

Minutes for Land Technical Advisory Group, 6 May 2015

Bay of Plenty Regional Council – Te Wai Ariki
1125 Arawa St, Rotorua, 9:00 am

Chair: Dave Clark

Convener: Andy Bruere

Present:

- Independent Advisors: Gina Mohi and Greg Lambert
- Ag First: Phil Journeaux
- Landcare: Suzie Greenhalgh
- AgResearch: David Houlbrooke
- Scion: Tim Payn
- BOPRC: Marcus Bloor, Helen Creagh, Simon Stokes, and Alastair MacCormick
- Others: Simon Park; Gloria Zamora, Lee Matheson (Perrin Ag), Te Taru White (Incentives Board) and Stuart Morrison (farmer)

Action summary

1. Suzie Greenhalgh: to circulate cultural monitoring tools.
2. LTAG: to answer how precise BOPRC needs to be in regards to soil.
3. Marcus Bloor: to look into hardcopy books of soil in the Rotorua catchment.
4. Andy Bruere: To circulate the WQTAG statement in regards to N & P.
5. Marcus Bloor: to change “nitrogen allocation” to “nutrient allocation” on science priorities.
6. Suzie Greenhalgh: to send policy on the ‘flow of information’: Farm to catchment to region to nation.
7. Marcus Bloor/Simon Park: to reframe priority for nutrient allocation.
8. Andy Bruere: to circulate information on how TLI’s were set.
9. Tim Payne: to circulate the report on cultural values from the Waiapu catchment.
10. Simon Stokes/Simon Park/Andy Bruere: to work with Tim Payn on fleshing out integrating forestry into pastoral landscapes and case studies.
11. Andy Bruere: to send N & P statement from WQTAG.
12. LTAG: to send feedback to Chris McBride on BOP lakes external loads report.
13. Andy Bruere: to contact Roland Stinger to speak to LTAG on attenuation.
14. Andy Bruere: to find out what the Waikato is doing around attenuation.
15. Marcus Bloor: to see if a study could be done in the Mamaku area around P-loss.
16. LTAG to come up with a way for the Advice and Support team to ask questions of LTAG.
17. Andy Bruere: to check with Warren Webber that the two presenters on Mānuka are not the same.
18. Phil Journeaux to identify additional research topics.
19. Andy Bruere: to circulate draft science review and a method as to what review will look like.

Item 1: Welcome, apologies, minutes from 24 Feb 2015, and Cultural Health assessments

- a. The Chairman welcomed Land TAG group.
- b. Apologies
 - For absence: Neels Botha
 - For lateness: Te Taru White
- c. 24 February 2015 minutes were approved.
- d. Cultural Health Assessments- Gina Mohi
 - i. There is real value in understanding the decision process with Māori trusts.
 - ii. Suzie Greenhalgh to circulate cultural monitoring tools.
 - iii. Assessments currently being completed, project is being led by Antoine Coffin.
 - iv. Need to get a better understanding of the iwi undeveloped land around catchment.
 - It is understood that there is approximately 3000 ha which are dry stock.
 - A breakdown of parcel sizes is needed.

- v. There is a 3rd group that needs to be looked at: Trustees which are non-active.
- e. Andy Bruere gave an introduction for Incentives Programme Director, Te Taru White.
- f. All presentations may be found here: http://www.rotorualakes.co.nz/land_tag_minutes.

ACTION: 1. Suzie Greenhalgh: to circulate cultural monitoring tools.

