by 33% due to an error in the costings by PDP).

KM – Some of the community are not in favour of this option because it is aerial sprayed.

Communities are in valleys at the lake side with gentle undulation and in terms of that level it seems very excessive for this pump.

Biolytix price cost includes its own pump unit and you can pump 35m/head with these pumps.

Please clarify if it is all going to a collection tank in the community then why do you need such a big pump?

WM –I guess it depends if you can you put a storage tank in a lower enough lying place to service each cluster

Andy Bell – Whatever goes in is likely to be designed and need good performance characteristics and therefore reasonable to allow for upgrading or whatever is needed.

JB – Craig supported this

KM – What is the cost estimates for this?

WM - We have allowed \$2000 for pump and installation per property – sections.

JB – One grinder pump per three lots –household drains fall 1 in 60 may be a high water table.

4.1.2 Option 5

Supply Costs - Based on one pumping unit per 3 properties.

JB – With regard to details on the gradient we have got to get from the houses to the Biolytix unit, being a fixed thing it does not take long with the 1 in 60 to use up a metre or two. How are you getting on with these Biolytixs? Are they going to be down in the ground and are you going to need risers on them?

WM – I guess if you are going to do it for every 3 properties then perhaps it will be quite far below the ground in certain cases, if you are doing it 1 in 2 I guess you will get away with it.

RD – These are questions for which we do not have the answers for right now.

Andy Bell - Too much detail but it proves that we are able to drive the price down which is preferable to the costs going up. We need to always be conservative with a plus or minus of 30% until we get some certainty about the costs. Option 5 - Allowed for gravity drainage \$1200 per household/3 properties

KM – We will have a better idea of actual costs once we have done the trials.

RD – For these options where we are putting in trench plant serving say 3 lots, the only way to be sure of the actual costs is to do an onsite survey for options 1, 2 & 3.

AB – Presumably to do this you need a specific sized tank and this seems to be the thing that failed on a lot of properties.

TL – It is not just the tank size, there are also soak holes which must feed into lake water, with no improvement in the last 5 or 6 years. Prior to that there was a great deal of pressure applied to people within Gisborne Point etc. to upgrade systems and some have been already been upgraded . I would think that we are better off than we were 20 years ago.

RD – Most of the housing stock is pretty old with a huge amount on leased land, in Rotoma, in particular. My guess is that a lot of those existing systems are in a very poor state.

TL –There have been recent dwellings (Oxford Street for example) which all have new race water systems, so there is a bit of a balance there.

KM – This is a big question mark because we are making assumptions for using onsite systems for the grey water. There are two issues that we need to be happy about here:

1. Proportions that are serviceable – Is it worth doing an update of the records to see what proportion, could this be a matter of checking through the Council records to see what has been upgraded?

TL – I am aware that we need to get a results within 6 weeks and we have just recently done an exercise on Tauranga Harbour trolling through 60 of the property files to extract that information took more than a week.

Andy Bell – I think that we can almost do rule of thumb depending on the age of the building can't we Terry?

TL- Standard 610 came out in 1982, which required 2700L septic tank, anything earlier probably will not comply, anything more recent than that probably will.

AB – Can't we get information out of our database where the guys have done inspections every 3 years?

TL – There is a question around its validity –some failed because of size and needed to be upgraded. We do not have complete information, at no time has every property been pumped.

GM – In terms of the costings can we do an optimistic, middle ground and pessimistic view to look at the comparisons?

KM – 2nd question on this is: What is the nature of the material going into the septic tank now after the faecal and urine is removed from the stream because these are failing tanks in a conventional application? What is the loading going into these tanks in terms of N&P and any other issues we may have.

RD – I agree with the points you are raising but at the end of the day with the totals we have \$2.3K basically with the percentages to be added on top of that, even if you said that this was to be halved because houses were more compliant than originally estimated, say to look at a more positive approach, \$1.5M in the scheme of things it is not actually a huge amount, but I appreciate that it all adds up. Taking all of Kepa's points into account and a super optimistic point of view what is the bottom line how much difference does it make?

KM – What is the PH. loading in the grey water?

