

# ecoLogical Solutions

Environmental Consultants



May 2026

## Tāiko Critical Minerals – Barrytown Southern Block Wildlife Act Authorisation Technical Report

Prepared for Tāiko Critical Minerals Limited



## Quality Assurance

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## Table of Contents

<b>1.0</b>	<b>Introduction.....</b>	<b>1</b>
<b>2.0</b>	<b>Information Requirements .....</b>	<b>1</b>
<b>3.0</b>	<b>Purpose of the Proposed Activity .....</b>	<b>3</b>
<b>4.0</b>	<b>Actions to be Carried Out .....</b>	<b>3</b>
<b>5.0</b>	<b>Impact Assessment .....</b>	<b>7</b>
<b>6.0</b>	<b>Protected Wildlife .....</b>	<b>7</b>
6.1	Protected bird species known or predicted in the area .....	7
6.2	Lizard species known or predicted in the area.....	9
<b>7.0</b>	<b>Impacts on Threatened, Data Deficient and At-Risk Species .....</b>	<b>10</b>
7.1	Impacts on ‘Threatened’ and ‘At Risk’ Birds .....	10
7.2	Impacts on ‘Threatened’ and ‘At Risk’ Lizards.....	10
<b>8.0</b>	<b>Meeting Best Practice Standards .....</b>	<b>10</b>
<b>9.0</b>	<b>Methods to Catch, Hold or Kill.....</b>	<b>11</b>
9.1	Birds .....	11
9.2	Lizards .....	12
<b>10.0</b>	<b>Proposed Activity Locations .....</b>	<b>12</b>
<b>11.0</b>	<b>Holding or Relocating Wildlife .....</b>	<b>14</b>
<b>12.0</b>	<b>Actual and Potential Effects .....</b>	<b>14</b>
<b>13.0</b>	<b>Methods to Avoid/Minimise Adverse Effects .....</b>	<b>14</b>
<b>14.0</b>	<b>Offences and Current Charges .....</b>	<b>16</b>
<b>15.0</b>	<b>Proof of Consultation .....</b>	<b>16</b>
<b>16.0</b>	<b>Holder of Wildlife Approvals .....</b>	<b>17</b>
<b>17.0</b>	<b>Proposed Conditions .....</b>	<b>17</b>
<b>18.0</b>	<b>Additional Supporting Documentation .....</b>	<b>17</b>
<b>19.0</b>	<b>References .....</b>	<b>17</b>

## Index to Tables

Table 1:	Threatened and At Risk birds recorded in eBird or during surveys and considered likely to use the SB.	8
Table 2:	Threatened and at-risk birds to be managed at the Barrytown Site.	9
Table 3:	Lizard species within 10km of the Site.	9
Table 4.	Management methods to avoid or minimise effects on ‘Threatened’ and ‘At Risk’ protected wildlife.	16

## Index to Figures

Figure 1:	Mining sections within the Southern Block, Barrytown.	2
Figure 2:	Watercourses within Tāiko Critical Minerals' Southern Block.	6
Figure 3:	Potential lizard habitats within Tāiko Southern Block, Barrytown.	13

## 1.0 Introduction

Tāiko Critical Minerals Ltd (Tāiko) holds resource consents from the Grey District and West Coast Regional Councils for mineral sand mining at the 'Central Block' (CB) within Mining Permit MP 60785 as shown in Figure 1. Tāiko is seeking consents under the Fast Track Approvals Act (2024) to extend mining to the 'Southern Block' (SB) which is approximately 408 ha in extent and located south of the Central Block, between Canoe Creek and Fagan Creek. Mining activity would occur in three sections across 280 ha within the SB, referred to here as the 'mining disturbance area' and shown in Figure 1. In addition, earthworks may be undertaken within up to 72 ha of the SB outside the mining disturbance area to assist with recontouring and rehabilitation within the mining disturbance area. The affected land is owned by Moir Farms Maimai Limited, Barrytown Farms Ltd, Nikau Deer Farm and Cargill Road Barrytown Limited. Grey District Council also owns a small piece of road reserve which would be affected.

Resource consents are being sought under Schedule 5 of the Fast Track Approvals Act 2024 to undertake mineral sand mining using a floating dredge to obtain ilmenite, garnet and other minerals. This report is to support a Wildlife approval being sought under Schedule 7 for management of lizards and avifauna. Tāiko's application to seek resource consents to mine within the SB was accepted into the Fast Track process on 6 October 2024.

## 2.0 Information Requirements

The following information is required for the application to obtain a 'wildlife approval' (where 'wildlife approval' means a lawful authority for an act or omission that would otherwise be an offence under the Wildlife Act 1953) as set out in Clause 2(1) of Schedule 7 of the FTAA:

- (1) *For the purposes of section 43(3)(h), application for a wildlife approval must—*
  - (a) *specify the purpose of the proposed activity:*
  - (b) *identify the actions the applicant wishes to carry out involving protected wildlife and where they will be carried out (whether on or off public conservation land):*
  - (c) *include an assessment of the activity and its impacts against the purpose of the Wildlife Act 1953:*
  - (d) *list protected wildlife species known or predicted to be in the area and, where possible, the numbers of wildlife present and numbers likely to be impacted:*
  - (e) *outline impacts on threatened, data deficient, and at-risk wildlife species (as defined in the New Zealand Threat Classification System):*
  - (f) *state how the methods proposed to be used to conduct the actions specified under paragraph (b) will ensure that best practice standards are met:*
  - (g) *describe the methods to be used to safely, efficiently, and humanely catch, hold, or kill the animals and identify relevant animal ethics processes:*
  - (h) *state the location or locations in which the activity will be carried out, including a map (and GPS co-ordinates if available):*
  - (i) *state whether authorisation is sought to temporarily hold or relocate wildlife:*
  - (j) *list all actual and potential wildlife effects (adverse or positive) of the proposed activity, including effects on the target species, other indigenous species, and the ecosystems at the site:*