Item 2: Land science and economics priorities for the Rotorua Lakes Programme

- a. Pre-circulated draft priorities - Marcus Bloor
 - i. Soil stability monitoring- BOPRC are looking at implementing a programme to look at the amount of P leaving land and increasing the amount of monitoring sites and including economic parameters.
 - BOPRC has very good updated S-maps
 - It was suggested to provide printed hard copy books of soils for farmers.
 - OVERSEER® is still having problems uploading data.
 - LTAG needs to define how precise BOPRC needs regards to soil?
 - ii. Land Monitoring Forum (LMF) is working with Regional Councils and in 2011 put together a national science strategy. A review is currently being done to pull together the priorities from interest groups.
 - iii. LMF list is the same as the Land Manager's Group (LMG) and freshwaters is consistent across the board.
 - iv. BOPRC needs LTAG's advice to ensure that they are not funding overlaps.
- b. Clarify the "research questions" for tiers 1 & 2- slides-
BOPRC needs feedback on defining the problem, potential projects to address the issues, and if there is any work out there that's currently being done to address the issues.
 - i. Nitrogen Allocation
 - Change "nitrogen allocation" to "nutrient allocation".
 - It was stated that farmers feel the opportunities are limited and would like to know where to go from here.
 - Why is N the only nutrient being considered in Rotorua catchment?
 - It's not; it's the only one being allocated.
 - Council is currently looking to do a project to identify what are the natural sources of P.
 - Why continue focussing on N when the lake is at its TLI because P is being controlled (alum dosing)?
 - The WQTAG has made a statement in regards to N & P and will be circulated to LTAG.
 - Some Iwi are not happy with alum dosing how it may affect long-term food sources.
 - Alum dosing doesn't encourage land management change.
 - Resource consents expire in 2018 and it will be a community to decision on whether to proceed.
 - These processes need to be underpinned on available science.
 - Priority is more around economic analysis
 - BOPRC needs the following answered:
 - What sort of principles need to be developed in the allocation scheme?
 - How do we adopt a consistent framework as we go onto other catchments in the region?
 - How to factor natural capital vs historical land use?
 - There is a misunderstanding that an economic model will answer their problems.
 - Need to be careful when using the word "economic" to not infer that it means "\$". It is not a "\$" figure.
 - An analysis showed that there is little known about iwi land and there is a whole range of items to be re-assessed.
 - Suzie Greenhalgh to send policy on the 'flow of information': Farm to catchment to region to nation.
 - The objective of nutrient allocation in terms of economic evaluation needs to be set by:

- Thinking broader
- Developing a consistent policy approach
- Considering the impacts on iwi land
- Reframing priority.

ACTION:

2. LTAG: to answer how precise BOPRC needs to be in regards to soil.
3. Marcus Bloor: to look into hardcopy books of soil in the Rotorua catchment.
4. Andy Bruere: To circulate the WQTAG statement in regards to N & P
5. Marcus Bloor: to change “nitrogen allocation” to “nutrient allocation” on science priorities.
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7. Marcus Bloor/Simon Park: to reframe priority for nutrient allocation.

ii. Economic Analysis

- An economic analysis needs: a consistent framework, to look at what the impact of a TLI limit is and what the cost of achieving a clean lake is.
- Suzie Greenhalgh (Landcare Research) or Scion can do a community survey which takes into account other factors rather than just monetary value.
- The community set the TLI- Andy Bruere to circulate information.
- Iwi have different values on the definition of a clean lake i.e. food sources
- A broad strategy was completed in 1999- 2000 and updated 2 years ago since then the economic side has been more ad hoc market analysis.
- Analysis must not use different methodologies.
- Process forward is to figure out the cost of achieving the TLI then capture and quantify the values.
 - Te Arawa will be releasing a report on this in the next few weeks.
 - Tim Payne can circulate the report from the Waiapu catchment – click [here](#).
- The definition of a clean lake will set the priorities and how to deal with the problem.
- Whilst the profit impacts are quite modest, the production cost increases substantially.
- Belief is that in the medium to long term land values will go up because of the value of living in a beautiful region.

iii. Local calibration of OVERSEER®

- Currently the Parekarangi trial is partly addressing the local calibration issue. The report is in draft stage which shows 3 years of leaching data compared to OVERSEER® outputs. If there are any differences that will have been caused by the drainage in the model.
 - So far there have not been any high end trials to calibrate OS.
 - Trial is using 300 lysimeters
- AgResearch is confident that the OVERSEER® modelling is more accurate now.
- OVERSEER®...
 - does not take into account extreme events.
 - May be underestimating the drainage in podzol soils.
 - is used by BOPRC to set benchmarks for the farms.
 - only as good as the information put into it.
 - has not been calibrated for the Mamaku podzol soil.
- Scion has just received some funding to research forestry in relation to OVERSEER®.

ACTION:

8. Andy Bruere: to circulate information on how TLIs were set.
9. Tim Payne: to circulate the report on cultural values from the Waiapu catchment.

Item 3: Forestry Integration into pastoral farms & landscape- Tim Payn

Factors to consider when integrating forestry into pastoral landscapes	
Low % age of pastoral farms have trees	Mixed business model
Farmers skills mix is missing forestry	Passive leases (history)
"pine tree" perception	Short-term vs. Long-term views
Risk analysis + long-term	Corporate
Advice and Support are farm consultants not foresters: Solid team would be horticulture, farm and forest advisor	Cash flow needs
Farmers need long-term land plans	Have to vs need to
Value proposition for property	Farm succession + VE trees

- a. Modelling done thus far has focussed on removing 270t and has always envisioned forestry to be a large component.
- b. Discussion on how to integrate forestry into existing pastoral landscapes
 - i. Challenge is what it is going to mean for each individual landowner.
 - ii. The Rotorua catchment needs advance pasture forestry.
 - iii. Perceptions
 - People don't like pine trees
 - Cash flow needs: risk analysis + long term
 - Values and Understanding
 - iv. There will be a change in national law on forestry roads soon.
 - v. Advice and Support service needs to engage a forestry consultant.
 - vi. Case studies need to be written up
 - vii. Complexity of forestry is picking what type of tree.

