

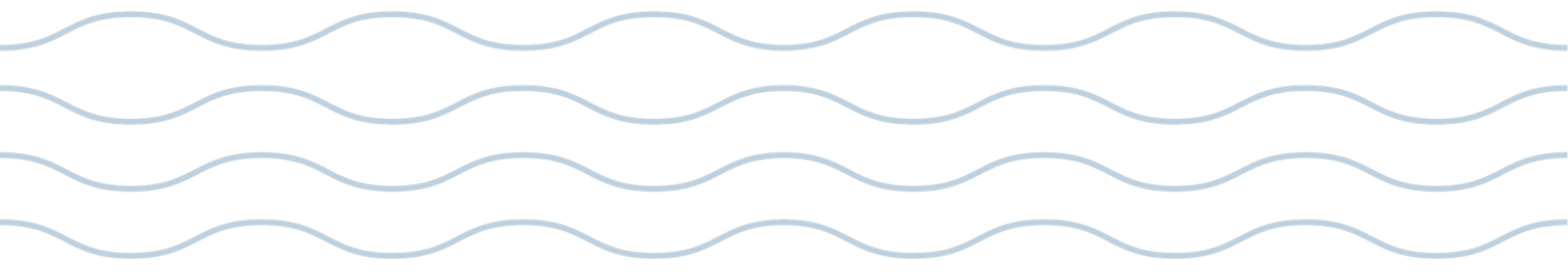


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Bendigo-Ophir Gold Project

Native Bat Survey

September 2025



Prepared for:

Matakanui Gold Ltd
15 Chardonnay Street
Cromwell

Prepared by:

Habitat NZ Ltd
Auckland
www.habitatnz.co.nz

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Abbreviation List

Abbreviation	Term	Meaning
AEE	Assessment of Environmental Effects	Report that will be informed by the surveys completed by Habitat NZ Ltd and other relevant ecology companies.
ABMs	Automatic Bat Monitors	Device placed at least 1.2m off the ground, which records and stores ultrasonic sounds, alongside the date/time, in the hours before and after sunset
BOGP	Bendigo-Ophir Gold Project	Is the topic of this resource consent application and covers approximately 550 ha
CIT	Come-In-Time	Area of land with gold resource containing a Mineral Resource Estimation (MRE) (2021) of 59,000oz of gold at a grade of 1.5g/t
DDF	Direct Disturbance Footprint	550ha area of land within the BOGP study area covering gold mining and ancillary activity areas that cause direct habitat loss. Includes a 150m buffer
DOC	Department of Conservation	New Zealand government agency charged with conserving natural and historic heritage within the country
eDNA	Environmental DNA	Emerging technique that analyses the genomic make-up of a sample (e.g. water, sediment, animal gut) to see what organisms may have been present
ELF	Engineered Landform	Overburden rock stack where rock is placed, engineered to achieve geochemical outcome
EPA	Environmental Protection Authority	New Zealand government agency responsible for regulating activities within the country that affect the environment
ESA	Ecological Study Area	5,000ha area of land composed of a mix of grazing lands, leasehold Crown land, and Crown land, with the 1,300ha BOGP study area in the centre.
GIS	Geographic Information System	Computer based tool that connects information and data about locations to the location
MGL	Matakanui Gold Limited	New Zealand company wholly owned subsidiary of Santana Minerals Ltd
MRE	Mineral Resource Estimation	Evaluation estimating the grade and tonnage of an ore in a deposit.
PSA	Project Study Area	Footprint of the land which will be significantly impacted/modified by the proposed Bendigo-Ophir gold mining operations, as of when study designs were made (Nov 2023). Later modified to the DDF
RAS	Rise and Shine	Area of land with gold resource containing a MRE (2024) of 2,217,000oz of gold at a grade of 2.3g/t
RMA	Resource Management Act	Resource Management Act 1991
SL	Surrounding Landscape	Area within the ESA that is not part of the DDF/PSA or BOGP. Provides the ecological context to these areas

Abbreviation	Term	Meaning
SRE	Srex East	Area of land with gold resource containing a MRE (2021) of 11,000oz of gold at a grade of 1.3g/t
SRX	Srex	Area of land with gold resource containing a MRE (2021) of 174,000oz of gold at a grade of 1.1g/t
SRX ELF	Srex elf	Engineered landform for the adjoining SRX Open Pit
TSF	Tailings Storage Facility	Engineered structures designed and constructed to hold mineral waste (tailings) generated after the gold has been recovered at the processing plant.

Executive Summary

This report details a comprehensive native bat survey across the Bendigo Ophir Gold Project (BOGP) Ecological Study Area (ESA). It informs the Assessment of Environmental Effects (AEE) for the project. **The report concludes that native bats were not found in the ESA and are not likely to be affected by proposed mining activities at the site. Data within the report suggests further consideration of potential effects on bat populations is not warranted in subsequent stages of the consent process for the BOGP.**

Background

Matakanui Gold Limited (MGL) is proposing to establish the Bendigo-Ophir Gold Project (BOGP), which comprises a new gold mine, ancillary facilities and environmental mitigation measures on Bendigo and Ardgour Stations in the Dunstan Mountains of Central Otago. The project site is located approximately 20km north of Cromwell and will have a maximum disturbance footprint of 550 hectares.

The BOGP involves mining four identified gold deposits referred to as Rise and Shine (RAS), Come in Time (CIT), Srex (SRX) and Srex East (SRE). The resources will be mined by open pit methods at each deposit within the project site, with underground mining methods also proposed to be utilised at RAS to access the deeper gold deposits. The majority of the mining activities, ancillary facilities and associated infrastructure will be located in the Shepherds Valley – which includes a conventional gold processing plant and water treatment plant, a tailing storing facility, two engineered landforms, internal haul roads, topsoil stockpiles, water pipelines, underground utilities and electrical supply with non-operational infrastructure located on the adjoining Ardgour Terrace. The BOGP also involves taking groundwater from the Bendigo Aquifer for mining-related activities and the realignment of Thomson Gorge Road via Ardgour Station.

Habitat NZ Ltd performed a comprehensive native bat survey across the 5,000-hectare ESA to support the project's AEE. The survey methodology included a review of the National Bat Database and strategic deployment of Automatic Bat Monitors (ABMs) at ecologically significant locations to detect any bat presence within or through the ESA during the 2023-2024 summer survey period.

Key Findings

- **Native bat absence:** The National Bat Database review and acoustic monitoring surveys found no evidence of long-tailed (*Chalinolobus tuberculatus*) or lesser short-tailed bats (*Mystacina tuberculata*) using the BOGP ESA for any purpose, including resting, foraging or commuting, during the 2023 – 2024 summer survey periods. Acoustic monitoring surveys were undertaken during valid periods of likely high bat activity and in locations that included major habitat features expected to be used by bats if they were present in the BOGP bat survey area.

