

**BEFORE WAIKATO DISTRICT COUNCIL
HEARINGS PANEL**

UNDER the Resource Management Act 1991 (**RMA**)

IN THE MATTER OF of a submission in respect of the PROPOSED WAIKATO DISTRICT PLAN by AMBURY PROPERTIES LIMITED pursuant to Clause 6 of Schedule 1 of the Act seeking the rezoning of land at Ohinewai.

DAVID KLEE

**PRIMARY EVIDENCE ON BEHALF OF THE AUCKLAND/WAIKATO FISH AND
GAME COUNCIL (“FISH & GAME”)**

Dated: 13/8/2020

1. QUALIFICATIONS AND EXPERIENCE

- 1.1 My full name is David Klee.
- 1.2 I am employed as Game Bird Manager, based at Auckland/Waikato with Fish & Game
- 1.3 I have a BSc degree in Biology and MSc degree with first class honours in freshwater ecology, both at the University of Waikato.
- 1.4 I have been in my current role since October 2008 during which time I have been responsible for monitoring and managing wetland habitat in the Waikato Region. During my employment with Fish & Game I have run the population monitoring and research programmes for game birds at both national and regional scales. A large part of my portfolio includes managing habitat enhancement and restoration projects around wetlands, lakes and rivers including the implementation of predator control programmes. During my employment with Fish & Game, I have also provided evidence for the Auckland/Waikato Fish and Game Council in statutory planning processes. This involves assessing notified resource consents applications, government policy statements, and statutory plans for their effect on wetland habitat and recreational hunting opportunities.
- 1.5 I am a member of the Waikato and Waipā Peat Lakes, Wetlands Accord groups, and sit on the Executive Committee of Waikato RiverCare.
- 1.6 I am very familiar with the area subject to the application and particularly the adjacent Lake Rotokawau reserve and Lake Waikare. I have conducted 4 externally funded wetland restoration projects on DOC (now also Waikato Tainui land) in close vicinity to the property, including a drainage bypass project to help mitigate the impacts of nutrients on Lake Rotokawau from the frost road drainage catchment. Other projects included habitat restoration and creation. As such, I have considerable experience, and personal knowledge, of these wetland environments and species that inhabit them. I have also managed several research projects encompassing some of these areas in recent years assessing the ecological integrity of wetlands and lakes in relation to avifauna productivity and population dynamics.

- 1.7 I have reviewed the Assessment of Environmental Effects submitted to Waikato District Council in relation to this development. I have attended project meetings and expert conferencing and shared with the applicant a summary of the desired ecological outcomes that would address the concerns of Auckland Waikato Fish & Game.
- 1.8 I have read the Environment Court's Code of Conduct for Expert Witnesses, and I agree to comply with it. I confirm that the issues addressed in this brief of evidence are within my area of expertise.
- 1.9 I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed. I have specified where my opinion is based on limited or partial information and identified any assumptions, I have made in forming my opinions.

2. SUMMARY STATEMENT

- 2.1 Fish and Games concerns regarding reverse sensitivity issues in relation to recreational game bird hunting have been addressed through a 3rd party agreement signed with Ambury Property Limited (APL).
- 2.2 I disagree that the application and further proposals presented to Fish and Game will adequately mitigate potential ecological effects agreed to during expert conferencing.
- 2.3 It is acknowledged by all parties during expert conferencing that the Lake Rotokawau reserve located directly adjacent to the proposed development is an ecologically significant site that contains several threatened and critically endangered species.
- 2.4 It was also agreed that the proliferation of pets, namely dogs and cats caused by development poses risks to some of the species that inhabit the Lake Rotokawau reserve and control of these animals is warranted.
- 2.5 Given the large home ranges exhibited by cats, their density in urban areas and published effects on birdlife the proposed rezoning would require much larger buffers to mitigate potential adverse effects.
- 2.6 APL through Mr Croft have developed a predator control plan focused on lethal control of domestic cats in a small portion of the proposed APL development footprint to mitigate potential effects of the rezoning.

2.7 In my opinion the proposed control plan is insufficient for the following reasons;

- Relying on lethal control to mitigate the impact of domestic cats is unlikely to be effective as they tend to hunt for reasons other than obtaining food and are therefore less likely to be caught in baited traps.
- The scale of the proposed control programme is insufficient to be effective at controlling predator numbers in the APL development area or Rotokawau reserve. Based on my experience developing similar projects and best practice guidelines developed by DOC in similar habitats, the proposed trapping programme would need to be increased by at least an order of magnitude.
- It fails to address concerns related to the impacts of dogs on breeding birds both within the APL development and the Rotokawau reserve.

