



**DECISIONS OF THE QUEENSTOWN LAKES DISTRICT COUNCIL**  
**NOTIFICATION UNDER s95A AND s95B AND DETERMINATION UNDER s104**  
**OF THE RESOURCE MANAGEMENT ACT 1991**

<b>Applicant:</b>	New Zealand Tungsten Mining Limited
<b>RM reference:</b>	RM151033
<b>Application:</b>	Application under Section 88 of the Resource Management Act 1991 (RMA) for land use consent to undertake mineral exploration, to establish informal airports for helicopter landings, to establish buildings for a temporary camp site within the Glenorchy Heritage Overlay Area, and to clear indigenous vegetation within an alpine environment.
<b>Location:</b>	Glenorchy-Paradise Road, Glenorchy Rural
<b>Legal Description:</b>	Secs 7 and 13 SO 369025 held in Computer Freehold Register 518974
<b>Operative District Plan Zoning:</b>	Rural General
<b>Proposed District Plan (Stage 1 – Decisions Version 2018) Zoning:</b>	Rural Glenorchy Heritage Overlay Area
<b>Proposed District Plan (Stage 2) Zoning:</b>	N/A
<b>Activity Status:</b>	<b>Discretionary</b>
<b>Date</b>	<b>19 December 2018</b>

**SUMMARY OF DECISIONS**

1. Pursuant to sections 95A-95F of the Resource Management Act 1991 (**RMA**) the application will be processed on a **non-notified** basis given the findings of Section 3 of this report. This decision is made by Paula Costello, Senior Planner, on 19 December 2018 under delegated authority pursuant to Section 34A of the RMA.
2. Pursuant to Section 104 of the RMA, consent is **GRANTED SUBJECT TO CONDITIONS** outlined in **Appendix 1** of this decision imposed pursuant to Section 108 of the RMA. This consent can only be implemented if the conditions in Appendix 1 are complied with by the consent holder. The decision to grant consent was considered (including the full and complete records available in Council's electronic file and responses to any queries) by Paula Costello, Senior Planner as delegate for the Council.

## 1. SUMMARY OF PROPOSAL AND SITE DESCRIPTION

Consent is sought to undertake mineral exploration for gold, tungsten and other elements within the Glenorchy Heritage Overlay Area. Consent is also sought for activities associated with the mineral exploration activity: three informal airports for helicopter landings, buildings for a temporary camp site within the Glenorchy Heritage Overlay Area, clearance of indigenous vegetation within an alpine environment for establishing drilling sites, and earthworks.

The applicant has provided a detailed description of the proposal, and the site and locality in the report entitled '*New Zealand Tungsten Mining Limited Mineral Exploration Consent Application*' prepared by Glenn Davis of Davis Consulting Group, and submitted as part of the application (hereon referred to as the applicant's AEE and attached as **Appendix 2**). This description is considered accurate and is adopted for the purpose of this report, with the following additional details and amendments:

The application originally proposed to undertake the activities within a larger area; this was substantially reduced to one 10ha site known as the Judah Lode; the site of the former Mt Judah State Mine. The site is within the Whakaari Conservation Area, Buckler Burn catchment, east of Glenorchy. The conservation area is Crown-owned, administered by the Department of Conservation, and includes public walking tracks and huts. A location map is included below in Figure 1.

The proposal is defined by Crown Minerals Act 1991 as *minimum impact activities* (such as taking samples by hand or aerial surveying). The applicant has obtained a Mineral Exploration Permit (40547.13) under the Crown Minerals Act 1991 that authorises the right to prospect for specified minerals and explore for specified Crown-owned minerals in the permit area. The permit was issued by the Ministry of Business, Innovation and Employment (New Zealand Petroleum & Minerals) on 10 September 2013 with extensions granted on 26 August 2015 and 29 September 2017. The permit expires on 10 September 2021 and is attached as **Appendix 3**. The access rights are registered on the title (interest 11070368.1).

The applicant later provided an Access Arrangement from the Department of Conservation for mineral exploration within the Whakaari Conservation Area (Judah Lode). The Access Arrangement expires on 10 September 2021 and is attached as **Appendix 4**.

The applicant confirmed that the activity will not use Mt Judah Road, which is privately owned; all equipment and personnel will be transported to and from the site by helicopter, and within the site along existing former State mine tracks.

Further information was provided in regard to estimated numbers of helicopter flights from Glenorchy Airfield and a flight path to avoid Wyuna Preserve and Blanket Bay.

The applicant provided a Heritage Impact Assessment entitled '*Heritage impact assessment for proposed drilling and minimum impact exploration activities on EP40547, Glenorchy*' prepared by Dr Hayden Cawte and Dr Dawn Cropper of New Zealand Heritage Properties Ltd (hereon referred to as the applicant's Heritage Assessment).

### *Proposal*

The applicant's AEE includes a comprehensive description of the proposed mineral exploration and associated activities. In summary, the proposal includes:

#### Mineral exploration:

- Drilling of 28 diamond core holes using a diesel-powered drill rig.
- The drill hole diameter will be 9.6 cm - 12.0 cm.
- Hole depth is expected to vary between 10 and 250 m below ground level depending on location, with an average depth between 50m – 100m.
- Drill core will be analysed for the presence and abundance of elements including tungsten and gold.
- Each hole produces 0.75m<sup>3</sup> of core (approximately 21m<sup>3</sup> in total over approximately 10ha).
- The drill holes are backfilled after completion.

### Transportation:

- The drill rig and supporting equipment will be transported onto the site by helicopter.
- Transportation of the drill rig to individual drilling sites will either be by helicopter, or if practical the rig will be mounted on tracks and driven under its own power along existing former State Mine tracks.
- Other transport of equipment, camp facilities and people to and from individual drill sites will be by helicopter.

### Drills sites:

- Drill sites proposed within the Judah Lode area will be on or adjacent to existing tracks that have been used for drill rig and mining access in the past (circa 1969).
- It is expected that most of the sites in the Judah Lode area can be drilled using a track mounted rig directly on the ground surface, but if required a temporary wooden drilling platform will be assembled and used.
- The drill sites (including rig etc) will each be approximately 227m<sup>2</sup> in area.

### Camps:

- A temporary camp for drilling personnel may be established close to the drill sites. If the camp site is not needed, workers will 'fly in fly out' each day.
- The drilling camp will provide portable accommodation using either flat pack container/portacom or tents. Toilet facilities will be provided with a standalone portaloos. The portacom buildings may be larger than 10m<sup>2</sup>.
- A maximum of 4 people will be accommodated on site at any one time to support the drilling programme. This will include 2 drillers, a geologist and geological field technician.
- The footprint of the camp will be approximately 20m x 20m (400m<sup>2</sup> in area).
- The camp site will be pre-selected and located on flat or gentle sloping terrain and placed on short tussock, pasture or on rocky substrates.
- No earthworks are required for establishing a platform for the camp site facilities, however the vegetation within the footprint will become flattened or possibly crushed.

### Informal airports:

- Three informal airports (helipads) are identified within the site.
- There will initially be three to five helicopter movements to carry the drill rig and equipment to the site. This will equate to approximately 1.5 hours flying time.
- Once on site, the drill rig and equipment will need to be moved from site to site every 3 to 10 days depending on the depth of the hole being drilled. Each movement will involve the helicopter flying from the Glenorchy Airstrip to the drilling site and then return to the Glenorchy Airstrip. The flying time to do this work is estimated to be approximately half an hour. The equipment and gear will be moved from site to site by helicopter using long lines. The majority of the time the helicopter will not need to land on the site.
- On completion of the exploration activities there will be a further three to five helicopter movements totalling 1.5 hours flying time to remove the equipment, samples collected and gear from the site back to the Glenorchy Airstrip.
- It is estimated that up to 150 flights would be needed in total or an average of three per day. The maximum number of flights would only be required if workers 'fly in fly out' each day rather than living onsite.
- Flight movements may be allocated from Heli Glenorchy's DOC concession (15 times per day and 5 landings on Black Peak).

### Clearance of indigenous vegetation:

- The main vegetation type is tussock grassland vegetation.
- Minor vegetation clearance and earthworks may be required to support drilling activities upon the existing State Mine tracks.
- Clearing will be kept to a minimum and undertaken with hand tools.

Heritage:

- The applicant's Heritage Assessment has identified a number of heritage or archaeological sites in the vicinity of the drilling areas and the drilling sites are with the Glenorchy Heritage Overlay Area.
- To avoid damaging the features, a heritage expert will visit the site prior to activities commencing and brief operators on what constitutes a site and flag important features allowing operators to avoid them.

Hazardous Substances:

- Storage of 1,200 L of diesel fuel will be stored in approved containers (e.g. fuel tank or jerry cans) on or adjacent to the temporary wooden drilling platform at any one time to support the operation of the drill rig.

Waste Management:

- All waste will be flown out as required or removed when the camp site is dismantled.
- Any contaminated soils or materials will be removed from the site and disposed of at appropriate facilities.

Other matters:

- The applicant confirmed that the proposal does not breach any applicable noise standards.
- A breach of earthworks fill height for backfilling the drill holes is required.
- Storage and transportation of diesel and other hazardous substances does not breach any applicable rules.

*Site and Locality Description*

The site is located near Glenorchy and is within the Glenorchy Heritage Overlay Area and Whakaari Conservation Area. The site is Crown-owned and administered by the Department of Conservation. A location map at Figure 1 below shows the extent of the Access Arrangement area.

The site is within the Buckler Burn Catchment, a mountainous area with a steep valley system, with the main vegetation type being native tussock grassland. The site features some shrublands and small wetlands. The overall vegetation cover is largely indigenous, despite grazing and historic mining activities. The applicant's AEE contains a comprehensive description of the site's ecology and setting.

The site contains numerous archaeological sites and heritage features that relate to mining activities that date back to the 1880s. Mining was most recently undertaken in the area in the 1980s. Recorded and unrecorded archaeological sites include sluiced faces, waste rock, tailings, and artefacts, water races and terraces. A detailed description of the area's heritage is contained within the applicant's Heritage Assessment.



**Figure 1 – location map**

### *Relevant Site History*

RM130412 was lodged in June 2013 to undertake mineral exploration near Glenorchy in accordance with the same Exploration Permit 40547. This application was withdrawn on 3 March 2016.

## **2. ACTIVITY STATUS**

The proposal requires consent for the following reasons:

### **OPERATIVE DISTRICT PLAN (ODP)**

The subject site is zoned Rural General in the ODP and the proposed activity requires resource consent for the following reasons:

#### Rural

- A **restricted discretionary** activity pursuant to Rule 5.3.3.3(xi) as the proposal breaches Site Standard 5.3.5.1(x) for clearance of indigenous vegetation less than 1075m above sea level and less than 200m from any other indigenous vegetation which is greater than 0.5 hectares in area. The proposal includes clearance of indigenous vegetation to establish mineral exploration drilling sites. Based on a drilling footprint of 80m<sup>2</sup> per 28 drill sites, a total area of clearance of up to 2,240m<sup>2</sup> is estimated. Council's discretion is restricted to the effect on nature conservation, landscape and visual amenity values and the natural character of the rural environment.
- A **restricted discretionary** activity pursuant to Rule 5.3.3.3(xi) as the proposal breaches Site Standard 5.3.5.1(xii) for clearance of indigenous vegetation within Alpine Environments higher than 1075m above sea level. The proposal includes clearance of indigenous vegetation to establish mineral exploration drilling sites. Based on a drilling footprint of 80m<sup>2</sup> per 28 drill sites, a total area of clearance of up to 2,240m<sup>2</sup> is estimated. Council's discretion is restricted to the effect on nature conservation values, the natural character of the rural environment, and landscape and visual amenity values.

- A **discretionary activity** pursuant to Rule 5.3.3.3(i)(a)(i) for the construction of a building(s) outside of an approved building platform. Consent is sought to establish buildings within a temporary mineral exploration camp site.
- A **discretionary** activity pursuant to Rule 5.3.3.3(v) as the proposal includes establishing three temporary airports to provide helicopter access to establish mineral exploration drilling sites.

### Earthworks

- A **restricted discretionary** activity pursuant to Rule 5.3.3.3(v) for a breach of site standard 22.3.3 (ii) (a) whereby the maximum height of fill associated with filling in the drill hopes will be 250m. Council's discretion is restricted to:
  - (i) The nature and scale of the earthworks
  - (ii) Environmental protection measures
  - (iii) Remedial works and revegetation
  - (iv) The effects on landscape and visual amenity values
  - (v) The effects on land stability and flooding
  - (vi) The effects on water bodies
  - (vii) The effects on cultural and archaeological sites
  - (viii) Noise.

For the avoidance of doubt, the following rules are relevant to the application but are treated as inoperative under s 86F of the RMA:

- A **controlled** activity pursuant to Rule 5.3.3.2(iv) as the proposal is for mineral exploration of not more than 20m<sup>3</sup> in volume in any one hectare. Council's control is in respect of terrain disturbance including vegetation clearance and volumes of material to be removed; rehabilitation of a site; siting of roads or any buildings; and dust and noise.

### **PROPOSED DISTRICT PLAN - STAGE 1 DECISIONS**

Council notified its decisions on Stage 1 of the Proposed District Plan (**Stage 1 Decisions Version 2018**) on 5 May 2018 and an Appeals Version finalised in July 2018. The subject site is zoned Rural within the Glenorchy Heritage Overlay Area by the Stage 1 Appeals Version 2018 and the proposed activity requires resource consent for the following reasons:

Rules that are treated as operative under s86F:

- A **controlled** activity pursuant to Rule 21.4.30 for mineral exploration that does not involve more than 20m<sup>3</sup> in volume in any one hectare. Council's control is reserved to:
  - a. the adverse effects on landscape, nature conservation values and water quality;
  - b. ensuring rehabilitation of the site is completed that ensures:
    - i. the long-term stability of the site;
    - ii. that the landforms or vegetation on finished areas are visually integrated into the landscape;
    - iii. water quality is maintained;
    - iv. that the land is returned to its original productive capacity;
  - c. that the land is rehabilitated to indigenous vegetation where the pre-existing land cover immediately prior to the exploration, comprised indigenous vegetation as determined utilising Section 33.3.3 of Chapter 33.
- A **discretionary** activity pursuant to Rule 26.5.15 for temporary buildings ancillary to mining on a mining site within the Glenorchy Heritage Overlay Area, with a building footprint greater than 10m<sup>2</sup> in area and that will remain on site for more than six months. It is proposed to relocate temporary container buildings or portacombs that may be over 10m<sup>2</sup> for the temporary camp site.

Rules that have legal effect under s86F but are not yet treated as operative due to appeals:

- A **discretionary** activity pursuant to Rule 21.4.11 in regard to the construction of any building including the physical activity associated with buildings including roading, access, lighting, landscaping and earthworks, not provided for by any other rule. It is proposed to establish buildings associated with a temporary mineral exploration camp site.
- A **discretionary** activity pursuant to Rule 21.10.1 for three informal airports located on public conservation land in accordance with an Access Arrangement. The rule excludes informal airports in accordance with Concessions and Recreation Permits but does not specify Access Arrangements or Access Agreements.

The activity is permitted by Rule 33.5.1 in respect to clearance of indigenous vegetation less than 2m in height and less than 5,000m<sup>2</sup> on a site with a total area of more than 10ha; however, this rule is under appeal.

## PROPOSED DISTRICT PLAN - STAGE 2 NOTIFIED VERSION

Council notified Stage 2 of the Proposed District Plan (Stage 2 Notified Version 2017) on 23 November 2017. The subject site is not zoned by the Stage 2 Notified Version 2017 and there are no rules with immediate legal effect that apply to the proposal.

Overall, the application is considered to be a **discretionary** activity under the ODP and the Stage 1 Decisions Version 2018.

## 2.2 NATIONAL ENVIRONMENTAL STANDARD FOR ASSESSING AND MANAGING CONTAMINANTS IN SOIL TO PROTECT HUMAN HEALTH

This application does not involve subdivision or a change or use or removal of a fuel storage system. Earthworks will not exceed a volume of 25m<sup>3</sup> per 500m<sup>2</sup>, and therefore the NES does not apply.

## 3. SECTION 95A – PUBLIC NOTIFICATION

Section 95A of the RMA requires a decision on whether or not to publicly notify an application. The following steps set out in this section, in the order given, are used to determine whether to publicly notify an application for a resource consent.

### **3.1 Step 1 – Mandatory public notification**

The applicant has not requested public notification of the application (s95A(3)(a)).

Public Notification is not required as a result of a refusal by the applicant to provide further information or refusal of the commissioning of a report under section 92(2)(b) of the RMA (s95A(3)(b)).

The application does not involve exchange to recreation reserve land under section 15AA of the Reserves Act 1977 (s95A(3)(c)).

### **3.2 Step 2 – Public notification precluded**

Public notification is not precluded by any rule or national environmental standard (s95A(5)(a)).

The proposal is not a controlled activity; or a restricted discretionary or discretionary subdivision or residential activity; or a restricted discretionary, discretionary or non-complying boundary activity as defined by section 87AAB; therefore, public notification is not precluded.

The proposal is not a prescribed activity (s95A(5)(b)(i-iv)).

### **3.3 Step 3 – If not precluded by Step 2, public notification is required in certain circumstances**

Public notification is not specifically required under a rule or national environmental standard (s95A(8)(a)).

A consent authority must publicly notify an application if it decides, in accordance with s95D, that the proposed activity will have or is likely to have adverse effects on the environment that are more than minor (s95A(8)(b)).

An assessment in this respect is therefore made in section 3.4 below:

#### 3.4.1 Effects that must be disregarded (s95D(a)-(e))

- A: *Effects on the owners or occupiers of land on which the activity will occur and on adjacent land (s95D(a)).*
- B: *An adverse effect of the activity if a rule or national environmental standard permits an activity with that effect (s95D(b), a permitted baseline assessment is undertaken (if applicable) in section 3.3.3 below).*
- C: *Trade competition and the effects of trade competition (s95D(d)).*
- D: *The following persons have provided their **written approval** and as such adverse effects on these parties have been disregarded (s95D(e)).*

Person (owner/occupier)	Address (location in respect of subject site)
New Zealand Petroleum & Minerals (Ministry of Business, Innovation & Employment, MBIE)	MBIE administers the Crown Minerals Act 1991. The Minerals Exploration Permit is considered to constitute approval to undertake the proposed activities until 10 September 2021.
Department of Conservation, DOC	DOC administers the Crown-owned subject site for conservation purposes. The Access Arrangement is considered to constitute landowner approval to undertake the proposed activities until 10 September 2021.
Heritage New Zealand, HNZ	Interest in heritage and archaeological values of subject site. It is noted that HNZ approval was issued for the original larger proposal.

##### 3.4.1.1 Permitted Baseline (s95D(b))

The consent authority **may** disregard an adverse effect of the activity if a rule or national environmental standard permits an activity with that effect. In this case, mineral exploration, clearance of indigenous vegetation within an Alpine Environment and airports within the Rural zones, and development generally within the heritage area, require consent. The permitted baseline comprises up to 1000m<sup>3</sup> of earthworks, some noise, and storage and transportation of hazardous substances.

##### 3.4.1.2 Assessment: Effects On The Environment

Taking into account sections 3.4 above, the following assessment determines whether the proposed activity will have, or is likely to have, adverse effects on the environment that are more than minor that will require public notification (s95A(8)(b)).

The relevant assessment matters are found in Section 5 (Rural) of the ODP and Chapter 21 (Rural) of the PDP and have been considered in the assessment below.

The Assessment of Effects provided at section 3 of the applicant's AEE, is comprehensive and is considered accurate. It is therefore adopted for the purposes of this report, along with the following additional assessment.

#### **Duration**

A duration has not been sought, although the applicant's AEE considers the activities would take 3-5 years. It is considered that a lapse date of 10 September 2021 aligned with the Minerals Exploration Permit and Access Agreement expiry dates is appropriate and will be imposed.

The applicant accepts the duration condition.

Overall, adverse effects in regard to long term activities on the site are considered to be less than minor.

### **Mineral exploration**

The limited scale of the drilling activity for mineral exploration is anticipated as a controlled activity. The activity will require earthworks for drilling, and clearance of indigenous vegetation for establishing drilling sites, the camp site and informal airports. There will be no permanent changes to landforms, as the proposal is for exploration and not large-scale mining.

To ensure that adverse effects are minimised, the proposal includes provisions for vegetation to be cleared by hand and site rehabilitation. It is considered appropriate to include these requirements as conditions, along with a condition on hours of operation to reduce noise from the drilling rig within the conservation area near public walking tracks, and a condition that the activity is undertaken in accordance with this application and supporting documents.

The applicant accepts the conditions.

Overall, adverse effects in regard to the mineral exploration activity on landscape, nature conservation values and water quality are considered to be less than minor.

### **Camp site**

The camp site will be temporary and limited in scale and nature, with four people accommodated at any one time. All rubbish and waste will be removed. Given the isolated location of the camp site, adverse effects on the environment in respect of noise, rural amenities, and recreational activities are considered to be temporary and less than minor.

Conditions are recommended in regard to emergency and accident procedures, sanitation, and removal of waste. An advice note in respect to the Health and Safety at Work Act 2015 is included.

The applicant accepts the conditions.

Overall, adverse effects in regard to the camp site are considered to be less than minor.

### **Airports**

It is proposed to establish three helipads associated with the mineral exploration activity, with associated flight movements.

As detailed above, the helicopter movements to set up and service the exploration activities will be relatively infrequent and of short duration. At present Heli Glenorchy does approximately 20 flights from the Glenorchy Airstrip on a busy day. Heli Glenorchy has a Department of Conservation concession to land in the Whakaari Conservation Area up to 15 times per day (5 landings per day on Black Peak). The proposed helicopter movements to set up, service and dismantle the exploration activities will therefore cumulatively be minor when considered alongside the receiving environment.

Conditions are recommended in respect to an average of 20 flights per week and total flights of 150, and associated hours of operation.

The applicant accepts the conditions.

Overall, adverse effects in regard to informal airports are considered to be less than minor.

### **Indigenous vegetation**

The description of the existing environment, assessment of effects and recommended management measures provided at section 3.1 of the applicant's AEE is comprehensive and is considered accurate. It is therefore adopted for the purposes of this report. The proposed level of clearance will be in an area that is not visible from many public places and retains large areas of indigenous vegetation habitat. The applicant's AEE advises that the tussock grassland vegetation that prevails across most of the area proposed for exploration drilling will recover within 12 months of removal of the camp site facilities. Woody vegetation and cushionfield communities would be less resilient to encroachment of this nature and will be avoided.

Conditions are therefore recommended in respect of hand clearance of vegetation, avoiding sensitive vegetation, and site rehabilitation to pre-existing land cover.

The applicant accepts the conditions.

Overall, adverse effects on the environment from clearance of Indigenous vegetation will be no more than minor.

### **Heritage and archaeology**

The applicant's Heritage Assessment is comprehensive and is considered accurate. It is therefore adopted for the purposes of this report, along with additional comments made by Heritage New Zealand. Conditions are recommended in regard to avoiding archaeological features, site briefing and monitoring by an archaeologist or heritage professional, and accidental discovery protocol. The applicant's methodology is considered to be appropriate, and will adequately manage potential adverse effects on heritage and archaeological values. Conditions in respect of the methodology are recommended.

The applicant accepts the conditions.

Overall, adverse effects on the environment in regard to heritage and archaeology will be no more than minor.

### **Hazardous substances**

The storage of a hazardous substance (diesel) could have potential adverse effects in respect to contamination and safety within the sensitive alpine environment and heritage area.

As control of hazardous substances is no longer a function under Section 31 of the RMA, an advice note will be added to remind the consent holder of their requirements under the Hazardous Substances and New Organisms Act 1996 Act.

For these reasons any potential effects on the environment relating to the storage of the diesel will be less than minor.

#### 3.4.2 Decision: Effects On The Environment (s95A(8))

On the basis of the above assessment, overall the proposed activity is not likely to have adverse effects on the environment that are more than minor. Therefore, public notification is not required under Step 3.

### **3.5 Step 4 – Public Notification in Special Circumstances**

There are no special circumstances in relation to this application.

## **4. LIMITED NOTIFICATION (s95B)**

Section 95B(1) requires a decision on whether there are any affected persons (under s95E). The following steps set out in this section, in the order given, are used to determine whether to give limited notification of an application for a resource consent, if the application is not publicly notified under section 95A.

#### **4.1 Step 1: certain affected groups and affected persons must be notified**

Limited notification is not required under Step 1 as the proposal does not affect customary rights groups, customary marine title groups nor is it on, adjacent to or may affect land subject to a statutory acknowledgement (s95B(2)-(4)).

#### **4.2 Step 2: if not required by Step 1, limited notification precluded in certain circumstances**

Limited notification is not precluded under Step 2 as the proposal is not subject to a rule in the District Plan or is not subject to a NES that precludes notification (s95B(6)(a)).

Limited notification is not precluded under Step 2 as the proposal is not a controlled activity or is not a prescribed activity (s95B(6)(b)).

#### **4.3 Step 3: if not precluded by step 2, certain other affected persons must be notified**

If limited notification is not precluded by step 2, a consent authority must determine, in accordance with section 95E, whether the following are affected persons:

The proposal is not a boundary activity where the owner of an infringed boundary has provided their approval, and it is not a prescribed activity (s95B(7)).

The proposed activity falls into the 'any other activity' category (s95B(8)), and the effects of the proposed activity are to be assessed in accordance with section 95E.

##### **4.3.1 Effects That May Be Disregarded**

###### **4.3.1.1 Persons who have provided written approval (s95E(3))**

The following persons have provided written approval for the proposed activity and therefore are not an affected person:

<b>Name</b>	<b>Address</b>
New Zealand Petroleum & Minerals (Ministry of Business, Innovation & Employment, MBIE)	MBIE administers the Crown Minerals Act 1991. The Minerals Exploration Permit is considered to constitute approval to undertake the proposed activities until 10 September 2021.
Department of Conservation, DOC	DOC administers the Crown-owned subject site for conservation purposes. The Access Arrangement is considered to constitute landowner approval to undertake the proposed activities until 10 September 2021.
Heritage New Zealand, HNZ	Interest in heritage values of subject site. It is noted that HNZ approval was issued for the original larger proposal.

##### **4.3.2 Assessment: Effects on Persons**

Taking into account the exclusions in section 95E(2) and (3) as set out in section 4.3.1 above, the following outlines an assessment as to whether the activity will have or is likely to have adverse effects on persons that are minor or more than minor:

###### **Conservation area users**

The Whakaari Conservation Area is used for walking, tramping, mountain biking, hunting and horse riding. The drilling operations are not an activity that is normally anticipated by the public in a conservation area; however, it is noted that the area was relatively recently mined (1980s) and as such these types of activities are not historic (pre-1900s). The operations may generate varying reactions from recreationists in regard to visual amenity of the area arising from the presence of a drill rig and the sound generated by drilling operations.

The applicant's AEE includes a proposal to undertake a programme of information dissemination, potentially in conjunction with the Department of Conservation. This may include press releases in local newspapers, provision of notices at local outlets in Glenorchy, and provision of signage at the Judah Road car park by the Glenorchy Road. A condition in this respect is recommended.

Noise associated with the drill rig will be minimal, with operating sound levels similar to a tractor engine operating at a constant and moderate speed. The site is isolated; however, visitors on the nearest track (Mt McIntosh Loop) may hear some sound from drilling. Drilling will not take place at night time.

Conditions of consent in respect to hours of operation of the drilling rig and helicopter landings/take-offs is recommended.

As discussed within the application, the activity will be temporary and *minimum impact*, limited to part of the wider conservation area, and all equipment will be removed when the activity ceases. Other than pockets of vegetation clearance and disturbance, which is generally expected to recover within 12 months after the activities cease, there will be no permanent changes to landforms and the wider environment.

It is therefore expected that the scale and duration of the activity will not impede general public enjoyment of the area. Overall, adverse effects on users of the conservation area are considered to be less than minor.

#### Other persons

Noise effects from the drilling rig and informal airports will be substantially separated by distance from neighbouring properties, and would be intermittent and temporary. As such, adverse effects in terms of noise or other amenities on persons outside the conservation area are expected to be less than minor.

#### 4.3.4 Decision: Effects on Persons (s95B(1))

In terms of section 95E of the RMA, the adverse effects on persons are considered to be less than minor

#### **4.4 Step 4 – Further Limited Notification in Special Circumstances (s95B(10))**

Special circumstances do not apply that require limited notification.