Conclusion

This native bat survey provides a thorough baseline of the absence of native bats within the ESA. The findings highlight that while potential occasional presence cannot be ruled out, it is unlikely that long-tailed bats are regularly present and extremely unlikely that lesser short-tailed bats are present in the BOGP ESA. This is based on the National Bat Database review results, acoustic monitoring surveys, and the relative lack of suitable roosting habitats

1 Introduction

1.1 Bendigo-Ophir Gold Project description

Matakanui Gold Limited (MGL) is proposing to establish the Bendigo-Ophir Gold Project (BOGP), which comprises a new gold mine, ancillary facilities and environmental mitigation measures on Bendigo and Ardgour Stations in the Dunstan Mountains of Central Otago. The project site is located approximately 20 km north of Cromwell.

The BOGP is located within the footprint of Minerals Exploration Permit 60311, which is held by MGL under the Crown Minerals Act 1991. MGL also has land access agreements with Bendigo and Ardgour Stations. The BOGP is located adjacent to land administered by the Department of Conservation (DOC), including the Bendigo Historic Reserve, the Bendigo Conservation Area and the Ardgour Conservation Area.

The BOGP involves mining four identified gold deposits named Rise and Shine (RAS), Come in Time (CIT), Srex (SRX) and Srex East (SRE). The resources will be mined by open pit methods at each deposit within the project site, with underground mining methods also proposed to be utilised at RAS to access the deeper gold deposits. The majority of the mining activities, ancillary facilities and associated infrastructure will be located in the Shepherds Valley, with an additional general and administration area located on the adjoining Ardgour Terrace.

Figure 1 below provides an overview of the footprint associated with the establishment, operation and rehabilitation of the BOGP, which includes a maximum disturbance footprint of 550 hectares.

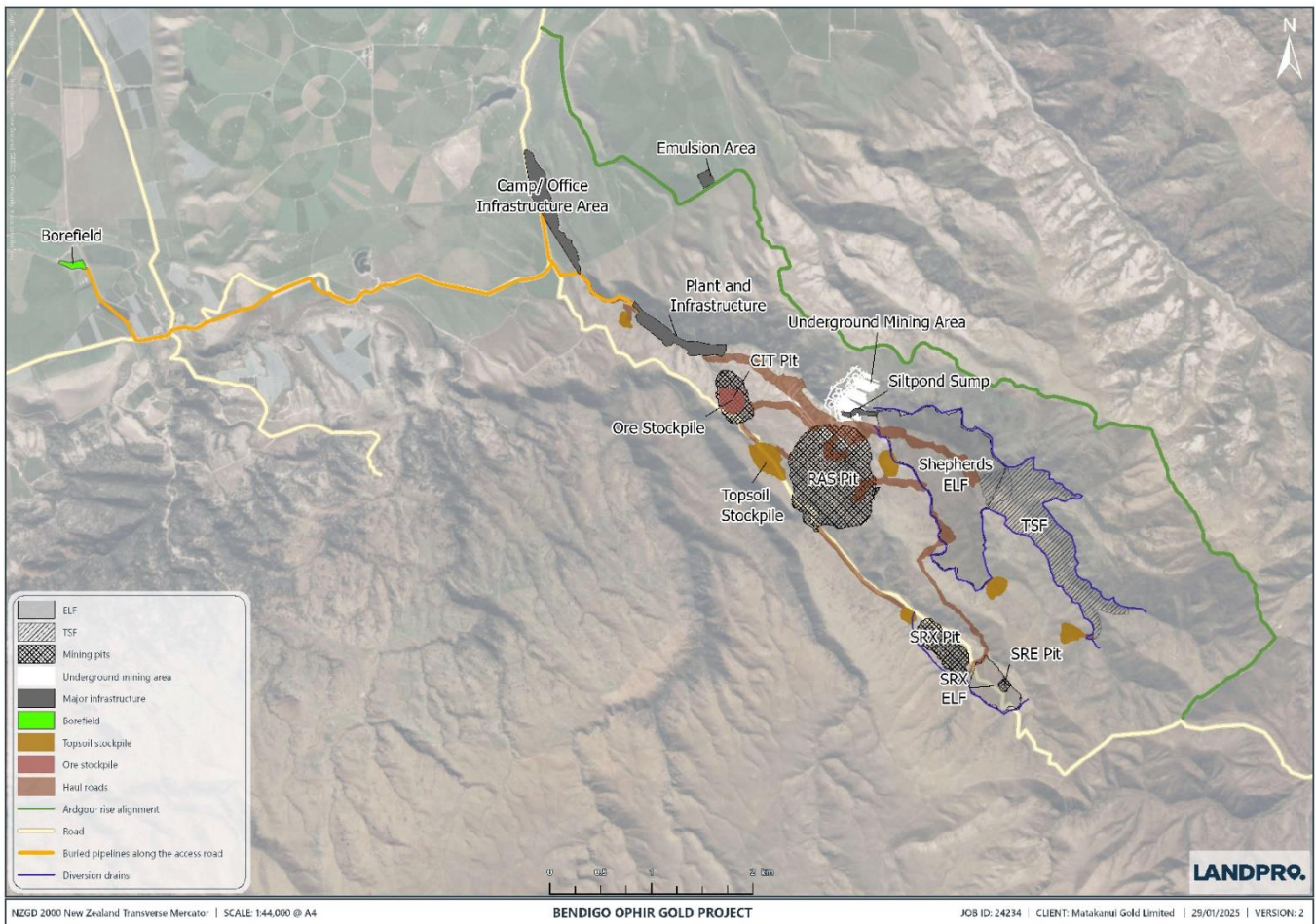


Figure 1: Overview site layout of the Bendigo-Ophir Gold Project

A full description of the various activities comprising the establishment, operation and rehabilitation of the BOGP is provided in the Assessment of Environmental Effects prepared by Mitchell Daysh Limited. However, by way of summary, the BOGP includes the following components:

- The establishment of the RAS Open Pit and Underground Mine and SRX Open Pit, which will be rehabilitated to pit lakes at closure
- The establishment of the CIT Open Pit, which will be progressively backfilled with waste rock from the RAS Open Pit and rehabilitated to native herb fields (to integrate with the surrounding area) at the completion of mining activities
- The establishment of the SRE Open Pit, which will be progressively rehabilitated with waste rock before becoming an engineered landform for the adjoining SRX Open Pit ("SRX ELF")
- A conventional hard rock gold processing plant and water treatment plant in the lower reach of Shepherds Valley, along with associated processing infrastructure and ancillary activities, including mine offices, carparking, workshops and equipment servicing infrastructure, a goods warehouse and a fuel depot. The establishment of this mining operations area will also include the realignment of Shepherds Creek
- The establishment of a water storage tank near to the processing plant

- The establishment of a Tailings Storage Facility (“TSF”) in the upper reach of Shepherds Valley (including clean water diversion drains), which will utilise waste rock from mining activities within the project site
- The establishment of engineered landforms in the Shepherds Valley (“Shepherds ELF”) and Rise and Shine Valley (“SRX ELF”) to permanently store overburden waste rock
- The establishment of temporary and permanent topsoil stockpiles and biological rehabilitation resource storage areas around the project site
- The taking of groundwater from the Bendigo Aquifer for use in mining-related activities, which will be conveyed to the processing plant via a pipeline over a distance of approximately 6.5 km
- The establishment of supporting infrastructure / activities within the project site, such as the upgrade of Ardgour Road and the extension of Thomson Gorge Road to provide improved access to the BOGP, internal mine access and haul roads, water pipelines and underground utilities, and electricity supply to the project site from Lindis Crossing via a new 66kV overhead powerline that will follow the existing road reserve corridor
- The realignment of Thomson Gorge Road, via Ardgour Station, to provide public access through to the Manuherikia Valley
- Main explosives magazines and emulsion mixing facilities (located outside the project site on Ardgour Station)
- The establishment of non-operational infrastructure associated with the BOGP on the Ardgour Terrace, including an administration office, high voltage substation and temporary construction workers accommodation
- The establishment of a construction and demolition landfill within the Shepherds ELF.

