Ruapehu Alpine Lifts Limited

Whakapapa Ski Area, Mount Ruapehu

Gondola Works Approval and Resource Consent Application

09128AP15 2 February 2018





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Date: 2 February 2018

Reference: 09128AP15

Status: Final

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- 9. Letter from Ruapehu Mountain Clubs Association





APPLICATION DETAILS

Authorities: Department of Conservation and Ruapehu District Council

The Applicant: Ruapehu Alpine Lifts Limited (RAL)

Address for Service: Cheal Consultants Limited, PO Box 165, Taupo 3351

Address for Invoice: Ruapehu Alpine Lifts Limited, Private Bag, Mount Ruapehu

Site Details:

Address.......Whakapapa Ski Area, Mount Ruapehu, Tongariro National Park

Legal Description.....Ruapehu 1B

District Plan ZoningProtected Areas Zone (Amenity Policy Area), Outstanding Natural

Feature and Landscape

Activity for which Consent is sought:

Works Approval from the Department of Conservation and Land Use Consent from Ruapehu District Council are sought to replace the National Downhill Chairlift with a new gondola at Whakapapa Ski Area. The proposed activity is considered a Discretionary Activity under the Ruapehu District Plan.





1. INTRODUCTION

Ruapehu Alpine Lifts Limited (RAL) is seeking works approval from the Department of Conservation and resource consent from Ruapehu District Council to construct a new gondola at Whakapapa Ski Area. The gondola will replace the National Downhill Chairlift which has already been removed and removal of the existing Waterfall Express Chairlift is also proposed. The new gondola will be entirely within the Amenities Area and will not extend into the Tuku (Gift Area).

Resource Consent from Horizons Regional Council (HRC) is not required.

Consultation with lwi is ongoing and a letter of support from the Paramount Chief of Ngāti Tūwharetoa and from Te Rūnanganui o Ngāti Hikairo ki Tongariro have been received.

Appended to this report is an assessment of the visual and landscape effects from a qualified and experienced landscape architect, an assessment of the ecological effects from a qualified and experienced ecologist, the concept plans and letters in support received from Iwi and the Ruapehu Mountain Clubs Association.

2. SITE DESCRIPTION

2.1 Whakapapa Ski Area

Whakapapa Ski Area is located on the north-west side of Mount Ruapehu. Mount Ruapehu together with Mount Ngauruhoe, Mount Tongariro and surrounding areas forms the 79,598 hectares of the Tongariro National Park. The peaks of the mountains were 'gifted' by Te Heuheu Tukino IV, the Paramount Chief of Ngati Tuwharetoa in 1887 and more land has been acquired over the last 125 years to form the current expanse of the Park.

The Park contains the only commercial ski areas of the North Island of New Zealand (NZ), and at approximately 550 hectares Whakapapa is the largest ski area in NZ. The Ski Area includes the upper reaches of Bruce Road, the associated carparks, Iwikau Village and the entire ski infrastructure. The Ski Area extends into the Gift Area. More than 40 club lodges are located at Iwikau Village and combined with ski infrastructure and buildings at the Top o' the Bruce, this base area terrain is heavily developed with the scale of infrastructure generally decreasing with increasing altitude. The Whakapapa Ski Area currently contains five chairlifts (Double Happy, Rangatira, Waterfall Express, Delta, West Ridge), three T-Bars (Valley, Knoll Ridge and Far West) and various surface lifts. The base area is located at approximately 1,630m above sea level (asl) and the highest lift point is at approximately 2,320m asl.

Due to the high altitude, volcanic rock and harsh climatic conditions, vegetation is generally sparse with less than 5% cover above 2,000m asl. Vegetation is mostly mountain inaka in stonefield. The Tongariro National Park is a World Heritage site and its volcanoes are recognised as Outstanding Natural Features and Landscapes in both the Horizons Regional Policy Statement and the Ruapehu District Plan.





Mount Ruapehu is the north island's highest peak at 2,797m asl. In summer the upper mountain retains pockets of permanent ice and snow generally at levels above 2,300m asl and in winter the snow level tends to be around 1,400m asl.

A full description of the site and surrounding area's physical landscape is provided in the appended Landscape and Visual Effects Assessment prepared by Kara Scott. Flora is described in greater detail in the appended Ecological Assessment prepared by Nicholas Singers.

