

New Zealand King Salmon: Was it a good decision for New Zealand?

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Photo: Queen Charlotte Sound. An example of second- and third-level effects, would be salmon attracting seals, which in turn attract sharks, which prey on Hector's dolphins.

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On 22 February 2013, the Environmental Protection Authority (EPA) published the Board of Inquiry's final report and decision on New Zealand King Salmon's (NZKS) application to establish nine new salmon farms in the Marlborough Sounds. The Board approved four of the nine farms, with conditions. This means up to 19,000 tonnes per annum of additional salmon feed can now be discharged into the Sounds.

Water quality and indeed the whole issue of water pollution and its effects are a very 'live' issue in New Zealand at the moment. Cleaning up water is a very expensive proposition. \$450 million has been committed to cleaning up Lake Taupo, the Rotorua lakes and the Waikato River over 20 years. How much, then, would be needed to clean up the Marlborough Sounds, if such a clean-up was required? Are we well placed today to assess the benefits, costs and risks of the NZKS proposal in terms of any unwelcome consequences in the future?

My interest in this decision arose from the fact that it was the first commercial application of *national significance* that was agricultural in context, following the establishment of the EPA in 2012. My involvement in the hearing – presenting a submission on behalf of the McGuinness Institute, as an economic expert, and cross-examining witnesses – provided an excellent opportunity to gain a deeper understanding of the new process, in which hearings are no longer heard by regional councils. In this case the Minister of Conservation considered a national Board of Inquiry the best option. As part-owner of a property on the western side of Arapawa Island, I also have an understanding of Queen Charlotte Sound, the community that lives within the Sound and the diverse range of bird and marine life that co-exists there.

This think piece summarises my observations in terms of the challenges and opportunities that arose during the hearing process. A map of the region under consideration and a table of farm sites is provided overleaf, and further supporting information is provided in the Institute's *Working Paper 2013/01: Notes on the New Zealand King Salmon Decision*.

CHALLENGES OF THE PROCESS

Stage 1: Before the application was received by the EPA

Broad governmental support for the aquaculture industry, and for New Zealand King Salmon, undoubtedly shaped the company's application, and provided some relevant context for the Board's decision. A similar context of political support is perhaps likely to be a common feature of projects of such a large scale. However, the basis of any political support must be critically examined, so that it does not have an undue influence in shaping consent decisions. See Note 1.

Stage 2: Applications of national significance

It should not be presumed that a project will generate national economic benefits simply because it is deemed to be of national significance. Claims of significant national economic benefits must be fully evaluated and tested if those benefits are to play a part in overriding local or regional interests. See Note 2.