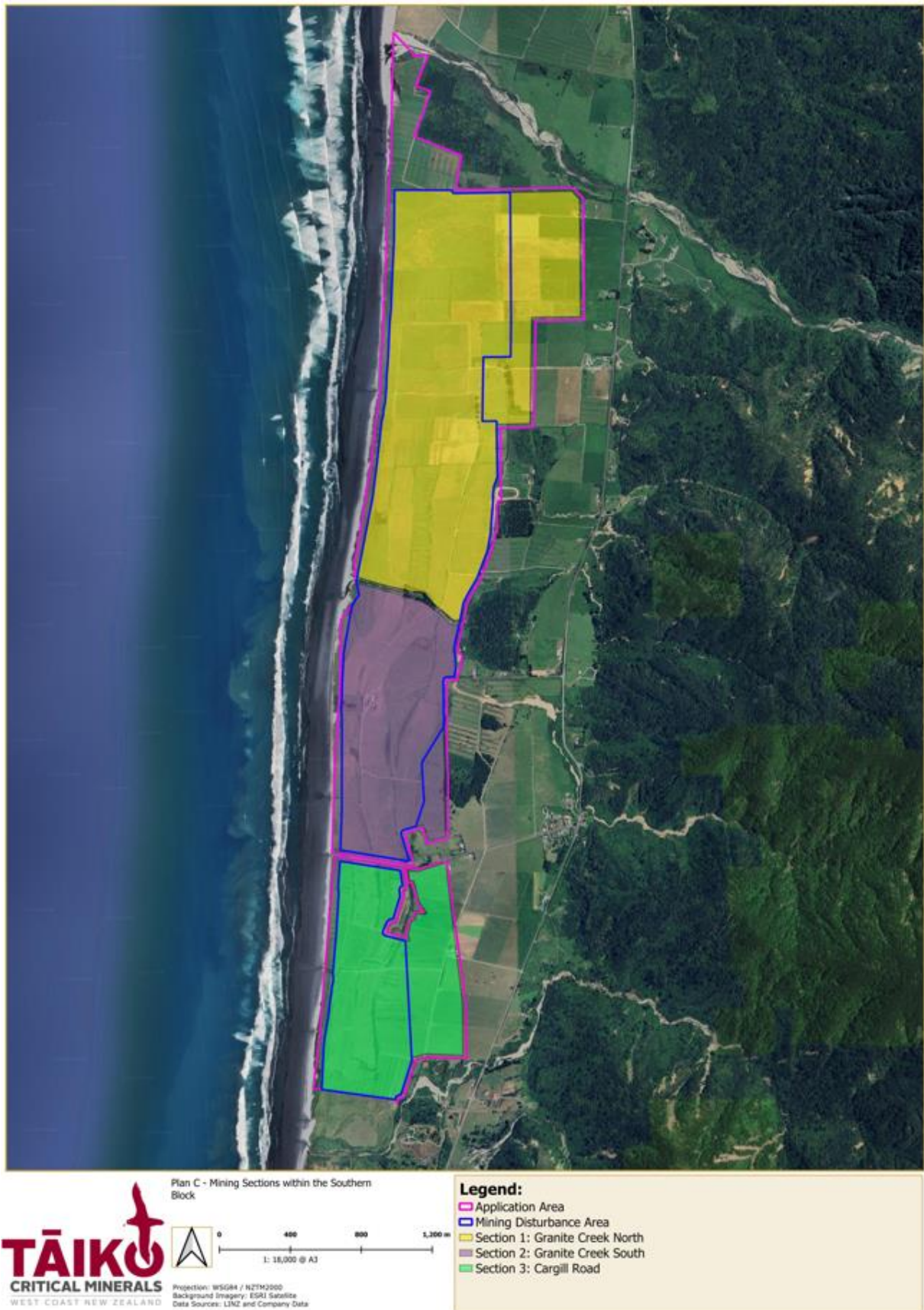


Figure 1: Mining sections within the Southern Block, Barrytown.

- (k) where adverse effects are identified, state what methods will be used to avoid and minimise those effects, and any offsetting or compensation proposed to address unmitigated adverse effects (including steps taken before the project begins, such as surveying, salvaging, and relocating protected wildlife):
- (l) state whether the applicant or any company director, trustee, partner, or anyone else involved with the application has been convicted of any offence under the Wildlife Act 1953:
- (m) state whether the applicant or any of the company director, trustee, partner, or anyone else involved with the application has any current criminal charges under the Wildlife Act 1953 pending before a court:
- (n) provide proof and details of all consultation, including with hapū or iwi, on the application specific to wildlife impacts:
- (o) provide any additional written expert views, advice, or opinions the applicant has obtained concerning their proposal.

