

OPTIONS FOR ROTOMA/ROTOITI SEWERAGE PROJECT

RRSSC - TAG Meeting #1, Monday 5 May 2014, University of Waikato

Draft Meeting Minutes – To be considered / confirmed at TAG #2 – 30 May 2014

Present.

Core TAG Members:

Jim Bradley BE(Hons), Dip SE Delft(Distinction) , FIPENZ, CEng(Civil, Environmental), IntPE, MCIWEM, ANZIM, DEE
Consultant, MWH NZ Ltd

Dr Te Kipa Kapa Brian Morgan BE(Civil), MBA, PhD, FIPENZ, CPEng,
 Senior Lecturer, University of Auckland

Professor David Hamilton

Bay of Plenty Regional Council Chair in Lake Restoration, University of Waikato

Greg Manzano MIPENZ, CPEng, IntPE

General Manager, Hydrus Engineering Consultants, Rotorua District Council

Andy Bruere (*by phone for part of the meeting*)

Lakes Operations Manager, Bay of Plenty Regional Council

Additional:

Chris Mc Bride MSc (Hons)

Technical Officer, The University of Waikato

Craig Brown MSc Occupational Psychology, PG Dip Ergonomics

CBC Wastewater

Alison Lowe NZCF, MSc Tech (Hons)

Senior Environmental Scientist, Rotorua District Council

Kevan Brian BTech (EnvEng), CEng(UK), MICHEM, MIPENZ (*by phone for part of the meeting*)

Technical Director, AWT Water, a member of the Mott Mac Donald Group

1. WELCOME AND INTRODUCTIONS

10:15. Jim welcomed everyone and invited Kapa to also welcome the TAG

2. DRAFT AGENDA – REVIEW AND ADJUST

JB presented the draft agenda, which was discussed.

KM asked if consideration could be given to him presenting the cultural background before the options. Yes, it would fit logically in item 6.

3. TAG TERMS OF REFERENCE (TOR) & COMMUNICATION PROTOCOL [ATTACHED]

JB apologised for emailing the TOR for the Project Steering Committee (PSC) rather than the TAG TOR, and he distributed a hard copy.

GM confirmed that a draft of the TAG TOR had been sent to the Rotoiti / Rotoma Sewage Steering Committee (RRSSC). He is not able to confirm at this point whether they have agreed to it.

Action 1. Confirm with TAG members whether the draft TOR for the TAG (provided in hard copy at the meeting) is the latest copy, and whether the RRSSC agreed. **Greg Manzano** – to advise and send electronic copy.

Action 2. Respond to Jim to confirm of acceptance TAG/TOR (Action 1 above) and of the Communication Protocol (provided). All Core TAG members.

JB said that the communication protocol had been emailed on Friday.

There was discussion related to the communication protocol.

KM. Consensus [decision making] is a good thing.

KM. I am the only person conversant with cultural issues, so how should we deal with this?

JB. The positions/perspectives of all will be recorded, and full decision making will be the role of the entire Steering Group. As a TAG we will listen, attempt to understand, and will honour the cultural dimension but not make decisions on cultural issues.

There was agreement that any advice to be given would be agreed upon by consensus.

KM. How do we report back to the RRSSC when we do not get consensus

JB. If we do not reach a consensus, the TAG minutes will record all perspectives. The minutes will go from the Chair (or interim Chair) of the TAG, to the Chair of the RRSSC, with the expectation that with all perspectives accurately and appropriately represented, the issue will then be with the RRSSC for their consideration.

There was general agreement.

TAG agreed for their meeting a Quorum is 3 members.

CB. Do people attending the TAG have a vote? JB. Only the core TAG team can vote.

4. RRSC (STEERING GROUP ACTIVITIES)

JB. Ian McLean's appointment as Chair of the Steering Group has been confirmed.

JB is the interim chair (for 2 meetings) of the RRSSC TAG

5. TAG RELATIONSHIP BETWEEN THE RRSSC PROJECT AND THE RPSC PROJECT

JB. The 2 Chairs and RDC see the two projects having a strong overlap. The idea is to have the same core TAG members (JB, KM, DH, GM, AB), plus AL on the Rotorua TAG, so that they may morph together.

6. PROJECT BACKGROUND AND UPDATE INCLUDING WORKSHOP 14TH APRIL –REPORT ATTACHED

JB. The workshop report has gone to the Major, Councilors and Ministry of Health. The outcome of the workshop is summarised in the report to Council.