TL - The ratio of N:P is 10 to 1 of grey water being well within the accuracy at the moment (being 10% of N & 10 % of P).

JB –Hydraulic loading on the disposal field with 60 - 70% of the water, so what is the key criteria both nutrient and that comes in the nutrient assessment, and liquid and disposal on site, so we still have the volume question. Back to GM's discussion we have \$2.3K on the estimates now and we can do a sensitivity on both best and worst case scenarios and maybe there is a relative \$1 – 1.5M relative to that number. From Terry's & Regional Council's point of view we still have the question of disposal of contaminated liquid on site, much less contaminated.

TL – If grey water is not managed well then we have a problem as there can be a stinking cesspit sitting on the surface.

Option 6:

It has been assumed that on average there is 1.5 toilets per property therefore the estimate of \$3825 will be less 33%, with an effective reduction of \$1.5M. IBC tanks collect urine and in most cases can't be gravity feed therefore we have allowed for 2/3rds of household to have in-ground tanks and 1/3rd will be utilised with IBC storage.

TL-IBC's need to sited where they are accessible to a collection truck.

Reticulation Costs:

Options 1, 2 & 3 –Are a reasonable way of looking at it without doing an onsite survey of every site.

Option 5 & 6 – A similar approach with slightly less costs

Ground Dewatering Costs: JB commented that the tables were very useful.

Land Disposal Costs

KM - Would it be cost effective to add a treatment phase in for dispersal to reduce carbon nitrogen?

RD could be but we did not go there however there will be cross over points.

TL – You talked about irrigation but there are rivers and intermediate possibilities as well, have you looked at that, given Kepa's resistance to spray irrigation I would have thought that it would have been good to have an intermediate option as well.

WM – No.

Andy Bell – Before leaving the meeting I do wish you all the best with your deliberations but speed is of the essence in some respects but being quick is not necessarily going to give us the best result either.

Apart from what I said earlier on about wanting to take back to Council whatever the Steering group recommends as the preferred option. I would be very, very disappointed if it wasn't a consensus view that we could run through the consent processes and know that we are going to be successful again. Having set this up and started it going, I would be very disappointed if we couldn't get there and like I said before I think that we are some way away from this.

From the weekend the same sort of perspective coming from me that having had the Steering Committee, with the stakeholders involved for 6 months, again, a little bit surprised (and I will talk to Ian about this as it is not a TAG group problem), that we still had people who did not know what was going on and were not well informed despite that being the idea of getting the stakeholders on the Steering Committee. Again we have a lot of work to do in a short period of time in getting people up to speed with what this is all about.

Other than that it is good to have the debate and good to have the perspective come back from people and really I do hope that we can get there in some form or other, and get there with a consensus. Because whatever it costs in fighting each other over these issues is detriment to the outcome at the end of the day.

We want to improve the water quality in the lakes at less cost to the community and unless we can get consensus it is going to cost us wasted money. So I would urge everyone to go back to their teams or parts of the community and work on trying to get consensus.

KM- We have the trial coming up and it has been suggested that RDC will not allow it until we have building consents which will add an extra 3 -4 days delay, as this is urgent do we have to get building consents as I think it was Greg that said that it has to go in?

Andy Bell – We will speed anything up we can Kepa

TL – The next step is with me and that is to draw up some sort of agreement between the parties (BOPRC, RDC and the Owners) and I have written some bullet points that would be the basis of that, there are some liability questions and we will want to run it by our legal team and you no doubt will want to do the same. I can see that this will take more than 3 weeks to organise just the agreement.

Andy Bell –You guys really as the TAG group may want to give some time and thought collectively to how this is going to work because the trial is going to go on for a long, long time after the Ministry of Health subsidy deadline date but to get any reasonable helpful trial results in a couple of weeks. I can see an option A & B depending on the results of the trial.