ACTION:

10. Simon Stokes/Simon Park/Andy Bruere: to work with Tim Payn on fleshing out integrating forestry into pastoral landscapes and case studies.

Item 4: Drystock farm nutrient mitigation options - Greg Lambert

- a. The low N foliage option is grass.
- b. OVERSEER® assumes all farmers are using BMP.
- c. P hot spots are more discreet and easy to manage. Most P is coming from 20% of paddock.
- d. Beef & Lamb NZ's LEPs have a lot of information useful for business planning to assist farmers.
- e. Farmers are going to have to go down the environment plan route to meet the rules. They should go to business planning too.
- f. Problem still exists that OVERSEER® is not a farm system model.
- g. Many of the mitigation methods done right could be profit positive.
- h. Need a farmer that is well above the NDA target and ability to monitor his farm over 5-10 years to meet the target.
- i. Have mitigation methods been modelled through to figure out cost?
 - i. Maybe BOPRC needs to pull that info out of the Economic Analysis project that Dairy NZ and BOPRC are currently working on.
- j. RTALP is now at an individual level not a collaborative approach.
 - i. At this point there has been no real farmer commitment.
 - ii. If farmers work together as a group a solution emerges.
 - iii. Need a committed forum for farmers trying to achieve the same outcome.
- k. Taking an approach where people come up with their own solutions more chance of compliance.

Item 5: Confirm outputs/advice from morning session

- a. This session was covered in the a.m. session

Item 6: Nitrogen and Phosphorus loss rates for use in catchment models- Chris McBride

- a. Project has been collaboration between NIWA and UoW to pull together a consistent view to bring together the latest and greatest of GIS layers information and to review nitrogen and phosphorus loads to all twelve major Bay of Plenty Lakes. By applying consistent methodology to estimate catchment loads and atmospheric deposition at the regional scale should enable comparison between catchments, and provide a benchmark against which the impacts of present and/or future catchment intervention and/or management strategies can be assessed.
 - i. Report still in draft stage and is being passed around for feedback.
- b. The leaching rates of the different land use types among the changes in the OVERSEER® versions has proven to be a bit more complex than first envisioned.
- c. Discussion focus will be on lakes Rotorua and Tarawera.
 - i. By using averages when going from version 5 to 6 some farmers will be advantaged and others disadvantaged.
 - ii. Farmers who have not provided their dairy files (half of the area) are disadvantaged.
 - iii. In regards to ROTAN is it calibration or attenuation?
 - ROTAN is giving a load at a land phase and migrates that load to the lake.
 - A factor to consider is the time lags.
 - ROTAN is calibrated to the lags so you can calculate attenuation fairly accurate.
 - There is a complex set of decisions when factoring the lake load.
 - BOPRC has contracted UoW to re-code ROTAN to work with GIS Arc system and calibrated.
 - iv. Catchment boundary fairly straight forward
 - v. Land use has been broken down into 3 groups
 - vi. Some attenuation questions still need to be answered.
- d. Questions/Discussions
 - vii. Did you look at previous land use?
 - No, report is being passed around to get feedback on what information needs to be considered.
 - viii. Why does the P load for Rotorua seem higher?
 - Rotorua is based on OVERSEER® data. These losses are much higher than what is actually observed heading into the water way.
 - Tarawera's is an average from the 5 catchments.
 - ix. On pg. 60 of report why is the 25% attenuation rate not applied to all categories i.e. bush, scrub, forestry?
 - There are 16 different ways to look at how you apply attenuation. The amount of attenuation is in the margin of error.
 - x. How does a landowner get a handle on their P loss if there are so many unknowns?
 - We need to be clear as to where the attenuation is placed.
 - Tarawera and Rotomā focus will be more on P. Tarawera's estimated load comes from geothermal.
 - xi. Could you have negative attenuation?
 - More going to lake than what OS is says.
 - Model is just to give a guideline.
 - Roland Stinger is willing to come speak at LTAG on attenuation.
 - One way to further understand the phosphate is to understand the sediment movement and recognizing that some of that is phosphate.
 - In the rules framework the budget works.
 - xii. Do you change your allocation regime because of the attenuation rate?
 - There are consequences for treating it all equal.
 - Taupō came up with a definition around buried soils but attenuation was not challenged in Environment Court.