GM discussed the way ahead. The Sanitary Works Subsidy Scheme (SWSS) funding was extended for 4 years, from June 27 2013, to a completion date of June 30 2017. The first Milestone related to complete investigations, consultation and option selection, by 30 June 2014. RDC is now to request the extension of this first milestone to 30 September 2014.

The project aims are therefore:

- (i) Work together to agree upon an option (TAG and RRSSC)

- (ii) RRSSC adopt the option
- (iii) RDC approve the option by 30 Sept 2014.

Suggested timing:

- 5 May 2014** TAG #1 - review options (this meeting)
- 30 May 2014** TAG #2 - develop evaluation criteria based on 'goals' (and recommend a shortlist of options). (Was 19 May but KM and DH could not make it so 30 May agreed upon)
- 9 Jun 2014** RRSSC - discuss: feedback from workshop; TAG comment on options and evaluation criteria; develop shortlist of options
- 16 Jun 2014** TAG #3 – further assessment of options
- 7 Jul 2014** TAG #4 – as required
- 14 Jul 2014** RRSSC – Assessment of shortlist options against evaluation criteria and a decision from the Steering committee on the preferred option
Refinement of preferred option and further investigation
Open to public consultation for approx. 2 months
- 30 Sep 2014** Greg will have a report for the Minister of Health and the Ministry of Health [because of the SWSS].

GM will be updating the Councilors with a monthly memo as well as the Ministry.

Action 3. Send a copy of the monthly updates that Greg provides to the Councillors and the Ministry (post acceptance) to TAG members. **Greg Manzano.**

Cultural Background and Sewerage Evaluation Criteria

KM gave a presentation (**attached**) that included describing the approach that had been used to compare the original RDC proposal and alternative proposal for Rotoma. He described the evaluation tools and the assessment of mauri. This is an approach that we could consider for evaluating and comparing the current options.

KM mentioned that his understanding was that the conventional 'pipe-in pipe-out' thinking that RDC proposed initially, doesn't sit well with Ngati Pikiao. There are also other issues related to taking the solids out of the catchment, and the proposed reticulation routes. He suggested that a basic underlying principle should be reduction at 'source'.

KM presented a schematic of a 'Decentralised Reduction At Source – Try Implementing Change ' - DRASTIC option that is based on this principle and includes urine separation. An Innoflow septic tank at each household would take the solids (faecal) waste stream and grey water. The solids would periodically be removed from the septic tank which could be taken a worm farm (there have already been discussions on this with the Trust). Urine would be conveyed to a separate offsite cluster storage tank and stored (potentially available for use out of rohe). The septic tank effluent would be conveyed to a cluster area on-site cluster soakage system.

KM's further slides provided information on a cost benefit analysis; draft plan change 2 related to OSET and a decision framework of attributes.

KM described the Ngati Pikiāo cultural opportunity mapping assessment, and described the different dimensions of Mauri: Ecosystem, Hapū /Cultural, Manāki /Social, Whanau/Economic, the process that was work-shopped at the marae to identify sets of indicators for the criteria that are considered important, in each of the 4 areas. These were then fed into the mauri model framework assessment, where they looked at the previous MBR option and the alternative option that was proposed.

KM defined Mauri as “the attractive force between physical and non-physical (spiritual) attributes”. AL asked if this was the same concept as for example, Chi, and whether it is a universal concept, with ‘Mauri’ being the te reo word to describe it. KM agreed that yes it is the same as Chi in the Chinese culture and also... (AL - I don’t recall exactly which additional terminology and cultures were mentioned, so I’ve taken the liberty of adding a few more)... ‘prana’ in Hindu, ‘lūng’ in Tibetan Buddhism, ‘ruah’ in Hebrew, ‘the force’ in Star Wars, and is also frequently translated as ‘natural energy’, ‘life force’, ‘vital energy’ ‘life energy’. [AL to aid interpretation for people not familiar with the concept I’ve included the term ‘life energy’ in places in the minutes]

KM described how the MauriOmeter that he had developed could be used as an assessment tool. It is a way to provide a qualitative assessment of the effect of each option on the mauri, or life energy.

For each indicator, consider the mauri, the life supporting capacity, the life energy as we one would imagine that it would be affected and changed by the option. Assign it a rating of either:

- 2 fully degraded
- 1 partially degraded
- 0 neutral, no change relative to the status quo
- +1 partially improved/restored
- +2 fully restored

Kepa – would you mind checking the descriptors for each ranking based on my understanding of what you said please? – I don’t recall if you used any terminology here other than neutral, partial, fully, and I included restored, improved, degraded?