KM: I have a suggestion that I did not put forward in the weekend and it is this, there will definitely be houses that we can't get into the reticulated scheme and it is a big one, so there is going to have to be some outlies, this trial could actually satisfy these so if we say in our response to the MOH that the preferred option is actually a combination of a central reticulated scheme with the aspects that can't be accommodated with that approach and are unlikely to get environmental court approval have been taken into account (ie. Hybrid solution) gives us time to get the solution. But I still think that it is critical that we get this in the ground and get it running because at the moment the situation where some people who we are having the trial for, are in substandard houses and I think it is health imperative that suggests that we put aside the paper work and say that we will do it retrospective as long as we have the inspection before we put it in the ground.

Andy Bell - I would support it from RDC point of view.

KM - Eddie Grogan said the same thing from Regional Council.

TL-Eddies mandate to me was to make haste slowly- to make sure all the protocols were in place and he made it quite clear that the consents were to be issued first.

Step 1: Draw up the Agreement.

Step 2: Application for a resource consent. I understand that Joe and Carl are going to be working and processing it for free, but it has to be someone else's application.

Andy Bell – Kepa knows my views on untested trials are not good (ie. the Waka Forest trials.) I would ask you to give consideration to Options 4, 5 & 6 to the performance of those disposal fields with some kind of longevity and how we would get over problems that may arise a few years into the operations. How can we have some certainty of results with disposal into the ground with these options?

JB – TAG has had no involvement in the trials to date.

KM-Question 19 of the Capex – How many days storage is required for Option 5 effluent? (Biolytix) You have a collection tank in each cluster which you have allowed 50 cubic metres for a week's storage. (RD to get back with an answer on this).

KM – Question 20 – How many days storage are required for Option 6 Effluent?

I think that you have 2.1 cubic metres daily with an estimate of \$50,000 tank

Is a rising main necessary on the scale?

WM – A small one only 50mm diameters or something like that.

RD – Key thing for me is - are people happy with the concepts because if they are not then it does not matter what the bottom line is even if it is \$5M cheaper. It is too hard to see - you want sell it.

KM- We actually consulted on an alternative option before we presented it to the Environment Court and Option 5 & 6 represent what was generally being described as that alternative and understood by the community and I believe that the cultural issues out there are quite unique and that in my opinion is why it failed because we transgressed too many Waahi tapu and any system as big as we are talking about does not address this system. The perception you are talking about might get away with MBR/SBR in Rotoma but then they are all leased properties and all Maori owned. I can't speak for I am not in a position to say how Ngati Pikiao will stand one way or the other. RDC 1, 2 & 3 is like the kiss of death. The perception in the community is that there has been unnecessary obstruction in finding out if an alternative would work. The best thing that we can do for the positioning of the consent application is to have that trial in place. If the trial goes in and does not work then there is no argument, but if we don't have a trial and we have not had long enough to get some information and we go down a particular pathway and end up in court there is still huge uncertainties that we can resolve by putting the trial up. Because if we are genuinely entertaining 6 options how does the trial actually hurt us? Regarding the uncertainties of the Capex installation and the performance in the field - My suggestion around performance and N & P removal from the start is the same as Craig that we can achieve the bigger outcome just by spending \$2M and taking 200 hectare out of agriculture use and you have got your N & P straight away.

JB – KM's question is still on the table

These options were put up by the committee after TAG input that they discussed and debated which to take out for consultation. We have had some indication from Kepa that maybe option 4 should not be there.

AB-It is a pity that this did not come out during the meetings at the weekend but when there was a question around the three options that involve traditional type reticulation and three options that involve some innovative new ideas and then we have the OSET. At one particular meeting there was overwhelming support to go in the traditional type direction, but there wasn't any discussion was there?

Why did they go for that option as opposed to the other 2 options; was it cost or their perceptions around the complexities of an alternative system that they were going to achieve more because of the nutrient graphs we put up.

KM – Many people expressed the point that they can't afford it.

TL – 1 or 2 people said that they just want it off their property they don't want to entertain anything on their property they just want drains to the grinder pump end of story. Joe Ta Hana from Ngati Pikiao Environmental society came to us, enter RDC, can we have a trial? our reaction is to say yes let us have a trial even if it doesn't meet the requirements in Rotorua Lakes it may well meet the requirements outside Rotorua Lakes so we think that some valuable experience can be learned from this trial. Regional Council's Chief Executive made a call as soon as she saw the application and said lets support this and then it went to Eddie who said \$10G. There are political reasons as to why he can authorise up to that level of expenditure.

