

## Minutes for Land Technical Advisory Group, 26 November 2014

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Bay of Plenty Regional Council – Te Wai Ariki

1125 Arawa St, Rotorua, 9:00 am

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**Chair:** Dave Clark

**Convener:** Andy Bruere

**Present:**

- Gina Mohi: Independent Advisor
- Ag First: Phil Journeaux
- Landcare Research: Suzie Greenhalgh
- AgResearch: David Houlbrooke and Neels Botha
- Scion: Tim Payn
- Greg Lambert: Independent Advisor
- BOPRC: Marcus Bloor, Helen Creagh, Sarah Omundsen, John Paterson, Sandra Barns and Alastair MacCormick
- Others: Simon Park; Gloria Zamora and Mike Scarsbrook (DairyNZ)

### Action summary

1. Gloria Zamora: to send out link to all presentations for StAG reports.
2. Sarah Omundsen: to circulate report from Regional Water advisory meeting.
3. Andy Bruere: Recommend who LTAG should invite from RDC to attend LTAG meetings.
4. Andy Bruere: Invite Lee Matheson to next LTAG to present cost-effectiveness analysis on hierarchy of mitigation practices.
5. Gloria Zamora: send 20 November 2014 Science Night presentations video links to LTAG.
6. Andy Bruere: to ask Raina Meha-Rangitauira for Cultural Impact Assessment Models and if there are any WQ aspirations and send to Suzie Greenhalgh to summarize.
7. Marcus Bloor: to send Water 4 Life Brisbane framework to Suzie Greenhalgh.
8. Suzie Greenhalgh: to send review on 24 cultural health indexes and to write summary
9. LTAG: to send links on additional international catchment assessment frameworks to Suzie Greenhalgh.
10. Andy Bruere: invite Sandra Barns to present at next Land TAG on Lake Rotorua catchment economic analysis.
11. Anna Grayling: to send through scope of Lake Taupō Protection Trust forest proposal that will include 2 Rotorua properties.
12. Tim Payne: to send report on barrier to entry into forestry.
13. Andy Bruere to send pollen nutrient report to LTAG.
14. Andy Bruere: to add Neels Botha to next agenda to finish farmer stress presentation.
15. Simon Park: to send Suzie Greenhalgh emails of Rotorua farmers for Landcare survey.

### Item 1: Welcome, Admin and recap on LTAG functions

- a. The Chairman welcomed Land TAG group.
- b. For all requested/additional work for LandTAG, BOPRC will issue a fresh purchase order. This will be outside of the LandTAG attendance contracts.
- c. It was decided that industry reps would be invited for certain discussion topics.
- d. Mike Scarsbrook is invited to attend the Land TAG meetings as he is a member of the Waikato Advisory group and provides some connection to their work, he has a wide expertise as to farming policy with respect to land use policy nationally and he is a trusted advisor to the farming industry.

**AGREED: To invite industry representatives to various LandTAG meetings as needed for expertise. Mike Scarsbrook of DNZ is invited to all meetings of the LandTAG.**

- e. Apologies  
For lateness: Dave Houlbrooke  
For absence: Prof David Hamilton
- f. All presentations may be found here: [http://www.rotorualakes.co.nz/land\\_tag\\_minutes](http://www.rotorualakes.co.nz/land_tag_minutes).

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**Item 2: BOPRC Policy Priorities for LTAG - Sarah Omundsen**