KM showed as an example the assessment that was done previously, and how indicators in each of the 4 dimensions was considered by summing the rankings, and then summed overall. It was also used to consider any change over time. This was done for each option, which then enabled a comparison of the options.

KM presented an overview of the CIA that highlighted that “active protection is possible and required” and we need to take a holistic approach. He concluded that the combination of the cultural opportunity mapping technique with the mauri model decision making framework produced a robust and clear understanding of the relative merits of each option. The previous workshop that assessed the original options concluded that intervention was required to address the current situation, in a way that enhances the mauri. The original RDC proposal for Rotoma did not achieve this, and there are options that could achieve an equilibrium state and enhance mauri over time, and KM suggested that we need to think outside the box.

7. RRSSC GOALS AND TAG’S ASSESSMENT OF THESE – LIST ATTACHED

JB provided the table of goals that had been drafted and agreed by the RRSSC, and included a goal 9.

KM stated that these goals don’t measure up for Ngati Pikiāo even if there were 4 Ngati Pikiāo people on the RRSSC. Goal 2 ‘best meets the needs of tangata whenua’ needs to be fleshed out, and

we need to consider the weighting, because goal 2 is the crux. This lead to some discussion on the existing site situation.

KM wanted more certainty around whether public health was an issue

Action 4. Obtain from Ian McLean/and or Greg RDC - Terry Long, BOPRC, information that he is gathering on the adequacy and impact of septic systems on public health, and send to TAG members. **Jim Bradley as soon as information is available.**

CM suggested that goal 1 would also be aligned with iwi. KM agreed, and 'how' it is implemented is key, and it's in the detail.

KM suggested that we need to look at fair representation, for example the ratepayers association are vocal and they represent only 15% of the ratepayers.

KM The goals need to reflect the Treaty intention, and suggested that perhaps half should represent Ngati Pikiao interests and the public health affects as well.

DH yes the wording of the goal should reflect that, and it needs to be rephrased.

There was general discussion and a consensus that in (i) in the first instance TAG only present technically sound options, (ii) while TAG acknowledge and keep in mind the RRSSC goals, they will be regrouped/reframed and further developed by TAG to assist the options evaluation process [to be subsequently provided as a recommendation to the Steering Group].

JB suggested a Technical Type Goal be added to the RRSSC's goals – KM commented this can be incorporated into the four wellbeings groupings.

Action 5. Regroup/reframe/reword the goals of the Rotoma Rotoiti Steering Committee in relation to the 4 well-beings and cultural relevance, and circulate draft to TAG members by Monday 12 May. **Kepa Morgan.**

Provide feedback to Kepa and Jim on his draft rework of the Steering Committee goals, and suggestions for inclusion by Monday 19th. **All Core TAG members.**

8. GOALS ISSUES AND TAG'S SUGGESTED EVALUATION CRITERIA – TABLE ATTACHED

Action 14. There was a consensus to use 2 decision making assessment tools at the next TAG meeting, the mauriOmeter and MCA. Determine how to run/use these MCA decision tool, for discussion at the next TAG meeting. **Jim Bradley** to distribute information on MCA approach by 15th May. **Kepa** to provide any further information to assist TAG members understanding the mauriOmeter application that was presented at the TAG, by 15th May.

9. OPTIONS REGISTER/LONG LIST – TABLE ATTACHED

The load to the lake from septic tanks depends upon the number of homes (HUE or HEU, both terms are used), their occupancy rate, and the load of nutrients in sewage and effluent, and the retention in the soil which dictates the subsequently load that will reach the lake. Therefore there is a need to agree on the values, and also we need to confirm that the loads to the lake in the action plan are realistic.

HUEs

There was discussion around the population and the HUE's, and the difference between the HUE's in the District Plan (on which the subsidy is based) and in the Action Plan for the lake. The current options are based on the HUEs in 2051 (ultimate), and these HUE numbers allow for the recreational facilities, toilets, camping ground, daycare etc, and this was confirmed by KB:

- Rotoma HUE's are 336, increasing to an ultimate of 432
- Rotoiti HUE's are 435, increasing to an ultimate of 517

The population growth in Rotoma is perhaps not typical, so there was a question as to whether the projection for the ultimate number of HUEs (2051) is realistic.