On our way to an RDC meeting the other day he said maybe we could add to that some features that are required in the system for monitoring, valves and flow metres etc. so that we get some meaningful information out of the trial in addition to the \$10K and process the consent for free. Having said that we will do those things we are now looking to see what protection we have and assurance that we will get information out of it and it seems that we should have an agreement/ legal document signed by property owners (Trusts I assume) and RDC as partners in the whole project. So I have made some bullet points and when I began to discuss those with Eddie he said we will need some legal help to draft that so I need to push it a little further and then it will go to our legal team.

GM – From the RDC side when the proposal was made it went straight to the Mayor and eventually after 3-4 weeks it came to my desk and a meeting was set up between the Mayor, Ngati Pikiao, Environmental Society, and other iwi representatives, Terry, Eddie, Andy, GM were there. The Mayor said that we support in principle subject to working it out with Ian's committee. The purpose of the trial is for the Rotoiti/Rotoma Sewerage scheme and not the wider use, these were the conditions.

KM – My understanding is that Ngati Pikiao Protection Society went and said look we had a proposal to do a trial back January 2012 which was agreed to in principle on the Marae which had the alternative put up in the Environment Court and in the plan change recommendations that went through in 2013 Ngati Pikiao were also saying that they wanted this trial and they got to the point of being totally frustrated and said we are running this trial, we will pay for it, if you want to contribute but we are going ahead with it. I think that there are delays which I will feed back to them, but I think that it is going to result in a very tense relationship and I know that both District Council and Regional Council's need a good relationship with Ngati Pikiao at the moment and I would suggest that every possible effort should be made as soon as possible because if it does not then it is going to be perceived as further obstruction, further reluctance to consider the option and that's not going to be good for anybody and certainly not this TAG.

JM - Nothing has been submitted to TAG though we have heard about it but nothing has come near it.

GM-We need to get our processes right because we need to be happy with this trial as a fact, if this trial disturbs our credibility in the long term for this particular project.

KM – If the trials go ahead regardless of what both Council's think its huge, I don't think we are damaged politically because that means that the mandated decision makers are just being walked over and Ngati Pikiao will do what they want.

GM – The comment from the Mayor was to support in principle subject to the conditions.

KM – The best thing that could happen to us is that the trial goes ahead as soon as possible so that we get some information from it.

GM – Look I am all for the trial we just need to tick all the boxes and need to make sure that the process is right so that when people ask questions we can say that this is the process we went through.

AB – I go as far as to say that I don't think that this TAG has to oversee the trial we just need to be aware of it and be really interested in the actual results and costs of installation so even though we might say in terms of what it achieves over a long period of time we will have some costings.

AL – It's not just about costing, don't we want to know what % of nitrogen has been removed in terms of that so I think we need to look over and OK the design and make sure that we get the loadings out, get the flow metres out and make sure that there is enough samples analysed so that it is representative of what's happening.

KM – There are two issues here that can be addressed in a different way.

1. What is the actual cost?(and)
2. What are the technical issues of putting it in with gradients and everything else?

These questions can be answered as soon as it goes in and the Biolytix are up and running within a week, so we can see results really quickly. The other side of this is nutrient performance if it works, if a lot of concerns about technical functions are covered off by doing it if we are saving that much money that we can buy a farm the nutrient issue just falls off the table. Doesn't this make sense?

JB – Can we bring this to some kind of conclusion to record something along the lines of that the TAG expresses interest in the trial and would from its technical function appreciate in an expeditious way, information on technical performance and cost as they feed into our technical assessments. Is that something along the lines of an appropriate conclusion point as of now, so that message goes back to Ian's Committee and that's not putting TAG in a position of approving, but is putting TAG in an information collecting point of view relative to our function. Because there is another question team that is the life of this TAG and I don't know what the answer is. But once there is a preferred scheme decision where does the TAG group sit? And there is another issue relative to the timing of the project.