- a. A presentation was given as to what the current RTALP priorities are.
- b. A request was made to LTAG for direction on what the priorities with the following questions around catchment and policy priorities?
  - a. Catchment Questions:
    - i. Catchment modelling of economic impacts
    - ii. What are the district-wide impacts (e.g. tourism)?
    - iii. What are the real impacts on property values?
    - iv. What are land use and system opportunities/alternatives?
    - v. What are the specific impacts on lifestyle properties?
  - b. What should be the policy priorities?
    - i. What does good farm or land? management look like?
    - ii. What are the benefits of good or improved water quality?
    - iii. How do we inform choices around targets or limits?
      - 1. E.g. what is the overall cost of a TLI of 3.8, or 3.9 or 4.0?
    - iv. Planned approach to scenario testing and modelling requirements
- c. There are 750 tons of N from land use headed to Lake Rotorua. As land use change is initiated this flow of N will be reduced
- d. There will be a Regional Water advisory meeting held 27 November 2014 and the report will be circulated to LTAG.
- e. Questions/Answers from discussion
  - a. Does catchment economic modelling take into consideration groundwater lag?
    - i. No, it was considered but given it was all going reach the lake some time there is not much of a benefit to consider it.
  - b. If TLI is going to go up and rules are being implemented, what will be the public perception of the disparity?
    - i. Answer is uncertain; however, programme cannot count on alum dosing as current resource consents will expire 2018 and 2019.
  - c. What is relationship with RDC district plan and land use?
    - i. RDC is present at meeting for all levels of the RTALP programme.
    - ii. Some policies between the Councils are integrated.
    - iii. Currently trying to improve communications between the Councils to have more synergy with plans.
- f. Given that there are a range of mitigations and there is much that can be done to optimize each farm.

**ACTION:**

1. Gloria Zamora: to send out link to all presentations for StAG.
2. Sarah Omundsen: to circulate report from Regional Water advisory meeting.
3. Andy Bruere: Make recommendation who LTAG should invite from RDC to the LTAG meetings.

4. Andy Bruere/Sarah Omundsen: to give LTAG a range of the technical options for farms.
5. Andy Bruere: Invite Lee Matheson to next LTAG to present economic analysis on the hierarchy of BMP's
6. Gloria Zamora: send video links to LTAG on 20 November 2014 Science Night presentations.

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**Item 3: Economic Analysis needs for the Rotorua Lakes Programme - Sandra Barns**

- a. Andy Bruere gave a background and context for the Lakes Programme for Lakes Rotomā and Tarawera for Economic Analysis while Sandra Barns presented on the different lakes having various policies.
  - a. BOPRC has requested LTAG to assist with the Strategic Planning and what the ideal information gathering framework should look like.
- b. **Catchment Economic Tools Discussion and Advice - Phil Journeaux**
  - a. Discussion centred around BOPRC's framework approach
    - i. Often start out without a framework and it forms as we put the information in.
    - ii. The social economic value list is always changing
    - iii. Need prioritise the priorities and keep in mind the emerging values.
    - iv. Need to have experts and users engaged and asking questions
    - v. You have the desired TLI, you have the environmental outcome as set. What environmental economic social cultural costs and benefits are there?
  - b. Questions from discussion:
    - i. Are TLI's negotiable?
      1. Yes, as they are a part of the Regional Land and Water plan which is reviewed from time to time.
      2. Lake Rotorua has an additional N target of 435 tons of N/yr has been set for the lake catchment input in the Regional Policy Statement.
    - ii. Council needs to decide which tools and methodology they plan to use.
    - iii. Have frameworks been established and are there any international precedence?
      1. Council needs to decide additional indicators to TLI, SPI, and water quality parameters.
      2. From the 8 Tarawera lakes some indicators will be the same.
      3. Brisbane beginning Water for Life programme may be used as a good starting point.
      4. Iwi may have environment management plan that may be used and there multiple cultural impact assessment models which are in development.
    - iv. Would the Council operate the framework?
      1. Depends on the size and scope of the project.
  - c. Suzie Greenhalgh will send review on 24 cultural health indexes and also write summary.

**ACTION:**

7. Andy Bruere to ask Raina Meha-Rangitauira for Cultural Impact Assessment Models and if there are any WQ aspirations and send to Suzie Greenhalgh to summarize.

8. Marcus Bloor to send Water 4 Life Brisbane framework to Suzie Greenhalgh.
9. Suzie Greenhalgh to send review on 24 cultural health indexes and to write summary
10. LTAG to send links on additional international frameworks to be considered be sent to Suzie Greenhalgh.

