

**Submission to Greater Wellington Regional Council for
Proposed Plan Change 1 to the Natural Resources Plan for the Wellington
Region (Plan Change 1)**

Table 1: Submitters details - Akatarawa Valley Residents

NAME	POSTAL ADDRESS	EMAIL	PRESENTER
John Van Nortwick Jill Van Nortwick	[REDACTED]	[REDACTED]	
Karen Wallace Mark Robbins	[REDACTED]	[REDACTED]	Yes
Paul Lambert Steph Lambert	[REDACTED]	[REDACTED]	
Sandy Cooper	[REDACTED]	[REDACTED]	
Fredrick Steensma	[REDACTED]	[REDACTED]	
Shoshanah (Shosh) Phillips	[REDACTED]	[REDACTED]	
Russell Judd Cecile Judd	[REDACTED]	[REDACTED]	
Johanna Overdiep Steve Sturgess	[REDACTED]	[REDACTED]	
Joany Grima Allen Rockell	[REDACTED]	[REDACTED]	
Keith Budd Liz Budd	[REDACTED]	[REDACTED]	Yes
Pete Clark	[REDACTED]	[REDACTED]	
Gillian Taylor Chris Taylor	[REDACTED]	[REDACTED]	
Hannah Dawson Ryan Dawson	[REDACTED]	[REDACTED]	Yes
Len Drabble	[REDACTED]	[REDACTED]	Yes
Graeme Allan	[REDACTED]	[REDACTED]	Yes

Joshua Wood Micayla Wood Jonathan Wood	[REDACTED]	[REDACTED]	
Tony Wood Helen Wood	[REDACTED]	[REDACTED]	
Glenda Arnold	[REDACTED]	[REDACTED]	
Janet Collins	[REDACTED]	[REDACTED]	
George Hare	[REDACTED]	[REDACTED]	Yes
Paul Arnold	[REDACTED]	[REDACTED]	
Chilly Brook Trust (Mary Redington)	[REDACTED]	[REDACTED]	Yes
Gaylene Ward Mike Ward	[REDACTED]	[REDACTED]	
Nigel Parry Judy Parry	[REDACTED]	[REDACTED]	
Leanna Jackson Carl Burns	[REDACTED]	[REDACTED]	
Joline Fowke Owen Fowke	[REDACTED]	[REDACTED]	
Paul Baker	[REDACTED]	[REDACTED]	
Allan MacDonald Phyllis Strachan	[REDACTED]	[REDACTED]	Yes
John Raffan Heather Raffan	[REDACTED]	[REDACTED]	
Redington Family Trust (Mary Redington)	[REDACTED]	[REDACTED]	
Ash Barker Kes Barker	[REDACTED]	[REDACTED]	Yes
Susan Davidson John Bryce	[REDACTED]	[REDACTED]	
Dr Patricia Laing Erica Dawson	[REDACTED]	[REDACTED]	Yes

Bruce Stevens Theresa Stevens	[REDACTED]	[REDACTED]	
Dr Harold Cuffe	[REDACTED]	[REDACTED]	Yes
Phil Kirycuk	[REDACTED]	[REDACTED]	
John Simister Sarah Purdy	[REDACTED]	[REDACTED]	Yes
Dr Anna De Raadt Roger Fairclough	[REDACTED]	[REDACTED]	Yes
Allan and Sarah Kelly	[REDACTED]	[REDACTED]	
Barry Hearfield Carol McGhie	[REDACTED]	[REDACTED]	
Karina Fraser Grant Fraser	[REDACTED]	[REDACTED]	
Jessica Perno Gavin Perno	[REDACTED]	[REDACTED]	
Thomas Davies	[REDACTED]	[REDACTED]	
Pam Ritchie	[REDACTED]	[REDACTED]	

Group Members Declaration (declarations all made as individuals per above table)

We do not stand to gain commercial advantage from our submission.

We wish to be heard in support of our submission. In addition, the members of the group who each wish to be heard are indicated in the table above.