TL – Can we agree on a resolution or something – I think that we acknowledge the point that Ian made when we met with him about last week and that was that he did not want this trial to delay a decision making process and there is a risk that if we pass a resolution like that, that it will be seen as a delay before the results come through and he was anxious that this did not happen. Kepa said that he did not think that Ian (Steering Committee) had said this at all, let the Steering Committee make their decision – TL stated that he was reading between the lines.

JB – I think that Terry is making a very good point and that in the statement we should add that we as at TAG acknowledge the timeframe and restraints the project is in with respect to the MOH Subsidy.

AB- I want to be careful around the Land purchase option – very much a “Thumb Suck” and there needs to be a lot more detail around that if we are to think about going down that track. I think what really stands out in the area of reticulation of land disposal is the statement from TAG around Rotoma. I think that we stand by that rather than we swap land use change for sewer reticulation.

AL- How would there be any money saving no matter how you crunch the numbers to buy a farm? (JB requested that this be parked as it is not in the consultation basket so we have a dilemma there GM-and part of the action plan).

TL-I think that the meetings were conducted in good spirit over the weekend and feel that everyone engaged and were in very good spirits, as we have previously done consultations in these areas and people have simply sat there and not engaged at all.

(Adjoined for lunch).

PDP report 6.00 Odour and Corrosion Assessment

GM – Initially when pipeline was possibly required to go to Rotorua or Kawerau we knew Odour and Corrosion would be one of the issues.

At the time Opus was approached to look at implications on design of pipeline and they produced a peer review. This information was passed on to PDP (Pattle Delamore Partners Limited)

Rob D referred to page 13 of the PDP report.

Option 1 – will require chemical dosing

Option 2 to 6 – will not require chemical dosing for corrosion but odour treatment will be required.

Rob and Warren continued with Report

The Operational Cost Estimates (Table 8) on page 20 of the PDP report was reviewed by Rob.

Indepth discussions took place around costings.

Item 9 of Table 8 (urine collection & disposal)

Action: Alison to get back with actual costs of what the treatment plant would charge to accept disposal

JB – Asked where is the resource consent monitoring which could be quite substantial especially for the 9 clusters?

Action: Rob to get back on costs for resource consent monitoring as per Jims question.

DH – Had a question around Zeolite and further discussion took place around Soil modifications & trees. David also queried drip irrigation vs spray irrigation.

Discussion also took place around nitrogen and the effects on costs.

Further discussion took place around the leasing of land. Kepa gave feedback around land use from discussions he has had with Ngati Pikiao.

JB – Regarding the costs of land use its best from a PDP point of view to stay with their least cost, don't involve trading of land. TAG need to park this and have further discussions on this.

GM referred to Kepas list of questions to the PDP report. (Attachment 1)

Kepa happy with the replies to his questions thus far.

Discussion then took place around the presentation of costs to the public.

Riaan commented that it is a problem for civil engineers. We're always pushed to give a figure, but we should always say its between this and this. Giving a range is much safer.

It was agreed that during a presentation a clearer explanation would be given on the options.

Conversation then referred back to Spray irrigation verses drip irrigation.

Drip would be very expensive.

More talk around the Biolytix options took place with hybrid options put forward as a possible option.

AL asked if it would be easy to identify the area that could be dealt with an MBR? so it would be part of option 3 and the rest as clusters??

A reminder any new statements on options needs to come from the Steering Committee not TAG. TAG to give recommendation

Action: Rob to email update of costs.

JB thanked Rob & Warren for the report presentation. (Rob & Warren then left the meeting at 2pm)

4. CONSULTATION FROM THE WEEKEND – 26-27 JULY

Reflections about the weekend meetings were covered by all

JB – Confirmed that extra public consultation meeting will be held on Saturday 9th August at Rotoma Fire Station. Ian will prepare flyer advertising this extra meeting.

KM – advised that the graph for option 6 needs a bit of revision. Option 5 or 6? should be lower because we have the details for the OSET compliance testing.

AL – Will look back on the spreadsheet. Graphs are done with 40% nitrogen removal.

Action: Alison to look at this with Kepa. JB explained unless it is very significant and there is a very good reason we do not go back out to consultation with a change.