Action 6. Find out the method used for determining the population growth for Rotoma (336 to 432), for consideration at next meeting. **Greg Manzano.**

The HUEs in the action plan are old, and include homes that have since been reticulated, so this needs to be addressed.

Occupancy

An agreement was reached on the occupancy rates (where aspects of the design need to be based on the ultimate peak, and the loads to the lake will be based on the ultimate average):

- peak occupancy would be 3.1 people per HUE - Kevan's Residual Nutrient Table – Peak for 12 month year
- average occupancy 1.15 people per HUE – Kevan's residual Nutrient Average over year (1 month Peak, 11 months at lower usage, as per some former Opus information).

Nutrient load to lake from septic tanks

The loads to the lake in the action plan assumed 1 HUE with a septic tank would produce roughly 10 kg N and 1 kg P annually, a 10:1 ratio of N:P, which is typical for septic tank effluent and this was based on 50% removal of P and 10% removal of N.

There was a question as to whether these numbers were used in Kevan's values for the options. Kevan used 2 kg P and 14 kg N per person/d in the raw sewage as the starting point for the options.

[AL. When I looked over the meeting notes, it was not clear whether people were talking about the nutrients in the raw sewage or the effluent, on a kg per person basis, and the way the loads were calculated for the options was different to the way they were calculated in the action plan. So I tabulated the data from the action plan (row 1 in each of the P and N tables below), and then added rows for the peak and average occupancy rates, along with the ultimate HUEs and the sewage N and P loads that Kevan used for the options calculations (14 and 2 resp.) that have been discussed at this meeting to give the sewage loads.]

[AL. This was not discussed at the meeting, but as the table was here, and to enable a comparison for consideration at the next TAG meeting, I included 20% removal of P and 10% removal of N in the septic tank to estimate the effluent loads].

ROTOMA Septic Tanks	HUE	people/ hue	total people	m3/d	Sewage-P (kg/pe/d)	Sewage-P (kg/pe/yr)	Sewage-P (kg/yr)	Removal %	Effluent-P (kg/yr)	P to lake (kg/yr)
Lakes action plan	251	2.8	703	155	-	0.7	492	50*		250
ultimate peak	432	3.1	1339	295	2	0.73	978	20	782	
ultimate mean	432	1.15	497	109	2	0.73	363	20	290	

*50% removal includes some removal in the soil

ROTOMA Septic Tanks	HUE	people/ hue	total people	m3/d	Sewage-N (kg/pe/d)	Sewage-N (kg/pe/yr)	Sewage-N (kg/yr)	% removal	Effluent- N (kg/yr)	N to lake (kg/yr)
Lakes action plan	251	2.8	703	155	-		2783	10		2530
ultimate peak	432	3.1	1339	295	14	5.11	6843	10	6159	
ultimate mean	432	1.15	497	109	14	5.11	2539	10	2285	

There was discussion on the mass of nutrients generated per person in the septic tank effluent, and how much the load of P from a household could be reduced by using P-free laundry powder and dishwashing powder. AL mentioned that laundry powder in NZ went P-free around 2008, and a reduction in the P in raw sewage was observed. Dishwashing powder still contains P. A study at Okareka estimated that P in dishwashing powders makes up a bit less than 20% of the P in the raw sewage.

Action 7. Check with Kevan whether the mass P generated/person (in raw sewage) is up-to-date, ie reflects the reduction associated with the removal of P from washing powders around 2006-8. Provide to Kevan the estimated %P in sewage that is from dishwashing powders based on the Okareka survey. **Alison Lowe**. Run another set of estimates of the concentration and load of P that would be discharged from the options if P-free dishwashing powder was used. **Kevan Brian**.

CB further introduced the DRASTIC option he had developed and presented his paper (**attached with a schematic since provided by CB**) discussed the modification to the urine separation option that could allow or council ownership and also still be qualify for the subsidy. The urine is separated, reticulated and removed. The option is flexible and could work in clusters.

Action 8. Progress/update/work on the figures for the urine separation option Craig presented at the TAG – Ensure as far as possible that cost estimates are on the same basis as RDC's work to date on other options. **Riaan Rossouw in collaboration with Craig Brown**.

Other issues with the options were discussed

KM Waahi tapu sites and rohe boundaries that need to be considered when grouping the clusters (**Kepa would you mind adding to this with reasons please as I was not familiar enough with the locations to record correctly:**

- Matai Kotare has to be separate
- Doctors Point – all the land behind is an issue

- More... Road - needs to go back to Roto??