As we are a group, we have appointed two co-agents to facilitate communication between our group and GWRC.

Dr Patricia Laing

[REDACTED]
[REDACTED]
[REDACTED]

and

Karen Wallace

[REDACTED]
[REDACTED]
[REDACTED]

Email karenwallaceneu@gmail.com

1. Introduction

This submission has been prepared by 73 residents of Akatarawa Valley whose rural lifestyle is potentially affected by the proposed provisions of PC1. We all live on rural properties pursuing activities consistent with low intensity farming, forestry and residential. We want certainty in managing our rural properties and continuing to live our rural lifestyle. We want to continue to undertake activities using sustainable and environmentally sound practices to manage our rural properties and improve biodiversity in the area. A summary description of our rural lifestyle includes (but is not limited to):

- developing and maintaining activities that allow for food security
- harvesting and planting indigenous and exotic species for food, bee forage, medicinal uses and heating purposes
- harvesting firewood for heating and cooking
- clearing, trimming and maintaining vegetation within 30m of buildings and associated infrastructure to manage wildfire risk, building health, health of solar arrays and collection of water in tanks
- clearing and maintaining of tracks, roads, access ways and firebreaks
- clearing and maintaining of the banks of watercourses to prevent erosion, sediment runoff and flooding
- maintaining gardens associated with buildings and related infrastructure
- building and maintaining outbuildings
- conducting pest and weed control activities
- “rough grazing” of stock such as sheep, cattle, goats, pigs, and horses on existing fenced areas
- building and maintaining fencing (Notice of Decision for Resource Consent Application for Earthworks and Vegetation Clearance at Upper Akatarawa Valley Properties, RM Ref: 2310003, 10 March 2023, refers).

While we support the intention for quality regarding freshwater and ecosystems, **we require an evidence-based approach that supports appropriately targeted strategies tailored for particular eco systems and environments.** It is our collective view that the PC 1 proposals fail to provide sufficient evidence or appropriate targeting to rationalise its implementation. Our assessment is that the proposed provisions in PC1 would render our land interest incapable of reasonable use (per section 85 of RMA), this being especially acute for those landowners who have yet to build on their property but have bought their property with this intention.

We require the GWRC to stop the PC1 process immediately. The newly elected coalition government has delivered more than sufficient indication that it intends to replace the foundational policy statement and environmental standards from which PC1 is derived.

Once the government policy is clear, **we require the GWRC to engage with the affected communities using a proper and meaningful consultation process.** This process should allow sufficient time for the community to review, understand and respond to the proposed changes; and

provide relevant documents in accessible plain language so that complex changes can be readily understood, as per the Plain Language Act 2022.

These and further points are expanded on below.

2. Government Policy Direction is under review.

The newly elected coalition government has stated that they intend to replace the National Policy Statement for Freshwater Management. The coalition agreement states: “Replace the National Policy Statement for Freshwater Management 2020 and the National Environmental Standards for Freshwater to better reflect the interests of all water users.”. This situation also applies to the RMA reform tranche of documents such as the Natural and Built Environment Plan, with the accompanying Future Development Strategy, and Spatial Planning Act, where the coalition agreement states that they will “Repeal the Natural and Built Environment Act 2023 and the Spatial Planning Act 2023”.

It is therefore unreasonable and wasteful of ratepayer funds to be consulting with communities on a proposal that is now lacking in government policy direction. **We require the PC1 process to be stopped until the policy direction is known.**

3. Consultation Process

From our point of view GWRC has failed to meaningfully consult with our community, which is affected by the proposed PC1 as required by the Local Government Act (2002) and GWRC’s own principles of consultation.

The proposal was notified with a public notice in The Post and an update to the GWRC website. Both methods are ineffective for consultation and notification. Our community and others have become aware of this proposal via word of mouth. In late November at a community led meeting, over 100 rural Upper Hutt residents were extremely distressed and angry to hear the concerns about the proposal. People at the meeting expressed outrage regarding the lack of communication about the proposal to affected residents.

