

Memo

To:	Jo Sunde, Woods	Job No:	2235
From:	Graham Ussher; RMA Ecology Ltd	Date:	31 July 2024
cc:			
Subject:	9, 33 and 49 Heights Road, Pukekohe, Auckland: ecological values		

Dear Jo,

This report details the results of an ecological assessment undertaken by RMA Ecology Ltd at 9, 33 and 49 Heights Road, Pukekohe, Auckland (see Figure 1 for the project investigations area) ('the site').

We understand that GBar Properties Ltd is seeking a Private Plan Change to rezone these sites from Future Urban to Business - Light Industry. As part of the Plan Change application, an assessment of the ecological values of the site is required.

The current land use is rural lifestyle with the western-most part of the site supporting a single dwelling, and grassed slopes, and the central and eastern areas developed as hardstand storage, workshop or recently landscaped slopes.

Access to all parts of the site was undertaken as part of the assessment process. Our assessment included a desk-top review as well as site-based survey to obtain an accurate assessment of ecological values across the site.

Initial site investigations were undertaken in October 2022, with additional investigations over summer 2022/2023. Following requests for further information from Auckland Council in August 2023, further work was subsequently undertaken on the site over summer 2023/2024.

This updated ecology assessment reports on the status of the ecological values at the site as at July 2024 and incorporates changes to the site that have occurred since 2022, and which are reported in the Clause 23 reply submitted to Auckland Council in February 2024.

This report has been prepared with regard to the ecological provisions of the Auckland Unitary Plan (AUP), the National Policy Statement for Freshwater Management 2020 (NPS-FM), the National Environmental Standard on Freshwater 2020 (NES-F), and the national Policy Statement for Indigenous Biodiversity (NPS-IB).

1 Assessment method

We applied the following assessment methods to the site:

1. Vegetation – notes on plant species across the site, with a focus on any rare or threatened native plants, those that comprise exotic or indigenous vegetation communities, or those which provide particular services (e.g. habitat or shading of watercourses).
2. Birds – notes on birds seen or heard, as well as comment on the availability and local importance of habitat for specific species.
3. Bats – the presence of habitat suitable for bats, and the context of the site in relation to known records of bats and the natural (or un-natural) state of the site.

4. Lizards – the likelihood that native lizards are present at the site, based on habitat availability and the existence of records of lizards nearby in the national database, Herpetofauna.
5. Streams/ watercourses – the presence of watercourses (drains, ephemeral flow paths) and streams (intermittent or permanent) as defined in the AUP.
6. Wetlands – given the prominence of wetlands in the NPS-FM and the potential constraints around activities within or near qualifying natural inland wetlands, we paid particular attention to the assessment of potential areas as wetlands, as outlined below.

The site was assessed for wetlands based on the definition in the AUP and the Resource Management Act 1991 (RMA). The site was also assessed for 'natural inland wetlands' based on the definition within the National Policy Statement for Freshwater Management 2020 (NPS-FM) (last amended January 2024).

The updated NPS-FM technical support documents regarding wetland classification and delineation require that a step-wise assessment is undertaken. That assessment includes application of the exclusion criteria based on pasture grassland, assessment of threatened species habitat use, and then application of three separate vegetation tests (Rapid Test, Dominance Test, and Prevalence Index). Wetland soils and hydrology information can be applied if the results of vegetation community and exotic pasture grass exclusion are inconclusive. Key for identification of natural inland wetlands at this site are whether any wet areas have developed in or around a deliberately constructed water body, or are dominated by pasture grasses.

We understand that the National Environmental Standards for Freshwater 2020 (NES-F) and NPS-FM require Councils to ensure that the loss of values and extent of 'natural inland wetlands' is avoided in most instances (excluding some activities, including urban development). The NPS-FM/ NES-F also restricts activities within a 10 m buffer around 'natural inland wetlands', and places controls on the level of potential adverse effects (from, for example, discharge of water or diversion of water) within 100 m from a 'natural inland wetland'.