1.2 Report purpose and scope

MGL commissioned a suite of ecological studies to inform the AEE. To this end, Habitat NZ Ltd was engaged to assess the presence of native bats within the BOGP study area and surrounding landscapes.

This report describes results of bat presence surveys for the Bendigo-Ophir Gold Project undertaken through the 2023 – 2024 summer season. It includes details of a desktop review of the National Bat Database (Department of Conservation 2023) to identify records of native bat presence in the broader landscape, and results of acoustic bat monitoring within the BOGP study area and surrounding landscapes.

2 Ecological context

2.1 Native bat conservation status

There are two species of native bat in the South Island; the long-tailed bat (*Chalinolobus tuberculatus*) and the lesser short-tailed bat (*Mystacina tuberculata*). At the time of undertaking the bat survey, Department of Conservation (DOC) records indicated long-tailed bats may be present in the immediate area of Dunstan Mountains (see section 4.1). The regional threat classification for native bat species in the Otago Region (Jarvie *et al.* 2023) indicates long-tailed bats have been known to occur near the Territorial Authority area that includes the Dunstan Mountains.

Long-tailed bats are classified as “Threatened – Nationally Critical” (O’Donnel *et al.* 2023); the highest threat classification possible for wildlife in NZ. They have an estimated population decline rate of 5-9% per annum, which is likely caused by predation, habitat loss and disease (O’Donnel *et al.* 2023). This species can have large home ranges, with colonies covering more than 10,000 hectares (100 square kilometres) (O’Donnel 2001).

The lesser short-tailed bat (*Mystacina tuberculata*) is classified as “Threatened – Nationally Increasing”. In the South Island, the species has reduced to only three known populations which remain localised and vulnerable. One of these populations is in Eglinton Valley, approximately 100km from the BOGP study area.

Long-tailed and lesser short-tailed bats are listed as ‘specified highly mobile fauna’ in the National Policy Statement on Indigenous Biodiversity 2023 (Ministry for the Environment 2023). Both species are indicated as being under pressure from long-term climate trends and/or extreme events, predation and impacts of human activity. As such, their management is a high priority for councils throughout the country.

2.2 Bat habitat and use

Long-tailed bats use linear landscape features, such as forest edges, creek lines, and valleys, as flyways to commute between foraging and roosting locations (O’Donnel 2000). They are nocturnal feeders and maintain generalist diets consisting of various airborne terrestrial and aquatic invertebrates caught mid-air (Gurau 2014). They forage in flight along vegetation edge lines, open gaps and immediately above the canopy. By day, they roost in mature native and exotic trees that provide sufficient shelter (O’Donnel and Sedgely 1999, Sedgely and O’Donnel 2004).

Lesser short-tailed bats are also nocturnal feeders, having a diet of insects, nectar, pollen and fruit (Lloyd 2001). By contrast, they forage on the ground and in flight. Their flight is fast and direct, usually among trees, low to the ground under the canopy of large forests. Short-tailed bats have been recorded in a variety of habitats (logged forest, scrubland, pine plantations and farmland); however, they are dependent on indigenous forest and intact old-growth habitat (Lloyd 2001).

2.3 Bat survey area

The area within which the bat surveys were conducted comprises a mix of semi-arid private grazing land, leasehold Crown Land and Crown Land administered by DOC. The area has moderate topography, with hills rising from the Bendigo terraces at 370mRL in the west to approximately 1200mRL on the face of Mt Moka in the east. The bat survey area covers approximately 5,000ha, as shown in Figure 2. This includes the main portion of the ESA, however a non-contiguous area by Lake Dunstan to the south west of the main area was not included.