### 3.0 Purpose of the Proposed Activity

- (a) Specify the purpose of the proposed activity:

The purpose of species management is to avoid or minimise adverse effects on birds and lizards during mine construction and operation. This will be achieved through the following activities as detailed within an Avian Management Plan and Lizard Management Plan prepared for the Project:

- Avian and lizard surveys to confirm individuals at risk due to the mining activity.
- Deterring birds prospecting for nests from the mining area in advance of mining and discouragement of breeding there.
- Where nests can proceed without impeding progress of the dredge, nest protection and monitoring.
- Fencing to exclude kororā from active mining areas.
- Handling of grounded or injured birds.
- Capture and relocation of lizards to remove them from clearance areas.
- Enhancement/augmentation of lizard habitat.

### 4.0 Actions to be Carried Out

- (b) Identify the actions the applicant wishes to carry out involving protected wildlife and where they will be carried out (whether on or off public conservation land):

Key aspects of the proposed activity are summarised below:

- The total area of the SB on the Barrytown Flats is approximately 408 ha. The proposed mining disturbance area is approximately 280 ha (c. 69% of the SB) and is on private farm land (and not on conservation land). In addition, earthworks may be undertaken within up to 72 ha of the SB outside the mining disturbance area to assist with recontouring and rehabilitation within the mining disturbance area.
- Resource estimates indicate that mining 2,000,000 tonnes annually will produce

400,000 tonnes of heavy mineral concentrate (HMC) per year.

- Mine life is expected to be 14 years excluding preparation and rehabilitation. Proposed mining is anticipated to commence in approximately 2034–2035 once the mineral resource on the CB has been exhausted.
- Mining activities will be undertaken during daylight hours and not on Sundays.
- A Wet Concentrator Plant (WCP) has been consented and a water supply from lower Canoe Creek is applied for. Consent has been granted by Grey District Council for a Mineral Separation Plant (MSP) at Rapahoe where HMC will be processed further with surplus material from the SB returned to the void.
- Mining will be undertaken in three sections including: Section 1 (Granite Creek North), Section 2 (Granite Creek South) and Section 3 (Cargill Road) (refer to Figure 1). Only one of the three sections will be mined at a time.
- Mining setbacks will be established including: 20 m from the consent boundary, Significant Natural Areas, Granite Creek, Fagan Creek and any property boundaries, 50 m from Mean High Water Springs (MHWS) and 200 m from dwellings other than where noise bunds are proposed.
- Mining will be undertaken using a floating dredge within a dredge pond (100 m wide x 100 m long). The dredge pond will be within a larger area referred to as a mining void. The mining void comprises the dredge pond, the area behind the dredge pond for deposit of tailings after processing (100 m wide x 50 m long), and the area in front of the dredge pond in preparation for mining (100 m wide x 100 m long).
- A mine starter pit will be constructed in each of the three sections (i.e., Granite Creek North, Granite Creek South, Cargill Road) to establish an initial dredge pond in which the floating dredge can operate. Separate starter pits are necessary because the three sections are divided by physical features that will not be disturbed (i.e., Granite Creek and Cargill Road). The first mine starter pit will be located in the southwestern corner of Section 1 (Granite Creek North).
- Mining will commence in the southwest corner of Section 1 (Granite Creek North) and progress east then north. Mining will generally progress in a north/south direction within a dredge pond (dimensions = 100 m wide x 100 m length). An exception will be when the floating dredge needs to turn along a strip as it reaches the northern or southern extents of the mining disturbance area and travel in an east/west direction to commence a new strip in a north/south direction.
- Each strip will be approximately 100 m wide and excavated to a depth of 10 m below ground level noting that the depth of mining is dependent on the ore distribution. The total disturbed land area at any one time will be no more than 16 ha.
- Once the mine starter pit has been constructed, the following steps will be undertaken to enable the extraction of ore:
  - (a) Removal of pasture, and small areas of other vegetation.
  - (b) Stripping of topsoil and overburden.
  - (c) Diversion of streams and drains.
  - (d) Extraction of run of mine (ROM) material.
  - (e) Initial screening of ROM material and deposit of waste material.
  - (f) Pumping of run of mine material to WCP.
- Fauna management (i.e., lizards, birds) will be implemented prior to the removal of

vegetation/habitat. Once completed, vegetation will be removed as mining proceeds.

- Watercourse diversions will be constructed to convey surface water in creeks and artificial drains during mining. Exceptions will be Granite Creek and Little Granite Creek, which will not be diverted. The diversion methodology will differ for each creek or artificial drain depending on the orientation of the channel (i.e., north/south or east/west), sequence of mining activities and future purpose of the land. Fish management will be implemented prior to and during the diversion of watercourses.
- Following the implementation of fauna management, removal of vegetation, topsoil and overburden and diversion of watercourses, the floating dredge will extract ROM material from the newly stripped area in the dredge pond and pump it as a slurry to the WCP.
- ROM material will be pumped from the floating dredge as a slurry to a Field Screening Unit to screen coarse material before entering the desliming circuit to remove very fine silt and clay particles (i.e., slimes) to improve recovery of valuable heavy minerals and reduce load on the WCP. After screening and desliming, ROM will be pumped as a slurry to the WCP to extract HMC and then transported to the MSP at Rapahoe for further processing.
- Tailings produced by the initial screening of ROM material at the Field Screening Unit, tailings from the WCP after extracting HMC from ROM material, and tailings from the MSP at Rapahoe will be pumped back to the rear of the mining void. Tailings deposited back into the mining void will be levelled and contoured. Overburden and topsoil stripped during pre-mining preparation will be placed over the tailings to complete the mining sequence and allow rehabilitation to commence.
- After an area has been mined and the land contoured and rehabilitated, creeks will be reconstructed in accordance with conditions and a Rehabilitation Management Plan (RMP) (Tai Poutini Resources Limited 2026). Some artificial drains may be reinstated if contouring alone does not provide sufficient drainage.
- Progressive rehabilitation of the mining void will take place at the same time as mining occurs and is expected to be completed within 12 months after mining at a given location has been completed and after mining voids are filled with tailings, overburden and topsoil (that was stripped pre-mining) and contoured.
- As mining in each of the three sections (i.e., Granite Creek North, Granite Creek South, Cargill Road) is completed, each section will be rehabilitated to its final landform and will include the construction of a proposed wetland of at least 50 ha, and approximately 53.7 ha, that will be planted with indigenous species and fenced to exclude livestock.
- The five diverted creeks (i.e., Northern Creek, Clarke Creek, Wasabi Creek, Southern Creek and Central Creek as shown in Figure 2) will be reinstated with more natural meandering flow paths than currently. These creeks will discharge to the coast at the same location as currently, since the outlets to the sea are within the 50 m mining setback from MHWS and therefore will not be modified.