The methodology applied for the identification of wetlands at this site was as follows (see Appendix B also):

- Visual assessment as to whether the potential wetland area could support a threatened species;
- Visual assessment as to whether the potential wetland and surrounding area is clearly dominated by pasture grass species (the Rapid Pasture Test);
- Visual assessment of areas where the vegetation composition includes species that are scored as wetland obligate, facultative wetland, or facultative (e.g., rushes, wet pasture or 'wetland-type' vegetation) as assessed by Clarkson *et al.*¹ (following the Pasture Exclusion Test, and Wetland Delineation Protocols as laid out in the Pasture Exclusion Assessment Methodology²);
- Where these compositions exist, an assessment of vegetation, soils, and hydrology is required according to the Pasture Exclusion Assessment Methodology:
 - Vegetation is assessed through plant identification and percentage cover estimates (as per the method described by Clarkson³) of 2 m x 2 m plot areas within each potential wetland area;

¹ Clarkson B. R., Fitzgerald N. B., Champion P. D., Forester L., Rance B. D. (2021). New Zealand wetland plant indicator status ratings 2021: Data associated with Manaaki Whenua - Landcare Research contract report LC3975 for Hawke's Bay Regional Council.

² Ministry for the Environment. 2022. Pasture exclusion assessment methodology. Wellington: Ministry for the Environment.

³ Clarkson, B. (2013). A vegetation tool for wetland delineation in New Zealand. Report prepared for Meridian Energy Limited by Landcare Research.

- Soils are assessed by applying the criteria outlined in Fraser (2018)⁴ for identifying hydric (wetland) soils – which involves excavation and examination for gleyed, mottled, peaty, or wet soils; and
- Hydrology is assessed by applying the criteria outlined in the Ministry for the Environment tool⁵;

An area can be classified as a wetland based on the definition within the AUP and the RMA, but not be classified as a ‘natural inland wetland’ under the NPS-FM because the definition of the latter includes some exclusions:

“Natural inland wetland means a wetland (as defined in the [Resource Management] Act) that is not:

- (a) in the coastal marine area; or*
- (b) a deliberately constructed wetland, other than a wetland constructed to offset impacts on, or to restore, an existing or former natural inland wetland; or*
- (c) a wetland that has developed in or around a deliberately constructed water body, since the construction of the water body; or*
- (d) a geothermal wetland; or*
- (e) a wetland that:*
 - (i) is within an area of pasture used for grazing; and*
 - (ii) has vegetation cover comprising more than 50% exotic pasture species (as identified in the National List of Exotic Pasture Species using the Pasture Exclusion Assessment Methodology (see clause 1.8)); unless*
 - (iii) the wetland is a location of a habitat of a threatened species identified under clause 3.8 of this National Policy Statement, in which case the exclusion in (e) does not apply”*

The boundaries of potential wetland areas are delineated by carrying out assessments of the various vegetation communities and through professional judgement.

⁴ Fraser S., Singleton P., Clarkson B. (2018). Hydric soils – field identification guide. Envirolink Tools Contract C09X1702. Manaaki Whenua – Landcare Research Contract Report LC3233 for Tasman District Council.

⁵ Ministry for the Environment. (2021). Wetland delineation hydrology tool for Aotearoa New Zealand. Wellington: Ministry for the Environment.