Stage 3: Application to the EPA

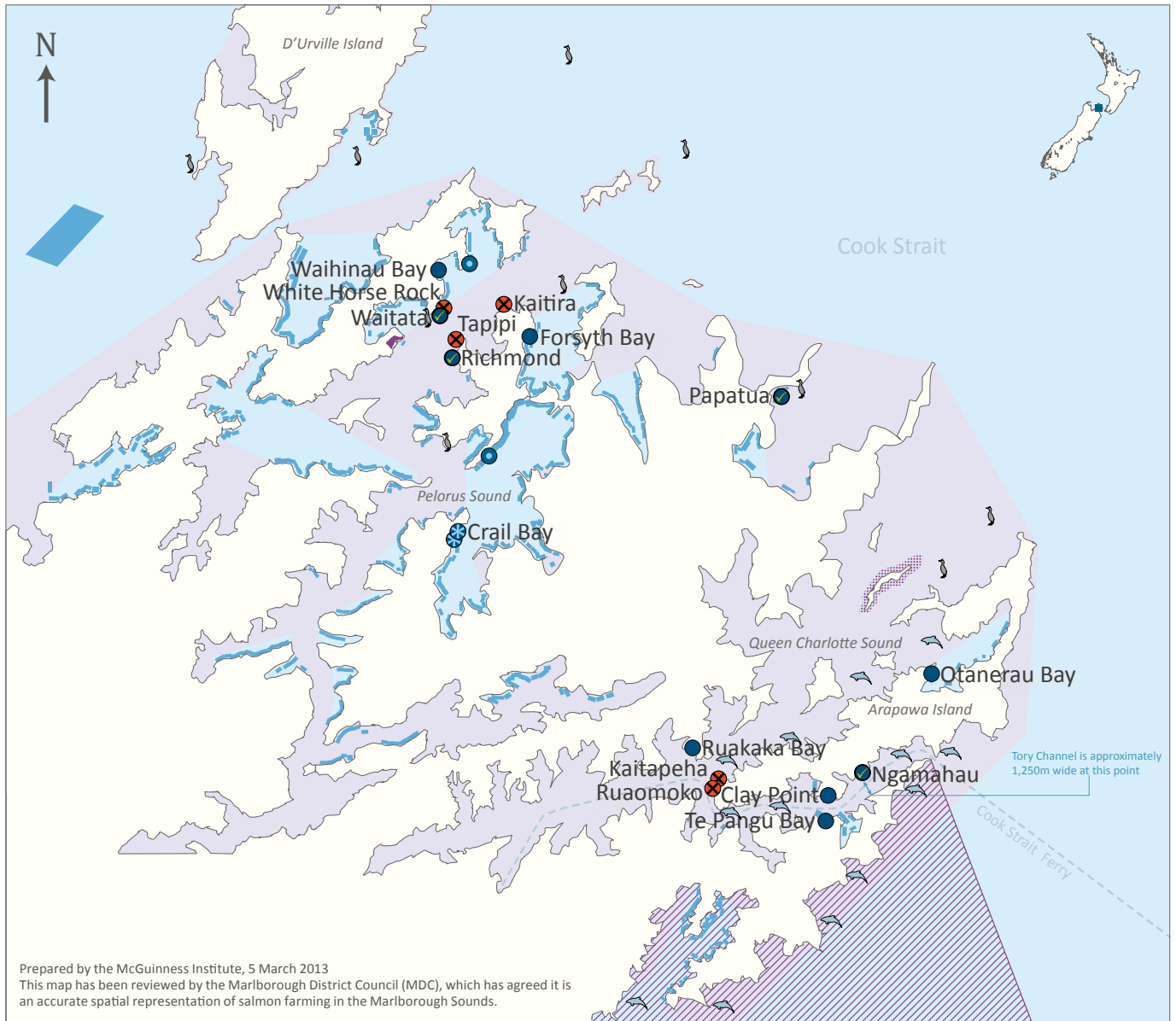
There is a lack of clarity around the relevance of an application's 'purpose', particularly where consents will enable an applicant to secure exclusive use of a resource. Whether or not an applicant implements its consents will be a commercial decision, but the current legal framework requires the Board to assume implementation. This provides little scope for the Board to evaluate a proposal against alternative proposals for use of the same resource. See Note 3.

Further, an applicant's incentive to prepare a comprehensive and accurate proposal will always be constrained by their interest in presenting the application in the most positive terms. That interest incentivises the applicant to convey the minimum amount of information necessary to enable consent to be granted, and there is limited disincentive or penalty to prevent the applicant from overinflating benefits and underestimating risks and costs. In this case, neither the applicant nor the Board prepared a comprehensive Cost Benefit Analysis (CBA). See Note 4.

Stage 4: The hearing

Ideally, the boundaries for a Board of Inquiry should be completely clear at the outset. It should be clear what is being assessed and what is not, how the Board will group effects and test that all have been identified, and there should be at least an outline of how the Board's

Figure 1: Map of Marlborough Sounds Salmon Farms



1. Salmon Farm Key

- An existing NZKS salmon farm in operation
Consent expires 31 December 2024.
- ⊛ An existing NZKS salmon farm not in operation
Consent expires 31 December 2024.
NZKS purchased the two Crail Bay farms from Pacifica in order to purchase their salmon. NZKS have told the Board of Inquiry that both farms are uneconomic and will not be operated except for research in the future.
- Granted marine farms that may be converted from mussel to salmon
A consented finfish farm exists in Beatrix Bay, it is owned by Ngāi Tahu Seafoods Ltd, but is not yet in operation. A consented finfish farm exists in Danger Point (Port Ligar), it is owned by KPF Investments Ltd and is under appeal.
- A new approved NZKS salmon farm
Approved as a result of the February 2013 Board of Inquiry. Salmon farming is now permitted as a discretionary activity in a newly created Coastal Marine Zone 3. The consent will run for 35 years once commencement is determined.
- ⊗ A declined NZKS salmon farm
Declined as a result of the February 2013 Board of Inquiry.