### **5. OVERALL NOTIFICATION DETERMINATION**

In reliance on the assessment undertaken in sections 3 and 4 above, the application is to be processed on a non-notified basis.

### **6. S104 ASSESSMENT**

#### **6.1 EFFECTS ON THE ENVIRONMENT (s104(1)(a))**

Actual and potential effects on the environment have been outlined in section 3 and 4 of this report. Conditions of consent can be imposed under s108 of the RMA as required to avoid, remedy or mitigate adverse effects.

#### **6.2 RELEVANT DISTRICT PLAN PROVISIONS (s104(1)(b)(vi))**

##### Operative District Plan

The relevant operative objectives and policies are contained within Parts 4 (District-Wide) and 5 (Rural Areas) of the ODP.

##### Part 4 District Wide

###### *Objective 1 - Character and Landscape Value*

*To protect the character and landscape value of the rural area by promoting sustainable management of natural and physical resources and the control of adverse effects caused through inappropriate activities.*

*Consider fully the district wide landscape objectives and policies when considering subdivision, use and development in the Rural General Zone.*

The proposed activity will not result in adverse effects on the existing conservation activities on site or outstanding natural landscape values as the mining is of short duration and all holes will be backfilled and capped following each extraction activity.

#### Part 5 Rural Areas

##### *Objective 3 - Rural Amenity*

*Avoiding, remedying or mitigating adverse effects of activities on rural amenity.*

The proposed extraction will not breach ODP noise standards or cause dust effects from the processing of the material, given the large land holding and distance to neighbouring properties. As such the proposal is in line with the above objective and associated policies.

##### *Objective 5 - Mineral Extraction*

*Mineral extraction, including prospecting and exploration, carried out in a manner which avoids, remedies or mitigates adverse effects on the environment.*

##### *Policies:*

*5.1 To ensure potential adverse effects of large-scale recreational extractive activities (including mineral exploration) on the rural environment are avoided, remedied or mitigated.*

*5.2 To ensure that during and after mining, sites are progressively rehabilitated in a planned and coordinated manner, to enable the establishment of a land use appropriate to the area.*

The minimal impact drilling methods and mitigation proposed will ensure that adverse effects on the environment will be adequately avoided or mitigated.

Overall, the proposal is in accordance with the relevant objectives and policies within the ODP.

#### Proposed District Plan (Stage 1 – Appeals Version 2018)

The relevant operative objectives and policies are contained within Chapters 6 (Landscapes), 21 (Rural) and 26 (Historic Heritage).

#### Chapter 6 – Landscapes

*6.3.8 Avoid indigenous vegetation clearance where it would significantly degrade the visual character and qualities of the District's distinctive landscapes*

*6.3.10 Ensure that subdivision and development in the Outstanding Natural Landscapes and Rural Character Landscapes adjacent to Outstanding Natural Features does not have more than minor adverse effects on the landscape quality, character and visual amenity of the relevant Outstanding Natural Feature(s).*

*6.3.15 The landscape character and amenity values of Outstanding Natural Landscapes are a significant intrinsic, economic and recreational resource, such that new large scale renewable electricity generation or new large scale mineral extraction development proposals are not likely to be compatible with them.*

The proposed clearance for the camp sites and drilling sites is minimal, will recover after 12 months, and will therefore not degrade the values of the surrounding conservation area and wider Outstanding Natural Landscape (ONL). The proposal is small scale mining and is therefore is appropriate within the ONL.

#### Chapter 21 – Rural

*21.2.5 Objective - Mineral extraction opportunities are provided for on the basis the location, scale and effects would not degrade amenity, water, wetlands, landscape and indigenous biodiversity values.*

The proposal gives effect to this objective and associated policies, as it relates to the economic value of locally mined gold and tungsten and other elements; and provides for small scale mineral exploration with limited environmental impact; and will ensure that drilling sites are rehabilitated with no changes to landforms.

## Chapter 26 – Historic Heritage

### *26.3.4 Objective - The historic heritage value of heritage features is enhanced where possible.*

The proposal gives effect to this objective and associated policies, as it comprises small-scale mining activities consistent with the maintenance of heritage and landscape values within the Glenorchy Heritage Overlay Area, while protecting the key heritage features identified in section 26.10.9.

Overall, the proposal is in accordance with the relevant objectives and policies within the Stage 1 of the PDP.

### Proposed District Plan (Stage 2 Notified Version)

Council notified Stage 2 of the Proposed District Plan on 23 November 2017. There are no objectives and policies of relevance to the proposal.

## **6.3 PART 2 OF THE RMA**

The activities are temporary and site damage will be rehabilitated. It is therefore considered that the proposal will not result in adverse effects on the surrounding Outstanding Natural Landscape that would be more than minor.

Effects on amenity values enjoyed by recreational users will be temporary.

The proposed mineral exploration activities will not affect public access to the Whakaari Conservation Area. There will; however, be a safe zone around the temporary drill sites to protect public health and safety.

The proposal includes mitigation measures to avoid adverse effects on heritage values.

The activities are not being undertaken within an area of significant indigenous vegetation.

The proposed activities will result in no more than minor adverse effects on ecosystems due to the small scale of the activity and proposed management and mitigation measures.

The proposal enables the applicant to provide for their economic wellbeing by undertaking mineral exploration activities. Effects on natural and physical resources will be no more than minor and any potential adverse effects can be avoided or mitigated.

In summary, it is considered that the proposal will be consistent with Part 2 of the RMA.

## **6.4 DECISION ON RESOURCE CONSENT PURSUANT TO SECTION 104 OF THE RMA**

Consent is **granted** to undertake mineral exploration, to establish informal airports for helicopter landings, to establish buildings for a temporary camp site within the Glenorchy Heritage Overlay Area, and to clear indigenous vegetation within an alpine environment, subject to the conditions outlined in *Appendix 1* of this decision report imposed pursuant to Section 108 of the RMA.

## **7.0 DEVELOPMENT CONTRIBUTIONS AND ADMINISTRATIVE MATTERS**

### *Local Government Act 2002: Development Contributions*

In granting this resource consent, pursuant to the Local Government Act 2002 and the Council's Policy on Development Contributions the Council has identified that a Development Contribution is required.

Please contact the Council if you require a Development Contribution Estimate.

Payment will be due prior to commencement of the consent, except where a Building Consent is required when payment shall be due prior to the issue of the code of compliance certificate.

*Administrative Matters*

The costs of processing the application are currently being assessed and you will be advised under separate cover whether further costs have been incurred.

The Council will contact you in due course to arrange the required monitoring. It is suggested that you contact the Council if you intend to delay implementation of this consent or if all conditions have been met.

This resource consent is not a building consent granted under the Building Act 2004. A building consent must be obtained before construction can begin.

This resource consent must be exercised within five years from the date of this decision subject to the provisions of section 125 of the RMA.

If you have any enquiries please contact Paula Costello at email: paula.costello@qldc.govt.nz.

Report prepared by

Decision made by




Rosalind Devlin  
**CONSULTANT PLANNER**

Paula Costello  
**SENIOR PLANNER**

- APPENDIX 1** – Conditions of consent
- APPENDIX 2** – Applicant's AEE
- APPENDIX 3** – Access Arrangement
- APPENDIX 4** – Minerals Exploration Permit

## **APPENDIX 1 – CONSENT CONDITIONS**

### General Conditions

1. That the development must be undertaken/carried out in accordance with the plans:

- 'Access Arrangement MP 40547 – New Zealand Tungsten Mining Limited'
- 'Figure 3 – Helicopter Flight Path Map'

**stamped as approved on 19 December 2018**

and the application as submitted, with the exception of the amendments required by the following conditions of consent.

2. This consent shall not be exercised and no work or activity associated with it may be commenced or continued until the following charges have been paid in full: all charges fixed in accordance with section 36(1) of the Resource Management Act 1991 and any finalised, additional charges under section 36(3) of the Act.
3. The consent holder is liable for costs associated with the monitoring of this resource consent under Section 35 of the Resource Management Act 1991.

### Duration

4. This consent shall lapse on 10 September 2021.

### Communication

5. Prior to commencement of the activity, the consent holder shall undertake a programme of public communication. This may include press releases in local newspapers, provision of notices at local outlets in Glenorchy and Department of Conservation visitor centres, and provision of signage at the Judah Road car park by the Glenorchy Road.

### Mineral exploration

3. The consent holder shall ensure that the operation and management of the activities are carried out in general accordance with the details submitted within the application.
6. Hours of operation for drilling, shall be:  
Monday to Sunday: 0700h to 2000h
7. The consent holder shall backfill and seal each drill hole following excavation as soon as practicably possible.
8. The consent holder shall keep a record of all areas excavated and make tis available to the Council on request.

### Camp site

9. The camp site shall be located on flat or gentle sloping terrain and placed on short tussock, pasture or on rocky substrates. No earthworks shall be undertaken in establishing the camp site.
10. A maximum of four (4) people shall be accommodated on site at any one time to support the drilling programme. This may include drillers, a geologist and geological field technician, or archaeologist.
4. The consent holder shall ensure a potable water supply is available and complies with the Drinking water standards for New Zealand 2005.

11. The consent holder shall be responsible for ensuring that all sanitary facilities (portaloos, showers and water taps) are monitored and serviced throughout the activity. Sufficient hand washing facilities or hand sanitiser must be provided and serviced. All greywater and other waste shall be collected and removed from the site for appropriate disposal.
12. The consent holder is wholly responsible for removing all rubbish, recycling and other materials associated with the activity from the area, and ensuring no damage occurs to any public property and the surrounding area as a result of the exercise of this consent. All rubbish stored on the site prior to removal is to be stored secure from animals and unauthorised persons. The consent holder shall undertake regular servicing inspections and removal of rubbish (for rubbish bins and facilities).
13. The consent holder shall ensure that all persons accommodated at, or visiting, the camp site know the procedures in the event of an emergency or accident and what their roles are. The consent holder shall ensure that first aid and firefighting equipment is located in appropriate locations with staff trained in evacuation and the use of fire extinguishers.

#### Lighting

14. Any lighting at the drilling sites or camp site shall be appropriately positioned to avoid glare or uplighting. Any lighting shall comply with the Southern Light Strategy, AS 1680.5 (workplace lighting) and AS 4282 (control of the obtrusive effects of outdoor lighting).

*<https://www.qldc.govt.nz/council-online/council-documents/strategies-and-publications/southern-light-strategy/>*

#### Heritage

15. The consent holder shall ensure that site operators are first briefed by an archaeologist/heritage professional on what constitutes archaeology and important features and how to identify these.
16. Camp site and drilling site establishment works shall be monitored by an archaeologist to ensure archaeological sites are avoided
17. Periodic or as needed monitoring of exploration works shall be undertaken by an archaeologist/heritage professional.

#### Accidental Discovery Protocol

18. If the consent holder:
  - a) does not have an archaeological authority from Heritage New Zealand Pouhere Taonga and discovers koiwi tangata (human skeletal remains), waahi taoka (resources of importance), waahi tapu (places or features of special significance) or other Maori artefact material, the consent holder shall without delay:
    - (i) notify Council, Tangata whenua and Heritage New Zealand Pouhere Taonga and in the case of skeletal remains, the New Zealand Police.
    - (ii) stop work within the immediate vicinity of the discovery to allow a site inspection by the Heritage New Zealand Pouhere Taonga and the appropriate runanga and their advisors, who shall determine whether the discovery is likely to be extensive, if a thorough site investigation is required, and whether an Archaeological Authority is required.

Any koiwi tangata discovered shall be handled and removed by tribal elders responsible for the tikanga (custom) appropriate to its removal or preservation. Site work shall recommence following consultation with Council, the New Zealand Pouhere Taonga, Tangata whenua, and in the case of skeletal remains, the New Zealand Police, provided that any relevant statutory permissions have been obtained.

- b) discovers any feature or archaeological material that predates 1900, or heritage material, or disturbs a previously unidentified archaeological or heritage site, the consent holder shall without delay:
- (i) stop work within the immediate vicinity (at least 5m) of the discovery or disturbance and;
  - (ii) advise Council, the Heritage New Zealand Pouhere Taonga and in the case of Maori features or materials, the Tangata whenua and if required, shall make an application for an Archaeological Authority pursuant to the New Zealand Pouhere Taonga Act 2014 and;
  - (iii) arrange for a suitably qualified archaeologist to undertake a survey of the site.

Site work may only recommence following consultation with Council.

#### Indigenous vegetation

19. The consent holder shall ensure that any indigenous vegetation clearing will be kept to an absolute minimum. Woody vegetation, cushionfield communities and wetland environments are less resilient to disturbance and shall not be cleared. Where vegetation clearance is required, it will be done with hand tools.
20. Prior to and immediately following demobilisation, sites will be inspected for any remaining materials and, if required, sites will be rehabilitated by moving dead vegetation onto the area of disturbance where possible.

#### Informal airports

21. A maximum of three informal airports (helipads) may be established within the site.
22. The flight paths shall be as shown on the plan approved in Condition (1) above titled "Figure 3 – Helicopter Flight Path Map".
23. Flights shall be no more than on average 20 per week over the duration of the activity or a maximum of 150.
24. Hours of operation for the informal airports, shall be:  
Monday to Sunday: 0600h to 2100h
25. A log of all flight movements shall be kept and made available to the Council on request.

#### Site reinstatement

26. The consent holder shall ensure that the site is vacated and cleared within seven days of the completion of the activity. This shall include the removal of all buildings, structures, signs, drilling rig, and all incidental equipment and waste materials associated with the activity. With the exception of indigenous vegetation, the area over which the activity takes place shall be returned to the condition and appearance as existed prior to the exercise of this consent.
27. Photos showing each drilling site, informal airport and the camp site, taken before works, during works, and after site clearance, should be kept and made available to the Council on request.

#### Review

28. Within six months of the date of this decision; and/or upon the receipt of information identifying non-compliance with the conditions of this consent, and/or within ten working days of each anniversary of the date of this decision, the Council may, in accordance with Sections 128 and 129 of the Resource Management Act 1991, serve notice on the consent holder of its intention to review the conditions of this resource consent for any of the following purposes:

- a) To deal with any adverse effects on the environment that may arise from the exercise of the consent which were not foreseen at the time the application was considered and which it is appropriate to deal with at a later stage.
  - b) To deal with any adverse effects on the environment which may arise from the exercise of the consent and which could not be properly assessed at the time the application was considered.
  - c) To avoid, remedy and mitigate any adverse effects on the environment which may arise from the exercise of the consent and which have been caused by a change in circumstances or which may be more appropriately addressed as a result of a change in circumstances, such that the conditions of this resource consent are no longer appropriate in terms of the purpose of the Resource Management Act 1991.
29. As part of the review clause stated in condition 28 of this consent, the Council may have the application audited at the consent holder's expense.

#### Advice Notes

1. This site may contain archaeological material. Under the Heritage New Zealand Pouhere Taonga Act 2014, the permission of the Heritage New Zealand Pouhere Taonga must be sought prior to the modification, damage or destruction of any archaeological site, whether the site is unrecorded or has been previously recorded. An archaeological site is described in the Act as a place associated with pre-1900 human activity, which may provide evidence relating to the history of New Zealand. These provisions apply regardless of whether a resource consent or building consent has been granted by Council. Should archaeological material be discovered during site works, any work affecting the material must cease and the Heritage New Zealand Pouhere Taonga must be contacted (Dunedin office phone 03 477 9871).
2. The consent holder is reminded that they need to meet all the relevant requirements of the Hazardous Substances and New Organisms Act 1996 and the Health and Safety at Work Act 2015.

#### **For Your Information**

If your decision requires monitoring, we will be sending an invoice in due course for the deposit referred to in your consent condition. To assist with compliance of your resource consent and to avoid your monitoring deposit being used before your development starts, please complete the "[Notice of Works Starting Form](#)" and email to the Monitoring Planner at [RCMonitoring@qldc.govt.nz](mailto:RCMonitoring@qldc.govt.nz) prior to works commencing.

You may also have conditions that require you to apply for Engineering Acceptance. To apply for Engineering Acceptance, please complete the [Engineering Acceptance Application form](#) and submit this completed form and an electronic set of documents to [engineeringacceptance@qldc.govt.nz](mailto:engineeringacceptance@qldc.govt.nz) with our monitoring planner added to the email at [RCMonitoring@qldc.govt.nz](mailto:RCMonitoring@qldc.govt.nz).

If your decision requires a development contribution (DC) charge, we will be sending a notice in due course. To answer questions such as what is a DC charge, when a DC charge is triggered and timing of payments, please refer to this link. <http://www.qldc.govt.nz/planning/development-contributions/> If you wish to make a DC estimate calculation yourself, please use this link: <http://www.qldc.govt.nz/planning/development-contributions/development-contributions-estimate-calculator/> And for full details on current and past policies, please use this link: <http://www.qldc.govt.nz/council-online/council-documents/policies/policy-on-development-contributions-and-financial-contributions/>

**APPENDIX 2 – APPLICANT’S AEE**

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**APPLICATION FOR RESOURCE CONSENT UNDER SECTION 88 OF THE  
RESOURCE MANAGEMENT ACT 1991  
(FORM 9)**

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**TO: QUEENSTOWN LAKES DISTRICT COUNCIL**

**I: GARY GRAY OF NEW ZEALAND TUNGSTEN MINING LIMITED**

**APPLY FOR THE FOLLOWING TYPES OF RESOURCE CONSENT:**

- Mineral exploration is a controlled activity pursuant to 5.3.3.2 iv Mining;
- Exploration activities will have some minor disturbance to vegetation within the Alpine Environment. The activity therefore triggers the site standard 5.3.5.1 xii and is a discretionary activity; and
- Helicopter landings to support the mining activities trigger a discretionary activity pursuant to 5.3.3.3 v Airports.
- Development activities within a heritage landscape (Glenorchy Heritage Landscape) is a discretionary activity pursuant to Rule 26.6.21 of the proposed district plan.

---

**1. THE NAMES AND ADDRESSES OF THE OWNER AND OCCUPIER (OTHER THAN THE APPLICANT) OF ANY LAND TO WHICH THE APPLICATION RELATES ARE AS FOLLOWS:**

The owner of the property is the Department of Conservation

**2. THE LOCATION OF THE PROPOSED ACTIVITY IS AS FOLLOWS:**

The exploration permit boundary is shown in Figure 1 and the exploration permit is provided in Appendix A of the attached Assessment of Environment Effects.

Proposed activities will take place within the boundaries of exploration permit EP40547 within the Whakaari Conservation Reserve as shown in Figure 1.

Drilling exploration activities will be undertaken in specific locations. The approximate drilling locations are shown in Figure 2. Minimum impact activities as defined by the Crown Minerals Act, 1991 will also be undertaken across EP40547.

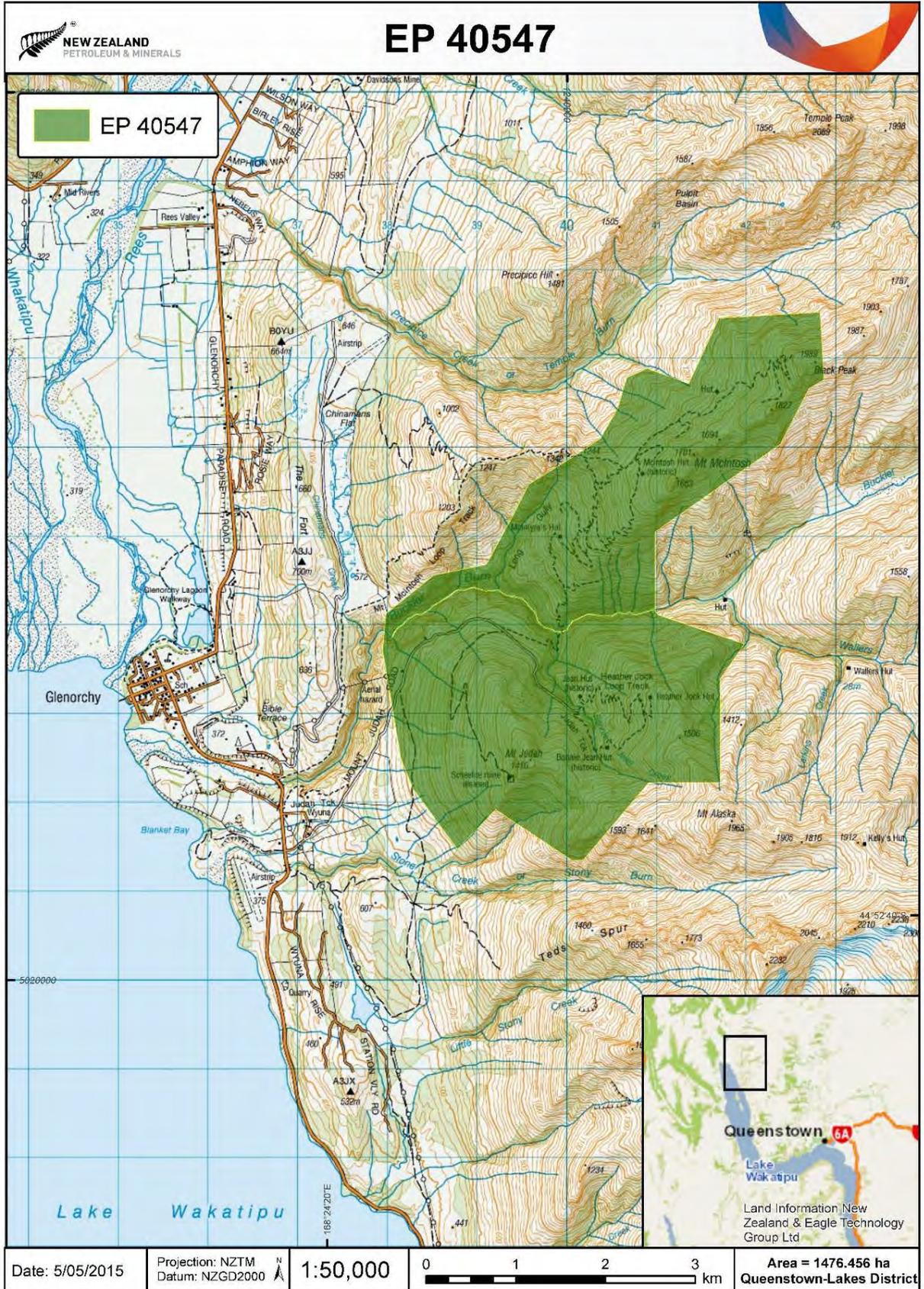


Figure 1: Site Location Plan showing EP40547 (figure taken from CMA Permit 40547).

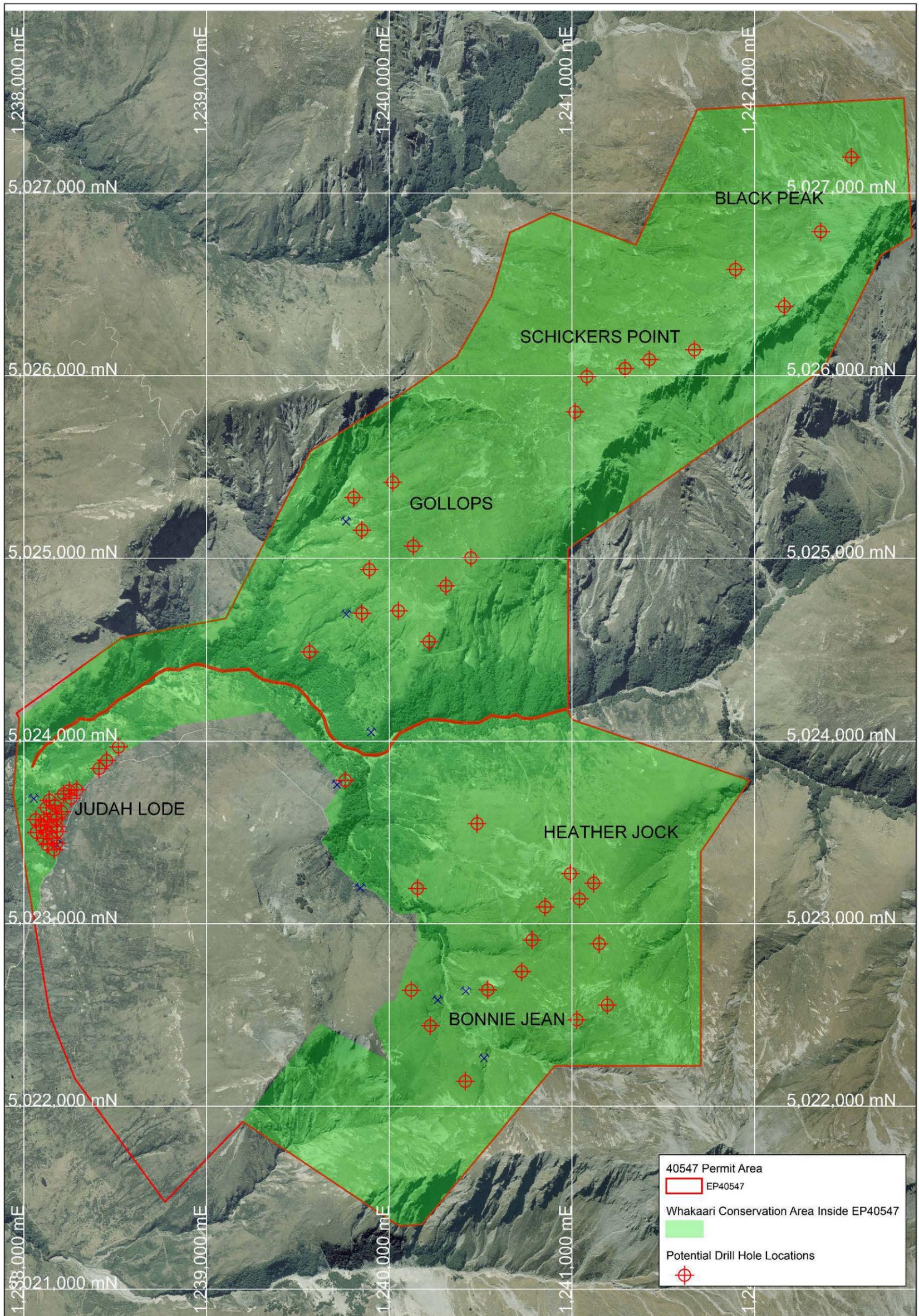


Figure 2: Approximate Drilling Activity Locations within the Exploration Permit and Whakaari Conservation Area (adapted from NZTM).

**3. THE ADDITIONAL RESOURCE CONSENTS NEEDED FOR THE PROPOSED ACTIVITY**

The proposed mineral exploration works trigger a total of four resource consents as set out above.

**4. I ATTACH, IN ACCORDANCE WITH THE FOURTH SCHEDULE OF THE RESOURCE MANAGEMENT ACT 1991, AN ASSESSMENT OF ENVIRONMENTAL EFFECTS IN THE DETAIL THAT CORRESPONDS WITH THE SCALE AND SIGNIFICANCE OF THE EFFECTS THAT THE PROPOSED ACTIVITY MAY HAVE ON THE ENVIRONMENT.**

The assessment of environmental effects is attached.

**5. I ATTACH OTHER INFORMATION REQUIRED TO BE INCLUDED IN THIS APPLICATION BY THE DISTRICT PLAN, THE REGIONAL PLAN, THE RESOURCE MANAGEMENT ACT 1991, OR ANY REGULATIONS MADE UNDER THAT ACT.**

All information is contained in the Assessment of Environmental Effects.

.....  
The image shows a handwritten signature in black ink. The signature consists of a large, stylized 'G' that loops around and under itself. To the right of the 'G', the name 'avis' is written in a smaller, cursive script. The signature is positioned between two horizontal dotted lines.