- xiii. BOPRC has been overriding the podzol in OVERSEER®. BOPRC are getting numbers in the 40's and 50's for P-loss because it puts all the p-loss in surface loss rather than drainage it is changed.
 - To date there hasn't been a study on Mamaku podzols.

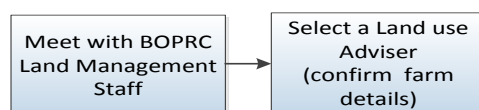
ACTION:

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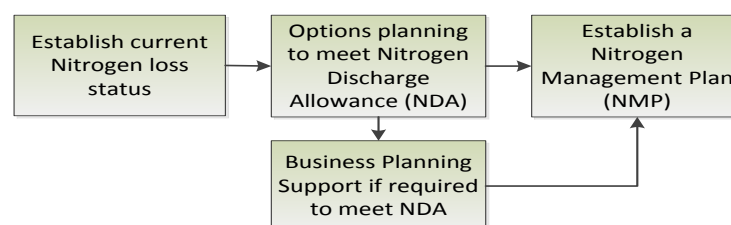
Item 7: Advice and Support scheme- progress to date, needs- Eykolina Benny

- a. The rules have been broken into 3 parts: the following is the process:

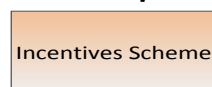
Getting started



Land Use Advice Service



Further options



- b. There are 7 Land Use Advisors confirmed and there is a \$2.2 million dollar fund to cover costs.
 - i. Over 40 ha gets up to 6k; less than 40ha up to 3k
 - ii. Business Plan funding is first in first served
 - iii. Q & A session on is being planned by Lake Restoration team
 - iv. Current limitations are OVERSEER® and paper roads
- c. Questions/Discussion
 - i. If you have a small block running dry stock are you ok?
 - A farmer would need to use the stock intensity look up chart and find out.
 - ii. Are farmers going to be allowed to put in alternative N-mitigations that are not in OVERSEER® such as cow housing, grass species etc...
 - LTAG collectively stated that BOPRC will need to be cautious about using LTAG in that capacity. LTAG's purpose is to give technical advice around science and further advised that when developing a framework to make sure to have business principles in it.
 - Chairman Dave Clarke cleared up Helen Creagh's, Rotorua Catchment Manager, of LTAG's role in to RTALP and agreed that LTAG would come up with a way to link with Advice & Support to answer questions raised by LMO's, farmers, and advisors.
 - iii. How much forestry conversations are you having with the landowners?
 - A bit, it takes the landowners awhile to come around to idea of forestry.
 - iv. Do you have enough of a tool kit for these discussions?
 - Minimal, just fact sheets.
 - v. Farmers tend to respond better to others outside of council.

ACTION:

17. LTAG to come up with a way for the Advice and Support team to ask questions of LTAG.

Item 8: LTAG input to June 2015 Opportunities Event

- a. Abstracts have been coming in and expecting 36 total
- b. Audience is landowners.

ACTION:

- 18. Andy Bruere: to check with Warren Webber that the two presenters on Mānuka are not the same.
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Item 9: Other business, actions, wrap up

- a. 3.3 million dollar fund-
 - i. Fund is a contribution of MfE and BOPRC specifically for N mitigations methods for lake Rotorua.
 - ii. Criteria for funding are still being written with hopes to put it up to Council by August.
 - iii. Does having a contestable process bring out the best ideas?
 - It was suggested that Council process under 50k as quotes over 50k as tender.
- b. Any Obvious gaps with LTAG?
 - i. Collective wanted LTAG to explore solutions available to farmers.
 - Important to farmers to know that they are getting a fair deal. Once allocation system was chosen then modelling began.
 - LTAG Peer review
 - ii. ACTION: Phil Journeaux to identify some of the research topics
 - iii. LTAG to feedback what other work is going on research topics
- c. StAG has been requesting a science review as written in the following (every 5 years):
 - i. RMA
 - ii. Oturoa Agreement
 - iii. Integrated framework
 - iv. There is a draft science review
 - v. Reviewer will be external to BOPRC and UoW.

ACTION:

- 19. Phil Journeaux to identify additional research topics.
- 20. Andy Bruere: to circulate draft science review and a method as to what review will look like.