The main proposal document is 350 pages, obviously long but also complex and not an easy read. Made harder by initially being an unsearchable PDF with no Table of Contents. The accompanying Section 32 report, (commonly more digestible) was a similar length and equally technical and hard to read.

When preparation for this submission was initiated, there was no summary other than a paragraph description of what the PC was trying to achieve, making any meaningful participation even more difficult. We contrast this with one example we found in a quick search, where Waikato Regional Council produced a 4-page summary written for the community that explained the proposed rules of an equivalent PC. In what can hardly be described as a timely response ((9 days before the submission deadline) this was remedied after numerous requests for summary documents specific to landowners in the 4ha-20ha category and 20ha and over to be made available.

All documents related to this proposal should be communicated in plain language so that complex changes can be readily understood, as per the Plain Language Act (2022). Only 16% of NZ adults are considered to have the high literacy levels demanded to understand complex and detailed

documentation such as PC1 (See for instance, <https://www.digital.govt.nz/standardsandguidance/designandux/contentdesignguidance/writingstyle/plainlanguage/>).

For GWRC's PC1 the consultation period is 5 weeks ending on 15 December. As we didn't learn of this proposal until late November, we had to produce this submission in a very short time frame at a particularly busy time of the year. We note that it is well known in local government that consulting close to the Xmas period is poor practice.

When a GWRC Councillor was questioned on the adequacy of the consultation the inquirer was told that the GWRC had done more than the minimum statutory requirement by allowing residents 5 weeks to respond instead of the usual 4 weeks. This is a cynical response when these proposals are complex and have the potential to substantially impact residents' lives and impose costs both directly and indirectly (including through increased rates to cover the City-wide requirements).

We found out via a Facebook post by a GWRC Councillor on a local community page that there was a GWRC hosted Q and A session for small landowners on 4 December. There was no information about this on the GWRC website and indeed, when called, the GWRC were unable to provide any information about the session. This session run by GWRC staff and consultants offered to provide a summary of the PC, the presentation given as part of the session and document detailing the questions and answers raised during the meeting. The information promised was received very late in the timeframe for preparing submissions when this material should have been available at the beginning of the consultation period. Questions were not able to be submitted in advance of the session, and many of the questions asked during the meeting by concerned residents were unable to be adequately responded to by the panel. The range of questions asked, and lack of clear answers are testament to the complexity and opaqueness of the proposal and indicate that the proposal has been prematurely released.

One of our group members sought the offer of assistance from the Friends of GWRC Submitters by email and promoted on the GWRC website. After several days, a response was received, however this did not help to clarify the questions and even contained incorrect information that the group member pointed out, which was later corrected by the Friend of Submitters. A further follow up question was asked and was not responded to by the Friend of Submitters.

We expect GWRC to meet their own Principles of Consultation (Local Authorities Act 2002 refers).

Given our experience, how did GWRC:

“Provide anyone who will or may be affected by, or have an interest in, the decision or matter with reasonable access to relevant information, in a manner and format appropriate to their needs and preferences.

And

“Encourage anyone who will or may be affected by, or have an interest in, the decision or matter to present their views to the Council”?

Once the Government policy direction is clear and if a revised PC 1 is required, **we expect GWRC to engage with the affected communities according to the Local Authorities Act (2002)** that is, in a proper and meaningful way using established good practice consultation and engagement techniques that are respectful of the communities it serves.

4. Concerns with Specific Provisions

Due to the time available and the complexity of the proposals the following list of concerns is supported with examples and is not exhaustive.