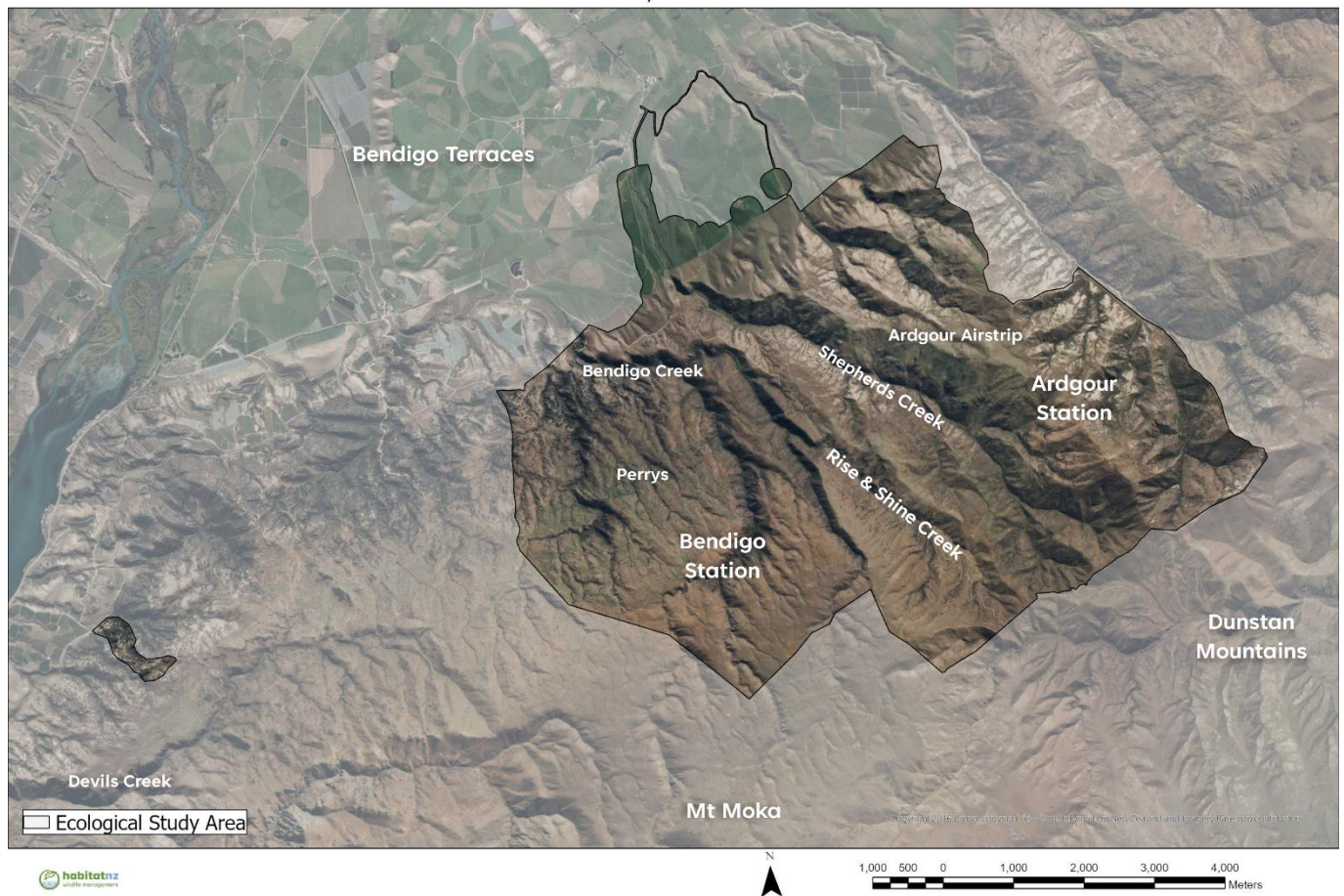


Figure 2: Bat survey area and key landscape locations for Bendigo-Ophir Gold Project ¹

With vegetation across most of the area being grey scrub, tussock and other low-growing vegetation, there is little suitable roosting habitat for bats despite the large study area size. However, several areas contain large trees with features suitable for bat roosting, resting, foraging, or other essential behaviours. This includes poplar trees (*Populus spp.*) in Srex East, mature pines (*Pinus radiata*) adjacent to the site, and several areas of willows (*Salix spp.*) along Shepherds Creek, Bendigo Creek and on the outskirts of Ardour Station. There are no areas of old-growth indigenous forest habitat to support short-tailed bats within or near the bat survey area. For a full description of vegetation and habitat see the Bendigo-Ophir Gold Project: Vegetation Values Assessment (RMA Ecology Ltd. 2025a).

The site also contains several wetland areas, creeks, and streams, which could be used as flyways for commuting bats or foraging sites for airborne aquatic invertebrates. Detailed descriptions of wetlands throughout the site can be found in the Bendigo-Ophir Gold Project: Wetland Values Assessment (RMA Ecology Ltd. 2025b)

¹ The study area boundary presented here is accurate at publication and provided for reference purposes only. It differs from the boundary used when designing the initial ABM monitoring programme. All subsequent maps in this document represent the boundary when surveys were designed and conducted.

3 Methodology

3.1 Database and literature review

The National Bat Database, administered by DOC, contains GIS records of bat sightings and monitoring activities across New Zealand, both historic and recent (Department of Conservation 2023). It is updated regularly with new data as monitoring is conducted. Organisations or individuals can submit and access monitoring activity records with positive and nil bat recordings to learn about bat species distribution and how that changes over time.

A database review was conducted to identify where monitoring has been carried out within approximately 60km of the BOGP study area and whether any recent positive bat records exist. Follow-up conversations were held between Habitat NZ and DOC in September 2023 to discuss concerns about the validity of records. Literature relating to long-tailed and lesser short-tailed bats conservation status, habitat use, and behaviour was also reviewed, with findings used to design an appropriate survey programme.

3.2 Acoustic bat surveys

Survey design

The objective of the survey programme was to detect the presence of bats across the bat survey area, as DOC records at the time indicated bats could be present within or surrounding this location.

As bats are highly mobile, have patchy distribution, and are only active at night, they are difficult to detect (Sedgely and O'Donnell 2012). Automatic Bat Monitors (ABMs) are the preferred method for presence surveys as they allow for:

- Multiple devices being deployed for long periods, providing effective coverage of large areas
- Sampling for full nights from dusk to dawn
- Fewer labour resources and reduced safety risks of night-time work for line transects
- Detection of either bat species
- Automatic storage and permanent records with standardised analysis (Sedgely 2012).

The preferred months for monitoring are between October and March, when bats are most active (Sedgely and O'Donnell 2012). Monitoring for bat presence was conducted across two periods of likely high activity and mobility. These were:

- Round 1: 27th November – 22nd December 2023
- Round 2: 4th March – 5th April 2024.

Devices

ABMs² used in the surveys passively record ultrasonic sounds and store them as spectrograms of sound wave frequencies alongside the date and time of occurrence. The ABMs were programmed to record full spectrum files of bat passes from one hour before sunset until one hour after sunrise each night. Each ABM automatically identifies sunset and sunrise times through the built-in function to correlate GPS position to local sunrise/sunset time.

² Song Meter Mini Bat 2 Ultrasonic Recorder, manufactured by Wildlife Acoustics

Site selection

ABMs were deployed at 28 sites across the bat survey area. Because bat activity can vary between habitats (O'Donnel 2000), ABM monitoring locations were chosen to cover the bat survey area thoroughly. This included sampling major features such as potential roosting trees, flyways or movement corridors, and possible foraging grounds within or nearby the bat survey area.

ABMs were positioned to detect bat passes near open ponds, streams, wetlands, valleys, ridges and edges that long-tailed bats could utilise. Two ABM locations were adjusted for the second survey round as the nearby ponds had dried up during mid-summer. These monitors were repositioned to a flowing creek, representing a better potential bat habitat.

The set-out and deployment of ABMs generally followed best practice guidelines as outlined by DOC in the 'Bats: counting away from roosts – automatic bat detectors' specification (Sedgely 2012), with consideration for the manufacturer's technical specifications. Figure 3 shows the locations of deployed ABMs.