2. Marine Zones, Reserves and Sanctuaries Key

- Coastal Marine Zone 1 (CMZ1)
New aquaculture activity is prohibited.
- Coastal Marine Zone 2 (CMZ2)
Aquaculture activity is permitted once consent is granted by the Marlborough District Council.
- Coastal Marine Zone 3 (CMZ3)
See 'An approved new salmon farm' above.
- ▨ Kokomahua (Long Island) Marine Reserve
- ▨ Marine Mammal Sanctuary
- ▨ Tui Nature Reserve

■ Granted Marine Farms

A *marine farm* includes resource consents approved and still current under (i) the Marine Farming Act 1971 and (ii) the Resource Management Act 1991 (RMA) (which replaced the Marine Farming Act 1971). 'Marine farm' is defined by MDC as 'any form of aquaculture characterised by the use of surface and/or sub-surface structures located in the coastal marine area.' Consent applications for granted marine farms will outline the species able to be farmed at the site. Most marine farms have consent for more than one species. For example, it is relatively common for a marine farm to be granted consent to farm mussels, oysters and seaweed, enabling owners to change water use from one to another without a new consent process. Currently, no marine farms, other than the eight existing and four newly approved salmon farms, have consent to farm salmon. This means that if NZKS, or any other party, wishes to farm salmon in the Marlborough Sounds they must apply for a resource consent. If a consent holder wants to change to a new species and/or change the structure outside the previous consent, they must apply for a new consent. However, if a site is sold, the coastal permit can be transferred to the new owner without a new consent process.

3. Marine and Birdlife Key

There is no regionally based system to identify all threatened marine and birdlife in the Marlborough Sounds. There are in effect two systems, one reflecting the situation at the national level and the other at the global level. The Department of Conservation operates a 'New Zealand Threat Classification System', which classifies taxa into *extinct*, *threatened* (nationally critically, nationally endangered, and nationally vulnerable), *at risk* (declining, recovering, relic and naturally uncommon) and *non-threatened* native biota. In contrast, an 'IUCN Red List of Threatened Species' uses a continuum: *extinct*, *extinct in the wild*, *critically endangered*, *endangered*, *vulnerable*, *near threatened*, *least concern* and *data deficient*. The two systems have different numerical

thresholds and criteria and may classify the same species differently because of differences in scale; hence they should be seen as complementing each other rather than conflicting. For example, the king shag is reported as *nationally endangered* in New Zealand but *vulnerable* on the IUCN Red List. In contrast, the Hector's dolphin is considered *nationally endangered* in New Zealand and *endangered* on the IUCN Red List. Other species found in the Sounds that are known to be classified include the orca (NZ: *nationally critical*; IUCN: *data deficient*), southern right whale (NZ: *nationally endangered*; IUCN: *least concern*) and bottlenose dolphin (NZ: *nationally endangered*; IUCN: *least concern*). DOC notes that any human-induced mortality of *nationally critical* or *endangered* species must be considered with a high degree of concern.

Hector's Dolphin

Hector's dolphins are endemic to New Zealand; they are one of the smallest cetaceans, and New Zealand's only endemic cetacean. There is a pod of Hector's dolphins, about 20–30 in number, that reside in Cloudy Bay (off the coast near Blenheim). During the summer months this pod travels through the Tory Channel and is often sighted by staff at Dolphin Watch Ecotours in the bays around Arapawa Island. Their natural predators are sharks, but DOC notes on its website that other 'potential threats to their survival include trawling, marine pollution, disease and impacts of tourism and aquaculture'. All dolphins are protected under the Memorandum of Understanding for the Conservation of Cetaceans and Their Habitats in the Pacific Islands Region.