4.1 “Unplanned Greenfields Areas”

The terminology used in this document describing areas such as the Akatarawa valley (Map 88, page 304) as “Unplanned Greenfields Areas” is grossly misrepresenting the history, cultural value and state of play in such areas. In the Akatarawa Valley, land parcels were first subdivided in 1875 and, since then, property owners have had – as of right – the ability to live on their properties. (See O’Flaherty. 2022. *Akatarawa, A History of the Sawyers, Settlers and Schools 1870s - 1980s*. P&P Publishing, Wellington) Current zoning rules planned by the Upper Hutt City Council allow, for example, landowners to build a residential unit / dwelling, a minor residential unit / family unit and associated outbuildings (General Rural Zone) to enable them to enjoy a rural lifestyle.

Under PC1, landowners intending to build and live on their properties, for example, would seem to need a “District Plan change” from rural to urban to allow them to do so: “Greenfield development within areas identified as ‘unplanned greenfield area’ on maps 86, 87, 88 and 89 which also require an underlying zone change (from rural/non-urban/ open space to urban) though a District Plan change to enable the development.” (page 10).

As such, this position is totally unreasonable as it significantly raises uncertainty and costs for the landowner. In addition, assuming that urban zone rules do not change, these are - at a fundamental level - not fit for purpose for rural areas. Moreover, many people who live in rural areas such as the Akatarawa Valley add value to the biodiversity of the area by managing and controlling pests such as deer, goats, pigs and possums as well as pest plant species such as gorse, this all adding to ecosystem health, including that of the waterways.

We require GWRC to:

- **Change the terminology of “Unplanned Greenfield Areas” to “Non-Urban Areas” or “Rural Areas”.**
- **Uphold and maintain current landowner property rights as per, for example, current zoning rules from Upper Hutt City Council. In addition, delete all rules that uphold the position taken in this document about this aspect, such as Rule WH. R13 (page 94) which states “Stormwater from new unplanned greenfield development – prohibited activity”.**

4.2 Lack of evidence to support proposals and use of generalised, undefined terms

Example from Sec 32 report - “Sources of Nitrogen - While the proportion of total nitrogen load in water bodies of the two whitua from rural land use is not known, we do know what the sources will be. “

Example - Akatarawa Water Quality is assessed as fair but it is only measured at the confluence of the Hutt/Te Awa Kairangi and Akatarawa River. We all need data on the river quality throughout the catchment in order to understand the extent of the problem, if there is indeed one, and then diagnose the causes. We know that anecdotally the Upper Akatarawa River has exceptionally good water quality (See Appendix: Akatarawa Water Quality by SPS Biota, Ecosystems Services). If that is the case, why subject those residents to the same rules?

Example - The document needs a definition for “river”. There is also a need to define how a 1m water course is measured. The GWRC presentation to the Q and A session included information on what a “river “is by reference to pictures but this needs to be included in the PC.

We require GWRC to:

- **Use relevant scientific evidence of sufficient spatial “resolution” as a basis to inform policy.**
- **Define important terms thereby addressing the lack of clear definition and prevent uncertainty and inconsistency.**

4.3 Impact of Changes

The provisions will see onerous and unreasonable levels of cost to be borne by landowners, for example, registration, environmental plans, nitrogen testing, administration, stormwater controls, needing an “Erosion and Sediment Management Plan” for vegetation clearance, changes in animal management, fencing, stormwater, water and so on. There is no information available on what fees and charges GWRC will levy as a result of this PC.

In addition, for landowners who have not yet been in a position to build a home, this plan change is exceptionally unreasonable and unfair.

As rural residents we have always accepted that we are required to fund and manage our own water, stormwater and sewerage requirements whilst paying a level of rates that, if we were urban, would see these services delivered to us. PC1 is increasing this burden with more onerous and expensive requirements and, as noted in 4.1, with no evidence that we are causing the issue.

Rural residents have been subjected to numerous reviews in council regulations with regards to their properties in recent times. It is becoming increasingly difficult to stay on top of these changes in the regulatory landscape. We are concerned that proposed changes by GWRC are out of alignment with regulations soon to be imposed by Upper Hutt City Council. In instances where GRWC and UHCC regulations give mixed advice to landowners, which regulation rules?