In terms of activities that approvals are sought for:

- Activities relating to lizards include capture, handling, relocation and liberation and incidental killing (of individuals unable to be salvaged).
- Activities relating to birds include disturbance (including applying deterrents and managing nests) and handling (including of grounded seabirds and kororā accidentally discovered as set out in the Avian Management Plan).



**Figure 2: Watercourses within Tāiko Critical Minerals' Southern Block.**

## 5.0 Impact Assessment

(c) *Include an assessment of the activity and its impacts against the purpose of the Wildlife Act 1953:*

The Wildlife Act 1953 does not have a dedicated purpose statement. However, the Supreme Court has concluded that 'The purpose of the Act is to protect Wildlife'<sup>1</sup>

The proposed actions in Section 4.0 of this report are intended to protect wildlife from mortality or physical injury associated with vegetation clearance and other mining activities.

Proposed methods to handle birds and lizards are set out in Section 9.0 of this report. The actual and potential effects of the activity are detailed in Section 12.0 and measures to manage the identified effects are detailed in Section 13.0.

Proposed conditions to apply to the Wildlife Act Authority are provided in Section 17.0.

With Tāiko's implementation of approved management measures as detailed below, adverse effects on protected wildlife will be avoided or minimised. Any temporary effects of capture and relocation of individuals or disturbance to deter settling will be minimal, but relocation in particular could cause social disruption and increased competition for individuals that are relocated and individuals already present in relocation areas.

## 6.0 Protected Wildlife

(d) *list protected wildlife species known or predicted to be in the area and, where possible, the numbers of wildlife present and numbers likely to be impacted:*

There are 10 protected wildlife species that are known or predicted to be within the Barrytown Site Southern Block including six species of birds as shown in Table 1 and four species of lizard as shown in Table 2.

### 6.1 Protected bird species known or predicted in the area

The birds identified as using the site or surrounds via desktop analysis and avian surveys are generally common exotic and native species typical of urban and rural environments, reflecting the highly modified state of the habitats within the SB. Thirty-four species of bird have been recorded during seasonal monitoring within the SB to date, including 20 native species and 14 exotic species. Fifteen of the 20 native birds recorded at the site during site surveys are more commonly associated with forest, although they may also use adjoining areas and rural and suburban habitats (e.g., tūī (*Prosthemadera novaeseelandiae*) and fantail (*Rhipidura fuliginosa*)). Given the lack of suitable habitat, particularly nesting habitat, for these species within the SB they are unlikely to be materially affected and management of these birds will involve avoiding clearance of shrubland and flaxland vegetation south of Cargill Road prior to planting of new shrubland vegetation and establishment of new wetland habitat within the SB.

Sixteen bird species of conservation interest have been detected within or near the site as shown in Table 1.

<sup>1</sup> Shark Experience Limited v Pauamac5 Incorporated [2019] NZSC 111 [11 October 2019] at paragraph 66

**Table 1: Threatened and At Risk birds recorded in eBird or during surveys and considered likely to use the SB.**

Common name	Scientific name	Conservation status (Robertson et al. 2021)
Tūturiwhatu/Banded dotterel	<i>Charadrius b. bicinctus</i>	At Risk Declining
Tarāpuka/Black billed gull	<i>Chroicocephalus bulleri</i>	At Risk – Declining
Māpunga/Black shag	<i>Phalacrocorax carbo novaehollandiae</i>	At Risk – Relict
Taranui/Caspian tern	<i>Hydroprogne caspia</i>	Threatened – Nationally Vulnerable
Roroa/Great spotted kiwi	<i>Apteryx maxima</i>	Threatened – Nationally Vulnerable
Kawaupaka/Little shag	<i>Microcarbo melanoleucos brevirostris</i>	At Risk – Relict
Kororā/Little blue penguin	<i>Eudyptula minor</i>	At Risk - Declining
Koekoeā/Long-tailed cuckoo	<i>Eudynamys taitensis</i>	Threatened – Nationally Vulnerable
Tarāpunga/Red-billed gull	<i>Chroicocephalus novaehollandiae</i>	At Risk – Declining
Kōtuku ngutupapa/Royal spoonbill	<i>Platalea regia</i>	At Risk – Naturally Uncommon
Mātātā/South Island fernbird	<i>Poodytes p. punctatus</i>	At Risk – Declining
Tōrea/South Island pied oystercatcher	<i>Haematopus finschi</i>	At Risk – Declining
Kārearea/New Zealand falcon ('bush')	<i>Falco novaeseelandiae</i>	At Risk - Declining
Tōrea tai/Variable oystercatcher	<i>Haematopus unicolor</i>	At Risk – Recovering
Pārera/Pacific black duck	<i>Anas superciliosa</i>	Threatened - Nationally Vulnerable
Tara/White-fronted tern	<i>Sterna s. striata</i>	At Risk – Declining

