
Form 13: Submission on application concerning resource consent

Resource Management Act 1991

To: Hamilton City Council (**the Consent Authority**)

Name of submitter: Director-General of Conservation (the **Director-General** or the **DG**)

This is a submission on a Notice of Requirement from Bloxam Burnett & Olliver Ltd (BBO) on behalf of the Hamilton City Council (HCC) Capital Projects Team (**the Applicant**) for an alteration to a designation

Description of activity: Notice of Requirement (**NoR**) – Alteration to Ruakiwi Road Reservoir Designation to enable the construction, operation, and maintenance of two reservoirs, a valve chamber, pipelines, and supporting infrastructure to supply water to the central city and the surrounding areas.

Trade competition: I am not a trade competitor for the purposes of section 308B of the Resource Management Act 1991 (**the Act**).

My submission relates to: The whole application.

My submission is: I seek that if consent is granted the conditions are appropriate and enforceable, management plans follow best practice, compensation for effects on biodiversity follow the effects management hierarchy, there is robust monitoring and compliance measures to ensure an effective compensation package is delivered.

The Director-General's interest in the Application

1. The Director-General of Conservation has all the powers reasonably necessary to enable the Department of Conservation (**DOC**) to perform its functions.¹ The Conservation Act 1987 (the

¹ Conservation Act 1987, section 53.



CA) sets out DOC's functions which include (amongst other things) management of land and natural and historic resources for conservation purposes, preservation so far as is practicable of all indigenous freshwater fisheries, protection of recreational freshwater fisheries and freshwater fish habitats and advocacy for the conservation of natural resources and historic heritage.² Section 2 of the CA defines 'conservation' to mean *'the preservation and protection of natural and historic resources for the purpose of maintaining their intrinsic values, providing for their appreciation and recreational enjoyment by the public, and safeguarding the options of future generation'*.

Reasons for the Director-General's submission

2. The application would result in permanent loss of terrestrial habitats and poses **adverse effects** to native species, particularly long-tailed bats (Threatened – Nationally Critical).
3. Due to these gaps and the potential for adverse ecological effects, the application presents a **significant level of ecological impact** that has not been adequately addressed.

Ecological Values and Effects

Long-tailed Bats and Identification of Bat Habitat

4. Long-tailed bats (**LTB**) have the highest threat classification of Nationally Critical based on the New Zealand Threat Classification System (NZTCS). They are predicted to decline by >70% over the next three generations. LTBs are Absolutely Protected Wildlife under the Wildlife Act 1953. If the numbers for LTBs continue to decline the next step on the NZTCS would be extinction.
5. Tompkin and Taylor Ltd (T+T) have provided an Ecological Impact Assessment (EIA), attached as Appendix G of the NoR application. The EIA confirms that across the 15 Acoustic Bat Monitors (ABM) used, 12 of the ABMs recorded bat passes, and the highest activity from an individual ABM, R7, recorded 6.9 passes a night.³
6. T+T's arborists conducted field surveys including identifying potential bat roosts within the site, with 17 trees being identified as having potential bat roosts. An additional 13 macrocarpa and one pine tree were confirmed to have good roosting habitat in the form of cracks, cavities, hollows, flaking or peeling bark, and broken or dead branches. Ground observations outside the site note that mature trees also contain potential bat roost features.³

² Conservation Act 1987, section 6.

³ Ecological Impact Assessment – Central City Reservoir Project, Hamilton City Council, August 2025, Page 12.

7. Based on their threat classification T+T identify bats as 'very high' ecological value and consider the value of the treeline habitat at the site as 'moderate', because no active roosts were located during climbing inspections and the presence of pest mammals (possums) reduces the value of roost features.
8. DOC's bat expert contends that the importance of LTB habitat across the site has been undervalued. The EIA has only considered 'treeland' when calculating the area of bat habitat which would be lost. The surrounding exotic grassland was considered to have 'negligible ecological value', and the clearance would result in a 'low level of effect', and as such no mitigation was considered to be required for the loss of exotic grassland and wider habitat at the site. Importantly, bats have been recorded to use pasture around small groups of trees or single scattered trees.⁴ Further, it is the mosaic of treeland and exotic grassland which makes up the bat habitat at the site, where bats have been recorded to use and forage.⁵ The site contains many large trees with potential natural features for bat roosts in the area. The finding of no active roosts during climbing inspections does not lessen the value of this habitat because LTBs move roosts often, and inactive roosts may be just as valuable as active roosts to the bats – particularly in this landscape where there are likely few roosts available.
9. Based on this uncertainty, the application should take a precautionary approach⁶ and consider the effects not only on potential roosting trees, but also on associated grassland and surrounding mosaics.