We require:

- **all rules that add cost to landowners be reconsidered and “recalibrated” with scientific evidence, whereby the more important issues are tackled instead of a “broad brush approach” to all perceived issues.**
- **A reconciliation and analysis of the GWRC proposal and other local authority regulations relevant to rural landowners (e.g. UHCC PC50) is completed to identify instances where regulation is inconsistent.**

4.4 Stocking Rates

One resident with 4 hectares runs a few cows to keep the grass down and provide meat for the family, this being especially important in the current economic climate. These stock numbers are low

and not at all intensive. However, their current stock level is close to exceeding the limit set by PC1.

There are no economically productive animal farming operations in Akatarawa Valley. Our residents are lifestyle block owners, hobby farmers and the activities are described as low intensity by experts. Landowners should be able to continue to farm at the level practicable for the land rather than be constrained to an arbitrary stocking level. It is patently unfair that, variability of farming levels will trigger more regulatory impost, for example, if when first registered a farm begins with little activity and then that activity increases within the 3-year period they will have increased the likely nitrate levels and trigger consents. These are the normal ebb and flow of rural properties farm management and should be taken account of without onerous and cumbersome regulatory processes for what are very small farms. The current provisions would see some residents say their land is incapable of reasonable use.

We require:

- **The stocking rates to be reviewed upwards to allow for low intensity farming. We want to know where the rates have come from so that we can assess whether or not they are reasonable. Registration and monitoring of nitrate risk should be reserved for properties that have farming at an intensity where nitrate levels require managing rather than using a stocking level that is more akin to an average. To that end are the rates broadly similar to what other Councils have used for similar proposals?**
- **The inclusion of an additional category for small breeds of cattle and deer. Some residents have Dexter cattle which feed at half the rate of standard cattle and therefore need a different stocking unit. Other residents have fallow deer which also feed at a reduced rate from that of ordinary deer.**

4.5 Small farms Registration for 4 or more hectares but less than 20 Hectares

The small farms in the Akatarawa Valley are low intensity hobby farms and lifestyle blocks and there is no data that points to them being the cause of poor water quality. The requirement to register and provide a significant amount of information is onerous and unjustified. Registration should be reserved for properties where there is a risk of elevated nitrate levels.

We require:

- **the registration of these properties to be deleted.**
- **GWRC to accept the designation of property management plans set out in the gazette NPS-IB namely QEII, Conservation and other approved property management plans which may include small farms of 4 or more but less than 20 hectares.**

4.6 Farm Management Plan for 20 Hectares or more

Larger properties (over 20 ha) in the Akatarawa Valley are frequent and on bush clad land that is unsuitable to be farmed (unproductive land). There is no data that points to either farming on this land or points to them being the cause of poor water quality. The existing RMA prohibits clearing of bush to scales that will increase erosion. This land typically borders on GWRC land and is frequently

browsed by pest species which are actively trapped by Akatarawa Valley Residents. The requirement to register and provide a farm management plan is onerous and not justified when residents are already incurring significant personal costs to maintain the land and/or regenerate indigenous biodiversity. We have been unable to get information on, or an example of, what a farm management plan would entail. Where landowners have approved property plans according to the NPS-IB there should be no further requirement to comply with the GWRC Plan Change 1. Additional costs incurred by the requirements of the proposal will likely be unsustainable for the average property owner.

We require the GWRC to:

- **Consider introducing additional categories of properties that respond to the actual range of properties in the Akatarawa Valley which would in turn allow for more appropriate controls. E.g. add a new category for properties over 20 hectares that are largely unproductive. and delete the requirement for this type of property to be registered.**
- **Exclude land registered in the Emissions Trading Scheme, QEII Trust, Conservation, approved property plan as per the NPS-IB.**