Action 17. Prepare a single map of the area concerned, highlighting the housing, toilets blocks etc, different rohe, and include any sites of potential concern, such as the waahi tapu sites that have been discussed. **Greg Manzano and Kepa Mogan. Date?**

The need to reduce the septic tank loads

KM The question was asked by the Environment Court Judge whether there was a need to reduce the 'sewage-derived' loads to achieve the lake nutrient targets. It was mentioned that there was a need to decide whether the targets were absolute or relative.

Action 9. Provide current mass loads from remaining onsite HUES and compare to the ultimate HUES mass load calculated by Kevan Brain for Rotoiti, Rotoma and Rotoehu based on the Lakes Action Plan/Programme. Compare these figures to the removal/mass load targets of the action plans. **Andy Bruere, Chris McBride, David Hamilton.**

Rotoma

DH. It comes down to protection versus restoration.

CM There is clear evidence that P in Rotoma is increasing and the N:P ratio is decreasing, therefore yes there is a need for nutrient reductions.

AB. There was no witness from the Regional Council to support RDC to address this issue, and in future whenever we are looking at schemes to address the lake water quality then a Regional Council/Lakes person needs to provide evidence.

The subsidy was granted for public health reasons. While there might or might not be an issue with pathogens from septic tanks, the other possibility is the nutrients contributing to algae and cyanobacteria growth and subsequent associated health issues. David Hamilton should provide evidence on this.

There have been hearsay comments from residents on issues. They are possibly localised to areas with septic tanks in the water table. There isn't much data on bacterial issues so we need to be really careful around comments about a problem when we have no evidence. Localise issues might not necessarily have shown up in any monitoring. It could be lesser of an issue than the N:P ratio changing and driving the whole lake water quality issue.

Action 10. The question was asked by the Environment Court Judge, and continues to be asked by residents and land owners, whether there is a need to reduce the 'sewage-derived' load of nutrients to Rotoma, Rotoehu, and Rotoiti (further reductions). Look into this, gather any evidence, and prepare something for consideration at the next TAG meeting. **Andy Bruere, Chris McBride, David Hamilton.**

AB If there is a residual nutrient discharge, P is the major target, but don't ignore N, but be sure that the reductions are more 1P: 10N, with the lake ratio in mind.

AB From a legal point of view, if a combined discharge goes back into Rotoiti then Rule 11 applies. Rule 11 does not apply to Rotoma. If there is a net reduction in the load of nutrients then there is no need to consider offsetting, only if nutrients are moved from one catchment to another.

Rotoehu

AB Landuse change has already been negotiated in the Rotoehu catchment to achieve the P target.

KM There is a link between Rotoehu and Rotoma, so there would be no distinction between these two.

AB I don't think there is any evidence about health issues for Rotoehu. In terms of the community they seem to oscillate between wanting and not wanting to be reticulated.

KM. There is no distinction between Rotoehu and Rotoma. Even if Rotoehu isn't reticulated, a discharge there is still likely to be acceptable.

DH. Because of Rule 11, Rotoehu might need to be reticulated to offset a discharge

AB. It's perhaps time to update the Rotoehu community.

Action 12. In terms of OSET find out more information on the financial contribution that accompanies a consent to discharge nutrients exceeding the permitted limits, and the contribution is a 1-off or for the consented period only. **Andy Bruere.**

10. MUST HAVE'S AND FATAL FLAWS ASSESSMENT OF LONG LIST – IDENTIFYING SHORT LIST – TABLE ATTACHED

GM presented the traffic lights sheet (attached)

Red – no go

Yellow- possible

Green – potentially OK

Option 1. Reticulation and back to Rotorua

KM 2 issues: (i) can't get passed Matai Kotare (ii) across catchment

JB: Potentially OK to include in the long-list for consideration if it's technically feasible?

Action 11. Investigate further the technical issue/feasibility of a pipeline passing the rocky outcrop, Mataikotare (I'm not sure – is this the corner the divers use?). **Greg Manzano.**

→ Flagged Yellow

Option 2. Reticulation, to Kawerau

Issues: Across catchment; Tarawera river considerations – (Tawaera Regional River Plan being reviewed), Tarawera catchment

→ Flagged Red but is technically feasible

Option 3. Reticulation with a combined plant

So long as not discharged to the catchment to the north (out in the environment court)

Confirmed that land disposal site is not in the option now

→ Stay on the table and go to next TAG meeting

Option 4. Two treatment plants and disposal fields

Potentially OK with proviso on the route in relation to hinehopu

New hybrid suggestion

With some of Rotoiti to Rotorua WWTP (if further reductions in Rotoiti required)

Gisborne point still goes past Matai Kotare so look at a cluster here

Update a previous Opus costing?