King Shag Roosting Site

The New Zealand king shag is endemic to the Marlborough Sounds. There is considerable uncertainty as to their actual ecology due to the remote nature of their breeding locations and the high sensitivity of birds to disturbance. The species is strictly marine, with all foraging occurring in the Sounds area. There is at least one known king shag roosting site north of this map, and therefore not shown.

decision-making will proceed. The complexity of the RMA provisions, particularly where matters are before a Board, and that Board is simultaneously determining plan changes and consent applications, makes it very difficult to understand and interact with the process. See Note 5.

In this case, the hearing itself provided an obstacle to public engagement. The statutory time pressure on the Board made it difficult for the hearing to be managed in a more flexible way, which would have enabled greater public engagement. The aggressive attitude of NZKS's legal team often made the hearing an uncomfortable environment. Repeated efforts by NZKS staff to engage with those who challenged the application, outside the hearing itself, was often beyond what would be considered reasonable. See Note 6.

One of my key concerns throughout this process was the lack of a framework to explore economic effects. The Board spent a great deal of time on the narrative, but in the end reached very limited and generic conclusions on the numbers. The claimed benefits of any proposal need to be rigorously validated. The weak economic analysis in this case undermined the validity of the claimed benefits. For example, in the NZKS case, the jobs at the farms (slaughtering and processing) are at the lower end of the salary spectrum. The projected number of jobs created by the additional farms was itself open to debate. See Note 7.

In addition, not all relevant economic data was disclosed because some of it was deemed commercially sensitive, and therefore excluded from the Board and most of the economic experts. There are a number of ways in which such data could have been made available so that it might have been independently reviewed and assessed, without compromising its *commercial sensitivity*. Despite the Board's appointment of a 'Friend of the Submitters', and the cooperation of EPA staff, the processes for gaining access to such sensitive information were not clear. This lack of access prevented general submitters from being able to debate the economic merits of the application in a fully informed manner. See Note 8.

Submitters (and their experts) are not always able to commit 100 per cent of their time to the process. In my own situation, despite the fact that I had met with NZKS at our offices in Wellington and attended the expert caucusing session on economics, my decision not to meet further with NZKS or its experts was used as an attempt to discredit my professional interest in the application during the hearing and in NZKS's closing submissions. A submitter's inability to commit as much time as an applicant should not affect the Board's consideration of issues the submitter has raised. Standard practices for Boards should

recognise that inequality typically exists between an applicant and submitters, and that the Board's powers to inquire should be used to ensure that all relevant issues are tested even if a submitter's resources are exhausted by simply getting the issues on the table.

New Zealand is a small country, so it is almost inevitable that conflicts of interest will arise. However, the Board of Inquiry process supports engagement by lay submitters who are not necessarily versed in the procedures for raising or addressing their concerns about conflicts. Much could be done to improve the procedures for lay submitters in this and other areas. See Note 9.

The Board of Inquiry did not really *inquire*. The applicant prepared and presented a vast quantity of information. Adding to that, the Board heard from a large number of submitters in opposition. Those factors (perhaps combined with the statutory time pressure on the Board) may have encouraged the Board to assume it had received information on all critical issues, and left the Board members with little sense of the need to actively *inquire* further. But the number and diversity of fields of expertise triggered in resource management matters is ever-expanding, and a Board may not possess expertise in all relevant areas, or even all key areas, necessary to determine an application. This significantly advantages an applicant, and disadvantages the public. If the Board does not have the expertise *to inquire* into a key area, such as economics, it must find ways to fill this gap so that it delivers a quality decision.

In my view, applicants must prove beneficial effects exist, identify and describe negative effects to the best of their ability, and put forward conditions to manage such costs and risks. If submitters challenging a proposal are not in a position to employ experts, then the Board should be in a position to commission such research if it believes such further work would be useful. At times, the onus appeared to be on submitters to engage experts to provide the necessary evidence to counter the applicant's claims. Such a process makes the debate flawed in the sense that the qualities of the arguments are a function of the comparative resources of the applicants and submitters. See Note 10.

Stage 5: The decision

Under the new EPA process, the ability to appeal a decision is limited to points of law. This increases the onus on a Board to write up the decision-making process and identify all the key data that has been used to shape the final decision. Without transparency, you cannot have accountability; and if you do not have accountability, you cannot learn lessons from the past in order to improve decisions in the future. See Note 11.