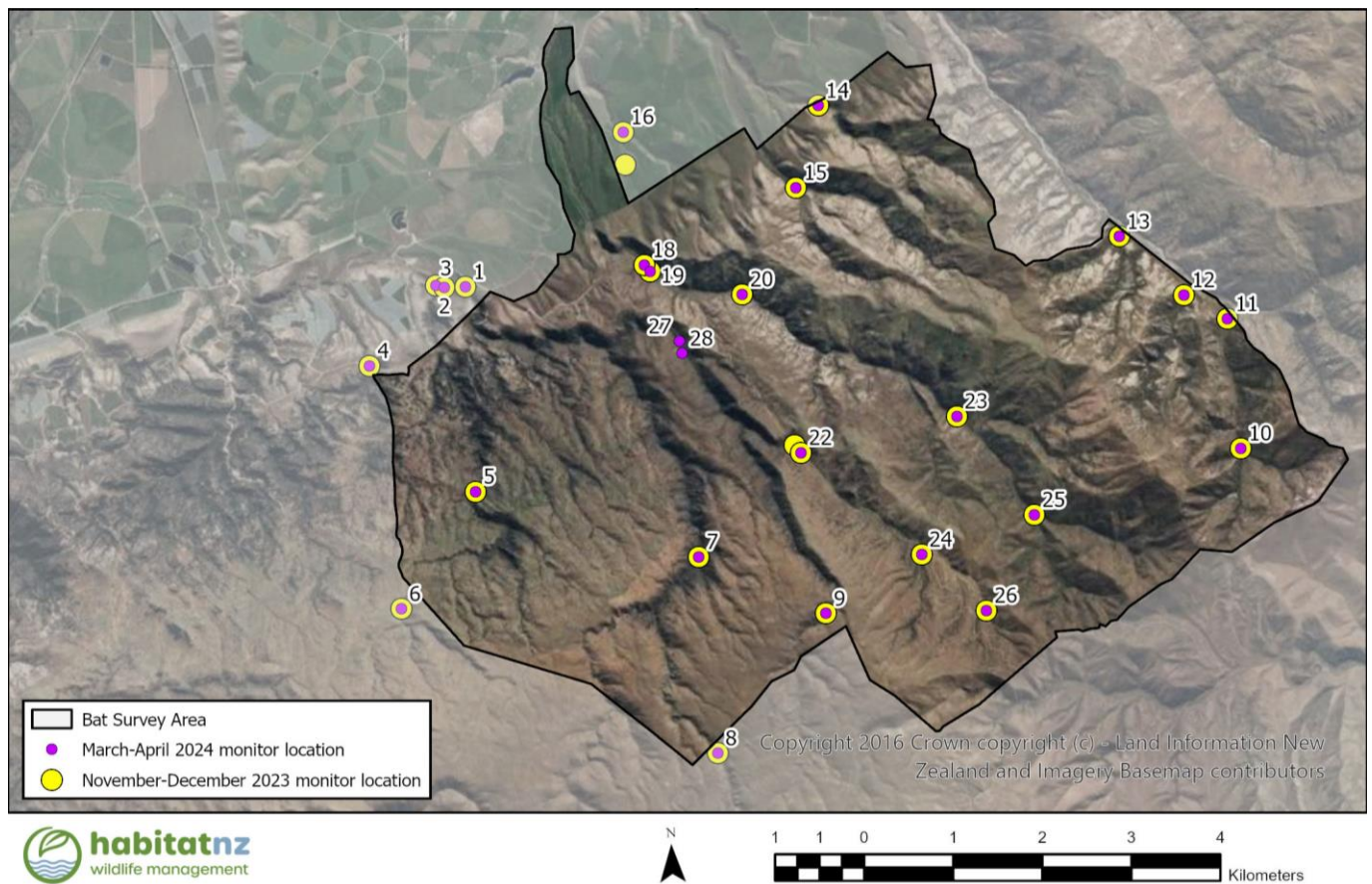


Figure 3. Bendigo-Ophir Gold Project bat monitor (ABM) locations

Deployment

ABMs were suspended between 1.2m and 5m off the ground in a range of vegetation types with minimal surrounding foliage or obstruction, such as on fence posts in tussock habitat, shrubs, larger poplar trees (*Populus spp.*), mature pines (*Pinus radiata*), and willows (*Salix spp.*). Figure 4 shows a typical ABM deployment.



Figure 4: Typical deployment of ABM in a Matagouri bush, with a green circle highlighting the location

Data processing

All acoustic recordings obtained during the two survey periods were analysed using Anabat Insight software (Titlley Scientific) to filter positive bat calls (passes) from other recordings in similar frequency ranges not attributable to bats (e.g. rat, insect, and bird calls). The process involves reviewing each acoustic recording and comparing it to known characteristics of native bats. Detailed results for each ABM are provided in Appendix A with results discussed in the section 4.

It is important to note that ABMs indicate bat activity levels rather than species abundance. As the movement of an individual bat can generate multiple passes, there is no way to correlate ABM data with actual bat population levels (Sedgely 2012).

The ABMs used for the survey detect echolocations of all New Zealand native bat species, however, short-tailed bat calls were not expected due to the absence of old-growth indigenous forest habitat within the bat survey area. Although there are regional differences in long-tailed bat echolocation calls throughout New Zealand, calls from all areas of the country have broadly similar characteristics (Parsons 1997). Typical long-tailed bat echolocations can be seen as spectrograms of the sound wave frequencies in Figure 5.

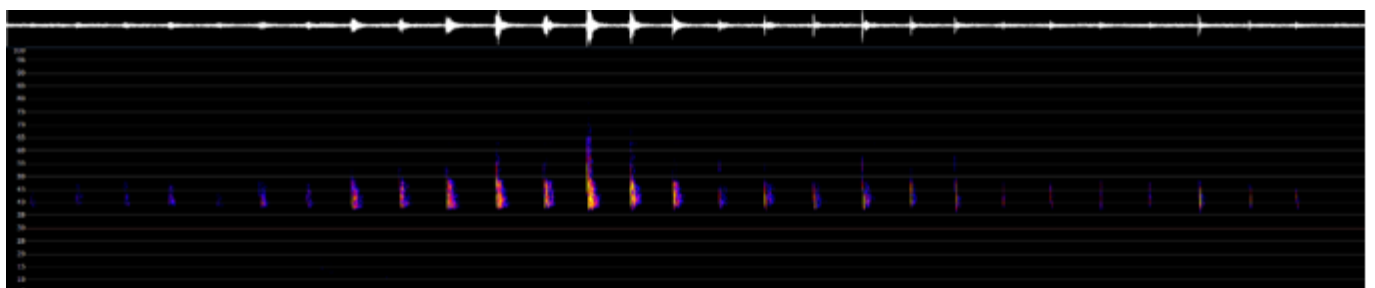


Figure 5: Typical long-tailed bat echolocation search calls as viewed in Anabat Insight. The frequency range of echolocations is provided on the left axis, and the amplitude of each call is shown at the top of the image

Long-tailed bats can create a ‘terminal-buzz’ echolocation, also known as a ‘feeding-buzz’, thought to aid the identification of moving targets from their surrounding environment (Parsons *et al.* 1997), as shown in Figure 6. Therefore, terminal buzzes on ABM recordings indicate bat foraging behaviour and provide information about a site's importance as a feeding ground.

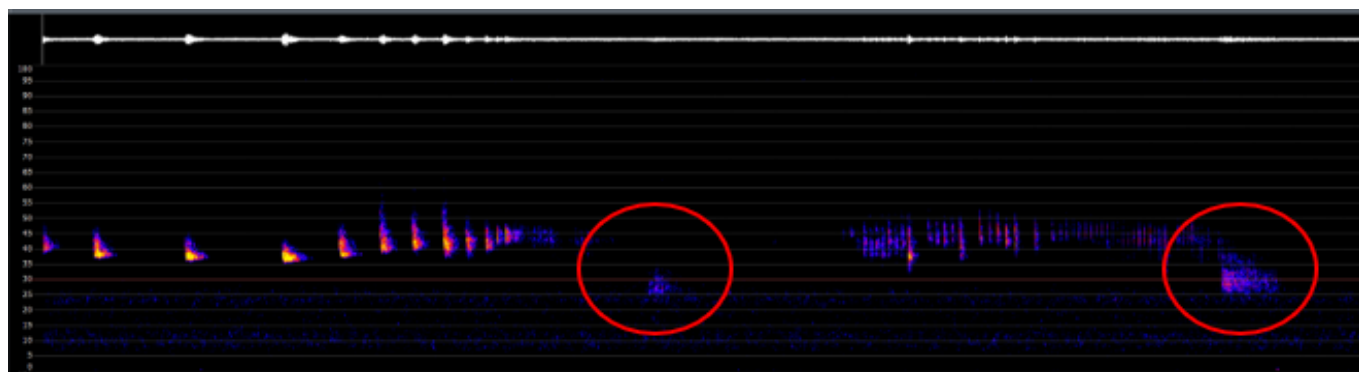


Figure 6. Typical long-tailed bat echolocation terminal-buzz as viewed in Anabat Insight. Terminal-buzz calls are indicated by red circles