The majority of these species are also primarily associated with coastal, wetland or forest habitats located off-site, and there is minimal quality habitat for birds within the site. However, based on existing survey data, six of the species listed in Table 1 are considered likely to temporarily use habitats within the site for foraging (especially in disturbed soil), loafing, breeding, or in the case of kororā (little blue penguin *Eudyptula minor*), may cross the site to access habitats inland. In addition, while tāiko (Westland petrel *Procellaria westlandica*, 'At Risk – Naturally Uncommon') have not been detected on site, any potential effects are addressed here since the only known breeding colony is located approximately 4.5 km to the north. Table 2 sets out the species considered likely to use the site and be at risk of negative effects from mining operations. These include tūturiwhatu, tarāpunga, tōrea and tōrea tai that may use the site for foraging, roosting and potentially breeding; kororā, that are potentially impacted by impediments to access pathways to breeding areas off-site; and tāiko that may be impacted by lighting effects on navigation.

**Table 2: Threatened and at-risk birds to be managed at the Barrytown Site.**

Common name	Scientific name	Threat classification
Tūturiwhatu / banded dotterel	<i>Anarhynchus b. bicinctus</i>	At Risk - Declining
Tarāpunga / red-billed gull	<i>Chroicocephalus novaehollandiae</i>	At Risk - Declining
Kororā / little blue penguin	<i>Eudyptula minor</i>	At Risk – Declining
Tōrea / South Island pied oystercatcher	<i>Haematopus finschi</i>	At Risk – Declining
Tōrea tai / variable Oystercatcher	<i>Haematopus unicolor</i>	At Risk - Recovering
Tāiko / Westland petrel	<i>Procellaria westlandica</i>	At Risk – Naturally Uncommon

## 6.2 Lizard species known or predicted in the area

Desktop assessment and site surveys conducted as part of an Ecological Impact Assessment (EclA) by Ecological Solutions Limited concluded that habitat for lizards on site was scarce and low quality, though higher value habitat was present adjacent to, but outside, the mining area in the form of permanent rank pasture, rock piles, cobble and fragments of shrubland.

Lizard species present near the Site include two species of native gecko (forest gecko - *Mokopirirakau granulatus* and West Coast green gecko - *Naultinus tuberculatus*) and one skink (Newman's speckled skink – *Oligosoma* aff. *newmani* “Westland”). The site is also within the known distribution of Canterbury grass skink (*Oligosoma* aff. *polychroma* Clade 4).

The gecko species potentially present nearby are both primarily arboreal and so are unlikely to be using habitat within the mining area due to the lack of mature vegetation, the small, isolated and highly fragmented nature of the immature indigenous vegetation, the prevalence of highly modified pastoral habitat and the lack of pest control. Newman's speckled skink and Canterbury grass skink are unlikely to occur in the poor-quality habitats within the mining area, but their presence cannot be ruled out. Potential habitat for lizards include:

- rough exotic pasture (particularly south of Cargill Road);
- patches of indigenous coastal shrubland; and
- patches of flaxland.

Despite the highly modified and disrupted nature of the pasture habitat which comprises the majority of the Site, the lack of regular grazing of parts of the Site south of Cargill Road means that native skink species may be occupying that habitat, which would be mined during Years 12 and 13 of the Project. Habitat for lizards is of slightly better quality outside the mining disturbance area and includes rank pasture, woody debris and cobblestone habitat which may provide refuge for Newman's speckled skink and Canterbury grass skink.

**Table 3: Lizard species within 10km of the Site.**

Common Name	Scientific Name	Conservation Status Hitchmough et al (2021)
West Coast green gecko	<i>Naultinus tuberculatus</i>	Threatened – Nationally Vulnerable
Forest gecko	<i>Mokopirirakau granulatus</i>	At Risk – Declining
Newman's speckled skink	<i>Oligosoma</i> aff. <i>newmani</i> “Westland”	At Risk – Declining
Canterbury grass skink	<i>Oligosoma</i> aff. <i>polychroma</i> Clade 4	At Risk - Declining

## 7.0 Impacts on Threatened, Data Deficient and At-Risk Species

(a) *outline impacts on threatened, data deficient, and at-risk wildlife species (as defined in the New Zealand Threat Classification System):*

### 7.1 Impacts on 'Threatened' and 'At Risk' Birds

Given the lack of quality avian habitat, only a small number of species of conservation concern are likely to be using the mining site regularly or are likely to attempt to breed within the active mining area (shown in Table 2). Oystercatchers (tōrea and tōrea tai), tūturiwhatu/banded dotterels and tarāpunga/red-billed gulls may utilise the site for foraging, roosting or possibly breeding. Impacts on species within the mining area and surrounds include the following:

- Disturbance due to deterrents implemented to deter birds from the mining area including fencing and visual/acoustic deterrents.
- Habitat clearance.
- Injury or incidental mortality due to vegetation clearance
- Disturbance, injury or incidental mortality due to mining operations (including lighting and vehicle movements).