2.8 Without a well-designed and implemented predator control plan the wetland habitats created by APL could become a population sink from species such as Australasian bittern and therefore have an overall negative impact on threatened and endangered avifauna populations.

2.9 For the above reasons, Fish and Game continue to oppose the proposed rezoning, however, should the panel decide to grant the request my evidence covers preferred options based on recent subdivision consents which in my opinion would better mitigate the effects of the proposal.

2.10 Finally, I consider the current rezoning process the appropriate time to ensure ecological effects are adequately mitigated. Future consent processes for the residential and multi-unit allotments fall into restricted discretionary activities. In both cases, under the operative Waikato District Plan, discretion is not reserved for potential environmental effects.

3. FISH AND GAME FUNCTIONS

- 3.1 Auckland/Waikato Fish and Game (Fish and Game) is an entity established under the Conservation Act 1987 with functions to:

26Q(1)...manage, maintain and enhance the ports fish and game resource in the recreational interests of anglers and hunters...

(b) to maintain and improve the sports fish and game resource-

(i) by maintaining and improving access; and ...

(iv) by ensuring there are sufficient resources to enforce fishing and hunting season conditions; ...

(c) to promote and educate - ...

(ii) by promoting recreation based on sports fish and game; ...

(e) in relation to planning,-

(i) to represent the interests and aspirations of anglers and hunters in the statutory planning process; and ... (iii) to prepare sports fish and game management plans in accordance with this Act; and...(vii) to advocate the interests of the Council, including its interests in habitats...

4. REVERSE SENSITIVITY

- 4.1 Fish and Game had concerns regarding potential reverse sensitivity issues associated with game bird hunting that occurs in close proximity to the proposed development. This issue has been resolved through a 3rd party agreement that will require no-complaint covenants to be instated onto residential lots should the applications for re-zoning be successful.

5. ECOLOGY

- 5.1 In my opinion the application and assessment of effects concentrated too heavily on the direct footprint of the proposed development and failed to adequately consider the potential effects on adjacent high value and ecologically sensitive wetland sites. This is particularly pertinent for potential environmental effects caused by the rezoning that can radiate some distance from the site itself.

- 5.2 By way of example, the EIA¹ does not consider the potential effects of a proliferation of cats and dogs due to the rezoning and subsequent subdivision on the adjacent Rotokawau reserve and the species that inhabit it.
- 5.3 Lake Rotokawau is unique amongst the Lower Waikato lakes in that it is surrounded by a 145ha wetland reserve administered by the Department of Conservation. It is an extremely high value site, ranking 2nd in the Waikato Regional Council Zone for biodiversity (Wildlands 2011). While the lake is only moderately large and shallow it has one of the most extensive and diverse areas of wetland vegetation surrounding a lake in the Lower Waikato Basin.
- 5.4 Lake Rotokawau is a highly valued site for recreational hunting and due to its dense vegetation cover also provides excellent breeding habitat for dabbling ducks and other wetland avifauna.
- 5.5 The reason the Rotokawau reserve has such a high ecological ranking is in part due to its faunal assemblages. The critically endangered Australasian Bittern (*botaurus poiciloptilus*), declining spotless crane (*porzana tabuensis*) and NI fernbird (*bowdleria punctata*) have all been recorded at the site. I have personally seen multiple bittern and heard these birds booming during the mating season (Sept-Oct).
- 5.6 The potential effects of urban and rural subdivision on ecologically high value sites is well understood and increasingly recognised in district plan changes around the country. For example, the Opotiki district plan automatically elevates subdivisions from discretionary to non-complying activity status when indigenous ground nesting birds including bittern, fernbird, dotterel, crane and waterfowl are present on or adjacent to the site.²
- 5.7 I acknowledge that some high value wetland sites could potentially be constructed within the APL development. If this were to occur it would undoubtedly provide habitat for some of the avifauna species currently found in the Lake Rotokawau reserve. Whilst I generally agree that this would be positive, the increase of cats and dogs in these areas needs to be carefully managed to ensure those wetlands do not inadvertently become a sink habitat with overall detrimental impacts on avifauna populations.