5. ACTION LIST – UPDATE

Item 9

JB-Hue numbers caused a bit of work to Council.

Greg advised this has been sorted. 462-Rotoiti, 280-Rotoma.

Item 26 on action list siting investigations. – Greg referred to work done by Opus a while back. This would be a good starting point for a more detailed investigation when we agree on a preferred option of combination of options. (Options 2 or 3)

GM - When we agree on an option and if a reticulation scheme is the solution then the ongoing work would be to define the investigation to a stage where we could develop a systematic environmental effects assessment.

Item 27 – Kepa referred to Maps on Appendix A and gave briefing.

Item 36 – GM – referred to the working draft planning and consenting booklet. (Booklet tabled and is a work in progress)

JB – Described the table on page 49 as a summary of risks and consent ability assessment. The 9 assessment no undertaken are mostly tangata whenua/Maori policies and objectives.

KM – Asked if the Iwi management plan for Ngati Pikiao is available.?

RR – tabled Item 3.1 Options High Level Risk Assessment. He gave explanation on use of spreadsheet and agreed this was a work in progress and would be used to further assess options and work on mitigations etc, measures for the preferred option once identified. Refer later:

JB – Made comment that all members weren't here and didn't want them missing out on the information.

KM – advised that spreadsheet was good and gave his opinion about it indicating the information needs validation.

6. IN-DEPTH TECHNICAL DISCUSSION ON OPTIONS

JB – referred to Kepa and the position of the MoH and the Medical Officer of Health statements.

JB- Clarified that the subsidy information is to TAG but not really a TAG issue. On behalf of the Total project I was asked by Greg and Ian to communicate with MoH and the Med Officer of Health and emails to them were on behalf of RDC and the committee. So instructions to them should be sent from RDC and the committee(Ian as Chair).

Further discussion to place regarding the subsidies.

JB – From a TAG point of view these issues need to be handed on to RDC and the Committee.

GM – Subsidy contract is between RDC and MoH.

KM – concern as a TAG member and a member of Ngati Pikiao is the subsidies are in effect influencing the public's choice of options to a certain direction.

GM – says that considerations they would have looked at is, whether it's a proven scheme? And secondly will RDC take over the long term maintenance and operation of the scheme? These are usually the main considerations.

Further discussion took place regarding options that RDC would own and operate and what qualifies for subsidies and the timing of contacting MoH.

More talk took place about subsidies, timing and application and it appears timing of requests are likened to the Chicken before egg process.

Started talking about Rotoma and possible Hybrid systems which may assist with subsidy qualification.

GM – at the end of the day, the subsidy criteria will go back to what RDC is willing to maintain and operate the system.

KM – Talked about Ngati Pikiao and the statement they made, which was to do with them taking over and implementing their own scheme if the solution that is put forward was consented.

GM – Would Ngati Pikiao be prepared to put this statement forward to the steering committee?

JB – commented on this issue and why it hasn't been brought to attention earlier.

Reminder we are still on a very tight timeline.

JB asked KM to summarise his statement

KM explained that what happened in the environmental court that at the beginning the Council gave their evidence stating their proposal and describing it and in their evidence they said they would not provide a solution for these communities if that consent was not granted.

AL – doesn't believe it was quite like that.

AL believes the intention was that if there was a reticulation system it would be something that Council would own, but if it wasn't consented it would default to On site systems and that is something that Council wouldn't be involved in.

KM – Ngati Pikiao were interested in doing this if there was a Section 33 transfer of powers under the RMA for Rotoiti.

Action

JB/KM – As a TAG meeting this information needs to be noted and referred back to the Committee.

Further discussion took place.

7. IDENTIFY ANY NEW ACTION ITEMS

ABruere – Gave his view about how RDC is tied into and bound to solutions for the lakes problems.

JB – Need to get back to TAG meeting

RR – referred back to his risk assessment table and explained how to use it.
Admits this is subjective and emails with your valued input are appreciated.

Action

JB – Suggest it would be useful if the team can think about further suggestions for this table before we come back to our next meeting.