2.2 Amenity Area

The Tongariro National Park Management Plan (TNPMP) breaks the Ski Area into two classifications being the Amenities Area and the wider Ski Area. Within the Amenities Area are carparks, road, lwikau Village, Top o' the Bruce buildings, Happy Valley, Knoll Ridge Chalet and several chairlifts and T-Bars. Outside of the Amenities Area but still within the Ski Area are generally less developed areas of the Ski Area including several T-Bars and chairlifts. Map 12 of the TNPMP (image 2 below) shows the Ski Area boundary, Amenity Area boundary and existing buildings and lifts. The Amenities Area is described in the TNPMP as follows:

In the park's ski areas, most infrastructure is located within amenities areas. These amenities areas are set aside to provide for the development and operation of public amenities at a scale and intensity which is not found elsewhere in the park (see 4.2.4 Amenities Areas). It is acknowledged that significant infrastructure is required for ski area operation which is outside existing amenities area boundaries.

The District Plan Amenity Area of the Protected Areas Zone is the same Amenity Area of the TNPMP.

Section 23A of the Conservation Act 1987 requires Amenities Areas to be managed to provide:

- a) that its indigenous natural resources and its historic resources are protected; and
- b) subject to paragraph (a), to contribute to and facilitate people's appreciation of its indigenous natural resources and its historic resources; and
- c) subject to paragraphs (a) and (b), to foster the recreational attributes of the area.

The proposed gondola is entirely within the Amenities Area.

2.3 Iwikau Village and Top o' the Bruce

lwikau Village and the Top o' the Bruce area is the entry to the Whakapapa Ski Area at approximately 1,630m asl with administration buildings, Lorenz's Café, lift pass and rental sales, retail, medical centre, numerous club lodges and the uppermost carparks. The area is the most modified of the Whakapapa Ski Area. An elevator provides access from the Top o' the Bruce area to the Happy Valley beginners' area and upwards transport is provided via the Rangatira Express Chairlift. Recently removed from the area are the National and Rockgarden Chairlifts.





There are 47 club lodges at lwikau Village, including at Hut Flat, shown in the following image.

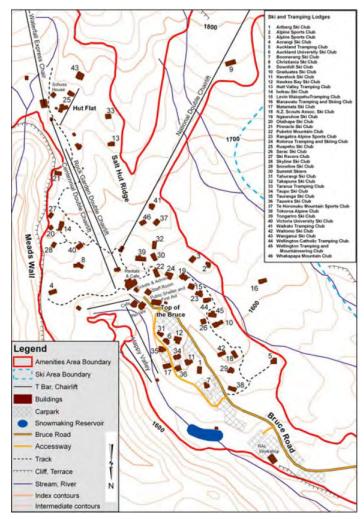


Image 1 - Club lodges at Iwikau Village¹

2.4 Knoll Ridge

The Knoll Ridge area is located at approximately 2,000m asl. The area contains the upper terminal of the Waterfall Express Chairlift, the Knoll Ridge Café, a small common room (previously the temporary café) a Cat Shed and the lower terminal of the Knoll Ridge T-bar. The Knoll Ridge Café is an award winning architecturally designed building which was constructed after an arson attack destroyed the previous Knoll Ridge Chalet.

2.5 World Heritage Status

Tongariro National Park was inscribed on the World Heritage list in 1990 for its outstanding natural values and again in 1993 for its outstanding cultural values. The National Park therefore has dual World Heritage status.

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¹ TNPMP Map 13





RAL fully supported the applications for World Heritage listing under both criteria. RAL consider that Mount Ruapehu is a unique and diverse volcanic landscape and has particular cultural and religious significance for Maori people. The mountains of Tongariro National Park are symbolic of the spiritual links between the community and its environment.

The National Park was granted World Heritage status under both World Heritage criteria at a time when the Whakapapa and Turoa Ski Areas were well established on the slopes of Mount Ruapehu.

The 1990 International Union for Conservation of Nature (IUCN) report which recommended listing the National Park for its outstanding natural values outlined concerns resulting from a 1987 field visit regarding ski development on Mount Ruapehu particularly in regards to expansion. An IUCN subsequent report concluded that the issues had been dealt with. The 1993 report which recommended the National Park also be inscribed for its outstanding cultural values does not include any reference to issues with the Ski Areas.

A later IUCN report in 2002 indicates that the original attributes which led to inscription of the National Park for both natural and cultural values are now stronger and the earlier issues of concern, particularly those that related to recreational use, have significantly diminished. This 2002 report makes specific reference to the Whakapapa sewage scheme of which RAL was a significant promoter and funder. RAL agreed and committed some years ago to the principal that the natural and cultural values of Mount Ruapehu can only be sustained if the treatment and disposal of all human waste is undertaken away from the slopes of the mountain. This principal is now 100% met for all ski facilities at both Whakapapa and Turoa Ski Areas.