Permanent loss of potential and actual habitat for threatened fauna

10. The application notes that approximately 0.58 ha of habitat will need to be permanently removed, including 14 trees with features confirmed as having potential for bat roosting.⁷ The DG has concerns with this assessment because it does not appear to include grassland which the DG considers as bat habitat. In addition, the actual area affected includes all the area which will be covered by artificial surfaces, and any that is affected by light. The ecological value of the vegetation as habitat for bats has been considered to be moderate, and the magnitude of effect of removing this habitat is moderate. Therefore, overall level of effect of the permanent loss of roosting and foraging habitat is moderate. The Applicant confirms that it is not possible

⁴ Davidson-Watts Ecology (Pacific) Ltd. 2019 Long-tailed bat trapping and radio tracking baseline report. Southern Links, Hamilton. Report for AECOM, Auckland.

⁵ Bennett RS 2019. Understanding movement and habitat selection of the lesser short-tailed bat to infer potential encounters with anticoagulant bait. MSc Zoology, Massey University, NZ.

⁶ National Policy Statement for Indigenous Biodiversity 2023 (As Amended 2024), Policy 3.

⁷ Ecological Impact Assessment – Central City Reservoir Project, Hamilton City Council, August 2025, page 18.

to avoid or mitigate effects, and therefore compensation is proposed in the form of planting, pest mammal control and artificial roost bat features.

11. Regarding replanting, the Assessment of Environmental Effects (AEE) confirms that a total of 144 replacement trees are proposed, including 35-large grade specimens to be planted onsite and 109 trees distributed throughout the wider reserve network. The DG supports the total of trees proposed for planting and suggests, in deciding the typology of new planting, the Applicant ensures this is carried out in accordance with the Bat Recovery Group Advice Note⁸ on appropriate plant species which provide roosts.

Injury or mortality of bats during vegetation clearance

12. During the vegetation clearance process, the EIA acknowledges that the magnitude of the effect from removing potentially occupied bat roosts is very high. To minimise the risk of accidental injury or death to bats in occupied roosts, a Bat Management Plan (BMP) incorporating vegetation removal protocols will be prepared by a suitably qualified bat ecologist.
13. The DG supports the imposition of a BMP carried out by a suitably qualified bat ecologist. As drafted the proposed BMP requires the Applicant to submit and have certified a BMP to the Consent Authority prior to vegetation clearance. The BMP sets out the requirement for a map to identify all trees (alive and standing dead) and the implementation of a pre-felling survey to be conducted pursuant to New Zealand DOC Bat Recovery Group, or any update to that document. Whilst, this condition mostly reflects best practice, the condition does not set out a clear objective for the outcome the condition is trying to achieve. The objective of the condition should be to *'avoid or otherwise minimise adverse effects on bat habitat, roosts, foraging and commuting areas during vegetation removal and construction'*, or to a similar effect.
14. The BMP also fails to provide the management of effects in relation to the potential bat roosts trees which are proposed to remain. Appropriate management of construction should ensure that effects on roosts that are remaining are either avoided or minimised.
15. As drafted, the BMP does not require monitoring to ensure that during vegetation clearance and construction any effects on bats are identified and reported to the Consent Authority.

Artificial light Spill

16. Lighting from the new tanks and walkways has the potential to generate light ingress into areas of bat habitat, including commuting and foraging areas, causing these areas to be avoided. The

⁸ [New Zealand Bat Recovery Group Advice Note – Planting to provide roosts.](#)

EIA classified this effect as moderate and recommends a Light Management Plan (LMP) to control light strength, time and location around the site to minimise light spill into retained habitats⁹ and the proposed artificial bat boxes and roost features.

17. Importantly, lighting spill effects on bats are best managed pursuant to the Bat Recovery Group Advice Note¹⁰ including specific lighting design principles, as set out below:

Principles to follow to reduce the impact/effect of artificial light on pekapeka (bats)

Useful general design principles from are copied below from the Australian [National Light Pollution Guidelines for Wildlife](#) page 19 (Table 1).

Table 1. Best practice lighting design principles.

Best practice lighting design incorporates the following design principles.

- 1. Start with natural darkness and only add light for specific purposes.**
- 2. Use adaptive light controls to manage light timing, intensity and colour.**
- 3. Light only the object or area intended – keep lights close to the ground, directed and shielded to avoid light spill.**
- 4. Use the lowest intensity lighting appropriate for the task.**
- 5. Use non-reflective, dark-coloured surfaces.**
- 6. Use lights with reduced or filtered blue, violet and ultra-violet wavelengths.**

Proposed compensation

Compensation Planting

18. Compensation planting for the loss of bat habitat is proposed at a 1:1 ratio, an area of 0.58 ha. This proposed planting will improve existing habitat rather than creating new habitat. Therefore, there will be residual effects because there is a permanent loss of overall habitat, and because there will be a time-lag of newly planted trees developing roost features. I also recognise the application involves clearing part of a Significant Natural Area. As such, this compensation measure does not sufficiently manage effects from vegetation removal, and hence, residual adverse effects are inadequately unmanaged.

⁹ Ecological Impact Assessment – Central City Reservoir Project, Hamilton City Council, August 2025, page 19.