.....  
*For Davis Consulting Group Limited  
on behalf of*

**Gary Gray OF New Zealand Tungsten Mining Limited**

**ADDRESS FOR SERVICE OF APPLICANT:**

Davis Consulting Group Limited  
P.O.Box 2450  
Wakatipu 9349  
Queenstown

Attention: Glenn Davis

Telephone No: (03) 409 8664  
Mobile No: 027 376 6588  
Email: glenn.davis@davisconsultinggroup.co.nz

**ADDRESS FOR INVOICING:**

Attention: GARY GRAY

New Zealand Tungsten Mining Ltd  
PO Box 90374  
Victoria St West  
Auckland 1010

Telephone No: 64-9-3566951

# **Assessment of Environmental Effects**

**New Zealand Tungsten Mining Limited**

Mineral Exploration Consent Application

December 2015



*Davis Consulting Group Limited  
Arrow Lane  
Arrowtown 9302  
03 409 8664  
Document ID: 15061*

## New Zealand Tungsten Mining Exploration Consent Application

### Document Status

<b>Version</b>	<b>Purpose of Document</b>	<b>Prepared By</b>	<b>Reviewer</b>	<b>Review Date</b>
A	Draft for internal review	CP	GD	01/12/2015
B	Draft for client review	CP	GD	23/12/2015
O	Final Document	GD	GD	29/12/2015

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## 1.0 INTRODUCTION

New Zealand Tungsten Mining Limited (NZTM) is the holder and operator of a Tier 1 Exploration Permit 40547 (EP40547) granted under the Crown Mineral Act 1991 (CMA) and is seeking a resource consent to undertake exploration drilling as a controlled activity within the Whakaari Conservation Area, Glenorchy. In addition to the consent required for exploration drilling, some support activities also require resource consent including the disturbance of indigenous vegetation, helicopter landings and development activities within the Glenorchy Heritage Landscape.

The exploration permit, EP40547, is provided in Appendix A and a description of the work programme and proposed activities is documented in Section 2 of this document.

To support the application, NZTM engaged Davis Consulting Group (DCG) to assess the location, describe the natural environment and undertake an assessment of effects. DCG's findings and recommendations are detailed in Section 3.

A summary of Iwi consultation undertaken by NZTM and commitments is provided in Section 4.1.

A full Heritage Impact Assessment has been completed by New Zealand Heritage Properties Ltd to support the access arrangement and consent applications. New Zealand Heritage Properties' findings and recommendations are detailed in Section 4.2 and the NZHP report is provided in Appendix D.

An assessment of social impact, undertaken by DCG is provided in Section 4.3.

## 2.0 DETAILED DESCRIPTION OF THE ACTIVITY AND STATUTORY PROVISIONS

### 2.1 Description of Activity

Mineral exploration activities are proposed to be undertaken within the Whakaari Conservation Area. Proposed activities include drilling of diamond core holes and minimum impact activities as defined by the Crown Minerals Act 1991 (and repeated below in section 2.2.1).

The following sections of this report detail the exploration activities proposed to be undertaken in the exploration programme.

#### 2.1.1 Minimum Impact Activity

Minimum impact activities (mapping and sampling) have already been undertaken by NZTM to identify exploration and drilling targets.

Minimum impact activities as defined by the Crown Minerals Act are proposed across the entire permit area within the Whakaari Conservation Area. The CMA defines Minimum Impact Activity as the following:

- (a) geological, geochemical, and geophysical surveying;
- (b) taking samples by hand or hand held methods:
  - (ba) taking small samples offshore by low-impact mechanical methods;
- (c) aerial surveying;
- (d) land surveying;
- (e) any activity prescribed as a minimum impact activity;
- (f) any lawful act incidental to any activity to which paragraphs (a) to (e) relate — to the extent that it does not involve any activity that results in impacts of greater than minimum scale and in no circumstances shall include activities involving—
- (g) the cutting, destroying, removing, or injury of any vegetation on greater than a minimum scale; or
- (h) the use of explosives; or
- (i) damage to improvements, stock, or chattels on any land; or
- (j) any breach of the provisions of this or any other Act, including provisions in relation to protected native plants, water, noise, and historic sites; or
- (k) the use of more persons for any particular activity than is reasonably necessary; or
- (l) any impacts prescribed as prohibited impacts; or
- (m) entry on land prescribed as prohibited land

### 2.1.2 Drilling Activity

Drilling activities are proposed within the Whakaari Conservation Area as part of the mineral exploration programme. The programme will involve the drilling of up to 100 diamond core holes, the approximate location of which are shown on Figures 2 and 3.

Drilling will be undertaken using a diesel-powered drill rig similar to that shown in Figure 4. The drill rig and support equipment will be pressure steam cleaned prior to arrival into the conservation area.

The drill rig and supporting equipment will initially be transported onto the Whakaari Conservation Area via helicopter. Following this, transportation of the drill rig to individual drilling sites will either be by helicopter, or if practical the rig will be mounted on tracks and driven under its own power on existing tracks. (e.g. in the Judah Lode area). Transport of equipment to and from individual drill sites will be by helicopter.

The drill hole diameter will nominally be 9.6 cm but when casing is required hole diameter will be approximately 12.0 cm. Hole depth is expected to vary between 10 and 250 m below ground level depending on location, with an average depth between 50 m and 100 m.

Drill core will be recovered for geological and geotechnical logging and subsequent geochemical analysis for the presence and abundance of elements including tungsten and gold. The volume of core extracted from each borehole will be less than 5 m<sup>3</sup> (a 100 m hole will produce approximately 0.75 m<sup>3</sup> of core).

Drilling penetration rates are expected to be at least 10 m per day, so drilling at each site is expected to be on average between 5 and 10 days per hole before moving onto the next drilling location.

When drilling is complete, a temporary plug will be used to seal the drill hole, and when access down the hole is no longer required the hole will be permanently sealed. This will remove the potential for surface water and contaminant entry and is required under the Otago Regional Council Regional Water Plan. Sealing the drill holes will also avoid risk to wildlife and people.

### 2.1.3 Drill Sites

Drilling will be undertaken either on the existing ground surface or from a temporary wooden platform assembled for this purpose.

Drill hole locations will be clearly identified by NZTM on the ground prior to establishing the drill sites. All personnel involved will be provided with a detailed plan of the drill sites and instructed as to where they are allowed to operate.

Any required vegetation clearing will be kept to an absolute minimum. Where vegetation disturbance is required, it will be done with hand tools.

Prior to and immediately following demobilisation, sites will be inspected for any remaining materials and, if required, sites will be rehabilitated by moving dead vegetation onto the area of disturbance where possible.

#### *Judah Lode Drill Sites*

Drill sites proposed within the Judah Lode area (as shown in Figures 2 and 3) will be on or adjacent to existing tracks that have been used for drill rig and mining access in the past (circa 1969). Minor vegetation clearance and earthworks may be required to support drilling activities upon the tracks. It is expected that most of the sites in the Judah Lode area can be drilled using a track mounted rig directly on the ground surface, but if required a temporary wooden drilling platform will be assembled and used.

#### *Other Drill Sites*

Drill sites within the Black Peak, Schickers Pt, Gollops, Heather Jock, Bonnie Jean, Boozer and Sunshine areas (as shown in Figure 2) will require the assembly of a temporary wooden platform approximately 6 m x 12 m in size at the drill site to support the rig and equipment and provide for safe drilling operations.

The drill rig and associated equipment will be flown onto the platform by helicopter to perform drilling operations. After drilling, the platform will be removed leaving only minor disturbance. Assembly and disassembly of the platform will require helicopter support.

The drilling activities will result in some disturbance of vegetation. Any disturbance of vegetation in the alpine environment above 1070 metres above sea level is a discretionary activity pursuant to site standard 5.3.5.1 (xii) Alpine Environments. Based on a drilling footprint of 80 square metres per drill site it is estimated that an area of disturbance in the alpine environment may be up to 2080 square metres.

Below the alpine environment NZTM estimates a conservative disturbance footprint of 7000 square metres. This will trigger site standard 5.3.5.1 (x) Indigenous Vegetation.



**Figure 4:** Drill Rig, which will be located on wooden platform (except within Judah Mine area), along with core and water and fuel containers.

#### 2.1.4 Drill Rig Access and Movement Between the Drill Sites

The Judah Lode area has a number of existing tracks that were used for drilling purposes circa 1969, and the drill rig will use these to move between drill sites. NZTM will transport the drill rig to the site via helicopter, after which the rig will move between drill sites under its own power on the tracks of the rig. Helicopter support may be required for the movement of equipment between drill sites and also to move the drill rig if a drilling site has no track access. We note that because the majority of drilling will be on existing tracks, and because drill rig movements will similarly be on existing tracks or by helicopter, earthworks activities required to support drilling operations will be very minor and will not trigger the permitted limits set out in site standard 5.3.5.1 (viii) Earthworks.

Outside the Judah Lode area, the drill rig and equipment will be transported entirely via helicopter. The drill rig and equipment will be flown to each drilling site and flown out once the drilling program is complete.

It is proposed to use Heli Glenorchy helicopters which are based at the Glenorchy Airstrip, approximately 1 minute flying time to the Judah Lode site.

It is anticipated that there will initially be three to five helicopter movements to carry the drill rig and equipment to the site. This will equate to approximately 1.5 hours flying time.

Once on site, the drill rig and equipment will need to be moved from site to site every 3 to 10 days depending on the depth of the hole being drilled. Each movement will involve the helicopter flying from the Glenorchy Airstrip to the drilling site and then return to the Glenorchy Airstrip. The flying time to do this work is estimated to be approximately half an hour. The equipment and gear will be moved from site to site by helicopter using long lines. The majority of the time the helicopter will not need to land on the site.

On completion of the exploration activities there will be a further three to five helicopter movements totalling 1.5 hours flying time to remove the equipment, samples collected and gear from the site back to the Glenorchy Airstrip.

Some disturbance of terrain and vegetation may occur from foot traffic on site, however this impact is expected to be minimal and will have only minor or less than minor temporary effect on the landscape or amenity values of the site.

### 2.1.5 Proposed Water Supply and Disposal

Water required for drilling will be abstracted from the nearest stream practically accessible from each drilling site using gravity feed, pumping or a combination of both. The volume abstracted will not exceed the Otago Regional Council (ORC) permitted abstraction rate of 25,000 L per day.

Helicopter support will be required to transport and locate equipment associated with the abstraction of water, including tanks, pipes and pumps.

Small amounts of drilling mud will be used. Either a bentonite clay (Rheogel L) or a water based biodegradable polymer mud system (Poly-Plus) with low eco-toxicity will be used. The MSDS for these products are provided in Appendix B. We also provide a letter from West Coast Regional Council (WCRC) stating that the effects associated with discharges from exploration drilling were found to be *de minimus* by the WCRC and that resource consent is not required for the use of these products on the West Coast providing there is no discharge to surface water bodies (Appendix B).

Drilling water will be recirculated as much as possible to minimise the water take. A transportable sump will be used at each drill hole to facilitate water recycling and the settling of sediment and drill cuttings (rock dust) (Figure 5 shows a sump similar to that to be used). Upon completion of drilling, the drill cuttings and sediment collected in the sump will be either returned to the drill hole or removed from site.

There will be no significant discharge associated with the proposed activity, and no discharge will be undertaken into sensitive environments such as water bodies. The proposed drilling will not take place over or adjacent to any protected aquifer zones or protected areas.

A small volume of water containing drill cuttings and/or drilling mud will be discharged onto the surface soils at each drill site directly surrounding the drill hole. The volume of drilling mud is estimated to be less than 20 L per hole. This discharge to land is a permitted activity under the Otago Regional Council's 'Regional Plan: Water for Otago'. The area of impact can be seen in Figure 4.

There will be no dust associated with the proposed activity as the water and mud used during the drilling process will suppress fine rock particles and incorporate them into the drilling water.



**Figure 5:** Water sump used for recycling and sediment collection

### 2.1.6 Accommodation

A camp for drilling personnel will be established on or close to each of the drill sites at the following areas:

- Judah Lode area (Mt Judah State Mine)
- Gollops
- Heather Jock
- Bonnie Jean
- Schickers Pt
- Black Peak
- Boozer; and
- Sunshine

The drilling camp will provide portable accommodation using either flat pack container/portacom type accommodation or tents. Toilet facilities will be provided with a standalone portaloo. These facilities will all be transported to the camp site by helicopter.

A maximum of 4 people will be accommodated on site at any one time to support the drilling programme. This will include 2 drillers, a geologist and geological field technician.

The footprint of the accommodation and portaloo will be approximately 20 m<sup>2</sup> in area. The camp sites will be pre-selected and located on flat or gentle sloping terrain and placed on short tussock, pasture or on rocky substrates.

No earthworks are required for establishing a platform for these camp site facilities, however the vegetation within the footprint will become flattened or possibly crushed.

It is expected that the tussock grassland vegetation that prevails across most of the area proposed for exploration drilling will recover within 12 months of removal of the camp site facilities. Woody vegetation and cushionfield communities would be less resilient to encroachment of this nature and will be avoided.

### 2.1.7 Storage of Fuel and other Hazardous Substances

When drilling outside the Judah Lode area a maximum of 500 L of diesel fuel will be stored in approved containers (e.g. jerry cans) on or adjacent to the temporary wooden drilling platform at any one time to support the operation of the drill rig.

At the Judah Lode area, up to 1,200 L of diesel fuel may be stored in a “trailer” fuel tank which will be used to refill smaller approved containers (e.g. jerry cans”) for daily drilling fuel requirements.

All diesel pumps and fuels will be held in approved tanks or containers and covered to keep out rain water and avoid/contain spills.

All hydraulics are to be equipped with quick couplers to eliminate any fluid loss whilst being moved between sites.

Spill kits and fire extinguishers will be available on each site. Any contaminated soils or materials will be removed from the site and disposed of at appropriate facilities.

### 2.1.8 Waste Management

All waste will be flown out or removed when the camp site is dismantled such as house hold waste from accommodation and sewage from the portaloo.

Any contaminated soils or materials will be removed from the site and disposed of at appropriate facilities.

### 2.1.9 Noise

Noise associated with the drill rig will be minimal. Operating sound levels are similar to a tractor engine running at 1800 RPM. The site is isolated and is separated by over 1500 metres from the nearest residence being Wyuna Station homestead. We note that visitors on the Mt McIntosh Loop, Mt Judah Track and Heather Jock Track and their associated huts may hear some sound from drilling.

Given the distance to the closest dwelling is over 1500 metres from the drilling activity the activity will not trigger the QLDC district plan site standard 5.3.5.2 (v) Noise.

### 2.1.10 Direct Economic Benefits

There will be a direct economic benefit to the Glenorchy community, specifically from the proposed utilisation of local labour, the local helicopter company, and the use of Glenorchy as the closest base for access to facilities (e.g. accommodation, food, fuel etc).

## 2.2 Statutory Provisions

Based on the proposed exploration activities described above the following provisions in the Queenstown Lakes District Council (QLDC) District Plan are triggered requiring resource consent:

- Mineral exploration as described herein is a controlled activity pursuant to 5.3.3.2 iv Mining;
- Exploration activities will have some minor disturbance to vegetation within the Alpine Environment. The activity therefore triggers the site standard 5.3.5.1 xii and is a discretionary activity; and
- Helicopter landings to support the mining activities trigger a discretionary activity pursuant to 5.3.3.3 v Airports.
- Development activities within a heritage landscape (Glenorchy Heritage Landscape) is a discretionary activity pursuant to Rule 26.6.21 of the proposed district plan.

With respect to the controlled activity required to support the mineral exploration the district plan states that the QLDC shall control the exercise of its discretion in relation to the following matters:

- (a) Terrain disturbance including vegetation clearance and volumes of material to be removed;*
- (b) Rehabilitation of a site;*
- (c) Siting of roads or any buildings; and*
- (d) Dust and noise.*

We note that no consents will be required from the Otago Regional Council. The sealing of boreholes and a water take of less than 25,000 litres per day means the activity is permitted under the ORC Water Plan.

### **3.0 ASSESSMENT OF EFFECTS ON THE ENVIRONMENT**

Davis Consulting Group Limited completed a visit of the Whakaari Conservation Reserve and some of the drilling locations on the 17<sup>th</sup> of September. The description of the biological environment detailed below is based on this site visit, previous fieldwork completed by them in the area, and a review of existing ecological information.

#### **3.1 Description of Physical and Biological Environment**

##### **3.1.1 Geology and Hydrology**

The study area is located within the Buckler Burn Catchment, a mountainous area with a steep valley system. The valley system includes Mt Judah (1416 m) to the south and Mt McIntosh (1701 m) to the north, as well as the ridge line from Mt McIntosh northeast to Black Peak (1989 m). The valley system faces south-east and ranges in altitude from approximately 500 m a.s.l. to 2000 m a.s.l. Within the Buckler Burn catchment and study area there are multiple unnamed tributaries, such as the creek within Long Gully, as well as the Bonnie Jean Creek.

The dominant underlying geology is 'undifferentiated volcanoclastic sandstone and siltstone' with areas of 'undifferentiated Quaternary landslide deposits' (Turnbull, 2000).

##### **3.1.2 Flora and Vegetation**

###### *Historical Vegetation*

Prior to human settlement, the vegetation cover of the Whakaari Conservation Area would have consisted of shrubland, tussock grassland and herbfields above beech forest located within the valley system (Our Environment, 2015).

The New Zealand threatened environment classification (TEC) maps environments across New Zealand based on the extent of vegetation cover remaining within defined physiographic environments and the area of vegetation within these environments protected for conservation purposes. Based on the TEC, the study area within the Whakaari Conservation Area lies largely within an environment with 86 to 92 % indigenous vegetation cover remaining despite historic mining activities and grazing that has occurred across the entire area. The TEC lists the remaining vegetation within these environments as under protected or less reduced and better protected.

### *Existing Indigenous Vegetation and Habitat within Study Area*

Within the areas targeted for exploration activities (see Figure 2) the main vegetation type is tussock grassland, dominated by native tussock species (*Chionochloa* species, *Poa colensoi* and *Festuca novae zelandiae*) and *Dracophyllum* species. Also present are matagouri (*Discaria toumatou*), *Coprosma* species, *Lycopodium fastigiatum* and *Gaultheria* species. There are areas of mountain beech forest (*Nothofagus solandri var. cliffortioides*) that are adjacent to the study area. Within the Bonnie Jean area there is also speargrass (*Aciphylla* species), *Ozothamnus leptophyllus* and prickly shield fern (*Polystichum vestitum*). At Schickers Pt the higher elevation means that presence of small areas of cushion fields are likely. Representative photographs of the vegetation are presented in Plate 1.

The Judah Lode area has previously been cleared of vegetation (circa 1970) for exploration and mining and therefore has a seral community of vegetation dominated by manuka and bracken fern, as well as some matagouri. This vegetation is the dominant early successional community in the Glenorchy area and has developed following disturbance that occurred in the 1970's. There are also areas of exotic pasture grass, and other exotic species such as gorse (*Ulex europaeus*), lupins (*Lupinus* species) and broom (*Cytisus scoparius*). Mountain beech forest is present towards the Buckler Burn. The existing State Mine tracks proposed for use by the drill rig in the area are covered by exotic pasture grass, as well as bracken fern. Representative photographs of the area are shown in Plate 2.

Small wetlands along stream banks and seepage zones, above 800 m a.s.l. within the proposed drilling areas, are classified as Regionally Significant Wetlands within the Otago Regional Council Water Plan (ORC, 2014). Such wetlands were observed around the Bonnie Jean area (see Plate 1). While the ORC consider wetlands above 800 m to be regionally significant, the communities within the study area will occur wherever the hydrological conditions allow, as well as within the wider Richardson Ecological District. We note the drilling camps and drill sites will not be situated within these wetland environments.



**Plate 1:** Representative photographs of the vegetation present at Gollops (top), Bonnie Jean (first middle) and Boozer/Sunshine (second middle), Schickers Pt (bottom left), and Heather Jock (bottom right).



**Plate 2:** Representative photographs of the vegetation present (top left and bottom) and existing tracks requiring vegetation flattening or clearance (top right) at Judah Lode.

### 3.1.3 Fauna

The only fauna observed during the Davis Consulting Group site visit were goats, although evidence of rabbits was also noted.

Previous records held by the Department of Conservation and the Queenstown Lakes District Council and other literature were reviewed to determine the indigenous faunal species likely to be present within the proposed study area.

#### *Skinks and Geckos*

The following lizard species may be present within the study areas (Jewell, 2006; Hitchmough, 2013):

- *Mokopirirakau cryptozoicus* (Takitimu gecko) – Nationally Vulnerable;
- *Mokopirirakau "Roys Peak"* (Roys Peak gecko – Moke Valley form)– Nationally Vulnerable;
- *Naultinus gemmeus* (Jewelled gecko) – At Risk: Declining;
- *Oligosoma chloronoton* (Green skink) – At Risk: Declining;
- *Woodworthia "Otago large"* (Otago/Southland large gecko) – At Risk: Declining; and,
- *Oligosoma maccanni* (McCann's skink) – Not Threatened.

#### *Invertebrates*

The invertebrate fauna of the higher alpine zones (1400 – 1950 m) likely includes weevils, native blowflies and diurnal moths. Below 1400 m, in the lower Buckler Burn catchment, no invertebrate information was obtained. The invertebrate fauna of the study area and surrounding mountain systems is considered to have a high conservation value (CRR, 2002).

#### *Avifauna*

There are at least 18 bird species that are possibly present at times within the conservation area. The species are listed in Table 1 below, along with their threat status (CRR, 2002; Robertson *et al.*, 2013). These include two nationally endangered species (rock wren and kea), as well the 'At Risk' New Zealand pipit, New Zealand eastern falcon and long-tailed cuckoo (see Table 1). The inclusion of the rock wren is based on historical records of rock wren on Mt McIntosh (CRR, 2002).

**Table 1:** Native avifauna species likely or possibly present within study area.

Species	Common Name	Threat Classification (Robertson et al., 2013)
<i>Xenicus gilviventris</i>	Rock wren	Threatened - Nationally Endangered
<i>Anthus novaeseelandiae novaeseelandiae</i>	New Zealand Pipit	At Risk - Declining
<i>Circus approximans</i>	Harrier hawk/swamp harrier	Not Threatened
<i>Nestor notabilis</i>	Kea	Threatened - Nationally Endangered
<i>Falco novaeseelandiae</i> "eastern"	New Zealand eastern falcon	At Risk - Recovering
<i>Tadorna variegata</i>	Paradise shelduck	Not Threatened
<i>Cyanoramphus auriceps</i>	Yellow-crowned parakeet	Not Threatened
<i>Chrysococcyx lucidus lucidus</i>	Shining cuckoo	Not Threatened
<i>Eudynamys taitensis</i>	Long-tailed cuckoo*	At Risk – Naturally Uncommon
<i>Ninox novaeseelandiae</i>	Morepork*	Not Threatened
<i>Prothemadera novaeseelandiae</i>	Tui	Not Threatened
<i>Rhipidura fuliginosa fuliginosa</i>	South Island Fantail	Not Threatened
<i>Mohoua novaeseelandiae</i>	Brown Creeper	Not Threatened
<i>Gerygone igata</i>	Grey Warbler	Not Threatened
<i>Acanthisitta chloris chloris</i>	South Island Rifleman*	Not Threatened
<i>Zosterops lateralis lateralis</i>	Silvereye	Not Threatened
<i>Petroica macrocephala macrocephala</i>	Yellow-breasted tomtit*	Not Threatened
<i>Anthornis melanura melanura</i>	Bellbird*	Not Threatened

\* More likely present within beech forest adjacent to study area.

### 3.1.4 Freshwater Environment

The freshwater environment is dominated by the Buckler Burn Catchment, which includes the Buckler Burn, Bonnie Jean Creek and multiple unnamed tributaries. Native fish species recorded within the Buckler Burn catchment are koaro (*Galaxias brevipinnis*), which are classified as 'At Risk – Declining' (CRR, 2002; Goodman *et al.*, 2014). More native fish species may be present, but have not been officially recorded (CRR, 2002). The catchment has areas of good freshwater invertebrate abundance (CRR, 2002; Fish and Game, 2003).

### 3.1.5 Helicopter Movements

As detailed above, the helicopter movements to set up and service the exploration activities will be relatively infrequent and of short duration. At present Heli Glenorchy does approximately 20 flights from the Glenorchy Airstrip on a busy day. Heli Glenorchy has a Department of Conservation concession to land in the Whakaari Conservation Area up to 15 times per day (5 landings per day on Black Peak). The proposed helicopter movements to set up, service and dismantle the exploration activities will therefore cumulatively be very minor when considered alongside the receiving environment.

### **3.2 Environmental Effects on Natural, Heritage, Cultural and Social Environments and Recommended Mitigation Measures**

A summary of actual and potential effects and a list of environmental management commitments is provided in the Environmental Impact and Management Matrix (see Table 2).

DCG considers that the impacts on the natural environment from the proposed exploratory drilling operations will be minor providing the management commitments set out in Table 2 are observed.

**Table 2: Environmental Impact and Management Matrix**

Exploration Activity	Item	Actual or Potential Effect	Magnitude of Effect	Recommended Measures to Avoid/Mitigate/Remediate Actual Effects / Comments
<b>Drilling</b>	1	Localised removal of indigenous vegetation within subject area to prior drilling.	Minor	<ul style="list-style-type: none"> <li>• Ensure rig platform is located away from sensitive vegetation types that could be adversely affected by compaction such as cushionfield, cushion bog vegetation and woody shrubs.</li> <li>• Avoid disturbance of vegetation within and surrounding drill site wherever practicable.</li> <li>• If required, sites will be rehabilitated by moving dead vegetation onto the area of disturbance where possible.</li> </ul>
	2	Localised compaction of indigenous vegetation due to positioning of drill rig on wooden platform	Minor	<ul style="list-style-type: none"> <li>• Ensure rig platform is located away from sensitive vegetation types that could be adversely affected by compaction such as cushionfield, cushion bog vegetation and woody shrubs and sub-shrubs.</li> <li>• Ecologist to approve drilling locations in the Schickers and Black Peak exploration areas.</li> </ul>
	3	Water contamination via discharge of pollutants and drilling muds.	Minor	<ul style="list-style-type: none"> <li>• Small amounts of drilling mud will be used, and this will be either be a bentonite clay (Rheogel L) or a water based biodegradable polymer mud system (Poly-Plus) with low eco-toxicity.</li> <li>• A small volume of water containing drill cuttings and drilling mud will be discharged onto the surface soils at each drill site directly adjacent to the drill hole. This discharge to land is a permitted activity under the Otago Regional Council's 'Regional Plan: Water for Otago.</li> <li>• Drill sites will be located at a suitable distance from watercourses to ensure runoff from drilling muds is intercepted by tussock and inter-tussock vegetation before entering any adjacent watercourses.</li> <li>• Drill holes will be sealed on completion of each drilling operation.</li> <li>• A transportable sump will be installed on each hole to facilitate recycling (see Figure 5). This structure will facilitate the settling of drill cuttings and sediment.</li> <li>• There will be no significant discharge associated with the proposed activity, and no discharge will be undertaken into sensitive environments such as water bodies.</li> <li>• The proposed drilling will not take place over or adjacent to any protected aquifer zones or protected areas.</li> </ul>

**Table 2 cont.** Environmental Impact and Management Matrix

Exploration Activity	Item	Actual or Potential Effect	Magnitude of Effect	Recommended Measures to Avoid/Mitigate/Remediate Actual Effects / Comments
<b>Drilling (cont.)</b>	4	Impact to wildlife from open drill holes.	Minor	<ul style="list-style-type: none"> <li>When drilling is complete, a temporary plug will be used to seal the drill hole.</li> <li>When access down the hole is no longer required, the hole will be permanently sealed.</li> </ul>
	5	Presence of operating drill rig and associated human activity which may attract/disturb kea, falcon and rock wren.	Minor	<ul style="list-style-type: none"> <li>Stringent waste management and hazardous substance storage procedures to limit kea exposure to hazardous substances.</li> <li>During the falcon and rock wren nesting season (September – January) an ecologist will check for breeding activity in the vicinity of the drilling activities and review drilling locations to avoid bird disturbance, and in the event of disturbance to record this.</li> </ul>
	6	Presence of operating drill rig and associated human activity which may affect invertebrates and lizards	Minor	<ul style="list-style-type: none"> <li>The drilling footprint is very small relative to the size of the conservation area and the level of disturbance to invertebrate and lizard population is also expected to be minor.</li> </ul>
<b>Provision of campsite accommodation</b>	7	Temporary compaction and crushing of indigenous vegetation/disturbance of invertebrates and lizards.	Minor	<ul style="list-style-type: none"> <li>Drilling camps and drill sites will not be situated within wetland environments.</li> <li>It is expected that the tussock grassland vegetation that prevails across most of the area proposed for exploration drilling will fully recover within 12 months of the removal of the camp site facilities.</li> <li>Ensure accommodation facilities are located away from sensitive vegetation types that could be adversely affected by compaction such as cushion field, cushion bog vegetation and woody shrubs.</li> <li>Ecologist to approve campsite locations in the Schickers and Black Peak exploration areas to avoid effects on cushion plants and rock wren.</li> <li>The campsite footprint is very small relative to the size of the conservation area and the level of disturbance to invertebrate and lizard populations is also expected to be minor.</li> </ul>

**Table 2 cont.** Environmental Impact and Management Matrix

Exploration Activity	Item	Actual or Potential Effect	Magnitude of Effect	Recommended Measures to Avoid/Mitigate/Remediate Actual Effects / Comments
<b>Waste Management</b>	8	Pollution of local environment from rubbish left after drilling operations and associated risk to wildlife and visual amenity.  Attraction of Keas to drill site.	Minor	<ul style="list-style-type: none"> <li>All waste will be flown out or removed when the camp site is dismantled including house hold waste from accommodation and sewage from the portaloo.</li> <li>Drill sites will be inspected prior to demobilisation to ensure all imported materials have been removed.</li> <li>Any contaminated soils or materials will be removed from the site and disposed of at appropriate facilities.</li> <li>Stringent waste management to discourage keas.</li> </ul>
<b>Storage of hazardous substances and fuel</b>	9	Impacts to soil from spills and leaks from drilling muds, oils, diesel fuel, sewage.	Minor	<ul style="list-style-type: none"> <li>Minimum volumes of fuel required for drilling will be stored at each site</li> <li>All diesel pumps and fuels will be held in purpose built steel tanks or approved containers and covered to keep out rain water and avoid spills.</li> <li>All hydraulics are to be equipped with quick couplers to eliminate any fluid loss whilst being moved between sites.</li> <li>Spill kits and fire extinguishers will be available on each site. Any contaminated soils or materials will be removed from the site and disposed of at appropriate facilities.</li> <li>Any contaminated soils or materials will be removed from the site and disposed of at appropriate facilities.</li> <li>Self-contained portaloo's will be provided at each camp site and all waste from these will be taken off site.</li> </ul>
<b>Drilling, and vehicle access</b>	10	Disruption to local wildlife due to noise.	Minor	<ul style="list-style-type: none"> <li>Ensure machinery and vehicles are well serviced and muffled</li> </ul>
	11	Noise impacts on neighbouring properties	Minor	<ul style="list-style-type: none"> <li>The site is isolated and is separated by over 1500 metres from the nearest residence being Wyuna Station homestead.</li> <li>Drilling will not occur at night.</li> </ul>

#### **4.0 ASSESSMENT OF THE ACTIVITIES AGAINST THE OBJECTIVES AND POLICIES OF THE PROPOSED AND CURRENT DISTRICT PLAN**

The objectives and policies of the Current District Plan and Proposed District Plan are set out in Tables 3 and 4 below, respectively. An assessment of the proposed activities with the relevant objectives and policies is also provided within these tables.