The decision dealt with risk assessment in a way that is difficult to make sense of. Although risk was mentioned 57 times, it was not categorised consistently throughout the decision (such as 'no effect', 'minor effect', 'major effect' or 'critical effect'), nor was ranking used to classify and address risks in terms of probability and magnitude, the timeframe of the risks and the level of uncertainty over the extent to which these exist. Lastly, there was no assessment of who gained the benefits versus who bore the costs and risks of the proposal. The latter needs to be assessed in terms of inter-generational and intra-generational benefits, costs, and risks; such as (i) the passing of environmental costs and risks on to our children, and (ii) the placing of the needs and wants of one group of New Zealanders ahead of those of another group of New Zealanders. Examples of the latter include placing private sector benefits ahead of public sector costs and risks, or placing national interests ahead of local interests.

The latter point is particularly relevant in decisions heard under *national significance*. There exists an implied bias that national interests are more important than local interests when an applicant takes a proposal away from local decision-makers (who are democratically elected by the local community) to 'national interest' decision-makers. I had expected the Board to take local interests, as represented in the regional planning process,

Table 1: Physical properties of proposed salmon farm sites

| Farm Site | Site Size (ha) | Maximum Feed Discharge Applied for by NZKS (tonnes pa) | Maximum Feed Discharge Approved by the Board (tonnes pa) | Near Bottom Currents | | Site Depth (top of cage to bottom of seabed in metres) |
|------------------|----------------|--|--|----------------------|----------------|--|
| | | | | Average (cm/s) | Maximum (cm/s) | |
| Kaitapeha | 16.5 | 4000 | N/A | 12.4 | 51.0 | ~60 |
| Kaitira | 16.5 | 6000 | N/A | 19.6 | 57.2 | ~60 |
| Ngamahau | 16.5 | 4000 | 4000 | 21.1 | 66.2 | 23-35 |
| Papatua | 91 | 5000 | 5000 | 3.4 | 19.2 | ~35 |
| Richmond | 16.5 | 4000 | 4000 | 15.7 | 56.3 | 32-40 |
| Ruaomoko | 14.1 | 6000 | N/A | 26.8 | 77.5 | ~50 |
| Tapipi | 16.5 | 5000 | N/A | 15.7 | 43.8 | ~62 |
| Waitata | 16.5 | 6000 | 6000 | 17.6 | 126.7 | ~63 |
| White Horse Rock | 2.2 | 3000 | N/A | 10.1 | 44.3 | 22-28 |
| Total | | 43,000 | 19,000 | | | |

The data shows the Ngamahau Tory Channel site has the highest near bottom current whilst having the shallowest site depth of all sites approved. The waste created at this site (surplus feed and salmon excrement) is more likely to be swept into the wider Sounds/Cook Strait region where it will gradually settle along the bottom of the seabed rather than directly below the farm site. In order to be able to get to the maximum feed discharge each site must comply with environmental quality standards (measured through annual monitoring).

into account and thus require significant evidence that these interests were outweighed by the existence of significant national interests. This additional level of proof did not seem to be discussed or weighed when the Board made its decision. As can be seen in the accompanying map, the community had determined that Queen Charlotte Sound should remain free of industrial structures; the existing salmon farms are legacies of the Marine Farming Act 1971, and their consents expire in 2024. See Note 12.

This decision increases the total number of salmon farms in the Marlborough Sounds from eight to twelve (including two farms NZKS is currently not operating). The decision potentially sets a precedent for future aquaculture in Queen Charlotte Sound, where previously recreational and industrial activities were clearly separated. Hence the decision creates a form of moral hazard; NZKS will not bear the full costs of its actions if unwelcome consequences occur, and is therefore likely to continue to take further risks. This paradigm is very similar to the circumstances that led to the recent Global Financial Crisis. Banks took high risks but it was the public who paid for the financial clean-up, not the parties that created the problem. See Note 13.

The decision also results in a lost opportunity for the next 35 years (as noted above, consents for all other existing farms expire in 2024): it is likely to prevent Queen Charlotte Sound from being converted into a large marine reserve, listed as a UN Heritage Site or developed into an 'eco-sound' for tourism. These alternatives were not assessed by the Board. See Note 14.