4.7 Management of GWRC Land

We are required to manage the animals including pests on our land. We require the GRWC to do the same. Our residents' properties regularly deal with incursions of pests such as deer, pigs, hares, rabbits, rats, possums stoats, feral sheep, feral cows and goats that originated from GWRC land. We allow access by GWRC to our land and co-operate when 1080 drops are being coordinated. We pay for the damage caused by these pests and where/when possible, humanely dispose of them via trapping or shooting. We are bearing the burden of GRWC failure to adequately manage the pests on their land. We also note that when these animals arrive unwanted on our land, they adversely impact our stocking levels. The numbers of deer regularly appearing on residents' properties exceed the numbers of the residents' own animals. Also, a recent ecological report for 16 properties in the Upper Akatarawa Valley found that the main stumbling block to landowners seeking to increase the indigenous biodiversity on their properties was these pests eating the understory resulting in a low level of regeneration of bush and forest.

We require:

- **GRWC to take steps to proactively manage the pests on their land, especially given the potential flow on impacts of having high numbers of these pests, for example, water contamination by soil from landslides caused by vegetation removal through browsing as well as contamination from *E. coli*.**
- **GWRC look into its own practices: We note that PC1 requires active management of forestry. We have experienced ambivalent management of GWRC forestry sites with slash sliding down hill sides and polluting the river.**

4.8 Earthworks

The definition of "Earthworks" (page 3 of document) is totally confusing and can be interpreted in

multiple ways. If read at face value, then for Wellington and Porirua, earthworks are defined as any disturbance to land except for gardening, cultivation and installation of fenceposts. It is extremely unclear as to what is trying to be achieved here as the exceptions are much more limited than those for the other districts. Importantly, this applies to both urban and rural areas. It is strongly suspected that this has not been thought through enough to understand the onerous implications for resource consents and other requirements. For example, a landowner owning land in a rural area which is not defined as a “Farm” will require a resource consent to maintain and repair their access ways, this being a health and safety necessity. Moreover, given the current definition of “Earthworks”, a resource consent would be required even if these works were conducted by hand, with a shovel for example.

It is unreasonable to require resource consents for these activities as they will increase cost and time to effectively manage our rural properties as we have always done. GWRC has not provided the justification for this significant change, or evidence to support it.

We require GWRC to reinstate the exclusions as given to the other districts.

5. Conclusion

We require the GWRC to stop the PC1 process immediately until the Government policy direction is known. Once the Government Policy direction is known and GWRC proceeds with PC1 processes we have the following requirements:

- an evidence-based approach that supports appropriately targeted strategies tailored for particular eco systems and environments;
- all documents related to PC1 communicated in plain language so that complex changes can be readily understood, as per the Plain Language Act (2022).
- all important terms defined thereby addressing the lack of clear definition; and preventing uncertainty and inconsistency; and
- engagement with affected communities using a proper and meaningful consultation process which meets GWRC’s own Principles of Consultation (Local Authorities Act 2002 refers).

With reference to the specific details of PC1 we require GWRC to:

- Change the terminology of “Unplanned Greenfield Areas” to “Non-Urban Areas” or “Rural Areas”;
- Uphold and maintain current landowner property rights as per, for example, current zoning rules from Upper Hutt City Council;
- Reconsider all rules that add cost to landowners and “recalibrated” them with scientific evidence, whereby the more important issues are tackled instead of a “broad brush approach” to any perceived issues;
- Analyse and reconcile the proposed GWRC PC1 and other local authority regulations relevant to rural landowners (e.g. UHCC PC50) to identify instances where regulation is inconsistent;
- Review upwards the stocking rates to allow for low intensity farming;

- Accept the designation of property management plans set out in the gazette NPS-IB namely QEII, Conservation and other approved property management plans which may include small farms of 4 or more but less than 20 hectares;
- Consider introducing additional categories of properties that respond to the actual range of properties in the Akatarawa Valley which would in turn allow for more appropriate controls;
- Proactively manage the pests on GWRC land, especially given the potential flow on impacts of having high numbers of these pests, for example, water contamination by soil from landslides caused by vegetation removal through browsing as well as contamination from *E. coli*;
- Look into GWRC's own practices regarding management of forestry;
- Reinstate the exclusions as given to other districts.