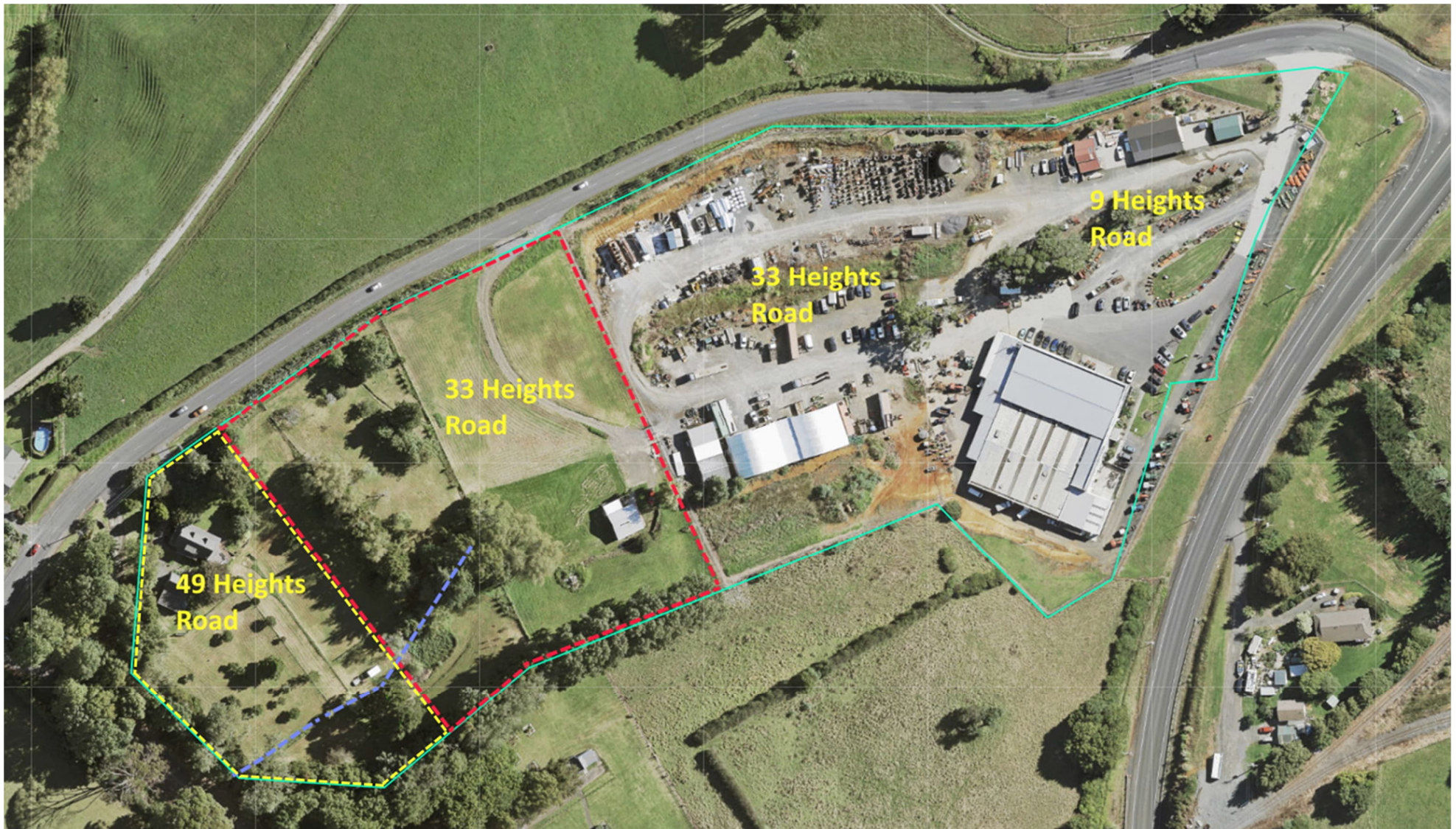


Figure 1. Investigations area (turquoise boundary; 9, 33 and 49 Heights Road), with confirmed overland flow path (blue dotted line). No wetlands or indigenous vegetation were recorded from the site. The red dotted polygon illustrates where pasture and treeland has been converted to hard stand (since the date of this aerial photograph), storage and a recently grassed shallow gully area. The yellow dotted line denotes the area cleared of all trees, gardens, and woody vegetation in early 2024 (permitted and/or authorised works).