RAL's main planning and investment in recent years has shifted away from expansion of the ski area boundaries towards upgrading of facilities within the current boundaries and use of snow making, and other snow management practises that will ensure a full winter snow season will continue to be available and will provide for skiing and snowboarding within the existing ski area boundaries even under the current worst case climate change predictions for the next 60 to 100 years.

2.6 Indicative Development Plan

RAL are required by the TNPMP to produce an Indicative Development Plan (IDP) for the Whakapapa and Turoa Ski Areas to set out the likely form of physical development of the Ski Areas for a ten year period. The IDP is not a statutory document under the Resource Management Act 1991. The 2001 Whakapapa IDP included the following changes to the upper mountain lifts:

- the Rockgarden Chairlift to be replaced with a higher capacity double chairlift on a similar line:
- the Valley Express Chairlift will replace the Valley T-Bar;
- a new chairlift will be constructed (Todd Express) which was to extend beyond the Ski Area boundary;
- the Western Gondola will replace the National Chairlift on a new line;
- relocation of one to two platter lifts in the Knoll Ridge area for short term use during light snow cover (with permanent foundations).





The 2001 IDP also included snow making extensions in the Waterfall, Rockgarden, Hut Flat, Meads Wall, Happy Valley and Staircase areas.

The 2011 IDP shows the Western Chondola and Top o' the Bruce café as a Stage 1 project (2015). The 2011 IDP was provided to DoC and lwi for consultation in September 2011. The IDP is also publicly available on www.mtruapehu.com. The proposal, although a gondola rather than a chondola, and in a different location is generally consistent with the intention of the IDP to replace the National Chairlift with a lift that can cater to both skiers and sightseers.

2.7 Recreational Values

Tongariro National Park is popular with day walkers, trampers, mountain climbers, rock and ice climbers, skiers and snow play tourists.

The opportunity to ski and experience snow is valued by many Tongariro National Park visitors. During the 2008 ski season RAL recorded 237,000 skier days at Whakapapa Ski Area². This number does not include people visiting the ski area for 'snow playing', which RAL estimates (based on car counts) increases total Whakapapa Ski Area winter visitor numbers by a further 10% to 15%. When compared to the number of visitors to the Tongariro Crossing, at around 109,000 per annum³, it can be seen that skiing is a very popular recreational use of the park. The proposed works will not only enhance the experience for this recreational group but will provide more facilities for snow play tourists.

The Whakapapa Ski Area is also well visited in the summer months, with approximately 20,000 persons taking a chairlift ride to Knoll Ridge⁴ and many freedom walkers exploring the area. Summer visitors to the Ski Areas numbered approximately 30,000 in the 2016/17 season with the vast majority at Whakapapa and the total number of sightseers over the year exceeded 60,000⁵. Some of the Ski Area infrastructure remains operational during the summer including some Café and Retail services at the Top o' the Bruce, Knoll Ridge Chalet and the Rangatira and Waterfall Express Chairlifts which provide sightseers and trampers with easy access to the upper reaches of Mount Ruapehu. The proposed gondola will be used in summer instead of the Rangatira and Waterfall Express Chairlifts and will provide an activity that is not weather dependent.

Notwithstanding this, it is acknowledged that other Park visitors seek different recreational opportunities and that this may, at times, conflict with the provision of skiing-related infrastructure. This issue was considered and addressed when the ski area boundary was reviewed within a much broader review of the TNPMP. Many other areas of the 79,598ha Park provide for different types of recreation and experiences.

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² Use of words skier, ski and skiing also includes snowboarders, snowboards and snowboarding.

³ 2015 year

⁴ Based on 2016 year records personal communication with Ross Copland September 2017

⁵ RAL (2017) Annual Report



3. BACKGROUND

RAL operates Whakapapa Ski Area under a licence (known as a concession) issued by DoC. Whakapapa Ski Area has facilities that include chairlifts and surface lifts with associated lift terminal buildings and a number of ancillary buildings including cafés, retail and rental outlets, sheds and offices. A map of the Whakapapa Ski Area, taken from the TNPMP, is shown below. Please note that some infrastructure has changed since the TNPMP was published in 2006. The National Downhill Chairlift and Rock Garden Chairlift have recently been removed, the Centennial Chairlift has been replaced with the Rangatira Chairlift (on the same alignment) and the Waterfall T-bar has been replaced with the Delta Chairlift (on the same alignment but terminating prior to the Gift Area).