**Table 3:** Assessment of Activities against the Objectives and Policies of the Current District Plan; Section 5: Rural Areas: Rural General, Ski Area Sub-Zones.

Objective	Relevant Policies	NZTM Comments and Section reference
<p><u>5.2.</u> Objective 1: Character and Landscape Value.</p> <p>To protect the character and landscape value of the rural area by promoting sustainable management of natural and physical resources and the control of adverse effects caused through inappropriate activities.</p>	<p><u>1.1</u> Consider fully the district wide landscape objectives and policies when considering subdivision, use and development in the Rural General Zone</p>	<p>The effects on the landscape from the drilling activities will be minor given the scale of the drill rig and size of the drilling camp within the Whakaari Conservation Reserve. An effect on recreational users is possible however steps are proposed to ensure the public is aware drilling activities are occurring in the area. Furthermore the activities are temporary and expected to be completed over a period of 2 years.</p>
	<p><u>1.2</u> Allow for the establishment of a range of activities, which utilise the soil resource of the rural area in a sustainable manner</p>	<p>Proposed activities are very small in scale and will not affect the health of the soil resource as activity will not cause erosion at the sites and the drilling activities can mitigate against the loss of fuel required for the operation of the drill rig. See further details in Table 2.</p>
	<p><u>1.4</u> Ensure activities not based on the rural resources of the area occur only where the character of the rural area will not be adversely impacted.</p>	<p>Exploration activities will be short term in nature and will leave no long term impact on the landscape.</p> <p>The operations are likely to generate varying reactions from recreationists visiting the Whakaari Conservation Area due to the perceived impacts on the visual amenity of the area arising from the presence of a drill rig and the sound generated by drilling operations.</p> <p>To mitigate or reduce the degree of adverse public reaction NZTM will undertake a programme of information dissemination in conjunction with the Department of Conservation. As to be agreed in conjunction with DoC this may include press releases in local newspapers, provision of notices at local outlets in Glenorchy and provision of signage at the Judah Road car park by the Glenorchy Road.</p> <p>Social impact is further discussed in Section 4.3.</p>
	<p><u>1.5</u> Provide for a range of buildings allied to rural productive activity and worker accommodation.</p>	<p>Temporary accommodation will be provided for work teams (see Section 2.1.6)</p>

**Table 3 cont.:** Assessment of Activities against the Objectives and Policies of the Current District Plan; Section 5: Rural Areas: Rural General, Ski Area Sub-Zones.

Objective	Relevant Policies	NZTM Comments and Section reference
<p><u>5.2</u> Objective 2: Life Supporting Capacity of Soils.            Retention of the life supporting capacity of soils and/or vegetation in the rural area so that they are safeguarded to meet the reasonably foreseeable needs of future generations.</p>	<p><u>2.1</u> Avoid, remedy or mitigate adverse effects of subdivision and development on the life-supporting capacity of the soils</p>	<p>Proposed activities are not anticipated to impact soil health.</p>
	<p><u>2.4</u> Encourage land management practices and activities, which avoid, remedy or mitigate adverse effects on soil and vegetation cover.</p>	<p>This proposal does not include earthworks.            Disturbance of vegetation will be limited to temporary compaction of tussock grassland vegetation and is expected to fully recover within 12 months of disturbance. Vegetation types that would be adversely affected by compaction such as cushion field, cushion bog vegetation and woody shrubs will be avoided (see Section 3.2, Table 2).            The disturbance to vegetation that does occur will heal rapidly in this environment.</p>

**Table 3 cont.:** Assessment of Activities against the Objectives and Policies of the Current District Plan; Section 5: Rural Areas: Rural General, Ski Area Sub-Zones.

Objective	Relevant Policies	NZTM Comments and Section reference
<p><u>5.2</u> Objective 3: Rural Amenity.            Avoiding, remedying or mitigating adverse effects of activities on rural amenity.</p>	<p><u>3.1</u> Recognise permitted activities in rural areas may result in effects such as noise, dust and traffic generation, which will be noticeable to residents in the rural areas.</p>	<p>Noise associated with the drill rig will be minimal. Operating sound levels are similar to a tractor engine running at 1800 RPM. The site is isolated and is separated by over 1500 metres from the nearest residence being Wyuna Station homestead. We note that visitors on the Mt McIntosh Loop, Mt Judah Track and Heather Jock Track and their associated huts may hear some sound from drilling.</p> <p>Given the distance to the closest dwelling is over 1500 metres from the drilling activity the activity will not trigger the QLDC district plan site standard 5.3.5.2 (v) Noise.</p> <p>There will be no dust associated with the proposed activity as the water and mud used during the drilling process will suppress fine rock particles and incorporate them into the drilling water (see Section 2.1.5).</p> <p>There will be no substantial impact on traffic in the local area as a result of this project.</p> <p>Social impact is further discussed in Section 4.3.</p>
	<p><u>3.2</u> Ensure a wide range of rural land uses and land management practices can be undertaken in the rural areas without increased potential for the loss of rural amenity values.</p>	<p>The proposed activity is on conservation land and all commercial activities are controlled by the Department of Conservation. DOC is required to manage the land for its ecological and heritage values which is the core landuse of the conservation reserve.</p>
	<p><u>3.3</u> To avoid, remedy or mitigate adverse effects of activities located in rural areas.</p>	<p>Exploration activities will be short term in nature and will leave no long term impact on the landscape.</p> <p>The operations are likely to generate varying reactions from recreationists visiting the Whakaari Conservation Area due to the perceived impacts on the visual amenity of the area arising from the presence of a drill rig and the sound generated by drilling operations.</p> <p>To mitigate or reduce the degree of adverse public reaction it is recommended that NZTM undertake a programme of information dissemination in conjunction with the Department of Conservation. This may include press releases in local newspapers, provision of notices at local outlets in Glenorchy and provision of signage at the Judah Road car park by the Glenorchy Road.</p> <p>Social impact is further discussed in Section 4.3.</p>

**Table 3 cont.:** Assessment of Activities against the Objectives and Policies of the Current District Plan; Section 5: Rural Areas: Rural General, Ski Area Sub-Zones.

Objective	Relevant Policies	NZTM Comments and Section reference
<p><u>5.2</u> Objective 4: Life Supporting Capacity of Water:            To safeguard the life supporting capacity of water through the integrated management of the effects of activities.</p>	<p><u>4.1</u> In conjunction with the Otago Regional Council:</p> <ul style="list-style-type: none"> <li>- To encourage activities, which use water efficiently, thereby conserving water quality and quantity.</li> <li>- To discourage activities, which adversely affect the life supporting capacity of water and associated ecosystems.</li> </ul>	<p>The volume abstracted will not exceed the Otago Regional Council (ORC) permitted abstraction rate of 25,000 L per day.</p> <p>Drilling water will be recirculated as much as possible to minimise the water take. A transportable sump will be used at each drill hole to facilitate water recycling (see Section 2.1.5).</p> <p>There will be no significant discharge associated with the proposed activity, and no discharge will be undertaken into sensitive environments such as water bodies. The proposed drilling will not take place over or adjacent to any protected aquifer zones or protected areas (see Section 2.1.5).</p> <p>Small amounts of drilling mud will be used. Either a bentonite clay (Rheogel L) or a water based biodegradable polymer mud system (Poly-Plus) with low eco-toxicity will be used. A small volume of water containing drill cuttings and/or drilling mud will be discharged onto the surface soils at each drill site directly surrounding the drill hole. The volume is estimated to be less than 20 L per hole. This discharge to land is a permitted activity under the Otago Regional Council's 'Regional Plan: Water for Otago' (see Section 2.1.5).</p>

**Table 3 cont.:** Assessment of Activities against the Objectives and Policies of the Current District Plan; Section 5: Rural Areas: Rural General, Ski Area Sub-Zones.

Objective	Relevant Policies	NZTM Comments and Section reference
<p><u>5.2</u> Objective 5: Mineral Extraction.                      Mineral extraction, including prospecting and exploration, carried out in a manner which avoids, remedies or mitigates adverse effects on the environment.</p>	<p><u>5.1</u> To ensure potential adverse effects of large-scale recreational extractive activities (including mineral exploration) on the rural environment are avoided, remedied or mitigated.</p>	<p>The mineral exploration activities are not considered large-scale and are temporary in nature.</p>
	<p><u>5.2</u> To ensure that during and after mining, sites are progressively rehabilitated in a planned and co-ordinated manner, to enable the establishment of a land use appropriate to the area.</p>	<p>The proposed activity if drilling activities associated with mineral exploration rather than mining. Notwithstanding this point any effects on the vegetation at the drill sites will be temporary due to the ability of the vegetation in this environment to regenerate quickly.</p>
<p><u>5.2</u> Objective 6: Ski Area Sub-Zone.                      To encourage the future growth, development and consolidation of existing Ski Areas, in a manner which mitigates adverse effects on the environment.</p>	<p>Not relevant to this project</p>	

**Table 4:** Assessment of Activities against the Objectives and Policies of the Proposed District Plan; Chapter 21: Rural.

Objective	Relevant Policies	NZTM Comments and/or section reference
<p><u>21.2.1</u> Enable farming, permitted and established activities while protecting, maintaining and enhancing landscape, ecosystem services, nature conservation and rural amenity values.</p>	<p><u>21.2.1.4</u> Minimise the dust, visual, noise and odour effects of activities by requiring facilities to locate a greater distance from formed roads, neighbouring properties, waterbodies and zones that are likely to contain residential and commercial activity.</p>	<p>Given the distance to the closest dwelling is over 1500 metres from the drilling activity the activity impact residential or commercial activities described in policy 21.2.1.4.</p>
	<p><u>21.2.1.5</u> Have regard to the location and direction of lights so they do not cause glare to other properties, roads, public places or the night sky.</p>	<p>Given the distance to the closest dwelling is over 1500 metres from the drilling activity the activity impact residential or commercial activities described in policy 21.2.1.5.</p>
	<p><u>21.2.1.6</u> Avoid adverse cumulative impacts on ecosystem services and nature conservation values.</p>	<p>No cumulative impacts are anticipated from the proposed activities. Management of minor effects are discussed in Section 3.2 Table 2</p>
	<p><u>21.2.1.7</u> Have regard to the spiritual beliefs, cultural traditions and practices of Tangata Whenua.</p>	<p>New Zealand Heritage Properties Ltd has met with Mr Dean Whaanga (from Te Ao Marama) in consideration of Maori and iwi values within the area of NZTM permit EP40547. While no archaeological or heritage sites of Maori association have been identified in the area of proposed exploration activities by either of these parties, NZHP has established a process for understanding and considering Maori sites during exploration and drilling to ensure Maori and iwi values are identified and protected should they be encountered.</p> <p>In summary, an archaeologist will be present during site establishment works to ensure no Maori sites are present at a point of disturbance. Operators will also be briefed on what is archaeology and how to identify sites and features should they be encountered inadvertently. At all times when an archaeologist is not present, operators will adopt an “accidental discovery protocol” meaning, should Maori (or European) sites be encountered, works will stop and operators will alert Heritage New Zealand in the first instance, who, in turn will alert, iwi and DoC, before works proceed.</p> <p>This is further discussed in Section 4.1</p>

**Table 4 cont.:** Assessment of Activities against the Objectives and Policies of the Proposed District Plan; Chapter 21: Rural.

Objective	Relevant Policies	NZTM Comments and/or section reference
<p><u>21.2.2</u> Sustain the life supporting capacity of the soils.</p>	<p><u>21.2.2.2</u> Maintain the productive potential and soil resource of Rural Zoned land and encourage land management practices and activities that benefit soil and vegetation cover.</p>	<p>Proposed activities are not anticipated to impact soil health and will have a minor effect on vegetation cover. Any effects will be temporary as the vegetation in this environment will regenerate rapidly.</p>
	<p><u>21.2.2.3</u> Protect the soil resource by controlling activities including earthworks, indigenous vegetation clearance and prohibit the planting and establishment of recognised wilding exotic trees with the potential to spread and naturalise.</p>	<p>This proposal does not include earthworks.            Disturbance of vegetation will be limited to temporary compaction of tussock grassland vegetation and is expected to fully recover within 12 months of disturbance. Vegetation types that would be adversely affected by compaction such as cushion field, cushion bog vegetation and woody shrubs (see Section 3.2, Table 2)</p>
<p><u>21.2.3</u> Safeguard the life supporting capacity of water through the integrated management of the effects of activities.</p>	<p><u>21.2.3.1</u> In conjunction with the Otago Regional Council, regional plans and strategies:</p> <ul style="list-style-type: none"> <li>• Encourage activities that use water efficiently, thereby conserving water quality and quantity;</li> <li>• Discourage activities that adversely affect the potable quality and life supporting capacity of water and associated ecosystems.</li> </ul>	<p>The volume abstracted will not exceed the Otago Regional Council (ORC) permitted abstraction rate of 25,000 L per day.            Drilling water will be recirculated as much as possible to minimise the water take. A transportable sump will be used at each drill hole to facilitate water recycling (see Section 2.1.5).            There will be no significant discharge associated with the proposed activity, and no discharge will be undertaken into sensitive environments such as water bodies. The proposed drilling will not take place over or adjacent to any protected aquifer zones or protected areas (see Section 2.1.5).            Small amounts of drilling mud will be used. Either a bentonite clay (Rheogel L) or a water based biodegradable polymer mud system (Poly-Plus) with low eco-toxicity will be used. A small volume of water containing drill cuttings and/or drilling mud will be discharged onto the surface soils at each drill site directly surrounding the drill hole. The volume is estimated to be less than 20 L per hole. This discharge to land is a permitted activity under the Otago Regional Council's 'Regional Plan: Water for Otago' (see Section 2.1.5).</p>

**Table 4 cont.:** Assessment of Activities against the Objectives and Policies of the Proposed District Plan; Chapter 21: Rural.

Objective	Relevant Policies	NZTM Comments and/or section reference
<p>21.2.4 Manage situations where sensitive activities conflict with existing and anticipated activities in the Rural Zone.</p>	<p><u>21.2.4.1</u> Recognise that permitted and established activities in the Rural Zone may result in effects such as odour, noise, dust and traffic generation that are reasonably expected to occur and will be noticeable to residents and visitors in rural areas.</p>	<p>Given the distance to the closest dwelling is over 1500 metres from the drilling, activities are not expected to impact nearby residents (see Section 2.1.9).</p> <p>There will be no dust associated with the proposed activity as the water and mud used during the drilling process will suppress fine rock particles and incorporate them into the drilling water (see Section 2.1.5).</p> <p>The site is isolated, however visitors on the Mt McIntosh Loop, Mt Judah Track and Heather Jock Track and their associated huts may hear some sound from drilling. Drilling will not take place at night time.</p> <p>There will be no substantial impact on traffic in the local area as a result of this project.</p> <p>Social impact is further discussed in Section 4.3.</p>
	<p><u>21.2.4.2</u> Control the location and type of non-farming activities in the Rural Zone, to minimise or avoid conflict with activities that may not be compatible with permitted or established activities.</p>	<p>The operations are likely to generate varying reactions from recreationists visiting the Whakaari Conservation Area due to the perceived impacts on the visual amenity of the area arising from the presence of a drill rig and the sound generated by drilling operations.</p> <p>To mitigate or reduce the degree of adverse public reaction NZTM will undertake a programme of information dissemination in conjunction with the Department of Conservation. This may include press releases in local newspapers, provision of notices at local outlets in Glenorchy and provision of signage at the Judah Road car park by the Glenorchy Road.</p> <p>Social impact is further discussed in Section 4.3.</p>

**Table 4 cont.:** Assessment of Activities against the Objectives and Policies of the Proposed District Plan; Chapter 21: Rural.

Objective	Relevant Policies	NZTM Comments and/or section reference
<p><u>21.2.5</u> Recognise for and provide opportunities for mineral extraction providing the location, scale and effects would not degrade amenity, water, landscape and indigenous biodiversity values.</p>	<p><u>21.2.5.3</u> Ensure that during and following the conclusion of mineral extractive activities, sites are progressively rehabilitated in a planned and co-ordinated manner, to enable the establishment of a land use appropriate to the area.</p>	<p>If required, prior to leaving drilling locations, sites will be rehabilitated by moving dead vegetation onto the area of disturbance where possible. This is committed to in Section 3.2, Table 2 item 1.</p> <p>When drilling is complete, a temporary plug will be used to seal the drill hole. When access down the hole is no longer required, the hole will be permanently sealed. This is committed to in Section 3.2, Table 2 item 4.</p> <p>All waste will be flown out or removed when the camp site is dismantled including house hold waste from accommodation and sewage from the portaloo. Drill sites will be inspected prior to demobilisation to ensure all imported materials have been removed. Any contaminated soils or materials will be removed from the site and disposed of at appropriate facilities. This is committed to in Section 3.2, Table 2 item 8.</p> <p>Prior to and immediately following demobilisation, sites will be inspected for any remaining materials and, if required, sites will be rehabilitated by moving dead vegetation onto the area of disturbance where possible (see Section 2.1.3).</p>
	<p><u>21.2.5.4</u> Ensure potential adverse effects of large-scale extractive activities (including mineral exploration) are avoided or remedied, particularly where those activities have potential to degrade landscape quality, character and visual amenity, indigenous biodiversity, lakes and rivers, potable water quality and the life supporting capacity of water.</p>	<p>No cumulative impacts are anticipated from the proposed activities. Management of minor effects are discussed in Section 3.2 Table 2.</p>

**Table 4 cont.:** Assessment of Activities against the Objectives and Policies of the Proposed District Plan; Chapter 21: Rural.

<p><u>21.2.11</u> Manage the location, scale and intensity of informal airports.</p>	<p><u>21.2.11.1</u> Recognise that informal airports are an appropriate activity within the rural environment, provided the informal airport is located, operated and managed so as to minimise adverse effects on the surrounding rural amenity.</p>	<p>Helicopter movements to set up and service the exploration activities will be relatively infrequent and of short duration. As discussed previously Heli Glenorchy completes approximately 20 flights from the Glenorchy Airstrip on a busy day and has a DOC concession to land in the Whakaari Conservation Area up to 15 times per day (5 landings per day on Black Peak). The proposed helicopter movements to set up, service and dismantle the exploration activities will therefore cumulatively be very minor when considered alongside the receiving environment.</p>
	<p><u>21.2.11.2</u> Protect rural amenity values, and amenity of other zones from the adverse effects that can arise from informal airports</p>	<p>Helicopter will be utilised to support the exploration activities. The effect of this activity has been addressed in section 3.1.5 of the AEE.</p>
<p><u>21.2.12</u> Protect, maintain or enhance the surface of lakes and rivers and their margins.</p>	<p>Not relevant to this project because activities will not occur near lakes, rivers or their margins.</p>	
<p><u>21.2.13</u> Enable rural industrial activities within the Rural Industrial Sub Zones, that support farming and rural productive activities, while protecting, maintaining and enhancing rural character, amenity and landscape values.</p>	<p>Not relevant to this project</p>	

## **5.0 MANAGEMENT OF CULTURAL, SOCIAL AND HERITAGE VALUES**

### **5.1 Iwi Consultation and Commitments**

Dr Hayden Cawte of New Zealand Heritage Properties Ltd (NZHP) has met with Mr Dean Whaanga (from Te Ao Marama) in consideration of Maori and iwi values within the area of permit EP40547. While no archaeological or heritage sites of Maori association have been identified in the area of proposed exploration activities by either of these parties, NZHP has established a process for understanding and considering Maori sites during exploration and drilling to ensure Maori and iwi values are identified and protected should they be encountered.

In consultation with Mr Dean Whaanga and in accordance with the other heritage procedures, Dr Hayden Cawte has engaged a process for ensuring Maori sites are understood and protected within the course of proposed exploration operations. In summary, an archaeologist will be present during site establishment works to ensure no Maori sites are present at a point of disturbance. Operators will also be briefed on what is archaeology and how to identify sites and features should they be encountered inadvertently. At all times when an archaeologist is not present, operators will adopt an “accidental discovery protocol” meaning, should Maori (or European) sites be encountered works will stop and operators will alert Heritage New Zealand in the first instance, who, in turn will alert, iwi and DoC, before works proceed.

NZHP have produced an iwi stakeholder information sheet and have disseminated to both Te Ao Marama and Kai Tahu Ki Otakou . This information is included in Appendix C.

### **5.2 Heritage Environment**

A full Heritage Impact Assessment has been completed by New Zealand Heritage Properties Ltd to support the access arrangement and consent applications. This assessment considers sites pre-1900 in age, defined as archaeological sites, and those post-1900 that contribute to the heritage environment. This report is provided in Appendix D.

The Heritage Impact Assessment has identified a number of heritage sites in the vicinity of the Judah Lode, Gollops, and Bonnie Jean drilling areas (see Figure 6). In addition, Figure 7 provides a plan showing the extent of the Glenorchy Heritage Landscape, protected archaeological features and the proposed drilling sites. New Zealand Heritage Properties considers these sites (and other unidentified sites) can be easily avoided. In order to ensure exploration activities, avoid these and any archaeological features in these areas, New Zealand

Heritage Properties will visit the site prior to activities commencing and brief operators on what constitutes a site and flag important features allowing operators to avoid them.

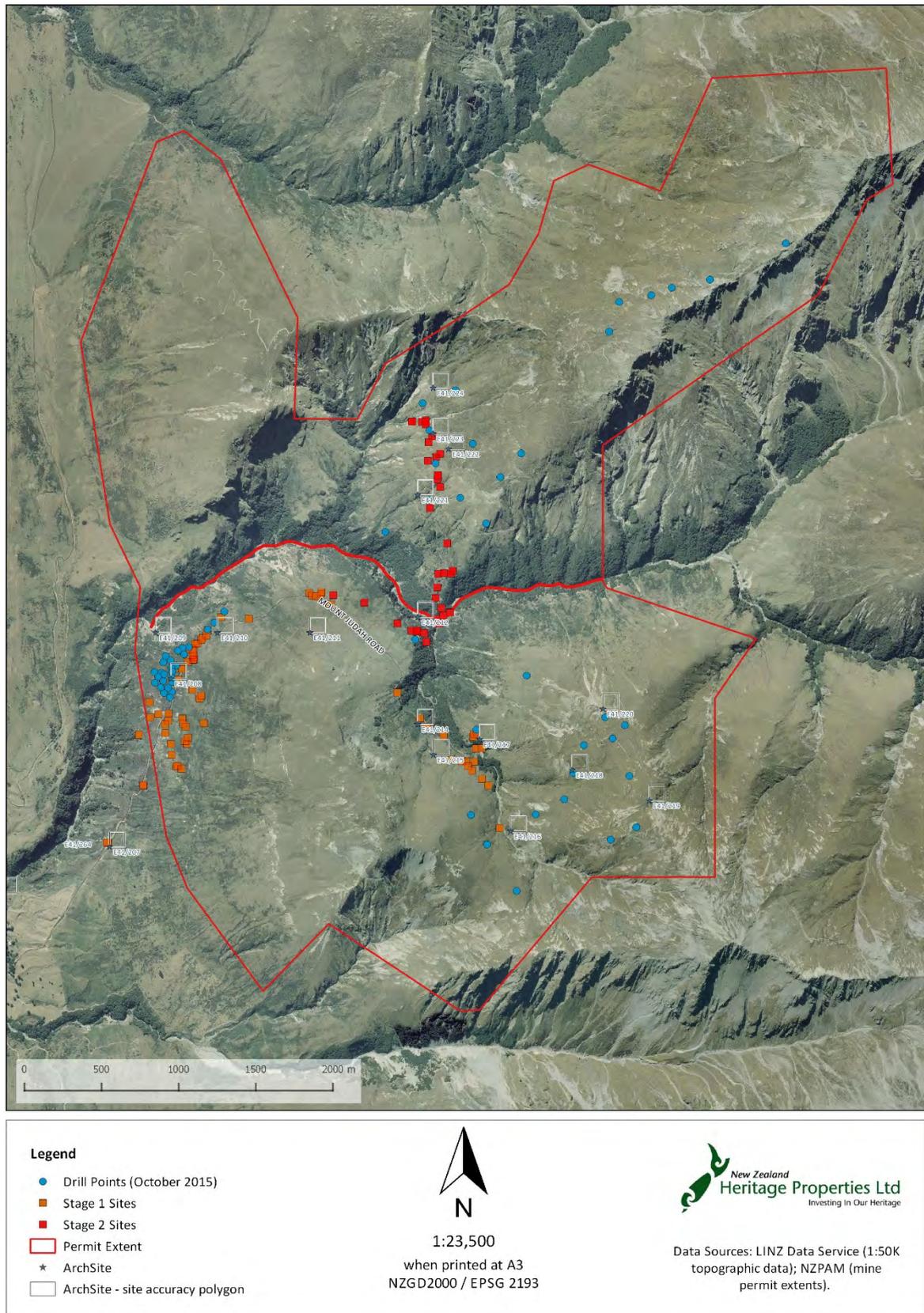
NZHP consider that the proposed exploration activities will have no adverse effect on the heritage environment, and are an appropriate development within the existing heritage landscape as all effects can be avoided by selecting specific target locations in consultation with a heritage professional. The following is an excerpt from the New Zealand Heritage Properties report on the effects of the proposed exploration activities.