2 Ecological values

9 Heights Road

9 Heights Road supports a commercial business with buildings, car parking, storage areas, workshops and access roads.

There are no streams, wetlands or native vegetation on the property, and very limited amenity planting, most of which is exotic. There are fifteen (15) retained native trees which occur in a single line along a mid-Lot scarp on the property. These trees are mature and are likely to be a remnant of when the site was in farmland. While some of the trees are young (ca. 30-40 years), most appear to be much older (80+ years old). Several of the tree contain crevices and splits that could offer habitat for bats. Of the fifteen native trees, 13 are totara (*Podocarpus totara var totara*) and two are kahikatea (*Dacrycarpus dacrydoides*).

Habitat for native lizards is completely lacking. Ground vegetation is young, weedy and only in very small patches. The only potential habitat trees for geckos are the 15 mature trees. All of the ground and tree habitat is surrounded by roads, parking, commercial works, and prior use was farming with surrounds in modified pasture. It is very unlikely that native skinks or geckos have persisted in this type of environment.

Similar, while the older trees support bat roost features, the trees are in an environment that is flood-lit, not near bush edges or flowing watercourses, has been separated from other viable roosting habitat for a long time, and has been subject to uncontrolled pest activity (possums, cats, mustelids, rats) for a long time. It is unlikely that bats are present. The closest records of bats are 8 km to the south-west beyond Pukekohe towards Waiuku with records at or around patches of mature old-growth forest and river margins.

See Plates 1 -3 for representative views.

33 Heights Road

Most of 33 Heights Road supports commercial activities as for 9 Heights Road. The western part of the property (shown as red dotted polygon in Figure 1) has recently been landscaped and most of this is also now under hard stand storage, sheds, and accessways.

The central portion of 33 Heights Road forms a shallow gully with a gradient to the east. Overland flow from 49 Heights Road is concentrated into this shallow gully. Recent works in this area have landscaped the gully and, as part of developing the central and eastern parts of 33 Heights Road, the overland flow has been historically culverted by way of consents.

There are no streams, wetlands or indigenous vegetation on 33 Heights Road. There is no woody vegetation; the only vegetation is kikuyu grassland – which comprises narrow strips along boundary fences, and recently sown/ sprouting fragments (along with ryegrass) within the recently landscape shallow gully area.

There is no habitat for native lizards or bats.

See Plates 3 - 8 for representative views.

49 Heights Road

49 Heights Road supports a dwelling– albeit in disrepair and overgrown from several years of lack of maintenance.

The site was recently cleared of all gardens and woody vegetation – including shelterbelts – and the paddock grass areas mown to a closely cut sward (see Plates).

The foot of the slope of the back yard supports an overland flow path, although in places this has been dug out to form a straight-sided channel over which a foot bridge and old path have been constructed. The flow path upslope and downslope of the excavated area does not exhibit characteristics consistent with the AUP definition of a stream, so we assume that the excavation of this channel in this part of the site has been for amenity / landscaping purposes.

The flow path receives flow from the property to the west – which in this case is the local cemetery within which surface flow from the parking bays and road access are fed into 49 Heights Road by way of a culvert.

Flows from the catchment to the north of Paerata Road are captured by the water tables either side of either Heights Road and diverted towards Paerata Road (flow from this part of the catchment does not across the subject site).

There are no wetlands or streams or indigenous vegetation on the property.

There is no habitat for bat or lizards on the property.

A survey for bats undertaken by Habitat NZ in October 2023 found no sign of bats (Attachment A).

See Plates 9 - 12 for representative views.

Overall values across the site

Streams, wetlands and vegetation

The site does not support any streams, wetlands or indigenous vegetation.

There are no wetlands or potentially qualifying wetlands within 100 m of the site, based on an examination of aerial photography and observations while on site looking for wetland plant species (likely to pass the Rapid Test) in the vicinity of the site.

The site supports 15 native trees, all of which are located on 9 Heights Road and surrounded by existing hardstand and commercial uses.