There is the potential for kororā to be crossing the area to reach burrows inland and therefore may be at risk of injury or mortality due to mining operations. Mining operations could also impede the movements of any birds moving between the coast and inland burrows.

Since the mining area is within 6 km of the only known breeding colony of tāiko, any lighting arising from mining activities could impact navigation and cause grounding of both young and adult birds. Mining activities would only take place during daylight hours to reduce the risk to tāiko. Furthermore, lighting management to comply with the Australian Lighting Pollution Guidelines for Wildlife (May 2023) and subsequent amendments is incorporated into the Avian Management Plan to avoid effects on tāiko.

### 7.2 Impacts on 'Threatened' and 'At Risk' Lizards

Both 'At Risk' and 'Threatened' lizard species are found within 10 km of the site, however the habitat within the site is unlikely to support the presence of gecko species. Vegetation clearance has the potential to result in direct injury or mortality of lizards without effects management. Any lizards found will be subject to disturbance and subsequently competition post relocation.

## 8.0 Meeting Best Practice Standards

(f) *state how the methods proposed to be used to conduct the actions specified under paragraph (b) will ensure that best practice standards are met:*

The management plans which accompany the application have been prepared in accordance with available best practice guidance and will be certified by West Coast Regional Council. The AMP is based on an earlier version for TCM's Central Block, which was prepared in consultation with the Department of Conservation, the West Coast Penguin Trust and Te Rūnanga o Ngāti Waewae. Those parties will have the opportunity to provide input to the current plans. The plans will be updated as required, for example when monitoring indicates additional management is required, if new best practice standards are developed or new information on the managed species becomes available. The Department of Conservation will

have the final sign-off on management plans via this Wildlife Act Authority application process and any conditions they may impose.

The specific species management in accordance with site- and species-specific management plans intended to reduce the effects of mining on wildlife will be implemented. Best practice standards listed below will be adhered to and are incorporated within the relevant species management plans:

- Key principles for lizard salvage and transfer in New Zealand (Department of Conservation 2019).
- Australian Lighting Pollution Guidelines for Wildlife (2023).

## 9.0 Methods to Catch, Hold or Kill

*(g) describe the methods to be used to safely, efficiently, and humanely catch, hold, or kill the animals and identify relevant animal ethics processes:*

### 9.1 Birds

Birds will not be handled unless by a suitably qualified ornithologist or ecologist. The only exception to this will be where a grounded tāiko is discovered, or where an injured or dead bird is discovered within the site. In cases where an injured bird is discovered within the site, the Department of Conservation emergency hotline will be called to determine the best course of action for the injured bird and identify where it must be taken to be treated. Injured birds will be handled carefully and placed in a dark, ventilated box until a qualified handler can be accessed.

The Avian Management Plan sets out accidental discovery protocols for live, injured and dead kororā and tāiko. It is the responsibility of the Consent Holder to provide training so as to ensure staff are appropriately informed and able to implement the accidental discovery protocol set out in the Avian Management Plan.

In the event of any dead birds (including kororā) being located at the site the Māwhera / Greymouth Department of Conservation office in Greymouth and Te Rūnanga o Ngāti Waewae will be informed and collection by or delivery to the Department of Conservation will be arranged.

In the event that a live grounded tāiko is discovered within the site, a person with the appropriate qualifications and permits will catch the bird, place it in a suitable enclosure in a warm dark place, and call the Department of Conservation hotline (0800 DOC HOT) as soon as possible for advice on care and relocation. A sturdy net suitable for catching grounded birds, leather gloves for handling birds and a suitable enclosure (lined box, crate or cage) will be held on site and all staff will be informed of their location. Best practice guidelines indicate a white flute-board or cardboard pet (cat) box with a dark interior lining is suitable for a single bird to be contained until a qualified handler can be accessed (Gummer *et al.* 2014). Boxes must have ventilation and a secured entry/exit point to ensure accidental release does not occur and to avoid injury.

If the bird is to be transferred to a care facility, it should be moved as quickly as practicable to the local (Māwhera / Greymouth Department of Conservation office (or as advised by the DOC hot line). The Department of Conservation will determine if it is fit for release and will undertake the release and inform the Mine Manager of the outcome. If injured the local Department of Conservation office will take responsibility for the bird and keep the Mine Manager up to date with progress.

In the event that a live tāiko is recovered from within 50 m of the dredge pond or the processing plant and loadout area, the event will be investigated and any reasons for grounding will be

eliminated immediately where possible. The incident will be logged, reported and will result in amendment of the lighting section of the Avian Management Plan where appropriate.

## 9.2 Lizards

Prior to undertaking any lizard salvage activities, a lizard survey will be conducted confirm species presence and abundance within the site to confirm any species specific management actions required to best mitigate effects on lizards (e.g. provision of habitat). Prior to salvage, the extent of the vegetation clearance and earthworks will be clearly marked (e.g., flagging tape, tree dazzle or pegs) to ensure that the project herpetologist and the machine operators clearly understand the full extent of the area of impact. Lizard salvage will be required where vegetation clearance is to be undertaken within identified lizard habitat. A Department of Conservation authorised herpetologist and suitably qualified assistant ecologist(s) will undertake targeted search and salvage campaigns prior to and during vegetation clearance. The search and salvage campaigns will be undertaken in two phases.