8. DISCUSS AND AGREE ON APPROACH TO IDENTIFY TAG PREFERRED OPTION FROM A TECHNICAL PERSPECTIVE.

JB – next TAG meeting is scheduled for this Monday 4th August.

Bottom line we require a preferred option that will be supported by TAG and if at all possible with consensus.

AL – asked what if we were to split Rotoma and Rotoiti as 2 separate projects. Maybe we'd come to a different outcome. Thinking of the different subsidies that make a huge difference in costs. There are different sensitivities to nutrients and there are more issues about waahi taapu at Rotoiti that don't seem to be at Rotoma. Our discussions show that an MBR might be the solution at Rotoma, where (especially with the subsidy) it doesn't look to be the solution for Rotoiti.

It might be easier to split it out – Alison's suggestion.

JB

We have adopted to a reasonable degree the Steering Committees goals and they don't distinguish between the 2 areas.

We have absolutely paramount and most highly weighted lakes driver.

We have real uncertainties on some subsidies.

We have cultural issues that Kepa has informed us of, that come through from hui

We are a TAG charged with TOR but we can be mindful of social and cultural.

Action

Can we get to a point technically being mindful of the social and cultural aspects with or without subsidy clarification on Monday?

GM – claims we need too, whether we agree to disagree a decision needs to be made.

CMH – Just received email from MoH in response to Kepa's email.

(email was read to the team)

AB – asked about the number of subsidies

JB clarified

4.46M –Rotoma

50% uncapped for Rotoiti from MFE

1.9M from BOPRC for each catchment

\$1500 PER hue FROM rdc

Further discussion took place in particular around the criteria's and wording of the subsidies.

Action

Andy to come up with a statement around the subsidies from MFE and BOPRC.

GM – The bench mark is quite important for us to determine the best solution for the lake.

More discussion took place around the options.

Action:

All confirmed next meeting 9.30 Monday 4th August'

9. DISCUSS APPROACH TO MAURIOMETER AND MCA FOR THE 4 AUGUST PREFERRED

We've parked the MCA and MauriOmeter.

Have asked Alison how we can refine and run the MCA again as we're going to bring the 2 models back as tools like we said we'd consider.

We will line up the various schemes against the technical criteria.

Kepa will set up THE MauriOmeter and Alison will run the MCA.

KM – talked about the well beings of the MauriOmeter the starting points and weightings.

AB view is the MCA as a technical tool and the MauriOmeter is a tool which involves more information that the Steering Committee can use.

Ian Mclean arrived:

JB advised of the discussions TAG have just had regarding the MauriOmeter and suggested to take a tool (which is to do with the cultural and social issues) like this to the committee may not be appropriate.

Ian advised that the committee itself and Pikiao will decide on the social and cultural issues. The MauriOmeter will be useful to run and see. Not sure if TAG is adequately equipped to pass judgement on Pikiao view on cultural matters.

JB- replied this is the way TAG see it too.

We can run the MCA with the technical components. We've looked hard at the committees 9 goals and we can drop 2 out as the others all relate to schemes and what they achieve.

KM – the thing about dropping the cultural environmental and social criteria is there a quite a few social indicators in the MCA, ie: the public health ones. So this will need clarification.

If you don't run the implication then is that 100% weighting is shared across the limited range of criteria. Then when you put the MCA up as a tool for guiding and decision its already obscured.

KM confirmed that for Monday it would be useful to use the indicators that we think we have the expertise to assess and the indicators that we aren't experts on can remain. MCA could do the same thing.

AL – we could leave gaps for the committee to fill.

All agreed

Action

Alison has developed and we've tried to refine the goals we've run through – Alison to distribute goals tomorrow for Monday

JB advised IM that as a TAG we believe the matters concerning the subsidies and directed to the MoH need to come through RDC and/or your Committee.

Rule 11 – Andy Bruree to continue to guide the TAG

AB - Rule 11 requires that any activity occurring that is going to increase the nutrient footprint of that area of land will need a resource consent and this will only be granted if there is an offset somewhere else.

If we do something in the catchment of Lake Rotoma its not subject to Rule 11 at ll.

JB – In lams consultation package we've noted this as key issues for certain options.