*The proposed exploration activities (minimum impact and drilling) have the potential to affect a range of heritage and archaeological sites across the EP40547 permit area. In considering the proposed drill locations with the known location of sites. we can see some overlap. Under the proposed activities, effects can occur in four ways; site establishment works, creating a working area, moving the drilling rig from site to site, and the physical drill holes themselves. Given the nature of core drilling, geophysical surveying and sampling using handheld methods, the effects would be considered minor. The location of the proposed exploration sites are somewhat flexible and can occur up to metres from their proposed survey location. Therefore, there is the ability to locate exploration sites to avoid any effect upon the previously identified heritage sites. In this case, there is considered to be no effect.*

New Zealand Heritage Properties identified the potential for effects of the proposed exploration activities and recommended mitigation measures to avoid impacts. These are summarised in Table 5.

**Table 5:** Assessment of effects on heritage values and mitigation commitments for drilling at EP40547 (taken from Table 6-1 within New Zealand Heritage Properties Ltd report dated 2015).

Effect	Ranking of effect	Avoid / remedy / mitigate	AEE action
Establishment of drill site equipment	Minor	Avoid	Archaeologist to brief contractors prior to establishment works on what constitutes a site, how to identify them and thus, how to avoid sites during establishment works.
Location of working area for core drill site	Minor	Avoid	Archaeologist to visit site and brief contractors prior to works as to what constitutes a site and thus, how to avoid it.
Movement of drill rig could impact upon archaeological and heritage sites	Minor	Avoid	The rig will be largely airlifted across the landscape, however, where it is to be tracked an archaeologist to advise contractors of features to avoid.
Drill hole	Minor	Avoid	Archaeologist to brief contractors prior to works meaning sites can be easily avoided



**Figure 6:** Plan showing the proposed drilling targets/points and identified archaeology (*Plan taken from Figure 5 within the New Zealand Heritage Properties report dated 2015*).

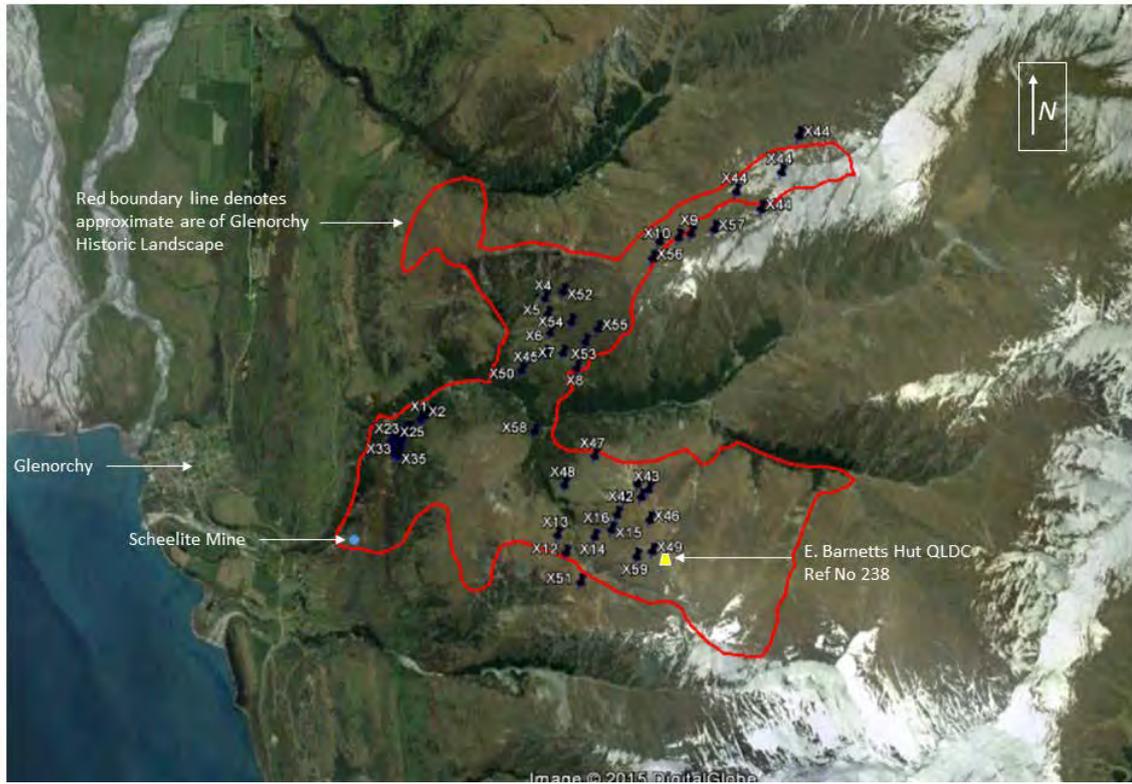


Figure 7: Boundary of Glenorchy Historic Landscape and Protected Features. The crosses denote the proposed drilling locations.

### 5.3 Review of Objectives and Policies of the Proposed District Plan – Historical Heritage

Table 6 below presents a review of the activity against the objectives and policies within Chapter 26 (Historical Heritage) of the proposed district plan.

**Table 6:** Assessment of Activities against the Objectives and Policies of the Proposed District Plan Chapter 26: Historical Heritage.

Objective	Relevant Policies	NZTM Comments and/or section reference
<p><u>26.5.1</u> To recognise and protect historic heritage features in the District from the adverse effects of land use, subdivision and development.</p>	<p><u>26.5.1.2</u> Protect historic heritage features against adverse effects of land use and development, including cumulative effects, proportionate to their level of significance.</p>	<p>A full Heritage Impact Assessment has been completed by New Zealand Heritage Properties Ltd to support the access arrangement and consent applications. This report is provided in Appendix D.</p> <p>The Heritage Impact Assessment has identified a number of heritage sites in the vicinity of the Judah Lode, Gollops, and Bonnie Jean drilling areas. New Zealand Heritage Properties considers these sites (and other unidentified sites) can be easily avoided.</p> <p>In order to ensure exploration activities avoid these and any archaeological features in these areas, New Zealand Heritage Properties will visit the site prior to activities commencing and brief operators on what constitutes a site and flag important features allowing operators to avoid them.</p> <p>New Zealand Heritage Properties identified the potential for effects of the proposed exploration activities and recommended mitigation measures to avoid impacts. These are summarised in Table 5.</p>
	<p><u>26.5.1.3</u> Require the mitigation of development affecting historic heritage, where it cannot be reasonably avoided, to be proportionate to the level of significance of the feature.</p>	<p>The historic heritage values have been recorded during an assessment undertaken by NZHP. This sites will be avoided and a process will be in place to avoid any further archaeology that may be encountered during the exploration activities.</p>
<p><u>26.5.2</u> To provide for the sustainable use of historic heritage features.</p>		<p>The proposed exploration activities will not affect the existing heritage features. On the contrary the activity can be considered complementary to the historic mining activities.</p>
<p><u>26.5.3</u> To recognise the diversity of historic heritage features, landscapes and values associated with them.</p>	<p><u>26.5.3.1</u> Identify the heritage values of precincts, buildings, structures, sites, archaeological sites, landscapes and sites of significance to Maori.</p>	<p>As in 26.5.1.2 and 26.5.1.3</p>

## 5.4 Social Environment

The Whakaari Conservation Area is popular for walking, tramping, mountain biking, hunting and horse riding. The majority of the users are walkers and trampers who are attracted to the area by its mining history, scenery, relative ease of access due to the extensive network of mining roads and tracks, and its proximity to Glenorchy. Some tramping parties camp overnight at one or more of the 3 huts located in the Whakaari Conservation Area which have been restored by the Department of Conservation.

The drilling operations are not an activity that is normally anticipated by the public in an Otago conservation area. The operations are likely to generate varying responses from recreationists due to the perceived effects on the visual amenity of the area arising from the presence of a drill rig and the sound generated by drilling operations.

To mitigate or reduce the degree of adverse public reaction it is recommended that NZTM undertake a programme of information dissemination in conjunction with the Department of Conservation. This may include press releases in local newspapers, provision of notices at local outlets in Glenorchy and provision of signage at the Judah Road car park by the Glenorchy Road.

Noise associated with the drill rig will be minimal. Operating sound levels are similar to a tractor engine operating at a constant and moderate speed. The site is isolated, however visitors on the Mt McIntosh Loop, Mt Judah Track and Heather Jock Track and their associated huts may hear some sound from drilling. Drilling will not take place at night time.

## 6.0 PART 2 OF THE RMA AND OTHER SCHEDULE 4 CONSIDERATIONS

### 6.1 Part 2 of the RMA

The following section addresses the purpose and principles of the act as set on in Part 2 of the RMA.

#### 5 Purpose

*(1) The purpose of this Act is to promote the sustainable management of natural and physical resources.*

*(2) In this Act, **sustainable management** means managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural well-being and for their health and safety while—*

*(a) sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and*

*(b) safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and*

*(c) avoiding, remedying, or mitigating any adverse effects of activities on the environment.*

The application to undertake exploration works is consistent with the 'Purpose' of the RMA. As set out in the AEE the exploration of minerals in the Whakaari Conservation Area will have a minor effect on the natural and physical resources and any potential adverse effects can be avoided or mitigated.

#### 6 Matters of national importance

*In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall recognise and provide for the following matters of national importance:*

*(a) the preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development:*

The only potential effect of the drilling activities on water bodies is the abstraction of water from unnamed streams. The water volumes required are very low and the takes will be consistent with the permitted volumes set out in the ORC Water Plan.

*(b) the protection of outstanding natural features and landscapes from inappropriate subdivision, use, and development:*

The scale of the drill rig is small compared to the landscape of the Whakaari Conservation Reserve. The rig will only be seen by recreational users. This effect has been discussed in

section 5.3 of the AEE. We also note that the drilling activities will be temporary in nature and is expected to be completed over a 2 year period.

*(c) the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna:*

Whilst the drilling activities are within a conservation reserve the activities are not being undertaken within an area of significant indigenous vegetation

*(d) the maintenance and enhancement of public access to and along the coastal marine area, lakes, and rivers:*

The proposed mineral exploration activities will not affect public access to the Whakaari Conservation Reserve. There will however be a safe zone around the drill sites to ensure the protection of the public during drilling activities.

*(e) the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga:*

Consultation has been undertaken with Kai Tahu ki Otago and Te Ao Marama.

*(f) the protection of historic heritage from inappropriate subdivision, use, and development:*

A detailed Heritage Assessment of the site has been undertaken by Dr Hayden Cawte of New Zealand Heritage Properties Ltd (NZHP). This work has identified the site as a Heritage Landscape based on the historical mining activities that have occurred in the area. The historical assessment has recorded the locations of a number of historical features. The mineral exploration activities will avoid historical features and is consistent with mining activities that the Heritage Landscape is based on.

*(g) the protection of protected customary rights.*

The application will not affect protected customary rights.

## **7 Other matters**

In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall have particular regard to—

*(a) kaitiakitanga:*

*(aa) the ethic of stewardship:*

NZTM has consulted with Te Ao Marama and KTKO. NZTM understands Te Ao Marama has not raised any concerns regarding the proposed mineral exploration activities.

*(b) the efficient use and development of natural and physical resources:*

*(ba) the efficiency of the end use of energy:*

The mineral exploration activities proposed in this application are associated with drilling only. At this stage NZTM is not undertaking activities associated with the development of natural or physical resources.

*(c) the maintenance and enhancement of amenity values:*

The mineral exploration activities are temporary in nature and small in scale. Some impact on the amenity of recreational users will occur as a result of the drilling activities in the Whakaari Conservation Reserve as set out in section ?? of the AEE.

*(d) intrinsic values of ecosystems:*

*(e) [Repealed]*

*(f) maintenance and enhancement of the quality of the environment:*

*(g) any finite characteristics of natural and physical resources:*

*(h) the protection of the habitat of trout and salmon:*

*(i) the effects of climate change:*

*(j) the benefits to be derived from the use and development of renewable energy.*

The proposed mineral exploration activities will have a minor effect on the values ecosystems due to the small scale of the activity. There is no trout or salmon habitat in the vicinity of the drilling activities.

Given the short duration of the activity the effects of climate change it is not possible to account for the effects of climate change over the duration of the project.

## **8 Treaty of Waitangi**

*In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall take into account the principles of the [Treaty of Waitangi](#) (Te Tiriti o Waitangi).*

NZTM has consulted with KTKO and Te Ao Marama on the project. We understand Te Ao Marama has not identified any activities associated with the mineral exploration that are inconsistent with the principles of the Treaty of Waitangi.

## **6.2 Schedule 4**

This document has been prepared with reference to Schedule 4 of the Resource Management Act, 1991.

A summary of information required in assessment of environmental effects is provided in Table 7.

**Table 7: Summary of Schedule 4 requirements and comments**

6. Information required in assessment of environmental effects	Comments
(1) An assessment of the activity's effects on the environment must include the following information:	
(a) if it is likely that the activity will result in any significant adverse effect on the environment, a description of any possible alternative locations or methods for undertaking the activity:	No anticipated significant adverse effects on the environment.
(b) an assessment of the actual or potential effect on the environment of the activity:	See Table 2.
(c) if the activity includes the use of hazardous substances and installations, an assessment of any risks to the environment that are likely to arise from such use:	See Table 2. The volumes of fuel required to be stored at each drilling site will be low and stored in jerry cans with the drill rig. Given the small volumes of fuel stored onsite the risk from the storage of hazardous substances is very low.
(d) if the activity includes the discharge of any contaminant, a description of— (i) the nature of the discharge and the sensitivity of the receiving environment to adverse effects; and (ii) any possible alternative methods of discharge, including discharge into any other receiving environment:	(i) A small amount of drill mud will be discharged, predicted to be less than 20 litres per bore hole. This discharge will be received by the surrounding surface soils and given the volume, will not migrate to any significant depths. We also note that the Westland Regional Council considers the effects of drill mud to be de minimus (see Appendix B. (ii) The proposed receiving environment is the least vulnerable environment within the proposed area. The discharge will not be entering into any sensitive environments or water bodies.
(e) a description of the mitigation measures (including safeguards and contingency plans where relevant) to be undertaken to help prevent or reduce the actual or potential effect:	See Table 2
(f) identification of the persons affected by the activity, any consultation undertaken, and any response to the views of any person consulted:	See Table 2 A summary of Iwi consultation undertaken by NZTM and commitments is provided in Section 4.1. An application for Access has been submitted to the Department of Conservation pursuant to section 61 of the Crown Minerals Act 1997 to undertake exploration activity within the Whakaari Conservation Area.
(g) if the scale and significance of the activity's effects are such that monitoring is required, a description of how and by whom the effects will be monitored if the activity is approved:	No monitoring is proposed.
(h) if the activity will, or is likely to, have adverse effects that are more than minor on the exercise of a protected customary right, a description of possible alternative locations or methods for the exercise of the activity (unless written approval for the activity is given by the protected customary rights group).	Not applicable

## 7.0 REFERENCES

CRR, 2002. *Wyuna Pastoral Lease Conservation Resources Report, Copied November 2002*. Land Information New Zealand.

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Hitchmough, R., Anderson, P., Barr, B., Monks, J., Lettink, M.; Reardon, J., Tocher, M., Whitaker, T. 2013: *Conservation status of New Zealand reptiles, 2012*. New Zealand Threat Classification Series 2. Department of Conservation, Wellington. 16 p.

Jewell, T. 2006. *Central Otago Lizards*. Jewell Publications, Cromwell, New Zealand.

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Otago Regional Council. 2014. *Regional Plan: Water*

Robertson, H.A., Dowding, J.E., Elliott, G.P., Hitchmough, R.A., Miskelly, C.M., O'Donnell, C.F.J., Powlesland, R.G., Sagar, P.M., Scofield, R.P., Taylor, G.A. 2013. *Conservation status of New Zealand birds, 2012*. New Zealand Threat Classification Series 4. Department of Conservation, Wellington. 22 p.

Turnbull, I. M. (compiler) 2000. *Geology of the Wakatipu area*. Institute of Geological & Nuclear Sciences 1:250 000 geological map 18. 1 sheet + 72 p. Lower Hutt, New Zealand. Institute of Geological & Nuclear Sciences Limited.

RM151033

Additional Information Request from QLDC

18 February 2016

Reply by New Zealand Tungsten Mining Ltd

3 March 2016

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## 1. HELICOPTER RELATED

**QLDC Information Request:** “Please provide a best estimate of numbers of helicopter flights and landings/take-offs.”

The number of helicopter flights estimated out of Glenorchy Airfield are tabulated in Table 1 below. The total number of estimated flights is 148 and these will occur over the next 3-5 years. When flights are made to service campsites the helicopter will land at or near the camp site to drop off the drilling crew and supplies, but other flights will not involve landing.

**Table 1 – Estimated number of flights from Glenorchy Airfield**

Estimated Return Flights From Glenorchy Airfield	
Purpose	Number
Mobilisation Drill Rig & Equipment	10
Move Drill Rig & Equipment between sites	62
De-Mobilisation Drill Rig & Equipment	10
Camp Site Mobilisation	5
Camp Site Move	8
Camp Site De-Mobilisation	5
Flights to service Campsites	48
Total Flights	148

Drilling is planned to be undertaken over the next 3-5 years and with the exception of the Judah Lode Area will not occur during the winter months. If straight averages are used this would equate to approximately 1 flight per week.

The estimated frequency for flights from Glenorchy Airfield to the different drill sites is tabulated in Table 2 below. The most frequent flights are estimated to be every 6 days as when drilling at the Mt Judah Lode.

**Table 2 – Estimated Frequency of flights from Glenorchy Airfield**

Estimated of Frequency of Flights From Glenorchy Airport to Different Drill Locations				
Location	# Drill Holes	Avge. Depth (m)	Total Drilled (m)	Avge. Days Btw Moves
Judah Lode Area	28	55	1540	6
Black Peak	4	100	400	10
Schickers Point	5	100	500	10
Gollops	11	80	880	8
Heather Jock - Bonnie Jean	10	70	700	7
Jean Hut Area	2	100	200	10
Blue Duck - Boozer	3	200	600	20
Judah Lode Area Only	28	55	1540	6
Other Areas	35	94	3280	10
Average/Total All Drill Sites	63	77	4820	8
NB: Flights to service campsites will be scheduled to coincide with drill rig moves as possible. If these need to occur independently of rig moves they will be 1 every 10 days.				

**QLDC Information Request:** “If Heli Glenorchy has a concession to land up to 15 times per day, with up to 5 landings per day on Black Peak (max 105 landings per week?), some of the NZTM landings could be allocated to the concession. Please confirm if Heli Glenorchy will consider allocating some or all of the NZTM landings to its concession.”

Heli Glenorchy is happy to allocate landings to their concession. Appendix 1 contains:

- i. A confirmation email from Heli Glenorchy regards allocating landings to their concession.
- ii. A copy of DoC Concessions for Heli Glenorchy in Whakaari Conservation Area. PLEASE NOTE An error was made in the Resource Consent application, and the maximum number of landings per day is 12 not 15 as in the application.
- iii. A summary of Heli Glenorchy mining and exploration experience.

**QLDC Information Request:** “Please provide best estimate locations of landing/take-off areas (on a map) and proximity of public tracks or huts – see camp site and recreation questions below.”

Drill rig and equipment will be moved by the helicopter using a long line and will be “dropped off” at the drill sites. Estimated locations of drill sites are shown in Appendix 2.

By necessity Some of these drill sites are in proximity to walking tracks as these tracks were established initially to provide access to the scheelite reefs that have been mined in the past, and these reefs are the targets of drilling.

**QLDC Information Request:** “Please provide a flight path map to and from Glenorchy Airport (e.g. avoiding Wyuna Preserve and Blanket Bay rural lifestyle areas).”

A flight path map is attached in Appendix 3.

**QLDC Information Request:** “Please confirmation that the drill rig and other equipment can be carried by helicopter.”

The drill rig and equipment can be carried by helicopter. This is the only way they can be transported onto the site as there is no road access.

---

## 2. BUILDINGS AND SERVICES – CAMP SITES

QLDC Information Request: “How many camp sites will there be? Will there be one for each drilling site, or will the same camp site be used for several drilling sites in close proximity? (as I have not visited the site (yet), I don’t know how far apart each drilling site is. The Judah Lode ones are close together on the location map)”

It is planned that there will be 9 camp sites each of which will provide a base for serving multiple drill holes as listed below:

- 1) Judah lode area – serves 28 drill holes
- 2) Black peak- – serves 4 drill holes
- 3) Schickers - Point serves 5 drill holes
- 4) Gollops Upper - serves 10 drill holes
- 5) Gollops Lower - serves 1 drill holes
- 6) Heather Jock - serves 5 drill holes
- 7) Jean Hut Area - serves 2 drill holes
- 8) Bonnie Jean - serves 5 drill holes
- 9) Blue duck-boozer - serves 3 drill holes

QLDC Information Request: “Confirmation that the camp site buildings will require resource consent under Rule 5.3.3.3 (i) (a) or Rule 26.6.21 (buildings over 5m<sup>2</sup> in the heritage landscape) and any further assessment necessary to address the (temporary) effects of these buildings e.g. screening or location away from recreational tracks/huts, rehabilitation of campsites, replanting of damaged vegetation.”

Yes confirmed that buildings will be over 5m<sup>2</sup> and will require resource consent. Campsites will be situated at least 50 metres from recreational huts/tracks.

We may require further details about water supply and wastewater storage to ensure the camp sites will be adequately serviced. To be confirmed with the Council RM Engineer.

Water supply to service the camp site will either be pumped to the camp site, as for water being pumped to the drill sites, or brought onto the camp site in 20 litre containers. A portaloos will flow into each campsite and will collect all toilet waste that will be flown out and discharged of at an authorised disposal facility. Wastewater from the shower is proposed to be discharged directly to ground at least 20m away from any surface water body shown on the LINZ Topo 50 map for the area.

### 3. RECREATIONAL USERS

**QLDC Information Request:** “Location of the 3 public recreational huts and tracks in relation to drilling sites on a map, and best estimate of numbers of recreational users who may be affected over the 2-year consent period. (local DOC office may be able to assist – I haven’t spoken to them yet - see map attached from DOC website).”

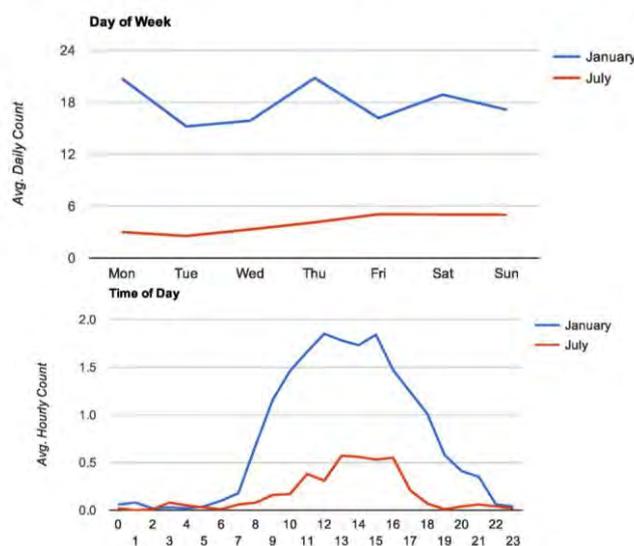
The consent period being applied for by NZTM is for 5 years, not 2 years as suggested here.

The location of recreational huts and tracks in relation to drilling sites is shown in Appendix 1.

DoC have an uncalibrated Track Pad Counter installed on the track near the carpark, but do not have a record of the number of track and hut users. A report from DoC on the data collected by the Track Pad Counter is attached in Appendix 4.

Figure 1 below from this report suggests that track users per day in January is between 16 and 20, and in July between 2 and 6. It is not known if these counts are the number of times a person crosses the counter or if they have taken account of returning visitors. If it is the number of times a person crosses the counter then visitors per day will be half, i.e. in January between 8 and 10 and in July between 1 and 3. Most visitors are understood to not go beyond the old battery site, and the number of visitors who currently venture to the proximity of the proposed drill sites is small.

**Data - Daily & Weekly Profiles By Season**



**Figure 3:** Actual/modelled average counts by Day of Week / Time of Day

**Notes:**

- January = High Season; July = Low Season

**Figure 1 – Estimated Track User Numbers**

QLDC Information Request: “Any health & safety measures that might be necessary e.g. marking off drilling sites and signs if drilling sites are near huts or tracks.”

Drilling activities will be operated according to a written Health and Safety plan and personnel will be equipped with emergency locator beacons and satellite phone in case of an emergency.

All drilling sites will be cordoned off and signage put in place to warn that there is operating machinery, that there may be hazards to safety, and that unauthorised entry to the drill site is not permitted. When the drill rig is operating there will always be NZTM personnel present to ensure this is adhered to and only authorised people will be allowed to enter following an appropriate site safety briefing.

When drilling is not occurring, the site and equipment will be made safe so that when unattended if a person is to cross the cordon onto the site there would be no imminent danger to them.

NZTM anticipate interest from the public and when practically possible a safe observation area will be provided at each drill site where visitors can watch the drilling operations without being a danger to themselves or others.

Information to inform visitors about the drilling, its low impact, and the history of scheelite mining in general will be provided by NZTM and made available for distribution to visitors at the drilling observation areas.

---

## 4. REHABILITATION/REPLANTING OF INDIGENOUS VEGETATION

QLDC Information Request: “Details of any proposed rehabilitation/replanting of indigenous vegetation that is removed for the drilling sites and campsites that would mitigate adverse effects on the vegetation and the surrounding Outstanding Natural Landscape (e.g. similar to NZSki operations where tussocks etc that are removed are retained and replanted).”

The disturbance to vegetation by the proposed activities is very small and scattered over a large area of the Whakaari Conservation Reserve and no replanting is proposed as part of the consent application. To mitigate the minimal disturbance to vegetation, any buildings at campsites will be placed on timber “blocks” to will raise them off the ground. The approach will minimise the disturbance to vegetation at the campsites.

Any disturbance to shrubland vegetation will largely be associated with the cutting of branches for drill rig access rather than removal of whole plants. Where this occurs the cut vegetation will be set to the side of the track, and when the track is no longer needed for drill rig access, lain back on the ground where it was cut from. This is expected to support the further recruitment of plants for regeneration as the branches are likely to contain viable seed. We note that the shrubland that will be disturbed is resilient, and where land has been retired from grazing natural regeneration is occurring. This proposal will not undermine these processes.

---

## 5. GLENORCHY HERITAGE LANDSCAPE

QLDC Information Request: “I spoke to Dr Matt Schmidt at Heritage NZ, and he had previously talked to Dr Hayden Cawte about this proposal. Dr Schmidt was happy with Dr Cawte’s proposal to mark-off archaeological/heritage sites so that the drilling sites and campsites avoid them. Identifying sites and briefing contractors is proposed in the Heritage Assessment, however, physically marking off the sites is not specifically discussed. Dr Schmidt also confirmed that an archaeological authority should not be required if the approach is to avoid and not damage sites. Please confirm that the applicant intends to engage a heritage expert to physically mark-off archaeological/heritage sites, so these sites can be avoided when establishing drilling site and campsites.”

Dr Hayden Cawte of New Zealand Heritage Properties will be providing heritage oversight to the project. This will include demarcating and marking off heritage features in the immediate area of drilling and campsites.

Dr Cawte considers that fencing off all features will interfere with other users of the area unnecessarily and that features within an immediate 10 metre radius of the drill site be fenced off and avoided. To ensure that all heritage sites are avoided Dr Cawte will conduct on-site training with personnel to ensure this is achieved.

**QLDC Information Request:** “Please confirm that damage to existing tracks will be kept to a minimum, where these are to be used for moving the drilling rig and other equipment. The Proposed District Plan requires the following key features to be protected within the GHL, including track ways:

*Key features to be protected:*

*26.12.9.1 All mines, mining huts, the cableway and track ways within the GHL boundary (including the Black Peak Mine).*

*26.12.9.2 The mine sites along the Mount Judah Road.*

*26.12.9.3 All other known archaeological sites and historic places within the GHL.”*

There will be little to no effect upon the heritage values of existing tracks, either from the drill rig itself, or the transport of persons and other property.

Heritage sites will not be effected by drilling or camp sites as neither will be located at heritage sites.

**QLDC Information Request:** “Please provide written approval from Heritage NZ as a potentially affected party: Jane [jodea@heritage.org.nz](mailto:jodea@heritage.org.nz) and cc Matt [mschmidt@heritage.org.nz](mailto:mschmidt@heritage.org.nz)”

Written approval from Heritage NZ as a potentially affected party is currently being processed by Heritage NZ, and this will be provided to QLDC by NZTM as soon as it is provided by Heritage NZ

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## 6. RM130412 – CURRENTLY ON HOLD

**QLDC Information Request:** “Please confirm whether the applicant wishes to withdraw RM130412.”

NZTM confirm that RM130412 can be withdrawn.