3.3 Valid survey nights

Weather conditions and daylight hours strongly influence bat activity (Borkin *et al.* 2023). Monitoring programmes must consider sunset/rise times, rainfall, and temperature to determine whether sampling periods provide valid fine-weather nights for detecting the presence of bats (Sedgely 2012). A valid survey night is a night where:

- Monitoring commences one hour before the official sunset and ends one hour after the official sunrise
- Air temperature remains at or above 7°C until four hours after official sunset (South Island)
- Total rainfall is less than 2.5mm in the first two hours after official sunset and less than 5mm total in the first four hours after official sunset.

Overnight weather data was acquired from an on-site weather station linked to the Harvest (Harvest Electronics 2024) weather website. The weather station was at the Come in Time area of the site, within the BOGP's area of interest. Appendix A provides details of temperature and rainfall conditions each evening of the two survey periods, with results of survey night validity summarised in section 4.

4 Results and conclusions

4.1 Database review

The DOC National Bat Database, as reviewed in August 2023, indicated a single isolated long-tailed bat record approximately 2 kilometres south of the bat survey area (Figure 7). This activity was a bat pass recorded during DOC Tier 1 monitoring. Being close to the BOGP site and in a similar habitat to the study area this recording indicated, at the time, that long-tailed bats could be present in the bat survey area and/or surrounding landscapes.

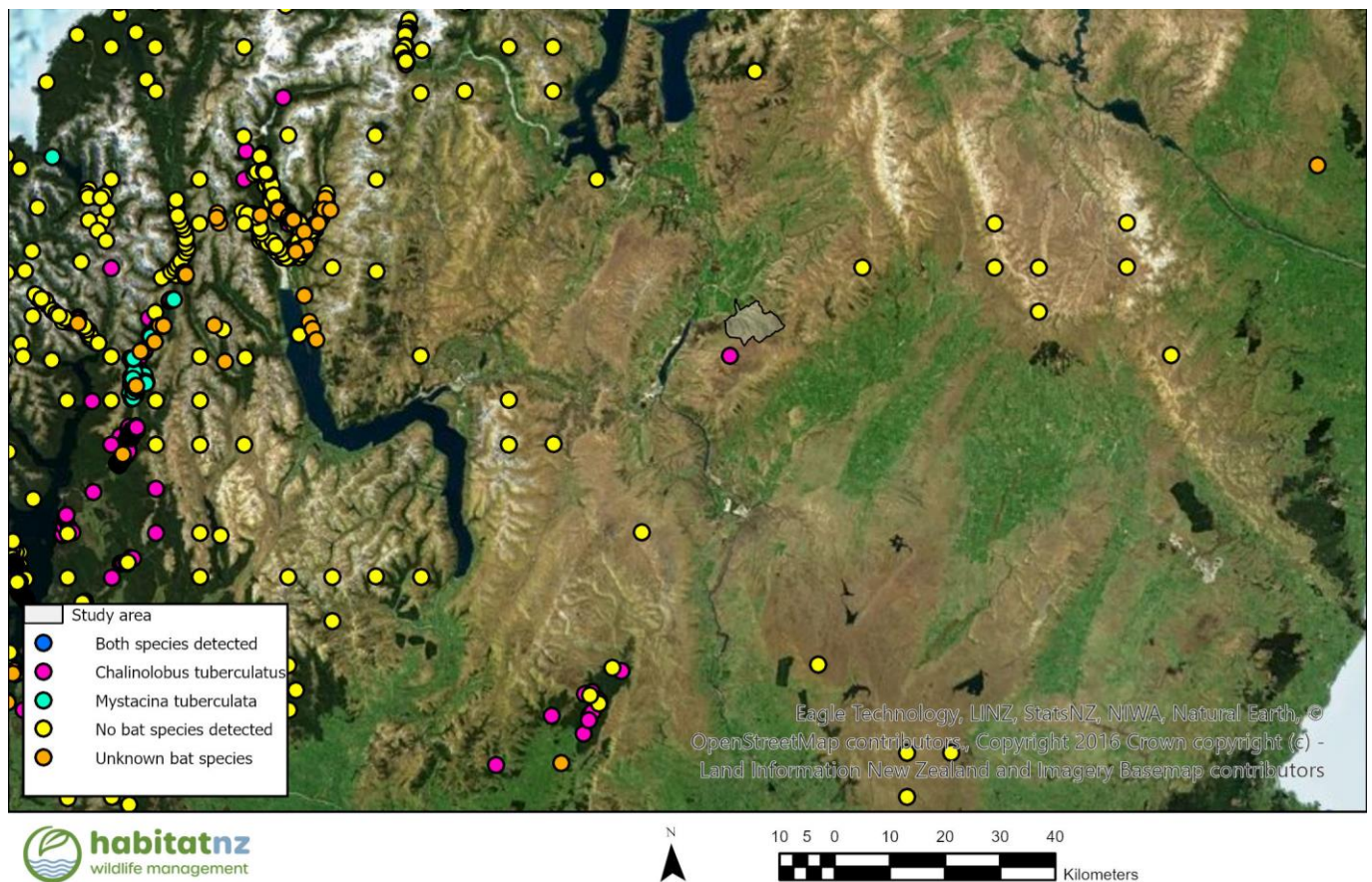


Figure 7: Map of known bat activity locations in the wider Otago area as identified using DOC National Bat Database, May 2023

The positive activity record was removed from the National Bat Database in late 2023 due to the degree of uncertainty around the recordings validity (M. Pryde, Department of Conservation, *pers comm*, September 2023). Following the data update, the nearest known bat activity to the BOGP study area was at least 60km from the site (Figure 7).

4.2 Survey validity

1,111 valid survey nights were obtained throughout the acoustic survey periods. These nights were within the required parameters of device monitoring times, minimum overnight temperature criteria and maximum rainfall criteria.

Temperature: One night in round 1 and four nights in round 2 survey periods did not meet the minimum temperature requirement ($>7^{\circ}\text{C}$ for the first 4 hours after sunset) for a valid survey night, as shown on Figure 8 and Figure 9. Data from these nights has been excluded from the total valid survey nights in the analysis, although it can be noted that no bat activity was recorded on these nights.

Rainfall: Maximum rainfall criteria were not exceeded for either survey round, as shown in (Figure 8). During the first survey round, there was no rainfall during the first four hours after sunset. There was light rainfall within the first four hours after sunset for two days during the second survey round (Figure 9), but this was minimal and did not exceed the criteria ($<2.5\text{mm}$ within 2hrs and $<5\text{mm}$ within 4hrs of sunset).

