

BEFORE

the Hearing Panel appointed by Waipā District Council

IN THE MATTER

of the Resource Management Act 1991 (**the Act**)

AND

IN THE MATTER OF

of Private Plan Change 20: Titanium Park Limited and Rukuhia Properties Limited – Airport Northern Precinct Extension

**SUMMARY STATEMENT OF TERTIA THURLEY FOR THE
DIRECTOR-GENERAL OF CONSERVATION
17 MARCH 2023**

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1. INTRODUCTION

- 1.1. My full name is Tertia Thurley.
- 1.2. I have been engaged by the Director-General to provide expert evidence for Proposed Plan Change 20 as it relates to effects on long-tailed bats.
- 1.3. My experience and qualifications are set out in my evidence in chief dated 7 March 2023 (EIC).
- 1.4. I ask you to note the following correction to that EIC: In paragraph 7.8 of my evidence, I refer to a radio-tracking study in Hamilton dividing bat habitat into three categories: “Most preferred habitats”, “Second-most preferred habitats” and “Least-preferred habitats”. The word “preferred” should be replaced by “used”, here and globally.
- 1.5. Since filing my EIC I have read and considered the following documents:
 - (a) The rebuttal statement of Ms Georgia Cummings
 - (b) The rebuttal statement of Mr Joshua Markham
 - (c) The rebuttal statement of Mr Ben Inger
 - (d) The evidence in chief of Mr James Bell-Booth

2. CODE OF CONDUCT

- 2.1. I reconfirm I have read the code of conduct for expert witnesses as contained in the Environment Court’s Practice Note 2023. I have complied with the practice note when preparing my written statement of evidence and will do so when I give oral evidence before the hearing panel.

3. KEY FEATURES OF EVIDENCE

- 3.1. My evidence considers the threat status of long-tailed bats, and the multiple pressures already facing the south Hamilton population. It then considers the additional pressure which this population will come under from planned urbanisation and industrialisation; then assesses the significance of the Plan Change 20 site, and the preliminary compensation package which has been offered.
- 3.2. Long-tailed bats are predicted to decline by >70% over the next three generations of bats (c. 36 years). As such they have the highest threat

ranking of Threatened-Nationally Critical.¹ Paragraph 5.5 of my evidence gives two examples to illustrate the ongoing decline of this species.

- 3.3. Bat populations live on a landscape scale, with individuals spread out across thousands of hectares. These large home ranges are required so the bats can find sufficient food, water and roost sites, with individual bats foraging in different parts of the landscape to reduce competition.²
- 3.4. The south Hamilton bat population is already under considerable pressure. The original wetland and dense podocarp forest landscape in which they once lived is very different to that which they occupy now. There is now a lack of trees to roost in and forage along, there is the built environment of housing, industry and roads which completely remove available bat habitat, there is artificial light associated with buildings and roading, there is noise, there are introduced predators (rats, cats, possums, stoats). Bats have persisted here, but the population seems to be small, and given what we have learned from other populations, this population may also be in decline.
- 3.5. The presence of long-tailed bats in a city is rare. The vegetated river and gully systems, alongside the rural farmland is likely a key reason why bats are still present.
- 3.6. In my opinion the greatest threats to the future of this bat population come from the ongoing reduction in the space available for the bats to live in, and the continual clearance of woody vegetation, including roost trees. Figure 4a and 4b in my evidence shows the planned expansion of urban and industrial areas into the habitat that this population occupies. Because urban and industrial areas are not bat habitat, the expansion of these areas will exclude bats from areas they now occupy. As a result of this the bats will be expected to find the resources that they need for roosting, commuting, foraging, drinking and socialising from a smaller and smaller area.
- 3.7. Bats cannot just move somewhere else. They have high fidelity to their home range, using the same areas year after year. Even when large part

¹ O'Donnell, C.F.J.; Borkin, K.M.; Christie, J.E.; Lloyd, B.; Parsons, S.; Hitchmough, R.A. 2018: Conservation status of New Zealand bats, 2017. New Zealand Threat Classification Series 21. Department of Conservation, Wellington. 4 p. <http://www.doc.govt.nz/Documents/science-and-technical/nztcs21.pdf>

² O'Donnell CFJ 2001. Home range and use of space by *Chalinolobus tuberculatus*, a temperate rainforest bat from New Zealand. *Journal of Zoology* (London) 253: 253-264.

of the bats home range is removed, home range is decreases rather than the bats moving to a new area.

3.8. I consider that the entire habitat that is within the Plan Change 20 site (apart from buildings) meets the Waikato Regional Policy Statement criteria for Significance under Criteria 3 because it is habitat that is currently habitat for indigenous species that are classed as threatened or at risk. My assessment is based on the following:

- a) Five acoustic surveys undertaken by the Applicant show that the PC20 site is used by bats for commuting and foraging.
- b) The Plan Change 20 site provides part of the rural area which bats move out from their roosting sites to commute and forage over.
- c) The persistence of this bat population is increasingly reliant on retaining rural land within the home range of the population. This is because bat habitat is planned to decrease markedly. Plan changes on council maps show that 25% of the home range of this population is already planned for urbanisation or industrialisation. On the western side of the Waikato River, where it appears that the female bats raise their young, 43% of land is planned to be urban or industrial.

3.9. There is considerable uncertainty whether the proposed Bat Habitat Areas within the Plan Change site will continue to be used by bats because:

- a) The 50m wide corridor and the Amenity Hub area will be surrounded by industry and retail. The only similar site that I am aware of, where there is a narrow corridor surrounded by urbanisation which is used by bats is the Mangakōtukutuku Gully system on the southern fringe of Hamilton city. However, this gully system is generally a lot wider than 50m, and when bats emerge from roosts in these gullies they move away through the gully system to the wide areas of rural habitat where they spend most of their time³. Whether they will use a 50m wide corridor to access 2.7ha is very uncertain.
- b) Roading deters bats. The Bat Habitat Area starts at a road, is bisected by a road, and has roads on three sides of the Amenity Area.

³ Davidson-Watts Ecology (Pacific) Ltd. 2019 Long-tailed bat trapping and radio tracking baseline report. Southern Links, Hamilton. Report for AECOM, Auckland.

- c) The immediate surrounds of the Bat Habitat Area are industrial, which bats avoid.
 - d) Bat activity may be negatively impacted by increased noise levels.
- 3.10. The Plan Change 20 proposal will remove at least 125ha of bat habitat. The preliminary compensation package includes an 11ha compensation block and 80ha of pest control over a 10-year period.
- 3.11. I support the proposed compensation site and consider that it is in a good location. It offers connectivity to the surrounding rural land, providing the rural land does not become urbanised or industrialised. The protection of this site from future development is also an important factor.
- 3.12. However I consider that replacing 125ha (or even 89ha if the 40ha which is already zoned Airport Business Zone is not included) with 11ha plus 5ha within the PC20 site is not adequate when so much bat habitat is already planned to become urban or industrial in the surrounding area. In my opinion enhancement of the compensation site does not make up for the loss, and the addition of 80ha of pest control is meaningless if the bats do not have the habitat available to meet their needs.

Dated 17 March 2023



Tertia Thurley