Finally, there is no obligation on NZKS to ensure that the economic benefits promised in the proposal will be delivered. An adaptive management approach has been adopted for some of the project's adverse effects, but there is no equivalent avenue to revisit the application if the economic benefits do not eventuate. In other words, the applicant does not actually have to deliver on the promised job opportunities or economic growth to the region. The proposal will never be reassessed in terms of the quality of the decision or the integrity of the applicant.

During the preparation of this think piece a number of concerns regarding the final decision became apparent; the decision-making process was not always logical, balanced or comprehensive. This is discussed further in *Working Paper 2013/01*. See Note 15.

Stage 6: Post-decision

As I write this, we are still in the early phases of the post-decision stage, with mention in the press of some parties considering taking the decision to the High Court. NZKS is complaining at the cost of the application: four farms for \$10 million. But the company can, and no doubt will, capitalise most of this expenditure so that it is reflected as an asset on its balance sheet as the decision to approve four farms will result in the creation of a tradable asset on NZKS's books. There is currently no coastal occupancy charging regime in force in the Marlborough Sounds, meaning NZKS does not have to pay any fees for their occupation of the coastal marine area. It was a surprise to find NZKS arguing that the process was too expensive. While it cost the company \$10 million, NZKS managed the budget and chose to proceed with the application, it employed the most expensive lawyers, and flew in numerous experts from around the country. Whether it managed its resources effectively or not should not be the domain of public policy.

I perceived an expectation by NZKS that the more money it spent on the application, the more it felt entitled to a positive decision in regard to the nine farms. Objectively, the amount of money that an applicant chooses to spend on an application is firstly their business,

and secondly completely irrelevant in determining the merits or otherwise of the application. See Note 16.

OPPORTUNITIES TO IMPROVE THE PROCESS

Given that the government has recently released a discussion document titled *Improving our Resource Management System* (February 2013) and that the process of *national significance* is relatively new, I believe that there are a number of lessons that can be learnt from this decision and usefully applied. Opportunities exist that could significantly improve the process without requiring significant changes to the legislation or the institutional framework. These are discussed in some depth in *Working Paper 2013/01*; see Note 17.

In brief, however, they are:

1. Improve the quality of economic expertise and skills in New Zealand. In cases of *national significance*, applicants should be required, as a matter of course, to prepare a comprehensive Cost Benefit Analysis (CBA), in addition to an Assessment of Environmental Effects (AEE). The CBA document could be used in a similar way to the Conditions document; in other words, as a working document the Board can use throughout the hearing process, and publish as part of its final written decision.
2. Improve guidance to applicants, submitters, experts and decision-makers. As noted in the discussion document mentioned above, there is a great deal of value to be gained by improving guidance. In relation to submitters, such guidance could cover the main aspects of the hearing process, and information on the legal framework that the Board works within.
3. Improve transparency and accountability throughout the process. Technology could be used more effectively to reduce the paperwork and time required from submitters, which would enable members of the public, particularly those from the community affected by a proposal, to engage meaningfully with the process.
4. Improve the quality of information on endangered taxa in New Zealand. If we wish to manage our ecological footprint, we need far better information from the Department of Conservation.
5. Most importantly, promote the inquisitorial role of the Board. The Board must have the skills, resources and time to inquire into a case. Its members should not rely on submitters who are challenging the application to provide expertise. Unless the Board takes on the responsibility to inquire, there will be an inappropriate advantage for the applicant, who pays its experts and benefits from the outcome, whereas submitters challenging a proposition are simply responding to an application, with no potential financial upside other than maintaining the status quo. The Board must look beyond contested issues and explore more broadly effects that may occur over the long-term duration of the proposal. Such an inquisitorial approach will remove the risk that the quality of the debate is purely a function of the relative resources of the applicant and submitters. Ultimately New Zealanders require robust decisions that will stand the test of time.

In answer to the overarching question, was this a good decision for New Zealand, I for one, remain unconvinced that resource management is up to the standard New Zealanders expect and deserve.

Thank you to the Board of Inquiry, the EPA staff and the Marlborough community.

For complete references and to find out more, visit our website: www.mcguinnessinstitute.org



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