¹⁰ [Reduce the impact of artificial light on pekapeka advice note.](#)

Artificial Bat Boxes and Roost Features

19. As part of the proposed bat roost compensation, 21 artificial roost boxes and 21 bat roost features are to be installed within the proposed designation, and also across the Lake Domain. The application notes success of these measures within Australia, specifically, in relation to the creation of artificial roost features. Notwithstanding this, the New Zealand Bat Recovery Group Advice Note on the use of artificial bat roosts indicates there is no evidence to date that artificial roost boxes or the creation of roost features are an effective tool for mitigating the loss of natural bat roosts.¹¹ Research indicates that bats choose roosts specifically for their thermal properties (Sedgeley 2001)¹², further that the thermal properties required for bats-year-round are unknown (Sedgeley and O'Donnell 2004).¹³ Other research shows that artificial roost boxes have been found to be too hot or too cold, so bats had lower productivity and survival than in the natural roosts they sought to replace/mitigate for the loss of (Griffiths 2021, Flaquer et al 2014).¹⁴
20. Based on the above information in paragraph 19, the DG is not supportive of this proposition. However, if the Consent Authority finds it appropriate to implement these, the proposed conditions as drafted do not specify how they should be installed, maintained or managed in perpetuity. To ensure effectiveness of installation and management, the conditions should require that the boxes are fitted with predator control bands and placed within the site, particularly in areas known for high bat activity. The artificial roost boxes should also be inspected at least once a year to check for signs of bat occupancy, ensure the predator control bands remain intact, and assess the overall condition of the boxes.

Predator control

21. 7.4 ha of pest control within the Lake Domain is proposed as a compensation measure for the removal of bat habitat. Whilst the DG supports this as a compensation measure, there is no information in relation to; what pests are being targeted, what are the target levels which pests are being reduced and how this will be measured, what time of year are pests reduced to these target levels, how will this be achieved, how long will pest control continue (e.g. that last as long

¹¹ [Artificial bat roost advice note.](#)

¹² Sedgeley JA. 2001. Quality of cavity microclimate as a factor influencing selection of maternity roosts by tree-dwelling bat, *Chalinolobus tuberculatus*, in New Zealand. *Journal of Applied Ecology*. 38(2):425:438.

¹³ Sedgeley JA, O'Donnell CFJ. 2004. Roost use by long-tailed bats in South Canterbury: examining predictions of roost-site selection in a highly fragmented landscape. *New Zealand Journal of Ecology*. 24(1):1:18.

¹⁴ Griffiths SR. 2021. Overheating turns a bat box into a death trap. *Pacific Conservation Biology*. Flaquer C, Puig X, Lopez-Baucells A, Torre I, Freixas L, Mas M, Porres X, Arizabalaga A. 2014. Could overheating turn bat boxes into death traps? *Barb Stella*. 7(1).

as the impacts, or preferably in perpetuity¹⁵). The DG is of the view that consent conditions should be amended to outline the above detail.

22. The proposed area of pest control does not take into account that effectively reducing pests in 7.4 ha will require pest control over a larger area to provide a buffer to allow for continual reinvasion of pests around the perimeter of the pest management area.
23. In addition to paragraph 20, the DG finds it more appropriate for these residual effects to be managed through the increase of predator control.

Monitoring of compensation measures

24. Following the imposition of the compensation measures as discussed in paragraphs 18-23, no monitoring is proposed to ensure that appropriate compensation has been delivered. Monitoring should include a report prepared by a suitably qualified person, confirming that compensation planting, artificial bat boxes and roost features, and predator control have been implemented in accordance with their respective conditions. This report should be provided to the Consent Authority upon the completion of works.

Decision sought

25. I seek the following decision from the Consent Authority:
 - a) If the Consent Authority is minded to grant consent, I seek that conditions are appropriate and enforceable, and that all management plans follow best practice. Ecological compensation for effects on biodiversity should align with the effects management hierarchy and include adequate measures to address the concerns raised in this submission. Potential measures could include:
 - Compensation for the loss of all potential bat roosts and foraging areas
 - Clear objectives in management plans
 - Defined lighting controls within the Light Management Plan
 - Consideration of unmanaged residual effects on LTB and their habitat
 - Clear predator control measures, including targeted species, control thresholds, and duration
 - Robust monitoring and compliance measures to ensure the compensation package is effectively delivered.

¹⁵ National Policy Statement for Indigenous Biodiversity 2023 (As Amended 2024), Appendix 4, principle (6).

I **do wish to be heard** in support of my submission.

If others make a similar submission, I will consider presenting a joint case with them at a hearing.



Niwha Jones

Operations Manager

Waikato

Acting pursuant to delegated authority on behalf of the Director-General of Conservation.

Date: 21 October 2025

Note: A copy of the Instrument of Delegation may be inspected at the Director-General's office at Conservation House Whare Kaupapa Atawhai, 18/32 Manners Street, Wellington 6011.

Address for service:

Attn: Ronan Whitelock, Resource Management Planner

rwhitelock@doc.govt.nz and cc to: RMA@doc.govt.nz

Department of Conservation

Private Bag 3072

Hamilton 3240