Action

Andy and Alison to look at details and costings to be brought to meeting on Monday.

KM – showed photos he took of the lake edges between Rotoehu and Rotoma. They were taken after the weekend consultation. It shows the land been logged. This is causing more sediment to go into the lakes.

Discussion took place regarding the extra nutrients from the forestry practices.

AB – There is absolutely no rule to stop this either.

Action

All agreed that from a professional point of view this TAG needs to draft up a statement to put forward to the appropriate Lakes Strategy Group.

10. MEETING REVIEW & CONFIRM 4 AUGUST AND AGENDA FOR IT

Summary of Meeting for Ian McLean and All

- Warren and Rob discussed in depth the PDP report and the estimates. From this the realisation that potentially Options 5 & 6 and possibly 4 could be refined downwards by a few million and they'll try to get a statement back to Greg regarding this and get more information in a couple of weeks.
- After the weekend consultation and discussions today we agreed not to change the figures but these results will be noted.
- In terms of the operational costs there will be refinements.
- Andy Bell gave a fairly strong direction to TAG, he appreciated what we're doing and the huge time pressure we're under to get things through to lams committee, but he was very hopeful that we could somehow get to a consensus and challenged us on this and noted the cost of this exercise and the importance of it.
- We had individual comments regarding the weekend consultations with general acceptance that we were reasonably pleased.

- We were updated on HUE numbers, on RDC siting investigations, cluster disposals.
- We tabled the risk matrix for the scientists to consider before next Monday and to get see if it helps them get a better idea, and we tabled the planning and consents report as a work in progress.
- We got into some technical discussion on subsidy and non subsidy.
- Andy Bruere is charged with getting back to us on Regional and MFE matter for Monday, but we agreed we can advance our technical discussion and decision without this and will just add in "subject toos" because this is a money matter out on the community.
- We had discussions that Kepa brought up going back to the environmental courts and RDC's position which is not a matter for TAG, its more for the TAG to refer back. It was a question about Ngati Pikiao possibly looking at their own scheme. (This was new to Jim and the team)
- Obtained general agreement about items to be discussed on Monday 4th August 9.30 WWTP next TAG meeting.

Action

Alison will send out a refined MCA for consideration in own time.

JB will provide a quick brief agenda for Monday due to limited time.

DH read out a draft statement re" best practice" in preparation for Mondays meeting.

Action"

David to prepare statement for signing off on Monday

KM – Regarding the trial, the installation costs will be useful. Further discussion took place about this.

CM – suggested that more specifics around road blocks and the waahi tapu locations would us come up with viable options on Monday

GM – As we are a technical group I hope we can make a decision based on technical grounds of the different options that is best for the lake and will not cost an arm and a leg for the community. Hopefully we can come up with a unanimous preferred option.

AL – Kepa are you able to give some indication on the Rotoiti map where we cant cross or if you cant share this, then maybe what we cant join together.

IM – The decision making needs to be quite clear ie: This is what we would do on technical grounds and if it turns out that some land is sacred to touch and Pikiao say that, then that comes as a separate issue. Pikiao will come back to us and give us their views.

GM – So Ian you are saying to let this group decide on the technical, economic, hard nose public health and environmental to make a recommendation to the project Steering Committee. The Project Steering Committee will say there are cultural issues related to this and we can accept this recommendation and go back with this information ??

IM – Emphasised the very limited time.

Hilda – Due to the short amount of time to get minutes back are you happy to just have key points noted?

GM – replied will be OK.

JB - The RPSC, Andy, David and Chris are yet to confirm they can attend Warren's meeting on 12th August. If you could get back to Alison or myself to confirm you are able to front this with work on the pros and cons on the various discharge locations there are in the rivers and lakes as per that brief.

JB – thanked Ian for coming in.

Ian also thanked TAG and appreciates they time pressures and acknowledge that they all have their own day jobs too. Unfortunately timing is crucial now.

Meeting closed at 4.30pm

Attachments to Minutes of RRSSC Technical Advisory Group Meeting Monday 29 July 2014

Attachment 1



Dr Kepa Morgan
notes for 29 July Tag