---

## **APPENDIX 1 – HELI GLENORCHY INFORMATION**

- i. Confirmation of use of allocation to concession landings
- ii. Heli Glenorchy Whakaari Conservation Area Concessions
- iii. Heli Glenorchy mining and exploration experience

## MDS Secure - Gary Gray

---

**From:** Info Heli Glenorchy <info@heliglenorchy.co.nz>  
**Sent:** Tuesday, 23 February 2016 9:15 a.m.  
**To:** Gary Gray - Mining  
**Subject:** Re: Heli Glenorchy Information

Hi again Gary,

I've had a message from Nick -

"Heli Glenorchy would be happy to allow use of our landings for your operations".

Cheers

Sue

#

Sue Scott - Reservations  
 Heli Glenorchy



[www.heliglenorchy.co.nz](http://www.heliglenorchy.co.nz) #  
 35 Mull Street, Glenorchy, Queenstown, NZ#  
 Freefone (within NZ): 0800 435 449#  
 Email: [info@heliglenorchy.co.nz](mailto:info@heliglenorchy.co.nz)#  
 #

On 22/02/2016, at 7:04 pm, MDS Secure - Gary Gray <[gary@mining.co.nz](mailto:gary@mining.co.nz)> wrote:

Thanks Fiona, that's great.

Can you also please confirm, as I discussed briefly with Nick, if Heli Glenorchy would be prepared to allocate some of our landings at Whakaari to your concession?

See quoted below from QLDC email (I made a mistake and quoted them 15 landings total per day – I see it is 12):

"If Heli Glenorchy has a concession to land up to 15 times per day, with up to 5 landings per day on Black Peak (max 105 landings per week?), some of the NZTM landings could be allocated to the concession. Please confirm if Heli Glenorchy will consider allocating some or all of the NZTM landings to its concession."

Cheers,

Gary

| Gary Gray - Mine Design Systems Ltd | P.O. Box 90374, AMC, Auckland, New Zealand |  
 | Ph:+64-9-3566951 | Mob:+64-29-5433367 | Fax:+64-9-3566952 | [mds@mining.co.nz](mailto:mds@mining.co.nz) |

			<i>Landings No per day</i>	<i>No Landings per year</i>	<i>10</i>
Sleepy Hollow	Caples Conservation Area	E1227762 N5023114	2 per day between these 3 sites	50	5
Kay Creek tributary	Caples Conservation Area	E1226256 N5028420		50	5
Kay Creek	Caples Conservation Area	E1225855 N5029121		50	5
Kay Creek Hut	Caples Conservation Area	E1224052 N5028485	2 per day between 1 April and 30 September	50	5
Fraser Creek	Caples Conservation Area	E1220944 N5029283	2 per day between 1 April and 30 September	50	5
The Spur	Remarkables Conservation Area	E1268627 N5004926 to E1269129 N5003425	10	600	6
Double Cone	Remarkables Conservation Area	E1269532 N5000723	5		6
South Double Cone	Remarkables Conservation Area	E1269232 N5000022	5		6
Wye Creek Ridge	Remarkables Conservation Area	E1269332 N4999621	5		6
Sugar Bowl Ridge	Remarkables Conservation Area	E1271832 N5003027	5		6
Ben Cruachan peak	Remarkables Conservation Area	E1274434 N5003630	5		6
Ben Cruachan 1	Remarkables Conservation Area	E1273935 N5002329	5		6
Ben Cruachan 2	Remarkables Conservation Area	E1274034 N5003230	5		6
Wye Creek Ice wall	Remarkables Conservation Area	E1270635 N4998521	2 per day between 1 June and 30 September each year	10	6
Lake Hope	Remarkables Conservation Area	E1271942 N4993117	2	50	6
Londonderry Terrace	Mount Aurum Recreation Reserve	E1258699 N5024739	5	300	7
Pleasant Creek Terrace	Mount Aurum Recreation Reserve	E1258699 N5024539	5	300	7
Burke's Terrace	Mount Aurum Recreation Reserve	E1258798 N5025741	5	300	7
Dandy's Saddle	Mount Aurum Recreation Reserve	E1254988 N5033347	2	50	7
Black Peak	Whakaari Conservation Area	E1242558 N5027009	5	300	8
Precipice Hill	Whakaari Conservation Area	E1240578 N5028479	5	300	8
Pulpit Basin	Whakaari Conservation Area	E1242218 N5028485	2	300	8

*No Landings  
per year*

(Permission number: 44318-AIR)

*10*

*↑ Map number.*



12 February 2016

To Whom It May Concern

The following information outlines the mining and exploration experience that our pilots at Heli Glenorchy have:

**Nick Nicholson (Owner/Operator/Pilot)**

- 8 years mining exploration, drill support and long line lifting experience in Alaska & Papua New Guinea
- Mining Companies worked with: Anglo America, Barrack Gold, Xtrata, MMG Mining

**Total Flying Hours: 7,000+**

**Dick Deaker (CEO/Pilot)**

- Approx 6 years drilling and mining support.
- 5000 hours mining and oil exploration in Peru, Papua New Guinea, Bolivia, Canada and Mexico.
- Animal recovery spanning 40 years in the Fiordland area, New Zealand.

**Total Flying Hours: 18,000+**

**Mark Hollows**

- 13 seasons mining exploration, drill support and lifting in Alaska totaling approx. 4000 hours.
- 35 Years of local flying in the Fiordland area doing Mountain Flying and Animal Recovery

**Total Flying Hours: 18,000+**

**Chris Brough**

- 1000 hours working for Pacific Helicopters in Papua New Guinea.
- 400 hours for Morobe Mining relocating drills, crew changes and supplies.
- 600 hours with oil search based at Moro
- 300 hours seismic ops – servicing seismic lines, drill moves, camp moves up to 11,000ft, using 100, 150 and 200 foot long lines.
- The last four years have been in the Mount Cook area moving gas and tanks to 8000ft as well as SAR work including human long line rescues as high as 11,000ft. Also including tourism activities.

**Total Flying Hours: 5,300+**



**Jeff Ormrod**

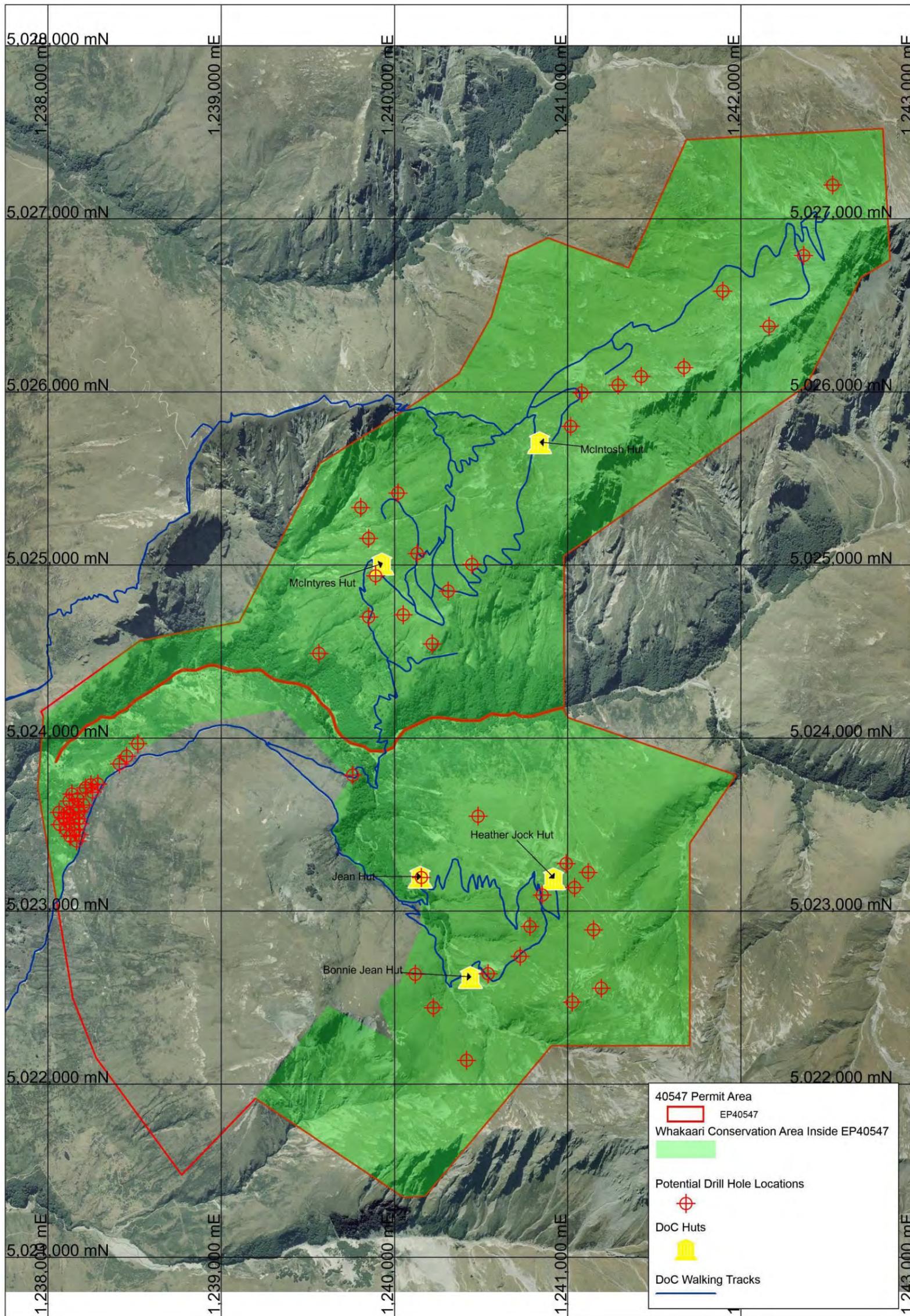
- 500 hours on diamond drill project in Yukon, Canada
- 300 hours for Total/Inter Oil in Papua New Guinea

***Total Flying Hours: 3,100+***

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**APPENDIX 2 – ESTIMATED DRILL SITE LOCATIONS IN RELATION  
TO DOC WALKING TRACKS AND HUTS**

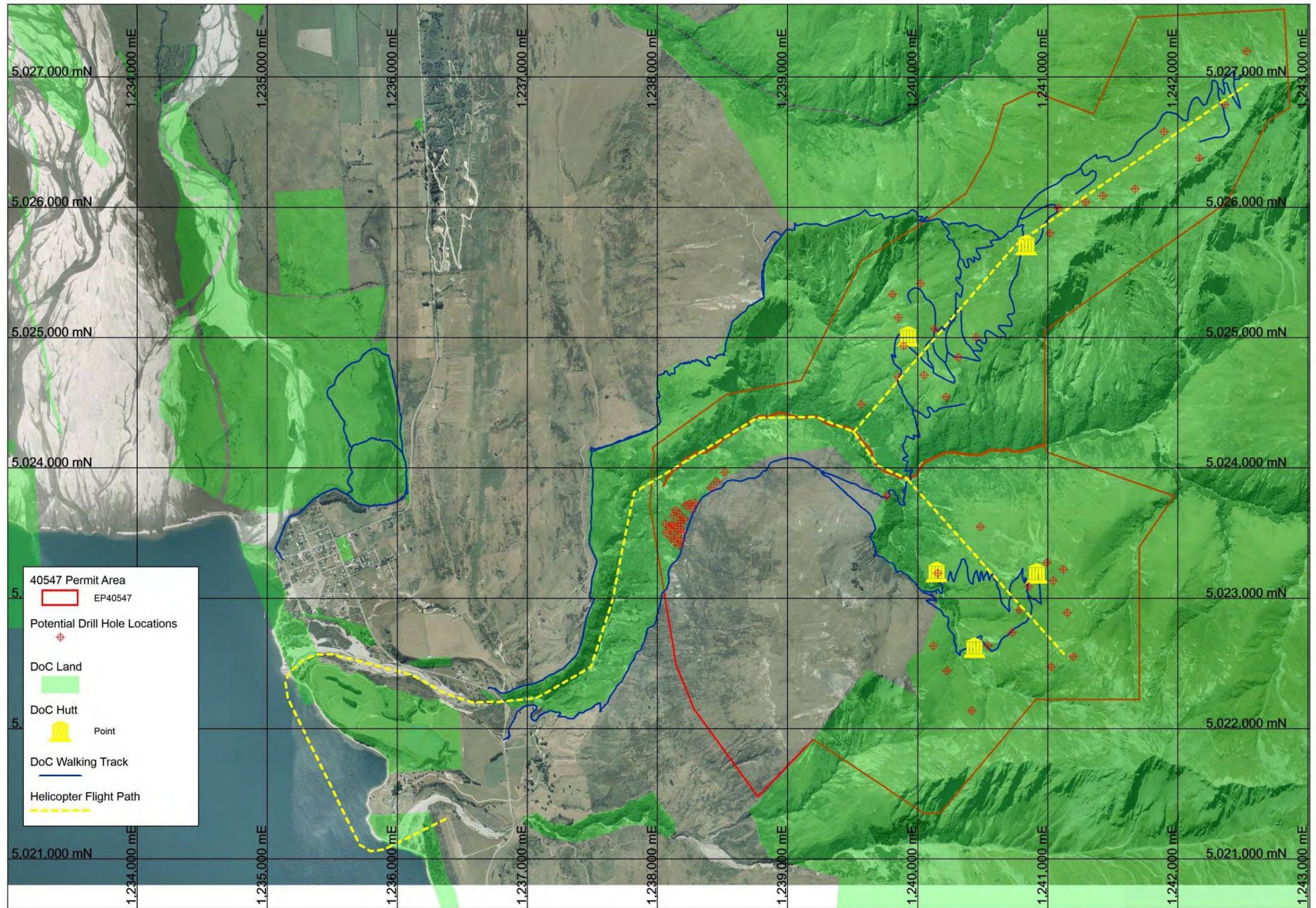
Figure 2 – Drill Site Locations in Relation to DoC Walking Tracks and Huts



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## **APPENDIX 3 – FLIGHT PATH MAP**

Figure 3 – Helicopter Flight Path Map



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## **APPENDIX 4 – DOC TRACK COUNTER REPORT**



## JUDAH TRACK PAD COUNTER

(This report uses uncalibrated counter data)

Access DMF Destination Consolidated Report for:  
Glenorchy/Kinloch activities.



### Counter Profile:

- Equipment Number: 100081555
- Technical ID: 34463
- Counter Network: (National)
- Type of Installation: (Long term)
- Installation Date: 14/10/2008
- Counter Status: ? (Open)
- Download Frequency: ?
- Date of last download: 06/11/2015

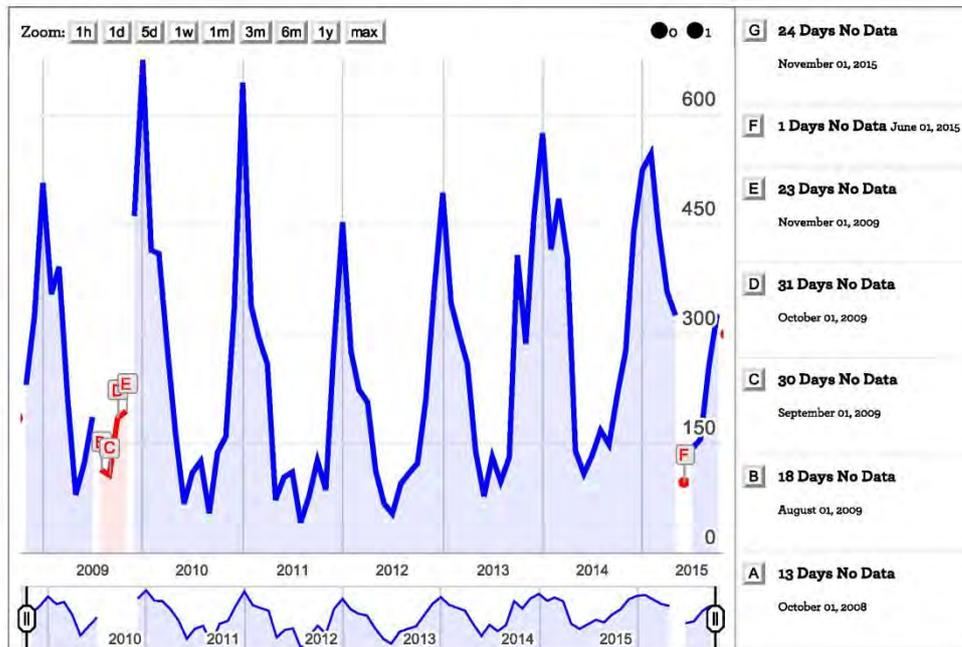
### Report Summary:

- Generated on: 28/02/2016
- Days counted at location: -2891
- Count from last 365 days: 3915
- Count from previous 365 days: 3567
- Change from previous 365 days: 10%

\*Missing data points are modelled.

A more detailed representation and discussion of the counter data at this location may be found in the associated Technical Report.

## Data - Longitudinal Time Series



**Figure 1:** Monthly total counts at installation site over time

**Notes:**

- Default period is last Financial Year. To view different periods, use either zoom buttons at the top left of graph, or specify a period using the adjustable sliders at the bottom of the graph.
- Red points labelled A-Z indicate periods (in days) where count data is incomplete.
- Red points at either end of graph indicate incomplete data due to installation/latest download date occurring sometime during the month.

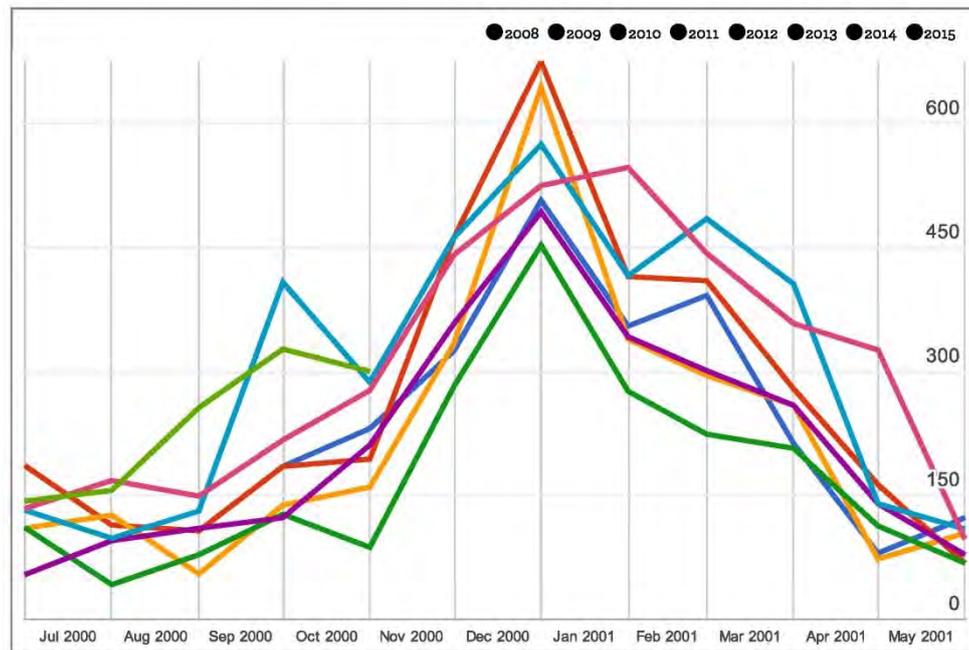
### Data - Financial Year

FY	Count	Change from prev. FY +/-	Prop. days counted
2008/2009	2,702		71%
2009/2010	3,257	21%	72%
2010/2011	2,637	-19%	100%
2011/2012	2,068	-22%	100%
2012/2013	2,564	24%	100%
2013/2014	3,649	42%	100%
2014/2015	3,682	1%	100%
2015/2016	3,932	7%	35%

**Table 1:** Actual/modelled total counts by Financial Year (period ending 30th June)

**Notes:**

- Counts for some years are incomplete (refer Figure 1) - i.e. prop. of annual days counted is < 100%.
- Where proportion of annual days counted is < 100%, modelled counts are used to enable meaningful comparisons across FYs.



**Figure 2:** Actual/modelled total monthly counts by Financial Year

**Notes:**

- Counts for some years are incomplete (refer Figure 1).
- Where proportion of annual days counted is < 100%, modelled counts are used to enable meaningful comparisons across FYs.

2/29/2016

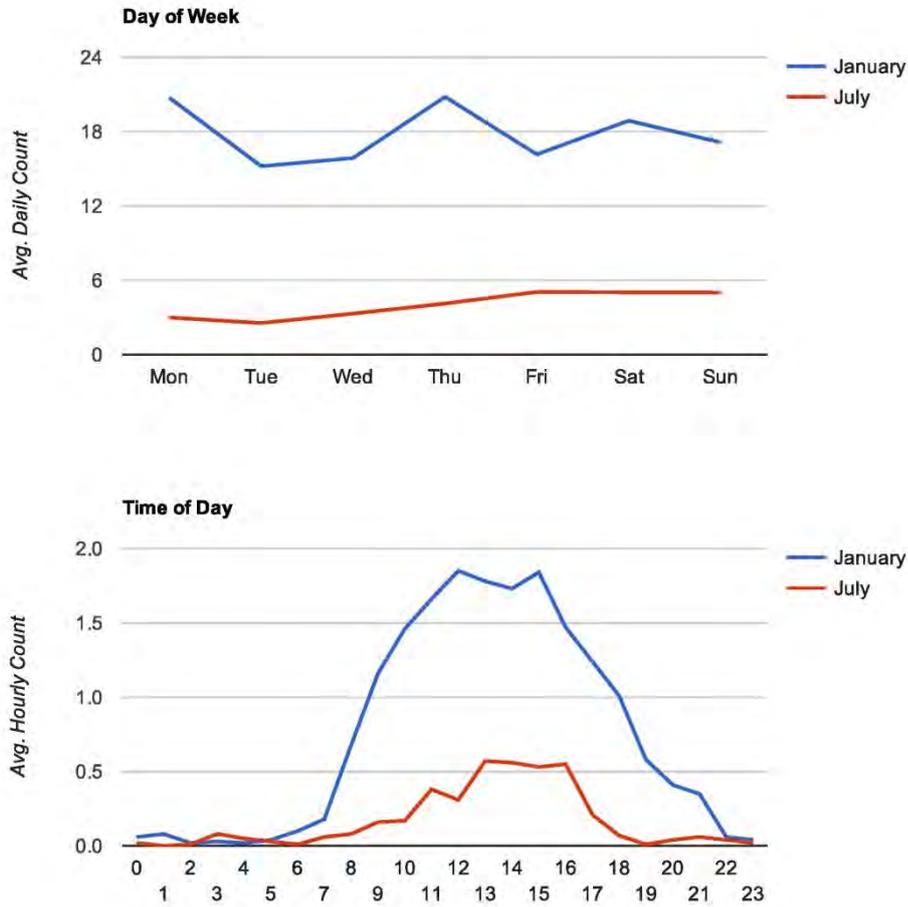
Visitor Asset &lt;br/&gt; Utilisation Report

- *The years shown on the horizontal axis is an error and should be ignored.*

file://chcrosvr2/groups\$/Science/Visitor\_Reports/100081555.html

4/5

### Data - Daily & Weekly Profiles By Season



**Figure 3:** Actual/modelled average counts by Day of Week / Time of Day

**Notes:**

- January = High Season; July = Low Season

**Report created by:** Planning Monitoring and Reporting (PMR), Science & Policy Group, Department of Conservation.  
**Help improve this report:** This Visitor Asset Utilisation Report is a work-in-progress, and we welcome your feedback.  
 Please forward your comments/requests for assistance to: Jeff Dalley at [jdalley@doc.govt.nz](mailto:jdalley@doc.govt.nz)

**APPENDIX 3 – MINERALS EXPLORATION PERMIT**

## **Crown Minerals Act 1991**

Section 35A

### **Minerals Exploration Permit 40547**

I, ILANA ROBYN MILLER, National Manager Minerals, Energy and Resource Markets, acting pursuant to section 35A of the Crown Minerals Act 1991 and acting pursuant to delegated authority under section 41 of the State Sector Act 1988, grant to

NEW ZEALAND TUNGSTEN MINING LIMITED (Permit Operator)

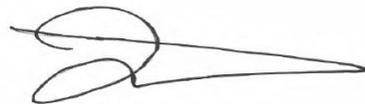
an extension of duration (an appraisal extension) of the permit for a period of 4 years from 10 September 2017.

Schedule 3 of the permit is replaced with Schedule 3 attached to this Certificate.

This exploration permit will remain a Tier 1 permit.

This extension of duration (an appraisal extension) is granted subject to the Crown Minerals Act 1991 and all regulations made under that Act, and the conditions of the permit.

DATED this 29th day of September 2017



-----  
**ILANA ROBYN MILLER**

## Schedule 3

### Minimum Work Programme

- 1 Within 12 months of the commencement date of the permit, the permit holder shall (to the satisfaction of the chief executive):
  - (a) complete a review of existing data on the Glenorchy field;
  - (b) produce a geologic report on the area;
  - (c) complete a tungsten marketing study;
  - (d) using computer resource modelling, carry out a pre-feasibility mining study; and
  - (e) make a commitment by notice in writing to the chief executive to complete the work detailed in condition 2 below.
- 2 Within 60 months of the commencement date of the permit, the permit holder shall (to the satisfaction of the chief executive):
  - (a) carry out such exploratory drilling and sampling as is necessary, having regard to good mining industry practice, to delineate a potentially mineable gold/scheelite orebody in the permit area;
  - (b) obtain such bulk samples as are required to carry out appropriate metallurgical testing on gold/scheelite ore from the permit area;
  - (c) carry out environmental impact studies into mining in the area; and
  - (d) complete a full feasibility study.
- 3 Within 72 months of the commencement date of the permit, the permit holder shall (to the satisfaction of the chief executive):
  - (a) undertake a programme of geological mapping and field surveying;
  - (b) develop a model case mine plan for application; and
  - (c) provide the chief executive with a report detailing the work completed during this phase of exploration, and the results of that work, including the submission of digital data.

- 4 Within 108 months of the commencement date of the permit, the permit holder shall (to the satisfaction of the chief executive):
- (a) conduct a further programme of mapping and field studies with the aim to assessing the continuity of mineralised fault structures; and
  - (b) provide the chief executive with a report detailing the work completed during this phase of exploration, and the results of that work, including the submission of digital data.
- 5 Within 120 months of the commencement date of the permit, the permit holder shall (to the satisfaction of the chief executive):
- (a) undertake a programme of ground-based geophysical surveying to assess the continuity of mineralised fault structures;
  - (b) complete a programme of channel sampling or trenching or drilling using appropriate manual or mechanical methods for a minimum of 40 channel samples or 4 trenches or 3 drill holes;
  - (c) complete a programme of underground drifting and/or surface sampling as considered necessary to identify mining targets and assess amenability of ore for processing;
  - (d) update the geologic model and complete a mineral resource assessment;
  - (e) complete a mine scoping study that includes an infrastructure assessment; and
  - (f) provide the chief executive with a report detailing the work completed during this phase of exploration, and the results of that work, including the submission of digital data.
- 6 Within 156 months of the commencement date of the permit, the permit holder shall (to the satisfaction of the chief executive):
- (a) conduct mapping and sampling over the entire accessible permit area to understand the continuity of resource;
  - (b) update the geological and GIS databases; and
  - (c) complete a technical report detailing all work completed during this stage of the work programme to be submitted to the chief executive in accordance with the regulations.

- 7 Within 168 months of the commencement date of the permit, the permit holder shall (to the satisfaction of the chief executive):
- (a) conduct infill drilling, channel sampling or trenching as necessary to understand the nugget effect of mineralisation;
  - (b) undertake a market study to assess the demand for tungsten mining operation; and
  - (c) complete a technical report detailing all work completed during this stage of the work programme to be submitted to the chief executive in accordance with the regulations.
- 8 Within 180 months of the commencement date of the permit, the permit holder shall (to the satisfaction of the chief executive):
- (a) complete a programme of drilling of a minimum of 750 metres;
  - (b) update the appropriate mineral resource estimates;
  - (c) prepare a technical report detailing all work completed during this stage of the work programme in conjunction with QAQC information and data sufficient to demonstrate levels of accuracy and precision to be submitted to the chief executive in accordance with the regulations.
- 9 Within 216 months of the commencement date of the permit, the permit holder shall (to the satisfaction of the chief executive):
- (a) complete a programme of resource definition drilling;
  - (b) update the mineral resource estimates;
  - (c) if warranted, complete a pre-feasibility study;
  - (d) if warranted, estimate a mineral reserve; and
  - (e) prepare a technical report detailing all work completed during this stage of the work programme in conjunction with QAQC information and data sufficient to demonstrate levels of accuracy and precision to be submitted to the chief executive in accordance with the regulations.