Complete results of ABM data, technical issues, survey dates, and bat activity levels are provided in Appendix A. Overnight temperature and rainfall conditions for each night in the survey periods are provided in Appendix B.

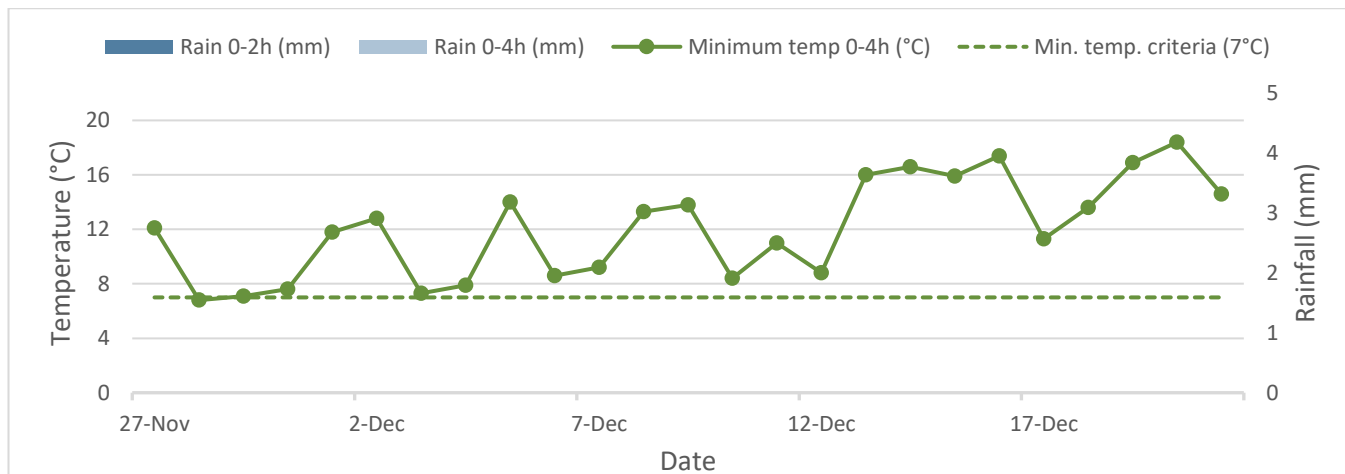


Figure 8: Temperature and rainfall conditions from official sunset time to 4 hours after sunset during round 1 survey period in November – December 2023

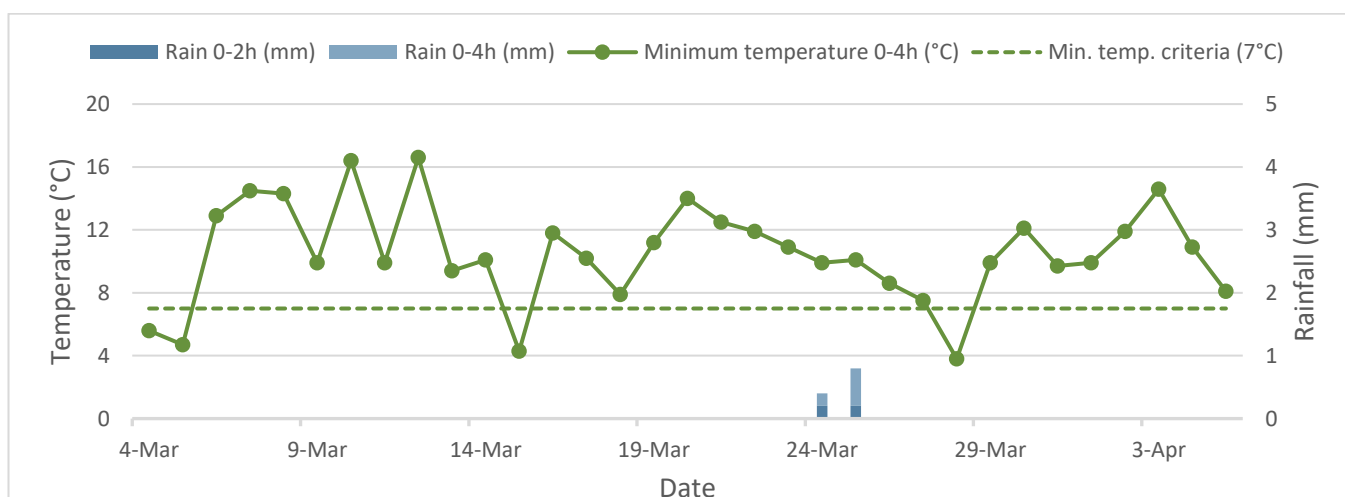


Figure 9: Temperature and rainfall conditions from official sunset time to 4 hours after sunset during round 2 survey period in March – April 2024

4.3 Bat presence

Acoustic monitoring surveys were undertaken during valid periods of likely high bat activity and in locations that included major habitat features expected to be used by bats if they were present in the BOGP bat survey area.

These surveys found no evidence of long-tailed or lesser short-tailed bats using the BOGP bat survey area for any purpose, including resting, foraging, or commuting, during the 2023 – 2024 summer survey periods.

Table 1 shows all ABMs returned negative results for bat passes on all survey nights.

Table 1: Acoustic monitoring survey results for the Bendigo-Ophir Gold Project bat survey area

Survey period	No. active monitor locations	Total valid survey nights	Total no. nights with bat activity	Total no. passes	Mean no. passes per night	Total no. feeding buzz
Round 1	25	477	0	0	0	0
Round 2	26	634	0	0	0	0
Total	51	1,111	0	0	0	0

In conclusion, while we cannot rule out potential occasional presence, we consider it unlikely that long-tailed bats are regularly present and extremely unlikely that lesser short-tailed bats will be present in the Bendigo-Ophir Gold Project bat survey area. This is based on the results of the National Bat Database review, acoustic monitoring surveys and relative lack of suitable roosting habitat.

Appendix A Acoustic survey results

The following tables summarise findings from the acoustic surveys for each monitoring round in the Bendigo-Ophir Gold Project bat survey area. The number of valid survey nights is determined from the number of nights ABMs successfully operated during the study (excluding any technical issues), less the number of nights invalidated by exceedance of temperature and rainfall criteria (refer Appendix B for valid weather night data).