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**Item 4: Farm N Mitigation Options- Dave Houlbrooke**

- a. A presentation was given on Nitrogen Mitigations Stocktake.
- b. Discussion centred around the current misuse of Nitrogen fertilizer in the Rotorua catchment and the belief of farmers and the use of N fertilizer.
- c. Winter barns may not be effective at reducing N as many farmers just increase the stocking rates to pay back the capital cost and so there is often no savings in N leaching.
- d. There are a broad range of mitigation methods. There is a need to bring farmers on board with the science with more effective communications.
- e. Questions:
  - a. Are there any packages being created for particular catchments?
    - i. No
  - b. Can LTAG get some advice on how to deal with mitigation methods that are not recognized by OVERSEER®?
    - i. Incentive Board would like some direction from LTAG as well.
  - c. Are wintering barns applicable to the Rotorua catchment?
    - i. The answer lies with each farmer and their ability to get them to work in their system. They are farm specific.
    - ii. Report being released in 2 months with more economic information to help Council make an informed decision.
- f. Anna Grayling suggested it may be beneficial to have advisor to Grow Rotorua (John Manhire) present at the next LTAG meeting as he has provided them with technical advice on some catchment options for land use.
  - a. LTAG responded that may would be suitable only if presenting technical report and warned that often alternative proposals do not reflect implementation such as infrastructure, value chains and barriers to entry.
  - b. It was also suggested that non-technical advisors can cause chaos to farmers and the catchment.
  - c. Andy agreed to find out what was available from GR and discuss with Chairman if presentation should be undertaken at future LandTAG meeting

**ACTION:**

11. Gloria Zamora: to send .ppt of Nitrogen Mitigations to LTAG.
12. Andy Bruere: to add Sandra Barns to present at next Land TAG on what can be achieved at a catchment level.

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**Item 5: Alternative Land use with low nutrient loss-plantation forestry - Tim Payn**

Lack of recent forest investment driven by policy uncertainty and landowners desire to return land use flexibility.

- a. Something to think about when speaking on economics of forestry in regards farmers,
  - i. Economics in forestry looks better than economics of sheep and beef.
  - ii. Lots of landowners may change their view on land change if they understood the implementation plan or had an incentive.

- b. Questions:
- c. In Terms of Rotorua, what other forest species may grow here
  - i. Douglas-fir, radiata, and kauri are suitable.
  - ii. Once infrastructure is in, the second harvest is less costly and more profitable.
- d. Main points covered in presentation
  - i. There are some high value crops that work well in forestry e.g. ginseng \$6/kg.
  - ii. Many non-financial benefits
    - a. Ecosystems services and processes
    - b. Recreational value
    - c. Erosion control
  - iii. Highlighted the need to have an inventory of possible/alternative land uses.
  - iv. BOP has plenty of processing capacity
  - v. Commented on the pine pollen impact water
    - a. Andy Bruere to find report on pollen and circulate
- a. First need to understand the area and resources, can't do locally till you understand the region by looking at the following:
  - i. Types of forestry people are interested in
  - ii. Architecture of aesthetics- impact on landscape. Currently broadly accepted in Rotorua.
- b. Questions:
  - i. Where would forestry give you the best benefits?
    - 1. Optimization models are often a waste of time.
    - 2. Maybe incentivise activities that you want in the catchment.
      - a. Converting a dairy farm in this type of catchment seems like going backward in terms of ethos.
  - ii. Is it common to have multi property deals?
    - 1. No, currently not in New Zealand however it is a concept that is growing.
    - 2. There is barrier to entry as there is lack of knowledge on how to do it successfully.
  - iii. Is there an inventory of alternate land use
    - 1. No, not at this time due to a lack of resources.
  - iv. How long is the N rundown when farm converted to forest?
    - 1. This needs to be answered.
- b. **Advice and Support funding- Simon Park**
  - a. BORPC now has a list of approved providers and consultants targeted for forestry if farmers want more information.