**APPENDIX 4 – ACCESS ARRANGEMENT**

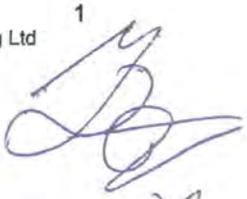
## ACCESS ARRANGEMENT

THIS AGREEMENT for an Access Arrangement pursuant to section 61 of the Crown Minerals Act 1991 dated 15/02/2018 between Her Majesty the Queen in Right of New Zealand ("**Crown**") acting by and through the Minister of Conservation and the Minister of Energy and Resources (hereinafter referred to as "the Ministers") and **NEW ZEALAND TUNGSTEN MINING LIMITED** (hereinafter referred to as the "Permit holder").

### WHEREAS

- (a) The Land described in the First Schedule is administered by the Department of Conservation pursuant to section 25 of the Conservation Act 1987 and the Minister of Conservation is responsible for that Department;
- (b) The Minister of Energy and Resources, through the Ministry of Business, Innovation and Employment, administers the Crown Minerals Act 1991. The purpose of the Crown Minerals Act is to promote prospecting for, exploration for, and mining of Crown owned minerals for the benefit of New Zealand;
- (c) The Permit holder has been granted a minerals permit (**Exploration Permit 40547**) by the Minister of Energy and Resources pursuant to section 25 of the Crown Minerals Act to undertake exploration operations in and on the Land;
- (d) Exploration Permit 40547 is classified as Tier 1 permit pursuant to section 2B of the Crown Minerals Act 1991.
- (e) The Permit holder pursuant to section 59 of the Crown Minerals Act 1991 has requested an Access Arrangement in respect of the Land described in the First Schedule to conduct exploration operations.
- (f) Pursuant to section 61(1AA) of the Crown Minerals Act 1991 the decision of whether or not to enter into an initial Access Arrangement in relation to a Tier 1 permit is with the Ministers.
- (g) Although this Access Arrangement is entered into by the Ministers, on behalf of Her Majesty the Queen, the administration of the Access Arrangement together with matters relating to the Permit Holder's access to, and use of the Land is the responsibility of the Department. The Ministry of Business, Innovation and Employment is responsible for matters relating to the minerals permit.

IT IS AGREED between the Ministers of the first part and the Permit holder of the second part that the Permit holder may enter the Land described in the First Schedule to conduct Exploration and Exploration operations, subject to the terms and conditions set out below and in the Second Schedule hereto:

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## 1. INTERPRETATION

"Access Arrangement" means this agreement for an access arrangement.

"Act" means the Crown Minerals Act 1991.

"Annual Work Programme" and "Work Programme" means the Work Programme referred to in Condition 7(b).

"Daylight saving time" means anytime between the last Sunday in September and the first Sunday in April, as specified on the New Zealand Government website: <https://www.govt.nz/browse/recreation-and-the-environment/daylight-saving/>

"Department" means the Department of Conservation.

"Exploration" has the meaning as defined in section 2 of the Crown Minerals Act 1991.

"Exploration operations" means operations in connection with exploration for any Crown owned mineral and authorised under this Access Arrangement.

"Exploration permit" means an exploration permit granted under the Crown Minerals Act 1991.

"Land" means the land described in the First Schedule.

"Manager" means the person for the time being holding the office of Operations Manager, Wakatipu District, Southern South Island Region of the Department of Conservation and includes any person authorised by the Operations Manager to act on his or her behalf in respect of this agreement.

"Ministers" means the Minister of Conservation and the Minister of Energy and Resources.

"Parties" means the Minister of Conservation, the Minister of Energy and Resources and the Permit holder.

"Permit" means minerals exploration permit 40547.

"Permit holder" has the meaning as defined in section 2 of the Crown Minerals Act 1991 and, where appropriate, includes its servants, agents, contractors and assignees.

"person under the control of the Ministers" means any employee, contractor, agent or other personnel of either Minister and, to avoid doubt, excludes members of the public and any person accessing the Land for their own purposes pursuant to a licence or other concession from the Department of Conservation.

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## ASSIGNMENT

2. The Permit holder will not assign, transfer or sublet any rights herein granted or any part thereof without the prior written consent of the Ministers, and such consent will not be unreasonably withheld. Any change in the Permit holder's shareholding altering the effective control of the Permit holder will be deemed to be a proposed assignment requiring the consent of the Ministers.

## COMPENSATION

3. Pursuant to section 76 of the Act, the Permit holder will pay the Minister of Conservation the following compensation:



Compensation will be paid by the Permit holder upon receiving an invoice from the Department or at the time of presentation of an Annual Work Programme, prior to commencing Exploration operations, with 3 (a) and (d) being paid in advance and 3 (b) and (c) being paid in arrears.

## COMPENSATION FOR ANY UNAUTHORISED DISTURBANCE

4. The Minister of Conservation may require the Permit holder to pay additional compensation for any breaches of this Access arrangement and/or Exploration operations carried out by the Permit holder on the Land or on other adjoining or proximate land administered by the Department outside of the Land **NOT** authorised by this Access arrangement. Such additional compensation will be for an amount solely determined by the Minister of Conservation acting reasonably and having regard to the conservation values that have been impacted/disturbed, and should be paid by the Permit holder upon receiving an invoice.

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## ADMINISTRATION COSTS

5. Pursuant to section 76 of the Act the Permit holder will also pay to the Minister of Conservation, upon receiving an invoice, but only if such costs exceed the Management Fee described in Condition 6 below:
  - (a) all actual and reasonable costs to cover the administrative costs of processing this Access arrangement; and
  - (b) the actual and reasonable costs of administering this Access arrangement; and
  - (c) The actual and reasonable costs of monitoring compliance of the conditions in this Access arrangement including all associated inspections of the Land by the Department.
  
6. The Permit holder will pay to the Minister of Conservation a Management Fee of \$500.00 +GST per annum for administration and file management associated with the Exploration operations and/or management of this Access Arrangement. The Management Fee will be paid in arrears on a pro rata basis for the previous 12 months, upon receiving an invoice.

## PRECONDITIONS BEFORE ENTRY TO LAND FOR EXPLORATION

7. The Permit holder will not enter in or on to the Land for the purpose of commencing Exploration operations until:
  - (a) The documents referred to in Condition 9 have been supplied to the Manager; and
  - (b) The Permit holder has submitted to the Manager an Annual Work Programme in accordance with Condition 62 in the Second Schedule; and
  - (c) Any payments referred to in Conditions 3, 4, 5, 6, 17 and 21 which are due and owing have been paid; and
  - (d) The Manager has approved the plans required to be submitted by Condition 7(b) and has issued the Permit holder with an Authority to Enter and Operate as provided by Condition 10.
  
8. The Manager may, acting reasonably, require the Permit holder to vary the proposed Annual Work Programme to ensure the Exploration operations are not inconsistent with the conditions of this Access arrangement. Where reasonably required by the Manager the Permit holder will amend the proposed Annual Work Programme accordingly.

Handwritten signatures in blue and purple ink, including the number '4' written above the signatures.

9. The Permit holder will seek an Authority to Enter and Operate from the Manager. At the time of seeking an Authority to Enter and Operate, the Permit holder will submit to the Manager:
- (a) A copy of the insurance policies and the premium payment receipts and guarantees or bonds as required in Conditions 20 and 21; and
  - (b) A copy of the Exploration permit granted pursuant to section 25 of the Act; and
  - (c) A copy of all resource consents granted under the Resource Management Act 1991, and a copy of any reports that the Permit holder has been required to submit to the consent authority as a requirement of any resource consent relating to the exploration permit, as defined in Whereas clause (c).
10. Upon the Manager, acting reasonably, being satisfied that the requirements of Conditions 7, 8 and 9 have been met, the Manager will issue the Permit holder with a written "Authority to Enter and Operate" permitting the Permit holder to enter in or on to the Land to commence Exploration operations for a period of 12 months, unless the Exploration permit has a lesser term remaining.
11. A breach or failure to comply with the requirements of the documents referred to in Condition 7(d), and approved by the Manager, shall be deemed to be a breach of this Access arrangement, and shall entitle the Ministers to exercise any rights or powers which arise from a breach of or failure to comply with the terms of this Access arrangement.
12. Prior to the expiry of the first Authority to Enter and Operate, and each subsequent Authority to Enter and Operate thereafter, the Permit holder will submit to the Manager for approval a further Annual Work Programme and any other plans or amended plans as required by Condition 7(b) and any other requirements of Conditions 7, 8 and 9 for the succeeding 12-month period (or a lesser period if considered appropriate by the Permit holder).
13. Except as permitted by the Manager, the Permit holder will not after the expiry of an Authority to Enter and Operate, undertake any work prior to each subsequent Authority to Enter and Operate has been issued by the Manager pursuant to Condition 10.
14. The Manager will not unreasonably fail to grant a subsequent Authority to Enter and Operate where the Permit holder has supplied all the required documentation and made all the payments required by Condition 12, and the further Annual Work Programme is consistent with the project description contained in the application for this Access arrangement or any variation(s) to this Access Arrangement and the conditions of this Access arrangement or any authorised variations to this Access Arrangement.

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15. Pending the granting of a subsequent Authority to Enter and Operate the Manager may in his or her discretion, issue an interim Authority to Enter and Operate providing the documents and payments required by Condition 12 have been submitted.

## INDEMNITIES

16. The Permit holder will indemnify and keep indemnified the Ministers against all claims by any person in respect of any injury, loss or damage (including fire damage) caused or suffered as a result of or arising out of any act or omission of the Permit holder, or otherwise caused as a result of the Exploration operations on the Land.
17. If due to the Permit holder's Exploration operations the Land or any part of it is assessed as rateable land under the Local Government (Rating) Act 2002, or any amendment to that Act, or the introduction of a new Act in substitution for it, the Permit holder is to pay any of the rates which may be struck in respect of the Land and/or the Exploration operations; but the Permit holder and the Minister of Conservation expressly agree that such payment is not to constitute an acknowledgement of exclusive possession by the Permit holder of the Land.
18. The Ministers will take, and will procure that every person under the control of the Ministers takes, all reasonable care not to damage or interfere with the Exploration operations, equipment, buildings or structures, held or erected on the Land nor suffer or permit such damage or interference, but the Ministers will not be liable for and do not accept any responsibility for damage or interference to the Exploration operations, equipment, buildings or structures, held or erected on the Land due to any cause whatsoever including (without restriction) any acts or omissions by the Ministers, their servants, agents, or contractors (other than acts or omissions arising from the wilful misconduct of the Ministers, their servants, agents or contractors), natural disaster, vandalism, sabotage, fire, exposure to the elements or any other cause whatsoever.
19. The Permit holder will take all reasonable steps to protect the safety of persons present on the Land during Exploration operations and between work periods and will, when required by the Minister of Conservation, erect protective fencing or erect signposts warning the public of any dangers that may be encountered as a result of the Exploration operations. The Permit holder will take all reasonable steps to mitigate any dangers to the public and will clearly mark any that remain.
- (a) Where the Permit holder, to ensure the safety of the public, employees, plant and equipment, requests the Manager (acting under delegated authority from the Minister of Conservation) to close public access to the Land the Manager may do so if he or she considers it appropriate.

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- (b) The Permit holder will give the Manager reasonable notice of its request so that the Manager can ensure that all reasonable steps are taken to ensure members of the public are made aware of the closure and the reasons for it.
- (c) The Permit holder will be responsible for the costs of ensuring that the public is made aware of the closure.

## INSURANCE

- 20. Prior to commencing Exploration operations the Permit holder will effect and maintain, during the term of this Access arrangement, insurance cover for an amount of **\$1,000,000.00** for public liability and will ensure that any aircraft operator engaged by the Permit holder to carry out Exploration operations on the Land has and maintains during its engagement insurance cover of **\$2,000,000.00** for aviation legal liability, and that the Permit holder is listed as an additional insured party under such cover. The Manager may from time to time require the cover of any insurance to be increased to such an amount as considered reasonably necessary.

## BONDS

- 21. Prior to commencing Exploration operations the Permit holder will provide a bond to ensure compliance by the Permit holder with the conditions of this agreement. The bond will be in a form approved by the Manager and the initial amount of the bond will not be less than **\$15,000.00**.
- 22. Notwithstanding Condition 21 the Manager may, acting reasonably having regard to the proposed Annual Work Programme or variation, during consideration of any Annual Work Programme or variation to any Annual Work Programme require the bond amount to be increased or decreased.
- 23. The bond will not be released and will remain effective until such time as all conditions of this agreement have been complied with, notwithstanding the completion of Exploration operations. In the event that there is an adverse effect to the Land and its natural resources caused by the Exploration operations, whether during or after the completion of the Exploration operations which is not permitted by this agreement and could not have reasonably been foreseen, the Permit holder will take all action necessary to mitigate or remedy those adverse effects. If the Permit holder fails to mitigate or remedy those adverse effects to the Manager's satisfaction, the Manager may undertake any necessary action to do so and recover the costs associated with undertaking the work by calling on the bond
- 24. If the Permit holder breaches any condition of this arrangement the Manager may revoke the Authority to Enter and Operate and call on the bond, or any portion thereof to ensure compliance with the conditions of this Access arrangement. If the Manager calls on the bond, or any portion thereof, the Permit holder must submit a new Annual Work Programme or amended Annual Work Programme before re commencing any further Exploration operations.

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## FIRE PRECAUTIONS

25. The Permit holder will:
- (a) Take all reasonable precautions to ensure no fire hazard arises from the Exploration operations;
  - (b) Not light any fire except by permit issued by the Manager;
  - (c) Not store or permit to be stored fuels or other combustible materials on the Land without the prior written permission of the Manager;
  - (d) Comply with the Manager's requirements for fire safety equipment and for firefighting equipment to be kept on the Land.

## PROTECTION OF THE ENVIRONMENT

26. The Permit holder will ensure that in respect of all Exploration operations under this Access arrangement:
- (a) Environmental disturbance is minimised and land affected by Exploration operations is kept stable and free from erosion.
  - (b) There is no land disturbance other than that authorised under this Access arrangement.
  - (c) All indigenous flora and fauna are protected except for disturbance authorised under this Access arrangement.
  - (c) No debris, rubbish or other dangerous or unsightly matter will be deposited in or on the Land, or any pollution will occur of any water body, except as permitted by this Access arrangement and any resource consent granted under the Resource Management Act 1991.
  - (e) There will be no destruction, damage or modification to any archaeological site in the area (as defined by the Heritage New Zealand Pouhere Taonga Act 2014) without the authority of Heritage New Zealand Pouhere Taonga obtained under section 48 of that Act. The Permit holder will produce such authority to the Manager.
  - (f) Any *protected New Zealand object, or taonga tūturu* (as defined by the Protected Objects Act 1975), or object of historic significance found in the area or on the Land will be left *in situ*, and the Manager and Secretary of Internal Affairs notified as soon as reasonably practicable.
  - (g) Every person under the Permit holder's control entering on to the Land complies with the provisions of this Condition (Condition 26).

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## SUPPLY OF INFORMATION

27. The Permit holder will, upon request, lodge with the Manager copies of the renewal of or substitution for any insurance policies including receipts for payment of premiums, any variations to bonds and evidence that the bonds are in force.
28. The Permit holder will provide to the Minister of Conservation all information reasonably required from time to time by the Minister of Conservation in respect of the use of the Land and any buildings or equipment thereon including any details concerning the Exploration operations and details concerning the numbers of people employed by the Permit holder or permitted or allowed by the Permit holder to come onto the Land.
29. The Permit holder will submit to the Minister of Conservation a copy of any application lodged with the Minister of Energy and Resources to vary the minerals permit covering the Land including any application to transfer all or any of the interest in the exploration permit to another person, and any notification of change of control under section 41A of the Act.

## MONITORING

30. The Permit holder will allow the Manager or any other person authorised by the Manager to enter in or on to the Land at any time:
  - (a) To inspect the Land or to consider approval of any Annual Work Programme or other plans, or to monitor compliance with the conditions of this Access arrangement.
  - (b) To undertake any work necessary for the exercise of the Minister of Conservation's functions and powers in respect of the Land provided that such work will not unnecessarily interfere with the Permit holder's rights under this Access arrangement.
31. Monitoring may include but is not limited to, the taking of soil and water samples, and the taking of a photographic record of activities occurring on the Land subject to the Access arrangement.

## BANKRUPTCY OR INSOLVENCY

32. If the Permit Holder becomes bankrupt, insolvent or has a receiving order made against it or is wound up or otherwise ceases to function or carries on its business under a receiver for the benefit of creditors the Ministers may either:
  - (a) Terminate this Access arrangement forthwith by notice in writing to the Permit holder or to the receiver or liquidator or to any person in whom the Access arrangement may become vested; or

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- (b) Give such receiver or liquidator or other person the option of continuing the Access arrangement subject to the provision of a guarantee by one or more guarantors of any bond given, on terms acceptable to the Ministers for the due and faithful performance of the Access arrangement up to an amount to be determined by the Ministers.
- (c) Any notice under Condition 32(a) does not release the Permit holder from liability in respect of any breach of this Access arrangement prior to the termination of the Access arrangement or which survive termination.

## TERM

- 33. The term of this Access arrangement shall be from the date of execution of this Access arrangement until 10 September 2021 or until the expiry of Exploration Permit 40547, whichever is the lesser.

## TERMINATION

- 34. If the Permit holder is in breach, or fails to observe any of the conditions contained herein or the requirements of any approved Annual Work Programme or any other approved plan, the Ministers will give written notice to the Permit holder specifying the breach or failure and requiring it to be remedied within 28 consecutive days. If the Permit holder fails to comply with such notice, then the Ministers may by notice in writing terminate this Access arrangement.
- 35. Notwithstanding Condition 34, termination of this Access arrangement will not release the Permit holder from liability in respect of any breach of this Access arrangement.
- 36. Upon termination or expiry of this Access arrangement the Ministers will not be liable to pay any compensation to the Permit holder whatsoever for any buildings, structures or improvements erected by the Permit holder. If requested by the Manager, or at the Permit holder's option, and in either case prior to the completion of Exploration operations, the Permit holder will remove all such buildings and structures and improvements. The Permit holder will repair at its own expense all damage which may have been done by such removal and will leave the Land in a clean and tidy condition for restoration as set out in the second schedule of this Access Arrangement. If the Permit holder fails to remove any buildings within a reasonable time of the request, the Minister of Conservation may undertake this work and recover the costs from the Permit holder or from the bond referred to in Condition 21.
- 37. The Permit holder is responsible for the acts and omissions of its employees, contractors, agents, clients and invitees (excluding other members of the public accessing the Land and any person under the control of the Ministers). The Permit holder is liable under the Access arrangement for any breaches of the terms of the Access arrangement by its employees, contractors, agents, clients and invitees (excluding other members of the public accessing the Land and any




person under the control of the Ministers), as if the breach had been committed by the Permit holder.

## MISCELLANEOUS

38. If the Permit holder has:

- (a) Not paid any compensation payment as provided by Condition 3; or
- (b) Not submitted an Annual Work Programme to the Manager-

Within two years of the date of execution of this Access arrangement, this Access arrangement will terminate and cease to have any effect.

39. Any notice required to be addressed by any of the parties will in the absence of proof to the contrary be sent by ordinary post, facsimile or email during normal business hours and will be deemed to have been received by the other parties;

- (a) In the case of posting by ordinary mail, on the fifth working day following the date of posting to the address for service; and
- (b) In the case of facsimile transmission, when sent to the facsimile number for service provided in this agreement; and
- (c) In the case of email, when acknowledged by the party orally or by return email or otherwise in writing, except that return emails generated automatically shall not constitute an acknowledgement of receipt of the email.

40. The Minister of Conservation's address, phone and fax number, and email for service will be C/- The Manager, The Department of Conservation, 10 Sewell Street, Private Bag 701, Hokitika; Ph (03) 756 9100; Facsimile (03) 756 9188, Email: permissionshokitika@doc.govt.nz

41. The Minister of Energy and Resources' address, phone and fax number for service will be C/- The National Manager Minerals, Energy & Resource Markets Group, Ministry of Business, Innovation and Employment, 15 Stout Street, Wellington 6140, P O Box 1473; Ph 0508 263 782; Facsimile (04) 471 0187.

42. The Permit holder's phone number and address for service will be C/- Tompkins Wake, Level 8, Westpac House, 430 Victoria Street, PO Box 258, Hamilton 3204, Ph (09) 356 6951. Email: gary@mining.co.nz

## DISPUTE RESOLUTION

43. The parties agree to negotiate in good faith to resolve any differences which arise in connection with this Access arrangement.

44. Failing resolution in accordance with Condition 43, any differences and disputes between the parties concerning this Access arrangement, its interpretation, effect or implementation or any act or thing to be done in pursuance thereof (except as otherwise expressly provided) is to be referred to arbitration in New Zealand by a single arbitrator who is to be mutually agreed upon and, failing agreement, are to be appointed by the President of the New Zealand Law Society (or his or her nominee). In all other respects the provisions of the Arbitration Act 1996 shall apply.

## GENERAL

45. Except where inconsistent with this Access arrangement, the Permit holder will comply with the provisions of any conservation management strategy or conservation management plan pursuant to Part IIIA of the Conservation Act 1987, together with any amendment or review of any such strategy or plan.
46. The Permit holder will at all times comply with all statutes, ordinances, regulations, by-laws or other enactments affecting or relating to the Land or affecting or relating to the Exploration operations including the Health and Safety at Work Act 2015, the Fire and Emergency New Zealand Act 2017, the Hazardous Substances and New Organisms Act 1996, the Crown Minerals Act 1991, the Resource Management Act 1991 and the Conservation Act 1987 and all Acts included in its First Schedule.
47. The Permit holder will comply with all conditions contained in this Access arrangement and within three working days of a request in writing by the Ministers, or such longer time as specified by the Ministers, supply the Ministers with such evidence of compliance.
48. A breach or contravention by the Permit holder of any legislation affecting or relating to the Land or affecting or relating to the Exploration operations will be deemed to be a breach of this Access arrangement.
49. The Permit holder will only operate within the boundaries of the Land. Any Exploration operations carried out by the Permit holder outside the boundary of the Exploration Permit is unlawful and constitutes an offence under the Act.
50. The Permit holder will not use any Land subject to this Access arrangement for any purposes other than those specified in this Access arrangement. Unless otherwise authorised by this Access arrangement, or otherwise approved by the Minister of Conservation, the Permit holder will not erect, install or operate anything on the Land other than that described in the approved Annual Work Programme or any other approved plans submitted in accordance with Condition 7(b).
51. Any transfer of the Land to a purchaser or other transferee transfers to that purchaser subject to this Access arrangement provided it has not expired and the Ministers will ensure that any such purchaser or transferee agrees in writing in favour of the Permit holder to be bound by this agreement prior to effecting a transfer of the Land.




52. The headings set out in this Access arrangement have been inserted for convenience and will not in any way limit or govern the construction of this Access arrangement.
53. Nothing in this Access arrangement including Special Conditions in the Second Schedule will prevent the Ministers from participating in any statutory process in respect of any matter relating to Exploration operations in or on the Land defined in this Access arrangement.
54. If any conditions attached to any resource consent obtained by the Permit holder are in the reasonable opinion of the Minister of Conservation, or the Ministers, as the case may be, inconsistent with this Access arrangement the Ministers may review the provisions of this Access arrangement and this Access arrangement may be varied accordingly.
55. If in the reasonable opinion of the Ministers, the Exploration operations of the Permit holder, are having, or may have an adverse effect on the natural, historic or cultural values of the Land, which are not permitted by this Access Arrangement and could not have reasonably been foreseen, the Ministers may:
- (a) Suspend the Exploration operations or any part of the Exploration operations, until the Permit holder remedies or mitigates such adverse effects to the extent satisfactory to the Minister of Conservation, acting reasonably; and/or
  - (b) Review the conditions of this Access Arrangement and impose any further reasonable conditions necessary to avoid, remedy or mitigate such adverse effects; and/or
  - (c) Call on the Bond required under Condition 21 or any portion thereof to ensure such adverse effects which have occurred are remedied or mitigated.
56. The Ministers may suspend the Permit holder's rights pursuant to this Access arrangement, or any part of the Exploration operations, while the Ministers or any other enforcement agency investigates any of the circumstances contemplated in Condition 55. The Ministers may also suspend the Permit holder's rights pursuant to this Access arrangement, or any part of the Exploration operations, while the Ministers or any other enforcement agency investigates any:
- (a) Potential breach of the terms and conditions of this Access arrangement, or
  - (b) Possible offence by the Permit holder, its directors, employees, servants, agents, contractors or assignees under the Crown Minerals Act 1991; Conservation Act 1987, or any of the Acts listed in the First Schedule of that Act, or any other Act relevant to the Exploration operations.

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57. Any temporary suspension pursuant to Condition 56 may, at the sole option of the Ministers, acting reasonably, be either in whole or in part, and be either immediate or after such time as the Ministers, acting reasonably allow. Notice of such suspension may be given to the Permit holder in writing.
58. Unless otherwise specified by the Ministers in their notice of suspension (having regard to Condition 57), during any period of suspension all Exploration operations on the Land will cease, other than activities necessary for the purposes of saving or protecting life or health, or preventing serious damage to property or avoiding an actual or likely adverse effect on the environment. The Permit holder will remain responsible for the health and safety, and environmental protection of the Land, and will continue to have access to the Land for these purposes during the term of any suspension, subject to any reasonable directions issued by the Ministers. The Permit holder will remain liable for all fees and payments required to be paid under this Access arrangement during the term of any suspension.
59. The Ministers will not to be liable to the Permit holder for any loss sustained by the Permit holder by reason of any reasonable suspension of the Access arrangement under Conditions 55 and 56 including loss of profits or consequential loss.
60. The Permit holder will pay in full immediately on demand all costs and fees (including solicitor's costs and fees of debt collection agencies engaged by the Ministers) arising out of and associated with reasonable steps taken by the Ministers to enforce or attempt to enforce the Ministers rights and powers under this Access arrangement including the right to recover outstanding money owed to the Ministers.
61. Any failure by the Ministers to exercise any right or power under this Access arrangement does not operate as a waiver and the single or partial exercise of any right or power by the Ministers does not preclude any other or further exercise of that or any other right or power by the Ministers.

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Signed for and on behalf of the **Minister of Conservation** by:

**Geoff Owen**

Operations Manager,  
Wakatipu District,

Southern South Island Region,  
Department of Conservation,

pursuant to a written delegation from the Minister of Conservation under the Crown Minerals Act 1991

in the presence of:

Name: Surie Geh

Signature: [Signature]

Address: Cave's Building

1 Arms Road, Queenstown  
Occupation: DOC Ranger

Signed for and on behalf of the **Minister of Energy and Resources** by:

**Iana Miller**

National Manager Minerals,

Energy & Resource Markets – Building, Resources & Markets Group,  
Ministry of Business, Innovation and Employment,

pursuant to a written delegation from the Minister of Energy and Resources under the Crown Minerals Act 1991 and the State Sector Act 1988

in the presence of:

Name: Cameron McCahe

Signature: [Signature]

Address: 15 Stout Street  
Wellington

Occupation: Sernex Minerals Advisor

Signed on behalf of **New Zealand Tungsten Mining Limited**

Name: **Gary Roger Gray**

Signature: *G.R. Gray* ..... (Director)

in the presence of:

Name: *J. Best* ..... 

Signature: 

Address: 



Occupation: 

Name: **Junge Xu**

Signature: *Junge Xu* ..... (Director)

in the presence of:

Name: 

Signature: *J. Best* .....