¹ Report No. 1708247.1-002 V1

² Rule 10.3.4 Operative Opotiki District Plan

- 5.8 There have been published studies quantifying the prey caught by domestic cats in New Zealand. They confirm that cats catch birds including native species. In urban areas cats exist at a density of up to 225 per square km. Even though individual cats may catch few birds, their cumulative total of birds killed is large. Cats catch birds, including native species, in proportion to their abundance in the local environment. GPS-derived home ranges of 32 cats and resource selection indices demonstrated a preference for native vegetation fragments with birds being the most common prey item followed by rodents (Van Heezik et al. 2010)
- 5.9 I recently led a large-scale telemetry study where we collected and evaluated data from 304 radiomarked female mallards, 491 nests, and 190 broods (Sheppard 2017). During the study we lost just over 20% of our hens through mortality events. Most of these occurred during nesting and necropsies indicated that 75%-80% were likely killed by cats.
- 5.10 Cats are known to have large home ranges with an average linear length of 6.3km for males and 3.8km for females. Therefore, cats will impact habitat that is well away from the immediate vicinity of a development. Maximum distances moved and large variability between individual cats suggest buffers in rural landscapes would need to be at least 2.4 km wide between subdivisions and adjacent habitats in order mitigate their impacts (Metsers et al. 2010).
- 5.11 Whilst there is not much published literature quantifying the impacts of dogs on species such as bittern in New Zealand (mainly due to the fact that there are so few left) incidence of juvenile bittern being killed by dogs from nest sites has been documented overseas (O' Donnell 2011). Dogs are also known to take fernbird, ducks and crane.
- 5.12 Even if dogs and cats do not kill nesting birds or fledglings directly, repeated disturbance events are known to cause abandonment. For example, all birds that were flushed from their nest on more than 1 occasion by a predator within a 3-day window abandoned their nests (Shepherd 2017).
- 5.13 Fish and Game own and administer some 1700Ha of wetlands habitat, much of which falls in the Whangamarino Wetland, another strong-hold for bittern. Due to the recognised potential detrimental impacts of dogs to breeding avifauna in these environments, we close our wetlands to hunting and dogs

at the cessation of the dabbling duck season (June) and do not reopen them until the following May.

- 5.14 The experts reached agreement on many of the issues raised in expert conferencing. For completeness I have annexed the signed joint witness statement to my evidence.³

Rotokawau: *All the experts agreed that this area holds significant values including threatened and critically endangered species. It was also agreed that there are predation threats as a result of urban growth next to the reserve.*

Dog Control: *It was agreed that there would be benefits of dog control within certain areas of the OSP but it could not agreed what framework dog control should take.*

Cats: *It was agreed that cats pose a risk to some of the species that inhabit the Lake Rotokawau Reserve and that some form of control is warranted. It was also agreed that a well-designed and implemented predator control plan could be beneficial to both the wetlands that form part of the development and the Rotokawau Reserve. Agreement was not reached on the nature or framework of the control's relation to the potential of cat predation.*

Water Quality: *It was agreed that there is potential for water quality to be improved in terms of reducing nutrient runoff but also an increased likelihood of contaminant loading from stormwater runoff and spills.*

- 5.15 I disagree with aspects of the summary presented in the statement of evidence by Mr Croft in relation to the agreed outcomes of expert conferencing⁴. There are subtle differences that change the context of the agreements reached.

- 5.16 Mr Croft suggests that it was agreed during conferencing that a predator control framework is justified solely within the Ohinewai structure plan area. This is incorrect and was not agreed to. If cats and dogs can be contained within the APL development area or not allowed to inhabit the site through the use of no cat covenants, then this may be a justifiable approach.

³ Appendix A

⁴ 2.6 b evidence of Mr Croft.

- 5.17 Post expert conferencing a draft predator control plan has been provided by Mr Croft in order to try and address the agreed potential adverse effects highlighted during expert conferencing. This plan relies solely on lethal control to mitigate effects. I have provided initial feedback on this plan, but at the time of drafting this evidence there is still substantive disagreement about the likely efficacy of the proposed predator control programme. No further discussion has been had regarding dog control.
- 5.18 Relying on lethal control through trapping programmes for domestic cats is problematic as they are more likely driven to hunt by factors other than obtaining food and therefore less likely to be attracted to bait. Putting this to one side, if predator control through lethal mechanisms is to be relied upon to mitigate the potential impacts on the Lake Rotokawau reserve, especially the potential impacts of cats, the control programme would need to be extended to encompass the adjacent Rotokawau reserve and mechanisms to exclude dogs from the reserve during critical breeding times also need to be implemented. The current plan proposes a small amount of control focused solely on the area around the proposed constructed wetlands on the eastern side of the development.
- 5.19 I have developed several predator control projects in similar wetland habitat types over the past decade and have learned that unless done correctly, predator control is essentially a waste of resourcing as it invariably fails to achieve objectives. In the current instance, based on best practice guidelines in the literature, DOC predator control projects, monitoring in the nearby Whangamarino Wetland and my personal experience, the proposal would need to be increased by an order of magnitude in both extent and quantity of traps deployed in order to adequately mitigate the potential effects of increased predation risk caused by the development.
- 5.20 The draft plan relies on current legislation to try and combat issues associated with dogs, which in my opinion will fail to address the issue. First and foremost, very few dog owners are aware of the relevant animal control legislation;