Avifauna

Birds seen or heard across the site comprise common native or exotic species – as would be expected for a cosmopolitan avifauna. No At Risk or Threatened species of birds were observed or recorded.

In terms of bats, the nearest record is 8 km to the south-west. While some trees (5 trees on 9 Heights Road) support apparent cavities and splits that may be potential bat habitat, there is a very low likelihood of bats being present given the urbanised setting, and lack of ponds, streams, mature bush patch edges and surrounds being pasture and hard surfaces.

A survey of bats on 49 Heights Road found none.

Herpetofauna

There is no habitat for native lizards on any of the properties.

Overall, the site does not trigger any of the Schedule 3 criteria for SEAs – namely Representativeness, Rarity, Connections, Buffers.

National Policy Statement for Indigenous Biodiversity (NPS-IB).

The NPS-IB provides protection to SNA areas, and requires either avoidance of adverse effects or management of adverse effects on indigenous biodiversity.

There are no SEAs (i.e. qualifying SNAs under the NPS-IB) on this site.

This site does not support native vegetation, with the exception of 15 individual native trees on 9 Heights Road that are surrounded by hardstand and commercial uses, rather than a native vegetation habitat.

This site does not support native bats or lizards.

There are no trees or shrubs on the site that provide habitat of native birds – these have all been removed since our initial ecological assessment.

Any native biodiversity that does use the site (such as pukeko) would not constitute a 'significant adverse effect' from the development of the site (ie. the threshold required by the NPS-IB for adverse effects on non-SNA habitat for indigenous biodiversity).

Therefore, under the NPS-IB no action is required to minimise, remediate, offset, or compensation for loss of any potential indigenous biodiversity that may use the site.



Plate 1. 9 Heights Road showing site dominated by commercial activities. A small mid-Lot scarp supports some mature native trees, including 13 totara and 2 kahikatea (indicated by green arrows).



Plates 2 and 3. 9 Heights Road (left) showing hard stand and parking areas, and a view from the central part of 33 Heights Road looking east towards 9 Heights Road (right) showing extensive developed areas. The mature trees shown in Plate 1 are in the background of Plate 3.



Plates 4 and 5. 33 Heights Road showing typical commercial activity. Left photo is looking up the shallow gully towards 49 Heights Road.



Plates 6 and 7. 33 Heights Road western end showing recent landscape works in the shallow gully (left photo looking down gully into 33 Heights Road after heavy rain; right photo looking up the shallow gully towards 49 Heights Road after heavy rain). Grasses establishing within landscaped areas are ryegrass and kikuyu.



Plate 8. 33 Heights Road panoramic view taken from the southern side and showing part of 49 Heights Road (to the left) around to the lower part of 33 Heights Road (to the right). All trees and pasture shown within the red dotted polygon on Figure 1 have been removed and the area converted to hard-stand and landscape shallow gully (within which the overland flow path traverses).



Plates 9-11. 49 Heights Road photos of the dwelling and garden/ paddock surrounds. All vegetation with potential habitat to support lizards, birds or bats has been removed.



Plates 12 and 13. Cemetery adjoining 49 Heights Road to the south with car parking and road areas (top left and right) contributing overland flow to the overland flow path through 49 Heights Road (bottom left – looking down-gully, and bottom right – looking up-gully). The overland flow path is piped further down under 9 and 33 Heights Road.



Plates 14 and 15. 49 Heights Road looking along the roadside boundary (left) and from the bottom paddock up the southern boundary fenceline (right). All shelterbelt trees, gardens and vegetation that might support lizards, birds or bats has been removed.

A summary of the ecological values within the site, and nearby is provided in Table 1.

Overall ecological values of the site are essentially nil or close to it.

Table 1. Presence and condition of ecological values at the site.