**ACTION:**

- 13. Anna Grayling: to send through scope of Lake Taupō Protection Trust- forest proposal that will include 2 Rotorua properties.
- 14. Tim Payne: to send report on barrier to entry into forestry.
- 15. Andy Bruere to send pollen report to LTAG

**Item 6: Alternative pasture species- Dave Clark**

- a. Must fit with farm system and value chain to be implemented successfully,
- b. There are many grasses that are alternatives to P.rye-white clover and are able to grow in the Rotorua catchment and are listed on the slide. Low protein content is desirable.
- c. Italian Rye grass is a fast growing winter species. It is intensively stocked in winter. Farmers don't graze it but use it as feed in spring.
  - a. Lucerne would like to see it more used in the Rotorua area (High quality/high protein feed).
  - b. Chicory has a high environmental score. ???
- d. Maize was given a 2 due to its careful cultivation because of its potential for good effluent removal. It is great as a low end feed in a constrained system.
- e. Tannins have a beneficial impact on N partitioning in dung and urine. There are tannins in white clover flower and there is research being done tannins into white clover leaf.
  - a. You can import it and feed it to cows to mitigate nitrogen but not through existing species.
- f. Average farmers have difficulty in managing alternative crops properly. The Rye-white clover pasture can withstand management pressure and the alternative species only have marginal benefits.

The ideal new species should also grow rapidly in winter as this will allow it to take up N.

- g. Questions:
  - a. Are there any pasture pests?
    - i. Yes, moth to plantains, weevil, above ground and underground pests do affect all pasture species.
  - b. How are you going to know if you made a difference if the advantages are only marginal and the use of different species is not included in modelling used to assess nutrient outputs?
    - i. By a BMP process on the farm system to include known options to reduce N; but they may not be additive.
- h. On a national level a farm system change needs to take place to make these changes worthwhile.
- i. Farmers will farm to the system they can understand and meets the system they are working in.
- j. No silver bullets among the pasture species basically if it's not growing in winter it is not taking up nitrogen.

**Item 7: 7. Understanding and Managing Farmer Stress- Neels Botha**

- a. Provided some context on stress in community.
- b. All parts of community subject to some stress
- c. Stress is not bad, provides motivation to get things done
- d. Too much stress can cause issues for people
- e. Communication and messaging can impact on community stress levels
- f. Provided example of survey of farmers at NZ Agr Field days. There were 3000 farmers surveyed. Looked into medical factors of stress and psychological aspects.
- g. Need to communicate to farmers in their language.
- h. Due to time constraints presentation will resume at next LTAG and focus on how to speak to farmers without creating additional stress.

**ACTION:**

16. Andy Bruere: to add Neels Botha to next agenda to finish his presentation.

## Item 8: Wrap Up

- a. LTAG question:
  - i. How is Council putting legislation together with so much uncertainty?
    1. It's never going to be perfect. There will always be level of uncertainty; however need to push ahead.
    2. Community not confident with the level of uncertainty.
    3. Suggested that it may be best to give one figure to farmers on their nitrogen allocation with + or – 1 or 2 not such a large range.
    4. Council needs to have good documentation so that knowledge doesn't leave when a person does.
    5. AgResearch has run stress interviews with farmers and may be a good idea to do so before the rules come out to gauge where the farmers are.
    6. Landcare will be running a survey n 2015 send email address to Suzie Greenhalgh to have more Rotorua farmers included.
    7. To have trust, you need relationship. Council needs to get better at reaching community.
  - ii. Some key points
    1. Uncertainty and variability, hard for community to understand and buy into the programme,
    2. Need to invest in collaborative process with community or parts of community so that the focus is taken off the details of targets and centred on solutions and a way forward, but acknowledge uncertainty,
    3. Need for documentation of assumptions and processes to evaluate nutrient inputs,
    4. Need to keep farmer professionals well informed,
    5. Rural decision makers survey?? What was this??
    6. Make community linkages and relationships to allow better understanding of the science and feedback of perceptions from the community,
    7. Need better forestry economic analyses
- b. A Land Use Opportunities Symposium event will take place Feb/Mar 2015, a joint collaboration with Grow Rotorua and BOPRC, and would like some direction from LTAG on the following topics:
  - i. Mitigation options to be presented on 1<sup>st</sup> day
  - ii. Alternative options to be presented on 2<sup>nd</sup> day
- c. Forestry needs more economic analysis – Scion looking to do one this year and possibly undertake two case studies within the Rotorua catchment.

### **ACTION:**

17. Simon Park: to send Suzie Greenhalgh emails of Rotorua farmers for Landcare survey.