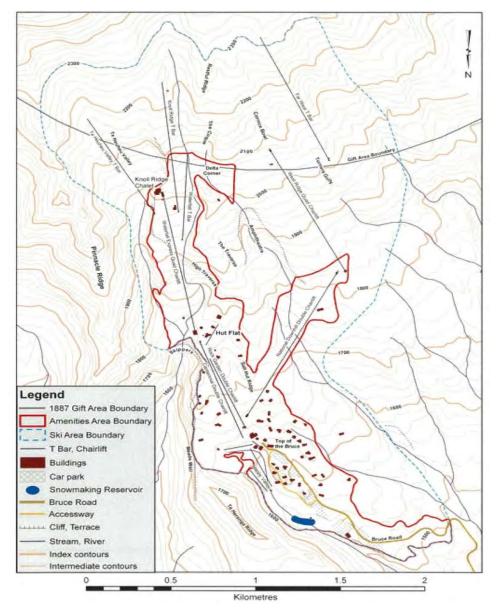


Image 2 - TNPMP Map 12 Whakapapa Ski Area (not to scale)





3.1 History of RAL

RAL is a public company and was formed in 1953 for the purpose of purchasing and operating the Whakapapa Ski Area. RAL purchased the Turoa Ski Area licence in 2000 and now operates both ski areas. Any profits made by the company are required to be put back into improving facilities at Whakapapa and Turoa. No dividends or benefits are returned to shareholders.

3.2 Company Structure

RAL is a registered company under the Companies Act 1993 and trades as a Public Benefit Entity. There are approximately 4,200 shareholders who are predominantly keen skiers who made an initial investment during the 1950s. The company constitution precludes any dividend or benefit being provided to shareholders, with all financial surpluses being reinvested at the ski areas.

The Ruapehu Alpine Lifts Trust was created in 1983 to protect the interests of the company and its shareholders and to preserve the company's integrity for future generations. This Trust controls 45% of shares on issue. The Trust shareholding and its stated aim of "preserving RAL in its current form", is intended to prevent any individual, group of individuals or organisation being able to action a takeover of the company.

3.3 RAL Aspirations

RAL was created, and has now operated for over 60 years, to develop and operate ski areas on Mount Ruapehu for the benefit of the public and to promote snow sports. Ski areas are inherently capital intensive operations which require ongoing reinvestment to upgrade facilities and services to ensure customer expectations can continue to be met and the operations can be sustained in the long term. RAL have progressively been upgrading infrastructure and lifts which provides for safer and more efficient operation.

During the past 20 years RAL has been proactive in reducing the overall effects (environmental, cultural and visual) of the historical developments and operating systems which had evolved over the previous 40 years. Examples of this have included removal of many old and redundant structures (e.g. National Downhill base area), significant investment in landscaping and replanting programs (e.g. Happy Valley) and most importantly the final elimination of on mountain effluent disposal with the implementation of the reticulated sewage system. RAL have also been reducing the number of structures within the Tuku (Gift Area) with the Waterfall T-bar replacement being the latest example. This approach is ongoing and an integral part of all development proposals. It demonstrates the commitment of RAL to managing its activities in a manner sympathetic to the natural and cultural landscape in which it operates.

The eruptions of Mount Ruapehu during 1995 and 1996, followed by three years of relatively light natural snow falls through 1997 to 1999, then economic downturn combined to cause significant reduction in overall visitor numbers to the slopes. Whakapapa continues to attract visitors at levels that are less than those that were consistently achieved in the early 1990s. To address this significant drop in patronage and relative revenue the company must upgrade the skiing and boarding experience and in particular embark on a programme of replacing aged lift infrastructure with modern lifts meeting new safety and comfort standards.





3.4 National Downhill Chairlift

The National Downhill Double Chairlift has recently been removed from the Ski Area in anticipation of the gondola project. The National Chairlift provided access from the rear of the Top o' the Bruce area towards the western extent of the Ski Area, providing access to the West Ridge Quad Chairlift. The main lift route is now up the main trunk of the Ski Area (Rangatira and Waterfall Express Chairlifts). The proposed gondola is to replace the capacity lost with the removal of the National Downhill Chairlift. The National Downhill Chairlift was a double and consisted of 17 towers of 8.5m to 12.5m high, exposed bull wheels and small operator cabins. The area of the base platform was approximately 108m² and the top platform approximately 103m².