Ecological factor	9 and 33 Heights Road	49 Heights Road
Indigenous vegetation	No vegetation, but supports 15 totara/ kahikatea trees	No vegetation
Threatened or At Risk plant species	Nil	Nil
Lizards	Nil habitat	Nil habitat
Birds	Nil/ few- Overall values nil	Common exotic/ native urban spp. Overall values poor
Bats	Poor or nil habitat	Nil habitat
Streams	nil	nil
Wetlands	Nil	nil

3 Potential ecological effects – and conclusion

We have viewed the Scheme Plan (P18-188-UD101 Rev A) for the site. Any remaining vegetation across the site will be removed as part of the proposed future development.

The existing ecological values are:

- nil for wetlands, streams, and indigenous vegetation; and
- very low or nil for bat habitat and lizard habitat and native bird resources.

Given the very low or nil values to indigenous species and ecology on this site, we do not consider there to be any need for ecologically-focussed mitigation, and no need for offsetting or compensation for the removal of vegetation across the site. We assume that standard erosion and sediment controls would apply, as would environmentally-sensitive stormwater management design.

There are no ecology values that should be noted on the Masterplan as constraints to development.

Yours sincerely,



Graham Ussher, Principal Ecologist⁶

31-Jul-24

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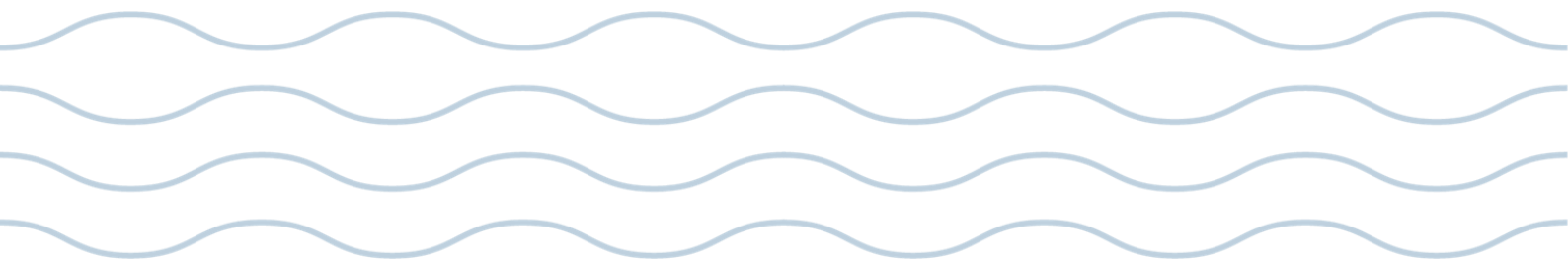
⁶ This report has been prepared for the benefit of our Client with respect to the particular brief given to us and it may not be relied upon in other contexts or for any other purpose without our prior review and agreement. Any use or reliance by a third party is at that party's own risk. Where information has been supplied by the Client or obtained from other external sources, it has been assumed that it is accurate, without independent verification, unless otherwise indicated. No liability or responsibility is accepted by RMA Ecology Limited for any errors or omissions to the extent that they arise from inaccurate information provided by the Client or any external source.

Appendix A – bat survey report

49 Heights Road

Bat Roost Protocol Assessment

February 2024



Prepared for:

RMA Ecology Ltd.

Prepared by:

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Project No:

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1 Background

In October 2023, Habitat NZ was contracted to carry out an assessment of the risk to bats of vegetation removal at 49 Heights Road, Pukekohe. This work was carried out by Keith Barber (BHC0117), in accordance with the 2021 Department of Conservation Bat Roost Protocols for minimising the risk of felling bat roosts.

2 Assessment of bat habitat on the site

An initial desktop assessment was made of the likelihood of bats being present at the site. A review of the site location and records in the National Bat database identified multiple records of long-tailed bats recently being detected near the site. This meant that long-tailed bats could be present or occasionally use the site.