Address: 



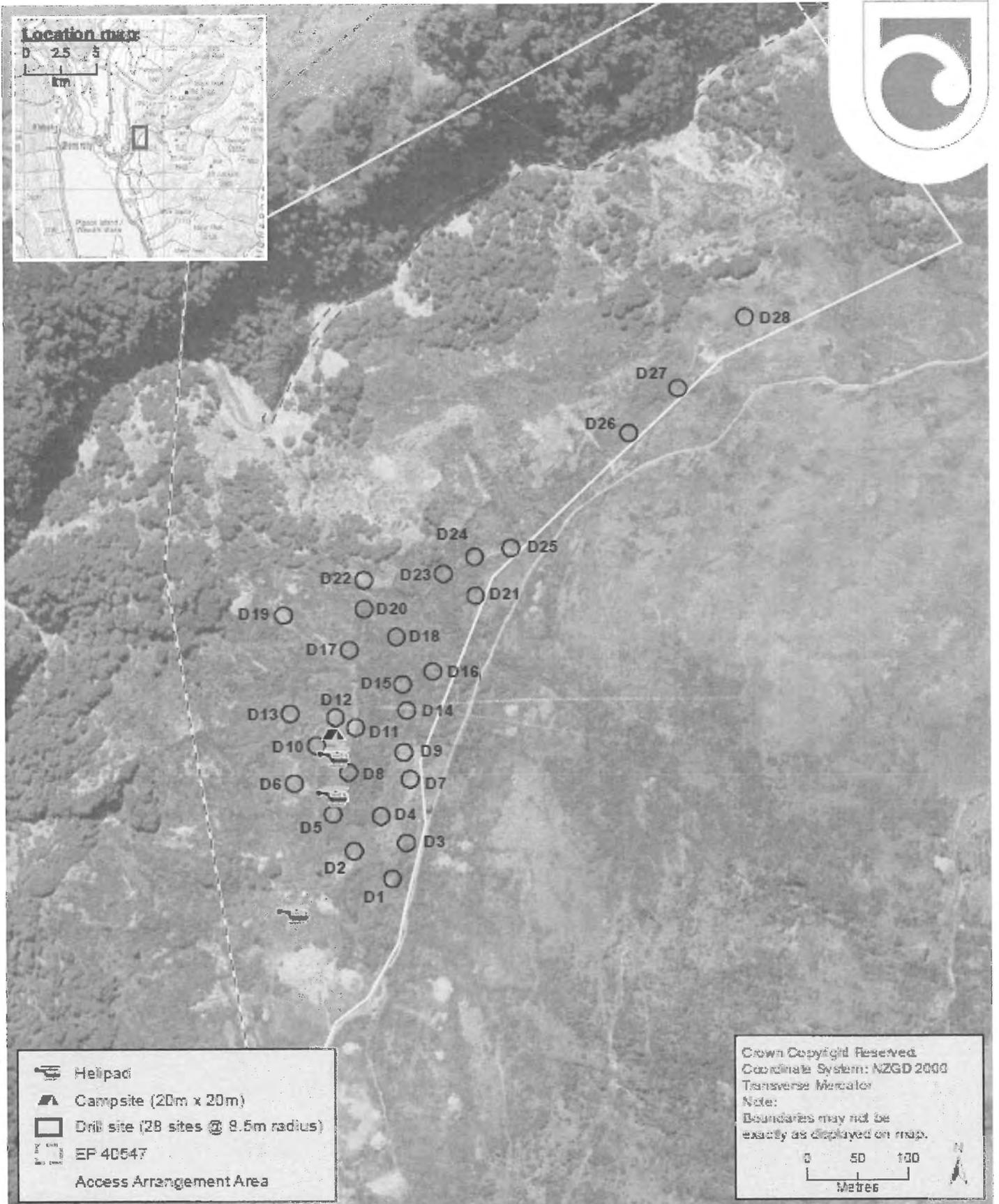
Occupation: 

## FIRST SCHEDULE

The Permit holder, subject to the conditions contained in this Access arrangement, will have access to the Land, that being 38.3 hectares (ha) of Whakaari Conservation Area within Exploration Permit 40547 near Glenorchy, specifically:

1. The 28 drill site locations listed in Table 1, comprising a total of 0.4 hectares;
2. The camp site shown in Plan A; and
3. Helicopter landing zones
4. Any old and existing vehicle tracks within the Land

The location of the Land is shown in the attached map/plan



**Access Arrangement**  
**EP 40547 - New Zealand Tungsten Mining Limited**

Exploration permit 40547  
 File ref: PAM-13-07-40 547  
 PermissionID: 48613-AA  
 LocationID: 60495

AA Area: 39.3ha	Topo50 ref: CB10	Photo ref:
Date compiled: 16/01/2015	Scale (A4) 1: 5,000	District: Wairarapa

Legal description: Sections 7 and 13 SO 363025  
 Land status: Stewardship area (Whakareia Conservation Area)

**Department of Conservation**  
*Te Papa Atawhai*  
 New Zealand Government

Table 1: Approved drill site locations

Site ID	NZTM_E	NZTM_N
D1	1238167	5023400
D2	1238129	5023428
D3	1238181	5023436
D4	1238156	5023463
D5	1238108	5023465
D6	1238070	5023496
D7	1238185	5023500
D8	1238124	5023507
D9	1238179	5023527
D10	1238092	5023534
D11	1238131	5023552
D12	1238111	5023562
D13	1238066	5023566
D14	1238182	5023569
D15	1238178	5023595
D16	1238208	5023608
D17	1238125	5023630
D18	1238172	5023643
D19	1238060	5023665
D20	1238140	5023671
D21	1238251	5023684
D22	1238140	5023700
D23	1238219	5023706
D24	1238250	5023723
D25	1238287	5023732
D26	1238405	5023847
D27	1238453	5023892
D28	1238520	5023963

NZTM 2000

## SECOND SCHEDULE

### SPECIAL CONDITIONS:

#### ACCESS ARRANGEMENT FOR EXPLORATION PERMIT 40547

NOTE: These conditions are in addition to the conditions in the main body of the Access arrangement and do not in any way affect the generality of those conditions.

#### ANNUAL WORK PROGRAMME CONDITIONS

62. Before undertaking any Exploration operations under this Access arrangement, the Permit holder will submit to the Manager for approval the first Annual Work Programme and thereafter annually submit for approval a new Work Programme for the succeeding 12 month period.

The Annual Work Programme will include:

- (a) A recent aerial photograph or plan at an appropriate scale showing the Exploration permit boundary and the conservation land boundary and the location of all proposed Exploration operations for the forthcoming 12 months.
- (b) A description of all Exploration related activities including operations, mitigation measures, rehabilitation, access, monitoring and reporting carried out in the previous 12 months including a table of completed and uncompleted drill sites.
- (c) A detailed description of all Exploration related activities including operations, mitigation measures, rehabilitation, access, monitoring and reporting intended to be carried out in the following 12 months with an approximate timetable of events.
- (d) A description and analysis of any unexpected adverse effect on the environment that has arisen as a result of activities within the last 12 months and the steps taken to mitigate or remedy any effects that resulted.
- (e) The type, colour and registration (if known) of all aircraft to be used for Exploration operations.
- (f) A detailed description of safety procedures to be put in place to ensure the safety of staff and members of the public at drill sites and helicopter landing/hover sites.
- (g) Any other information required by other conditions of this agreement or that is required by any resource consent held by the Permit holder relating to this Exploration operation.

The Permit holder will submit to the Manager, for approval, an amended Work Programme if required by the Manager.

63. The Permit holder will undertake all work in accordance with the approved Annual Work Programme.

64. The Permit holder may, at any time, submit to the Manager for approval an amended Annual Work Programme, provided that no work may occur under that amended Annual Work Programme until it is approved in writing by the Manager.

## EXPLORATION OPERATIONS CONDITIONS

### Authorised Activities

65. Subject to these Special Conditions and approval of the current work programme the Permit holder may undertake the following exploration operations on the Land:
- (a) Undertake exploration drilling at those 28 sites specified in Table 1 of the First Schedule;
  - (b) Situate a temporary camp at the location shown in Plan A of the First Schedule;
  - (c) Use existing tracks to transport staff and equipment between drill sites;
  - (d) Use helicopters to enter the Land; and
  - (e) Use helicopters to move staff and equipment between drill sites inaccessible from existing tracks.
66. The Permit holder will undertake all exploration operations in accordance with the Access arrangement application lodged by the Permit holder, this Access arrangement approved by the Ministers, and an Authority to Enter and Operate issued by the Manager in accordance with Condition 10. In the event of inconsistency, the Access arrangement and Authority to Enter and Operate shall prevail over the application for Access arrangement.

### Exclusion Conditions

67. The Permit holder **will not** undertake the following activities on the land:
- (a) Undertake any Exploration operations during the high visitor period of 23 December – 6<sup>th</sup> February (inclusive) excepting those activities required to maintain the security and safety of the drill site(s);
  - (b) Undertake any Exploration operations on Public Holidays;
  - (c) Use helicopters between the hours of 10am and 5pm daily during Daylight saving time and between 11am and 3pm daily outside of Daylight saving time, excepting those activities required to maintain the security and safety of the drill site(s).
  - (d) Take any dog or domestic animal onto the land;
  - (e) Disturb or hinder public use, access or enjoyment of the land otherwise unaffected by the activities authorised under this Access arrangement;
  - (f) Undertake any stream diversions or modifications;
  - (g) Conduct onsite processing using any chemicals, other than chemicals required for the safe use of the portable toilets as long as any chemicals required for portable toilets are not separately stored, or discharged on the Land or any other public conservation land;
  - (h) Construct drains or ponds;
  - (i) Construct mast or aerial structures including power lines or poles;

- (j) Use paint on vegetation or rock for marking purposes;
- (k) Form any new tracks; or
- (l) Clear any vegetation outside of the drill sites and camp site specified in the First Schedule, except minor vegetation clearance associated with utilising existing and old tracks;

### **Wakitipu District staff engagement**

- 68. The Permit holder will inform the Wakitipu District Operations Manager no less than five working days prior to the commencement of Exploration operations on the Land.
- 69. At the request of the Manager, the Permit holder will be required to have on site a Department of Conservation employee, liaison person, agent or contractor appointed by the Manager to oversee any operation or activity on the Land. Any such appointment would be at the expense of the Permit holder.
- 70. The Permit holder will have the right to request the Manager in writing to remove and replace any of its personnel if the Permit holder can show reasonable grounds for such removal. The Department will make the final decision in respect to the removal of such person or persons.

### **Minor changes to site locations**

- 71. In a situation where the exact drill site locations listed in Table 1 of the First Schedule are unsuitable for drilling due to unforeseen circumstances or specific matters included in Special Condition 89 and/or Special Condition 128 the Permit holder will request approval of an alternative location from the Manager. Alternative sites will be within proximity and as close to the originally listed location as possible. Approval of the alternative site may require a site visit from Department staff.
- 72. Prior to commencing exploration operations at Site D21 (as listed in Table 1 of the First schedule) the Permit holder will arrange for the Manager to visit the location and designate a refined site selection that avoids any doubt as to the potential for imposition of D21 on the boundary of the neighbouring property.

### **Vegetation clearance and site disturbance**

- 73. The Permit holder will ensure that each drill site will comprise an area of total disturbance of no more than 144 square metres (allowing for a drilling platform footprint of 6mx12m plus space for facilities and other equipment) and will be established to minimise ground disturbance and damage to vegetation.
- 74. Vegetation clearance will be minimised at all times and only undertaken where necessary to accommodate the required machinery, apparatus and drilling platform.

75. Vegetation clearance will be by hand held equipment only.
76. All felled vegetation, slash and other leafy materials will be kept onsite and stockpiled in such a manner that they will be restored to the site upon completion of the drilling.
77. Any vegetation disturbance required for the landing sites of aircraft will require written approval from the Manager via the Annual Work Programme.

### **Water Management**

78. The Permit holder will ensure that no more than 20% of the water flow of any waterway is taken for Exploration operations. Where possible, water supply lines will run along existing tracks or access tracks.
79. The Permit holder will ensure that intake pipes used for water abstraction are fitted with screens with a maximum slot size of 3mm.
80. The Permit holder will ensure that all drill water used for Exploration operations is circulated through a portable sump to promote settling of sediment and drill cuttings prior to being discharged to the Land.
81. The Permit holder will ensure that drill cuttings and sediment are disposed of by spreading evenly on the ground adjacent to (and on) the drill site, with a thickness of no greater than 5 centimetres, such that there is no disturbance or impact on indigenous flora or fauna. If the disturbance or impact on indigenous flora and fauna is more than minor drill cuttings will be removed from the Land.
82. The Permit holder will ensure that any water discharge from Exploration operations is monitored to ensure it does not enter any waterways.
83. The Permit holder will ensure that all sewage and grey water is collected and stored in containers and removed from the Land.

### **Fauna**

84. All Exploration operations will be undertaken in a manner that minimises the disturbance and impacts on indigenous fauna.
85. The Permit holder will ensure that all materials, equipment, machinery and supplies used for Exploration operations:
  - (a) Do not contain lead, to avoid the risk of poisoning kea; and
  - (b) Are secured to prevent Kea access at all times

86. Prior to undertaking Exploration operations during the falcon breeding season (September to December inclusive) drill sites and the surrounding habitat will be surveyed by a suitably qualified ecologist, approved by the Manager (such approval will not be unreasonably withheld or delayed) for the presence of falcon nests or nesting pairs of falcon. Should a nest or nesting pair be located, the drill site will not be drilled until after nesting has been completed or moved, subject to Special Condition 71 to a site that is outside of active falcon nesting territory.
87. Prior to the commencement of Exploration operations the Permit holder will obtain an authority under the Wildlife Act 1953 to disturb absolutely protected lizards that may be present at drill sites.

### **Rehabilitation**

88. The Permit holder will provide a detailed summary of proposed rehabilitation methods within the Annual Work Programme.
89. The Permit holder will ensure that each disturbed site is rehabilitated progressively as the drilling programme is undertaken and that rehabilitation of each site includes:
- (a) removal of all drilling structures, equipment and debris including removal of residual drilling waste and mud;
  - (b) capping or plugging each drill hole;
  - (c) re-contouring and stabilisation of any disturbed land; and
  - (d) re-spreading any disturbed topsoil, duff, humus and vegetation across the surface of the re-contoured drill sites.

All rehabilitation will be completed to the satisfaction of the Manager.

90. All indigenous trees, at all times, remain the property of the Ministers. No indigenous trees may be removed from the land as they will be used by the Permit holder for the purposes of onsite restoration.
91. All drill core samples and core sample material will be removed from the Land in their entirety, i.e. not only that aspect of the sample that is useful to the identification of the mineral resource.

### **Public Access, Awareness and Safety**

92. Prior to the commencement of drilling at each site clear signage and/or markers will be erected around the drill site to avoid members of the public incidentally accessing the site while drilling operations are occurring.

93. The permit holder will ensure that all visitors to Whakaari are fully aware of the disruption they may experience during Exploration operations by placing appropriate track notices approved by Wakatipu District Office at the entrance to the Whakaari track and at the Visitor Centre in Queenstown two days prior to the commencement of drilling or helicopter activities.
94. The Permit holder will notify the Concessionaires, listed in special Condition 99, two weeks prior to commencement of Exploration operations. An updated Concessionaire contact list may be provided to the Permit holder at any time.

### **Existing Concessions Over/Near the Land**

95. The Permit holder acknowledges that there are Concessionaires with existing rights over/near the Land.
96. The Concessionaires contact details are:
- Experience Glenorchy Limited, 151 Main Road, PO Box 54, Stewart Island 9846, 03 2191155
  - Temple Peak Limited, Temple Peak Station, Rees Valley Road, Glenorchy, 03 442 9942
  - DKDnz.com Limited, 55 Coll Street, Glenorchy 9372, 03 442 7939
  - Pisidia Holdings Limited and Cabo Limited (Cabo Pisidia Holdings Joint Venture), Wyuna Station, PO Box 15, Glenorchy
  - Independent Mountain Guides Limited, 15 Ada Place, Lake Hayes Estate, Queenstown 9304, 03 442 445, [imguides@xtra.co.nz](mailto:imguides@xtra.co.nz)
  - High Country Adventures Limited, 243 Priors Road, Glenorchy 9350, 03 578 3724, [info@high-country-horses.co.nz](mailto:info@high-country-horses.co.nz)
  - Climbing Queenstown Limited, Outside Sports Building, 36-38 Shotover Street, Queenstown 9300, 03 450 2119, [info@climbingqueenstown.com](mailto:info@climbingqueenstown.com)
  - Antipodes Travel Limited, 67 Princes Street, Capitol Building, Dunedin 9016, 03 477 3300, [info@antipodes-travel.com](mailto:info@antipodes-travel.com)
  - Aro Ha Limited, 129 Station Valley Road, Wyuna Preserve, Glenorchy 9372, 03 442 7011, [Bas@aro-ha.com](mailto:Bas@aro-ha.com)
97. The Permit holder will not interfere with the Concessionaire(s) Activity(Activities) or rights under their concessions EXCEPT where the Concessionaire(s) confirm in writing that the Exploration operations may do so. The Permit holder will provide the Manager with a copy of written confirmation obtained from the Concessionaire(s). The Permit holder will provide the Manager with a copy of any variation to these agreements.

## Aircraft

98. The Permit holder will ensure that aircrafts are not to be used during the times specified in Condition 67 (c) or after the sun has set. Should helicopter activity be required during these exclusion times, the Permit holder may seek approval from the Manager to do so. Written approval will be given prior to aircraft use occurring; and
99. The Permit holder will ensure that aircraft landing/hovering zones are maintained to ensure public safety. The Permit holder will be on site during all helicopter hovers and landings to stop and/or advise members of the public in the vicinity of helicopter activity.
100. The Permit holder and any pilot of the aircraft authorised by this Access arrangement will hold the applicable aviation document and privileges to conduct the Exploration operations under the Civil Aviation Rules and will comply with Civil Aviation law.
101. The Permit holder will ensure that aircraft idle times on the ground are kept to a practicable minimum.
102. The Permit holder will not refuel, leave any fuel drums or construct any fuel dumps on the Land, unless in an emergency situation.
103. During the term of this Access arrangement, where the Manager believes that the effects of aircraft noise should be further reduced, the Manager may, by notice, require the Permit holder to either undertake measures to minimise the effects of noise on conservation values or become accredited to a recognised noise abatement and disputes resolution programme. If such notice is given by the Manager, the Permit holder will:
  - (i) if required to undertake measures to minimise the effects of noise on conservation values, within 3 months from receiving the notice undertake those measures to the satisfaction of the Manager until the Access arrangement has expired; and/or
  - (ii) if required to become accredited to a recognised noise abatement and disputes resolution programme, within 3 months from receiving the notice provide proof to the Manager that such accreditation has been completed and will keep their participation in that programme or training current until the Access arrangement has expired.

The Manager may, at any time, issue a subsequent notice(s) requiring the Permit holder to implement the other option.

### **Weed and Pest Control**

- 104. The Permit holder will ensure that all equipment to be used in all Exploration operations allowed for by this Access arrangement are clean and free of any exotic weed and seed material prior to entry to the Land.
- 105. The Permit holder will control any new exotic weeds within the Land to the satisfaction of the Manager for a period of two years following completion of all Exploration operations under this Access arrangement.
- 106. The Permit holder will supply an annual memo/report describing rehabilitation progress and weed control for drill sites for the first two years post the completion of drilling activities.

### **Storage and Structures**

- 107. The Permit holder will not erect/place on the Land any sheds, containers or similar structures not authorised in the Annual Work Programme.
- 108. All tents and temporary camp structures will be of colours complementary to the surrounding natural landscape (dark greens and/or light browns and/or light greys).

### **Fuel and lubricants**

- 109. All fuel will be stored in safe, secure double skinned containers  
  
The Permit holder will comply with all Hazardous Substances and New Organisms Act 1996 (HSNO) regulations and requirements for the storage of hazardous substances, including fuel (<http://www.hazardoussubstances.govt.nz/>)
- 110. A "Bulk Fuel storage request form" will be completed and returned to the Manager prior to commencement of Exploration operations
- 111. A spill kit will be held on site at all times and used immediately should a fuel or lubricant spill occur.
- 112. Any fuel or lubricant spill greater than 1 litre will be reported to the Manager at the earliest opportunity including the amount spilled, remedial action undertaken and any further actions required to fully remediate the site.
- 113. Only biodegradable drill fluids and lubricants may be used during drilling operations.

### **Fire risk and management**

- 114. The Permit holder will avoid and minimise the risk of fire at all times, including when "at camp".

115. A fire extinguisher will be on site during drilling operations and “at camp” at all times.

### **Waste disposal and toilets**

119. Self-contained toilets/“portaloos” will be provided for drilling staff at all times to ensure the containment of human waste.
120. All waste and effluent will be removed from the Land and disposed of at an appropriate facility upon the completion of Exploration operations.

### **Vehicles**

121. All vehicles used during Exploration operations will be fit for purpose for the terrain and weather conditions in order to reduce rutting and unnecessary track formation.
122. Care will be taken during wet weather to avoid undue damage to tracks and soil.

### **Public Access**

123. The Permit holder will not prevent public access to the Land or parts of the Land unless written approval to do so has been obtained from the Manager.

### **Removal of Material**

124. At the completion of the Exploration operations the Permit holder will remove from the site all materials including rubbish, pipelines, equipment and structures associated with the exploration operation, unless the Manager has given prior written approval for the item(s) to remain.

### **Historic and Cultural Sites**

125. The Permit holder will protect from damage any historic site.
126. All drilling staff will be familiar with the location of the historic sites identified in the Permit holders contracted archaeological review of the area “*Whakaari Conservation Area: Heritage impact assessment for the proposed drilling and minimum impact exploration activities on EP40547, Glenorchy*”, New Zealand Heritage Properties Ltd, December 2015.
127. Drilling staff will be fully briefed by a qualified Archaeologist on the features and character of historic sites in the area and how to identify previously undiscovered sites.
128. Prior to the commencement of drilling all drill sites listed in Table 1 of the First Schedule will be inspected by an archaeologist to ensure no archaeological features are present. Should an archaeological feature be found, the Permit holder will seek approval from the Manager to move the drill site subject to Special Condition 73.

129. Upon the discovery of any historical or archaeological object or artefact not authorised for destruction, damage or modification by the Heritage New Zealand Pouhere Taonga, the Permit holder will immediately cease Exploration operations in the immediate vicinity of the discovery and protect from damage any such object or artefact, and will forthwith notify the Manager. Conditions protecting the historical or archaeological object or artefact, will be defined by the Manager and/or Heritage New Zealand Pouhere Taonga, and will be adhered to by the Permit holder.
130. The Permit holder will be required to record the location and details of any historic site and object/artefact found on, in or under the Land. The Permit holder will protect from damage any historic site and object/artefact, and contact the Department on finding any such sites and objects/artefacts.
131. The Permit holder will be required to record the location and details of any cultural site and/or object/artefact found on, in or under the Land including Koiwi Tangata (human bones) or Toanga (artifacts/middens). On finding such site or object/artefact the Permit holder will cease work immediately and contact the Department and the following Rūnanga:

SOUTHLAND/MURIHIKU RŪNANGA

Awarua Rūnanga  
 Waihōpai Rūnaka Incorporated  
 Ōraka Apaprima Rūnaka  
 Hokonui Rūnanga Incorporated Society

OTAGO RŪNANGA

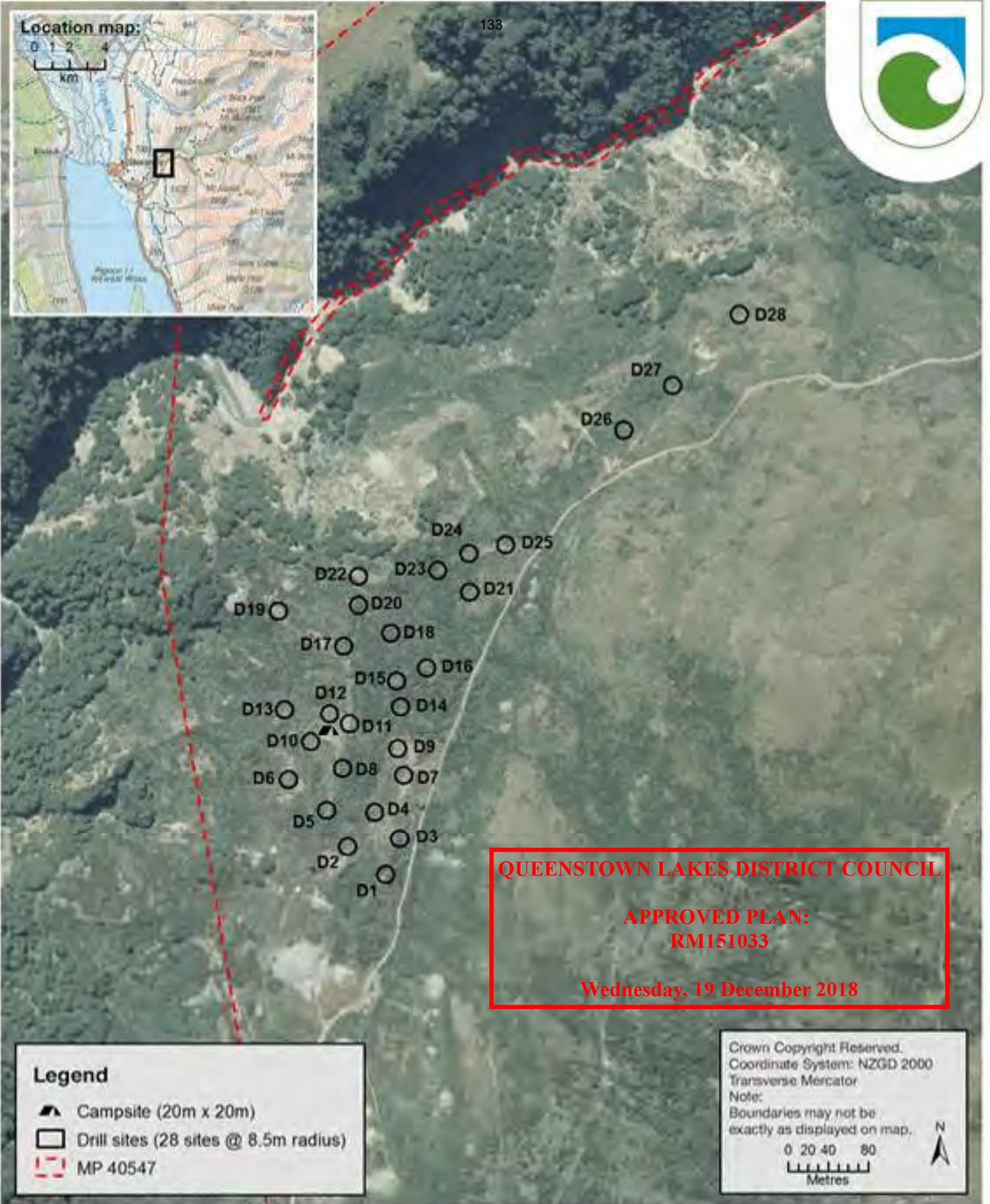
Te Rūnanga o Moeraki  
 Te Rūnanga Ōtākou Inc  
 Kāti Huirapa Rūnaka ki Puketeraki

Contact details can be found at:

<http://ngaitahu.iwi.nz/contact/contact-papatipu-runanga/>



Location map:



**QUEENSTOWN LAKES DISTRICT COUNCIL**  
**APPROVED PLAN:**  
**RM151033**  
**Wednesday, 19 December 2018**

**Legend**

- Campsite (20m x 20m)
- Drill sites (28 sites @ 8.5m radius)
- MP 40547

Crown Copyright Reserved.  
Coordinate System: NZGD 2000  
Transverse Mercator  
Note:  
Boundaries may not be exactly as displayed on map.

0 20 40 80  
Metres

<b>Access arrangement</b> <b>MP 40547 - New Zealand Tungsten Mining Limited</b>		Mining permit 40547 File ref: PAM-13-07-40 547 PermissionID: 48613-AA LocationID: 60495
Total Area: 6755 sq m	Topo50 ref: CB10	Photo ref:
Date compiled: 19/05/2016	Scale (A4) 1: 5,000	District: Queenstown
Legal description: Sections 7 and 13 SO 369025 Land status: Stewardship area (Whakaari Conservation Area)		

Department of  
Conservation  
*Te Papa Atawhai*

Figure 3 – Helicopter Flight Path Map