- *Phase 1:* Pre-vegetation clearance systematic manual habitat searches, use of artificial retreats and a live capture and relocation programme.
- *Phase 2:* Within areas where native lizards are detected, machine assisted destructive search (vegetation clearance supervision at focused areas).

Vegetation clearance supervision and machine assisted searching is a contingency measure, recognising that not every lizard may be captured during Phase 1.

- Destructive searches will involve searching through potential habitat during vegetation removal, and with the assistance of an excavator fitted with a toothed bucket or rake.
- Searches will cover all habitat where native lizards have been detected from the Phase 1 works, within the vegetation clearance area and continue until the supervising ecologist is satisfied that the potential habitats are sufficiently removed or degraded that lizards are unlikely to be present.

All lizards will be placed in a temporary containment box, which will be filled with local vegetation matter and leaf litter and misted with water. Lizards will only be held temporarily for the period of the active searches or retreat inspections, or in all cases less than two hours, after which the lizards will be transported to and released at the approved relocation site.

It is not anticipated that any lizard taxa with threat classifications higher than 'At Risk' will be encountered within the SB site. However, if this were to occur, the individual(s) will be captured and held temporarily in a containment box while Department of Corrections (Māwhera / Greymouth Office) is notified, and further advice and instruction is given to the herpetologist.

## 10.0 Proposed Activity Locations

*(h) state the location or locations in which the activity will be carried out, including a map (and GPS co-ordinates if available):*

For birds, the activities set out in this application apply to the entire site, since the species identified may use pasture, riparian vegetation, flaxland, indigenous coastal vegetation and exotic vegetation for foraging, roosting and breeding.

For lizards, the activities set out in this application also apply to those areas within the entire site where lizards are found to occur. While much of the SB is lacking in suitable potential habitat for lizards, the proposed activities will apply wherever lizards are found, but particularly in the isolated pockets of lizard habitat shown in Figure 3.



**Figure 3: Potential lizard habitats within Tāiko Southern Block, Barrytown.**

## 11.0 Holding or Relocating Wildlife

(i) *state whether authorisation is sought to temporarily hold or relocate wildlife:*

A Wildlife Act Authorisation will be required to enable the handling, capture and relocation of lizards, as well as the disturbance of any 'Threatened' or 'At risk' bird species that may attempt to nest within areas proposed to be mined and are therefore at risk from mining activities. This includes species attracted by bare earth for nesting (e.g., dotterels). There is ample suitable habitat for nesting at adjacent Pakiroa Beach and birds will be encouraged to relocate outside the mining area using a variety of methods including disturbance as set out in the Avian Management Plan. Any kōrorā which are found within the mining area may need to be shepherded out of harm's way. Direct physical handling of protected birds is only required in the case of accidental discovery of an injured or dead bird, or in the case of accidental discovery of a grounded tāiko. Other actions will include shepherding, disturbance using fencing, disturbance using visual and acoustic deterrents, which do not require handling.

## 12.0 Actual and Potential Effects

(j) *list all actual and potential wildlife effects (adverse or positive) of the proposed activity, including effects on the target species, other indigenous species, and the ecosystems at the site:*

Potential adverse effects of mining activities may include:

- Direct mortality or injury to individuals that may be harmed during vegetation clearance or earthworks activities.
- Disruption of movement pathways between the coast and breeding areas for kororā.
- Disturbance associated with deterrents including fencing exclusions, visual and acoustic deterrents (e.g. flagging, predator calls etc.), and shepherding (in the case of kororā being discovered under machinery or within the active mine site area).
- Temporary effects of capture and relocation of individuals may include stress, social disruption and increased competition in relocation areas.
- Disturbance associated with noise, dust and lighting from mining activities.
- Temporary reduction in breeding success due to effects of relocation.

No work is being undertaken within 50 m of the MHWS and no indirect effects (e.g., noise) are anticipated for avifauna likely to be utilising the coastal environment adjacent to the SB.

There is a low risk that artificial light will adversely affect tāiko either leaving or returning to the colony to the north. Mining would only occur during daylight hours, but lighting may be necessary at night for health and safety reasons (e.g., to assess and remedy break downs). The AMP also outlines how adverse effects of artificial light will be managed, monitored and reported. Implementing appropriate mitigation measures, including those developed as part of consenting the mining activities at the CB and which comply with the Australian National Light Pollution Guidelines for Wildlife (2023), and will minimise any effects.

## 13.0 Methods to Avoid/Minimise Adverse Effects

(k) *where adverse effects are identified, state what methods will be used to avoid and minimise those effects, and any offsetting or compensation proposed to address*

*unmitigated adverse effects (including steps taken before the project begins, such as surveying, salvaging, and relocating protected wildlife):*

Potential adverse effects have been identified in Section 5.0, Section 7.0 and Section 12.0 of this application. Mitigation measures proposed to address those effects are outlined in the following relevant management plans:

- Avian Management Plan (Ecological Solutions 2026a).
- Lizard Management Plan (Ecological Solutions 2026b).