On 23 Nov 2023, Keith Barber and Therese Barber visited 49 Heights Road to assess vegetation for the presence of High-Risk trees ahead of upcoming vegetation removal activities. High-risk trees have features such as holes, cracks, cavities, etc., within which bats may potentially roost. Of the approximately 95 trees on the site, approximately 15 were considered high-risk bat habitat. Trees regarded as low risk were marked with a solid ring of dayglow paint around the trunk at chest height, while high-risk trees were left unmarked. A full description of this assessment is presented in Appendix 1. Trees marked as low risk were removed before further evaluation at the site.

On 17 and 19 January 2024, six Wildlife Acoustics “Minibat” Automatic Bat Detectors (ABMs) were placed around the site overnight, as identified in Appendix 2. These were used to determine any presence of bats in the remaining potentially high-risk trees. Conditions on these two nights were within the monitoring parameters of the Bat Roosts Protocols (DOC 2021). Both nights had fine weather, with no rainfall and minimum temperatures of 19.1 degrees on night one and 17.9 degrees on night two.

Data from the six ABMs was downloaded after 9 am on 19 January. No bat calls had been recorded on any of the devices. Felling of all remaining trees commenced and was overseen by Keith Barber. All potential bat roosts were visually inspected to ensure no bats that had been previously undetected were present. No bats were detected during these inspections.

3 Summary

The Bat Roost Protocol checks were carried out for all vegetation at 49 Heights Road in November and January 2023 following the Bat Roost Protocols (DOC 2021). No bat activity was recorded at the site during the assessment, either pre-, during, or after the felling operations.

Appendix 1 Heights Road Vegetation Assessment

Location: 49 Heights Road, Pukekohe

Purpose: Habitat identification and de-risking

Attendance: Keith Barber, Therese Barber

Low-risk trees marked for removal

Tree #	Species	Risk assessment	Comment
1-17	Mixed garden and citrus	Low risk	Predominantly small trees and/or no roost features
18		Low risk	Small hole low down, wet inside
19		Low risk	Small broken branch @3.5m, possible small occlusion @4m, not deep enough for roost
20-23		Low risk	
24		Low risk	Well-maintained tree near the house, with little evidence of rotting branches.
25-34	Mixed fruit trees	Low risk	
35	Large totara	Low risk	Although large, it has no roost features
36-60	Cedar	Low risk	Marked trees along the boundary fence line, from the SE to the S corner. No evidence of broken branches, hollows, or other roosting sites NOTE: Not all trees along the boundary are clear for felling
60-80+	Cedar	Low risk	Marked trees along the boundary fence line, S corner, west side to Height Rd driveway entrance. No evidence of broken branches, hollows, or other roosting sites NOTE: Not all trees along the boundary are clear for felling

Possible roost habitat trees (as shown in Figure 1)

Location	Species	Risk assessment	Comment
A. Lawn area east of driveway	Oak, sycamore	High risk	Possible roost habitat - knot holes, crevice
B. Central paddock	Totara cluster x3	High risk	Cracks, possible obscured features
C. Bottom SE corner	Large totara	High risk	Marginal but possibly obscured features
D. Boundary fence line SE corner to south corner to Height Rd driveway entrance	Multiple oak & cypress trees	High risk	Knot holes, crevices, broken branches, and possible obscured features

Figure 1: Location of high-risk bat roost habitat trees



Appendix 2 ABM Locations

Figure 2: Heights Road ABM locations 16 and 17 Jan 2024



Appendix 3 Photographs of 49 Heights Road



Figure 3: Property with all vegetation standing, at time of first assessment in November 2023.



Figure 4: Property with low-risk trees removed and high-risk trees remaining, January 2024.



Figure 5: Area of felled high-risk trees after visual searching for bats, January 2024.



Figure 6: Examples of bat roost features searched after high-risk trees were felled.

References

Department of Conservation (2021). Protocols for minimising the risk of felling bat roosts (Bat Roost Protocols (BRP)). Department of Conservation, Wellington.