Dog control Act 1991: Section 5 (1):(b) to ensure that the dog is kept under control at all times;

(g) to take all reasonable steps to ensure that the dog does not injure, endanger, or cause distress to any stock, poultry, domestic animal, or protected wildlife;

- 5.21 In my opinion if dogs increase their visitation frequency to the Rotokawau reserve through the proliferation of dog numbers and unmitigated access, it is likely that conflict between dogs and wildlife, including critically endangered species, will increase.
- 5.22 The current proposals put forward by APL, fails to provide the requisite certainty that the potential effects agreed to during expert conferencing will be adequately addressed. In the absence of any further solution being proffered to this issue, I disagree with the conclusion that the proposal as it stands adequately avoids, remedies or mitigates potential adverse ecological effects, and therefore Fish and Game continue to oppose the rezoning. If the panel decides to grant the rezoning request, then I propose other options are more appropriate and will provide greater certainty that adverse effects are addressed.
- 5.23 No cat covenants are increasingly being used by environmentally conscious developers near ecologically sensitive sites. This can be coupled with high fencing to ensure dogs are also precluded from the same areas. Given the values present at Lake Rotokawau, this would be a more appropriate option than attempting to rely on lethal control of domestic cats through trapping.
- 5.24 A recent decision by independent commissioners on the proposed Amberfield development in North Hamilton addressed the implementing of no cat covenants and strict rules regarding dogs to mitigate the impact on long tailed bats.
- 5.25 *“Further conditions have been added to exclude domestic cats and mustelids (stoats, ferrets and rats for example) from lots on the Amberfield Development. While Mr Kessels saw little value in such an approach given the property is not core habitat and the lack of wider strategy or support for such an approach, submitters acknowledged and presented evidence that cats were a significant if not the most significant pest for native fauna including long-tailed bats . We took the view that while it was true that other established developments had not implemented a cat or mustelid ban, this did not in itself warrant not doing so in the case of Amberfield. Further as other developments come online, all protected habitat whether core or otherwise will be important, evidence suggests excluding cats, ferrets, stoats and rats helps. We agree. In respect of dogs a condition has been inserted*

requiring that they are properly controlled either fenced, or on a lead while outside of a property and securely housed at night.”⁵

- a) *No cats or mustelids which have the potential to be long tailed bat predators shall be introduced or kept on all lots.*
- b) *Any dog kept or introduced to the Amberfield site must be kept within a dog proof fenced area and be under effective control at all times when outside of the fenced area, e.g. on a lead. At night any dog must be kept inside or securely and safely housed.⁶*

5.26 Our concerns would be addressed if similar provisions were inserted into the current plan change. In this instance a dog proof fence should be instated around the periphery of the development to ensure dogs are unable to access the Rotokawau reserve.

5.27 It has been suggested that the exact nature of the mitigation arrangements to address ecological issues can be worked through at a later juncture or when the development is consented. The evidence of Mr Broekhuysen outlines the potential development options of multi-unit development⁷ or residential allotments⁸. The rules governing these activities⁹ are restricted discretionary and in both cases, discretion is not reserved for potential environmental effects on the environment. For this reason, I view the current plan change process as the only viable mechanism to address Fish and Game’s concerns.

⁵ Page 73 Commissioner Panel Decision Amberfield Resource Consent Application.

⁶ Rules imposed on Amberfield development.

⁷ Paragraph 6.48, evidence of Mr Broekhuysen

⁸ Paragraph 6.49, evidence of Mr Broekhuysen

⁹ Rules 16.1.3 and 16.4.4 in the operative Waikato District Plan respectively.

References

Metsers, E.M. et al 2010 Cat-exclusion zones in rural and urban-fringe landscapes: how large would they have to be? *Wildlife Research*, ,37,47–56

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