Option 5. Clustered

→ MBRs out because too costly

→ can consider other technologies e.g. Activated Sludge, SBRs, SAFs etc

Action 18. Develop a new cluster option generally following RDC option 5 but with a lesser degree of treatment than a MBR e.g package BNR activated sludge plant such as SBR or SAF etc. Consider less number of clusters so that there is some comparison to Craigs latest urine separation cluster option, and avoiding the sites identified as waahi tapu . **Greg and Riaan – by the 16th if possible.**

11. UPDATE ON OTHER OPTIONS/ESPECIALLY URINE SEPERATION AND CLUSTER SCHEME APPROACH – CRAIG BROWN AND DR KEPA MORGAN OUTPUT PLUS RDC

Option 6. Urine separation

A couple of options here with reticulation to clusters etc. CB confirmed that his new DRASTIC option supersedes the earlier urine separation on-site and cluster options presented at the RRSSC workshop on the 14th of April.

Action 8. Progress/update/work on the figures for the urine separation option Craig presented at the TAG – Ensure as far as possible that cost estimates are on the same basis as RDC's work to date on other options. **Riaan Rossouw in collaboration with Craig Brown.**

Option 7. OSET

The Capital Cost would be \$17500 per property. – Greg to update this estimated cost.

The subsidy scheme does not cover this.

Would require a resource consent and the financial contribution (BOPRC fund for offsets). Not sure whether the contribution is a 1=off or lasts the length of the consent.

Action 12. In terms of OSET find out more information on the financial contribution that accompanies a consent to discharge nutrients exceeding the permitted limits, and the contribution is a 1-off or for the consented period only. **Andy Bruere and Greg C.**

A potential option could be a combination of individual systems with urine separation and composting, and targeted upgrades. Could be an option for properties that cannot connect and need to be consented.

Action 13. Crunch the numbers (nutrient discharges/costs/both?) for the dry composting toilet option at the household level (and for the toilet blocks)? **Craig Brown, Kepa Morgan (with Riaan or Kevan?).**

AB The Lakes Programme does not support the financial contribution.

DH. It seems easy to say purchase a farm but it's not trivial.

KM. Ngati Pikiao are already doing land conversion. If someone stays in the catchment and pollutes they would have difficulty staying.

12. LAKE ROTORUA AND ROTOITI ACTION PLAN REFRESH AND UPDATE FROM A WASTEWATER PERSPECTIVE – COUPLED WITH ACTION 9

This key piece of work is to be advanced by CM, DH and AB, and will be matched against Kevan's residual nutrient assessment. It was stressed that the options nutrient output is immediately after treatment of on-site facilities and does not take into account any soil / water column nutrient reduction / attenuation.

13. RESIDUAL NUTRIENT ASSESSMENT FROM SELECTED OPTIONS – COUPLED WITH ITEM 12 - MEMO AND OUTPUT TABLES ATTACHED FROM KEVAN BRIAN

This was considered just before considering the options.

Action 19. Further brief Kevan Brian on next run on nutrient residual output and confirmation of matters discussed at TAG – output from a number of the above tasks required before completing.
Jim to brief Kevan by Friday 9th

14. PENDING HIKOI – TREATMENT PLANT/SCHEME VISITS

JB discussed the pending hikoi and visits and some options.

15. THE TAG WAY AHEAD- FURTHER TASK IDENTIFICATION AND PROGRAMME TERMS OF TECHNICAL ASPECTS OF THE PROJECT AND PROGRESSING THESE (OBJECTIVES, ISSUES OPTIONS, EVALUATION, GLOSSARY OF TERMS ETC)

16. GENERAL BUSINESS

Action 15. Send the Clean Water workshop proceedings to Kepa and Craig. **Greg** 9th May

Action 16. Prepare a draft glossary on or before for the next TAG meeting. **Alison Lowe.**

Next TAG meetings:

10am, Friday 30 May, University of Waikato.

10am, Monday 16 June, University of Waikato.

10am, Monday 7 July, University of Waikato.