Appendix 1: Report from SPS Biota re Akatarawa Catchment Water Quality

SPS Biota carried out environment condition assessments on properties in the upper Akatarawa valley in 2022. Although New Zealand's freshwater environments are under immense pressure, the Akatarawa river system is not considered to be under this pressure. Publicly available information supports this assessment as outline below.

The Akatarawa River is one of the major tributaries of the Hutt River, located in the upper western parts of the catchment. The river emerges from the Tararua Forest Park and drains through the valley between the Akatarawa Forest and Kaitoke Regional Park. The river has a catchment area of 116 square kilometers and joins with the Hutt River just below the Akatarawa Road bridge in Birchville, Upper Hutt.

The Wellington regional council does not have permanent monitoring stations located in the Akatarawa catchment. Regional Council monitoring data is used to calculate long term microbiological water quality grades, or the "microbiological history" of sites. This is done in accordance with national guidelines. Greater Wellington Regional Council monitors water quality at popular swimming spots throughout the Wellington region. The risk level of *E. coli* is determined using predictive modelling year-round. *E. coli* is a faecal indicator used to indicate the level of harmful pathogens in the water.

River flow data is recorded at the "Cemetery" location on the Akatarawa river. Water quality data is gathered from Birchville after the Akatarawa river joins the Hutt River after the predominately forest feed Akatarawa water merges with the predominant lifestyle and farming water of the Hutt River. Monitoring frequency in Akatarawa River at the Hutt confluence is sampled weekly from November 1st to March 31st. Historical water quality results show water quality tests pass 60-95% of the time. However according to Land, Air and Water Aotearoa¹ the long-term water quality of the Akatarawa catchment (Top) is category "Excellent" and is rated in the top 95% for New Zealand. Monitoring at the lower valley also has an "excellent" category. A risk of *Campylobacter* infection at <0.1% occurrence, 95% of the time. Please note that these categories are only for safe swimming and water activities.

The cause of poor water quality depends on the land use in the surrounding area or upstream catchment. In rural areas, the most common source of pollution is agricultural land use. In wet weather, excess rainwater flows over farms and into nearby streams and rivers, picking up manure and other contaminants along the way. In dry weather, stock defecating directly into streams or rivers can cause contamination of swimming spots.

The residences of Akatarawa use typically low-density organic farming practices. There are few commercial agricultural businesses operating in the catchment area. The Regional council lands are the greatest contributor to animal manure contribution through inadequately controlled wild deer, goat and pig populations as well as forestry operations that contribute to silt run off. Septic tanks can also be a source of contamination in rural areas.

¹ <https://www.lawa.org.nz>

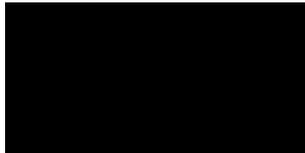
Heavy rain flushes contaminants into waterways raising potential contamination for up to 2 – 3 days after heavy or prolonged rain, even at sites that generally have good water quality. Consequently, at the confluence of the Akatarawa river with the Hutt River at Birchville, the last sample taken on 27th November 2023 has rated this site “no swimming” because of the E. coli risk. There is no algae risk. It should be re-emphasised that there are **no** sites being monitored for toxic algae and microbiological water quality within the Akatarawa catchment.

For a more scientific validation I recommend a comprehensive freshwater eDNA test. This would provide supporting data to the communities claims that the all current land use (and consented activity) has no detrimental effect on water quality.

SPS Biota could coordinate the eDNA test and develop a TICI (taxon-independent community index) that would assign a value associated with water quality to the species located and aggregate those values to provide an overall health score for the ecosystem tested. We could monitor on a regular cycle. This would cost \$350 per sample site. I would recommend 3 as a minimum. We can ensure information as it relates to your property remains confidential.

Trust this helps.

Kind regards



Keith Budd
Senior Consultant
SPS Biota