Methods to avoid/minimise effects on birds include:

- Seasonal surveys and pre-clearance monitoring of birds including use of trail cameras to inform mining operations so that risks to 'Threatened' and 'At Risk' birds can be identified in advance and mitigated by methods such as deterring birds from nesting, fencing to exclude them from active areas and establishing buffers around nests (where achievable), as mining proceeds.
- Avoiding mining near important avian habitats (identified as indigenous coastal shrubland and flaxland) prior to construction and establishment of new habitats within the SB including riparian and wetland vegetation.
- Maintenance of a 50 m buffer from Mean High Water Springs and a 20 m buffer from Granite Creek and Fagan Creek to the mining disturbance area. This boundary is to be permanently marked so as to avoid crossing it inadvertently and will provide 'corridors' for kororā crossing the site.
- Weekly breeding season surveys and bi-weekly monitoring of any identified nest attempts.
- Trail camera monitoring of kororā and tāiko.
- Physical exclusion using fences and visual and acoustic deterrents, to reduce or exclude crossing or nesting in disturbance areas.
- Annual wildlife surveys for kororā using a certified conservation dog.
- Identification of active kororā burrows and breeding pairs to inform the development of site-specific management plans for each confirmed nesting pair.
- Investigation of all potential burrows, including use of a burrow scope, to confirm whether kororā are actively using them.
- Accidental discovery protocols to identify and confirm the extent and magnitude of any unexpected effects on kororā and tāiko
- Progressive rehabilitation to replace and create additional wetland habitat, riparian planting and establishment of forest/shrubland habitat prior to habitat removal.
- Restriction of mining activities to daylight hours and management of any lighting required (e.g., for Health and Safety purposes whilst remedying equipment failure) in accordance with Commonwealth of Australia guidelines.

Methods to avoid/minimise effects on lizards include:

- Prior to vegetation clearance, systematic surveys will be undertaken in order to detect any lizards present within all areas of potential habitat. If lizards are found to be present, destructive habitat searches will also be undertaken.
- All native lizards found will be released at the designated release site immediately upon capture or in all cases within two hours.

- Rehabilitation of the site will involve planting of indigenous vegetation, providing much larger amounts of habitat than what is currently present on site.
- Habitat enhancement such as creation of refugia/eco-stacks within release sites.

**Table 4. Management methods to avoid or minimise effects on ‘Threatened’ and ‘At Risk’ protected wildlife.**

Group	Methods	Management plan
Lizards	Survey, capture and relocation to suitable habitat within predator exclosures outside area of effect.	Ecological Solutions Limited 2026b
Birds (general)	Survey, monitor, discourage nesting and buffer around nests.	Ecological Solutions Limited 2026a
Kororā	Conservation dog surveys, trail camera monitoring, fencing deterrents, habitat rehabilitation, protection of movement corridors, accidental discovery protocols, nestbox provision.	Ecological Solutions Limited 2026a
Tāiko	Trail camera monitoring, accidental discovery protocols, lighting management	Ecological Solutions Limited 2026a

## 14.0 Offences and Current Charges

- (l) *state whether the applicant or any company director, trustee, partner, or anyone else involved with the application has been convicted of any offence under the Wildlife Act 1953:*

No such convictions have been recorded.

- (m) *state whether the applicant or any of the company director, trustee, partner, or anyone else involved with the application has any current criminal charges under the Wildlife Act 1953 pending before a court:*

No such charges are pending.

## 15.0 Proof of Consultation

- (n) *provide proof and details of all consultation, including with hapū or iwi, on the application specific to wildlife impacts:*

TCM has engaged with Terry Calmeyer, the Department of Conservation Fast Track team, local DoC staff and technical staff in relation to species management. This consultation was assisted by the extensive engagement TCM had undertaken on the publicly notified resource consent for the Central Block, where the Department of Conservation was an active participant, including in appeals against the council decisions to grant consent. Robust resource consent conditions in relation to the Westland Petrel were agreed with the Department and other parties to the appeals via consent order. Lighting conditions for this application follow those agreed conditions and given mining activity will only occur during daylight hours, there are no anticipated effects on the Westland Petrel.

The Fast Track Application includes a summary of general consultation undertaken (which

included discussions on wildlife and regular engagement with mana whenua) as part of the project in Appendix F.

## 16.0 Holder of Wildlife Approvals

Tāiko Critical Minerals will be the holder of the Wildlife Act Approval. The named ecologists for lizards will be:

- Dr Graham Ussher.
- Matt Charteris.

The named ecologists for birds will be:

- Dr Gary Bramley.
- Dr Sarah Withers.
- Patrick Stewart.
- Matt Charteris.

## 17.0 Proposed Conditions

The term of the Wildlife Act Authorisations being sought is a term consistent with the relevant resource consents, with review every 10 years. A set of draft proposed conditions has been provided with the application.

## 18.0 Additional Supporting Documentation

- (o) *provide any additional written expert views, advice, or opinions the applicant has obtained concerning their proposal.*

None applicable.

## 19.0 References

Ecological Solutions, 2026a. Avian Management Plan. Unpublished report prepared for Tāiko Critical Minerals by Ecological Solutions Limited, Kāeo. March 2026.

Ecological Solutions, 2026b. Lizard Management Plan. Unpublished report prepared for Tāiko Critical Minerals by Ecological Solutions Limited, Kāeo. March 2026.

Key principles for lizard salvage and transfer in New Zealand (Department of Conservation 2019).

Robertson, H.A., Baird, K.A., Elliott, G.P., Hitchmough, R.A., McArthur, N.J., Makan, T.D., Miskelly, C.M., O'Donnell, C.F.J., Sagar, P.M., Scofield, R.P., Taylor, G.A., Michel, P. 2021. Conservation status of birds in Aotearoa New Zealand, 2021. New Zealand Threat Classification Series 36. Department of Conservation, Wellington. 43 pp.