Table 2. Matakanui Gold Ltd ABM survey data for first round of monitoring November – December 2023. The asterisk () indicates date of last record for ABMs with technical issues*

Location No.	Technical issues	Survey start date	Survey end date	No. valid survey nights	Total no. passes	Mean no. passes per night	Total no. feeding buzzes
1		30-Nov-23	20-Dec-23	19	0	0	0
2		30-Nov-23	22-Dec-23	21	0	0	0
3		30-Nov-23	20-Dec-23	19	0	0	0
4		29-Nov-23	20-Dec-23	20	0	0	0
5	Found on ground	29-Nov-23	3-Dec-23*	3	0	0	0
6		29-Nov-23	20-Dec-23	20	0	0	0
7		30-Nov-23	20-Dec-23	19	0	0	0
8		29-Nov-23	20-Dec-23	20	0	0	0
9		29-Nov-23	20-Dec-23	20	0	0	0
10		30-Nov-23	20-Dec-23	19	0	0	0
11		30-Nov-23	20-Dec-23	19	0	0	0
12		30-Nov-23	20-Dec-23	19	0	0	0
13		30-Nov-23	22-Dec-23	21	0	0	0
14		30-Nov-23	22-Dec-23	21	0	0	0
15		30-Nov-23	20-Dec-23	19	0	0	0
16		30-Nov-23	20-Dec-23	19	0	0	0
17		30-Nov-23	20-Dec-23	19	0	0	0
18		30-Nov-23	22-Dec-23	21	0	0	0
19		30-Nov-23	20-Dec-23	19	0	0	0
20		30-Nov-23	20-Dec-23	19	0	0	0
21		30-Nov-23	22-Dec-23	21	0	0	0
22		30-Nov-23	20-Dec-23	19	0	0	0
23		30-Nov-23	20-Dec-23	19	0	0	0
24		30-Nov-23	22-Dec-23	21	0	0	0
25		30-Nov-23	22-Dec-23	21	0	0	0
26	No recordings	30-Nov-23	20-Dec-23	N/A	N/A	N/A	N/A

Table 3. Matakanui Gold Ltd ABM survey data for the second monitoring round, March – April 2024. The asterix (*) indicates date of last record for ABMs with technical issues

Location No.	Technical issues	Survey start date	Survey end date	No. valid survey nights	Total no. passes	Mean no. passes per night	Total no. feeding buzzes
1		04-Mar-24	05-Apr-24	28	0	0	0
2		04-Mar-24	03-Apr-24	26	0	0	0
3		04-Mar-24	03-Apr-24	26	0	0	0
4		05-Mar-24	05-Apr-24	28	0	0	0
5		04-Mar-24	05-Apr-24	28	0	0	0
6	Found on ground	04-Mar-24	31-Mar-24*	23	0	0	0
7		04-Mar-24	26-Mar-24	18	0	0	0
8		04-Mar-24	01-Apr-24	24	0	0	0
9		04-Mar-24	26-Mar-24	18	0	0	0
10		04-Mar-24	05-Apr-24	28	0	0	0
11		04-Mar-24	03-Apr-24	26	0	0	0
12		04-Mar-24	05-Apr-24	28	0	0	0
13		04-Mar-24	03-Apr-24	26	0	0	0
14		04-Mar-24	05-Apr-24	28	0	0	0
15		04-Mar-24	03-Apr-24	26	0	0	0
16		04-Mar-24	05-Apr-24	28	0	0	0
18		04-Mar-24	05-Apr-24	28	0	0	0
19	Found on ground - broken	04-Mar-24	11-Mar-24*	5	0	0	0
20		04-Mar-24	03-Apr-24	26	0	0	0
22		04-Mar-24	03-Apr-24	26	0	0	0
23		04-Mar-24	03-Apr-24	26	0	0	0
24		04-Mar-24	05-Apr-24	28	0	0	0
25		04-Mar-24	03-Apr-24	26	0	0	0
26		04-Mar-24	05-Apr-24	28	0	0	0
27	Found on ground	04-Mar-24	10-Mar-24*	4	0	0	0
28		05-Mar-24	05-Apr-24	28	0	0	0

Appendix B Survey weather conditions

Weather data sourced from the Harvest website for the Come in Time weather station, situated within the Bendigo-Ophir Gold Project bat survey area, for the first survey round (Table 4) and second survey round (Table 5).

Table 4: Matakanui Gold Ltd weather data for first survey round (November-December 2023). Highlighted rows indicate survey nights that did not meet valid temperature/ rainfall criteria.

Date	Official sunset time	Minimum Temperature 4h after sunset (°C) Criteria >7°C	Rainfall 2h after sunset (mm) Criteria <2.5mm	Rainfall 4h after sunset (mm) Criteria <5mm	Valid weather night (Y/N)
27-Nov	21:04	12.1	0	0	Y
28-Nov	21:06	6.8	0	0	N
29-Nov	21:07	7.1	0	0	Y
30-Nov	21:08	7.6	0	0	Y
1-Dec	21:09	11.8	0	0	Y
2-Dec	21:10	12.8	0	0	Y
3-Dec	21:11	7.3	0	0	Y
4-Dec	21:13	7.9	0	0	Y
5-Dec	21:14	14	0	0	Y
6-Dec	21:15	8.6	0	0	Y
7-Dec	21:16	9.2	0	0	Y
8-Dec	21:17	13.3	0	0	Y
9-Dec	21:18	13.8	0	0	Y
10-Dec	21:19	8.4	0	0	Y
11-Dec	21:20	11	0	0	Y
12-Dec	21:20	8.8	0	0	Y
13-Dec	21:21	16	0	0	Y
14-Dec	21:22	16.6	0	0	Y
15-Dec	21:23	15.9	0	0	Y
16-Dec	21:24	17.4	0	0	Y
17-Dec	21:24	11.3	0	0	Y
18-Dec	21:25	13.6	0	0	Y
19-Dec	21:26	16.9	0	0	Y
20-Dec	21:26	18.4	0	0	Y
21-Dec	21:27	14.6	0	0	Y

Table 5: Matakanui Gold Ltd weather data for second survey round (March-April 2024). Highlighted rows indicate survey nights that did not meet valid temperature/ rainfall criteria.

Date	Official sunset time	Minimum Temperature 4h after sunset (°C) Criteria >7°C	Rainfall 2h after sunset (mm) Criteria <2.5mm	Rainfall 4h after sunset (mm) Criteria <5mm	Valid weather night (Y/N)
4-Mar	20:23	5.6	0	0	N
5-Mar	20:21	4.7	0	0	N
6-Mar	20:19	12.9	0	0	Y
7-Mar	20:18	14.5	0	0	Y
8-Mar	20:16	14.3	0	0	Y
9-Mar	20:14	9.9	0	0	Y
10-Mar	20:12	16.4	0	0	Y
11-Mar	20:10	9.9	0	0	Y
12-Mar	20:08	16.6	0	0	Y
13-Mar	20:07	9.4	0	0	Y
14-Mar	20:05	10.1	0	0	Y
15-Mar	20:03	4.3	0	0	N
16-Mar	20:01	11.8	0	0	Y
17-Mar	19:59	10.2	0	0	Y
18-Mar	19:57	7.9	0	0	Y
19-Mar	19:56	11.2	0	0	Y
20-Mar	19:54	14	0	0	Y
21-Mar	19:52	12.5	0	0	Y
22-Mar	19:50	11.9	0	0	Y
23-Mar	19:48	10.9	0	0	Y
24-Mar	19:46	9.9	0.2	0.2	Y
25-Mar	19:44	10.1	0.2	0.6	Y
26-Mar	19:43	8.6	0	0	Y
27-Mar	19:41	7.5	0	0	Y
28-Mar	19:39	3.8	0	0	N
29-Mar	19:37	9.9	0	0	Y
30-Mar	19:35	12.1	0	0	Y
31-Mar	19:33	9.7	0	0	Y
1-Apr	19:32	9.9	0	0	Y

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