Historically, the beginner facilities at Whakapapa were developed in up to six different areas as there was more than one company operating lift facilities at Whakapapa. Beginner areas included Meads Wall, Happy Valley, Hut Flat, Pinnacles, Cinder-track and the National Downhill beginner area. After RAL took over management of the whole Ski Area, RAL significantly upgraded the terrain in Happy Valley – consolidating the beginner facilities into this one area; replaced rope tows with chair/platter/carpet lifts; installed snowmaking and introduced the café and rental buildings.



Image 3 - National Downhill Double Chairlift (removed)

3.5 Waterfall Express Chairlift

The Waterfall Express 2800 persons per hour (pph) capacity⁶ chairlift provides access from Hut Flat to Knoll Ridge. The chairlift is a quad with seventeen towers and was the first detachable chairlift in New Zealand, installed in 1989. It is also the only detachable chairlift in New Zealand operated all year round resulting in an effective age of more than double a winter-only equivalent lift of its type. The lower terminal building is approximately 600m² and the upper terminal building is approximately 305m². The approximate tower heights are shown below in metres.

There is a heightened degree of urgency around installation of the Whakapapa Gondola due to the imminent full overhaul which is required for the Waterfall Express if it is not decommissioned prior to the 2019 winter season. RAL were recently made aware of the requirement to complete this

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⁶ Personal communication with Ross Copland of RAL



overhaul following a survey of the existing lift in late 2017. An extensive upgrade involving new electrical, safety, controls, braking, bullwheel bearing, gearbox, motor and grip assemblies amounts to an investment of approximately \$3m7. This very significant investment would be almost completely lost upon removal of the lift due to the age and incompatibility of these components on other RAL lifts and no second-hand market for parts on lifts of this vintage. Given the replacement plans, the extensive upgrade cost would be wasted and therefore timing the replacement to occur prior to the upgrade is the best outcome. Currently the Waterfall Express Chairlift is the only lift access to the upper mountain and RAL need to avoid losing access to the upper mountain (>70% of the skiable terrain at Whakapapa) if the gondola is not completed and operational prior to the requirement to upgrade. Losing access to the upper mountain could be crippling to RAL's business and could have significant effects on the regional economy, RAL staff and the reputation of the wider region as a ski destination. Tourism spending in the Visit Ruapehu area is significantly higher in winter than the other seasons of the year8. Tourism is the third largest contributor to the district's GDP9. The possibility of losing upper mountain access could be devastating to the regional visitor economy impacting nearby towns of Ohakune, Turangi and Taupo which also supply services to Whakapapa Ski Area.

Waterfall Express Chairlift Tower Heights																	
Tower	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Total	6.5	9.4	12.5	11.85	12.9	10.9	11	12.4	12.4	9.5	10.4	10	10.8	11.7	10.7	12.9	14.9
approx																	
height																	



Image 4 - Looking down towards Hut Flat with the Waterfall Express Terminal circled

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⁷ Personal communication with Ross Copland of RAL

⁸ Ministry of Business Innovation and Employment http://www.mbie.govt.nz/info-services/sectors-industries/tourism/tourism-research-data/monthly-regional-tourism-estimates/monthly-spend-grouped-by-rto-and-country-of-origin 2009-2017 sourced on 31 January 2018

⁹ Ruapehu District Council Infometrics https://ecoprofile.infometrics.co.nz/Ruapehu%2bDistrict/Tourism/TourismGdp 2016 year sourced on 31 January 2018





Image 5 - Waterfall Express Chairlift Upper Terminal Building (circled)

3.6 Rangatira Express Chairlift

The Rangatira Express Chairlift is a quad which provides transport to and from the Top o' the Bruce area to Hut Flat. The Rangatira was only recently installed and replaced two double chairlifts – the Centennial and Rock Garden. The lower terminal of the proposed gondola is in close proximity of the Rangatira lower terminal. The Centennial Chairlift consisted of 13 towers ranging in height from approximately 5.06m to 14.91m. The chair storage shed is located behind (east of) the lower terminal, and the all-weather snowmaking machine is located behind (east of) the storage shed.



Image 6 - Rangatira Express Chairlift Lower Terminal Building





4. DESCRIPTION OF PROPOSAL

4.1 Overview

It is proposed to construct a new detachable gondola at Whakapapa Ski Area, originating at the edge of Happy Valley and terminating at Knoll Ridge. The gondola cabins will be 10 person capacity and the maximum design capacity is expected to be approximately 2,400 persons per hour, although it is likely to be operated at a reduced speed. The proposal is entirely within the Amenities Area and is to replace the uphill capacity that was lost through the removal of the National Downhill Chairlift. Currently only the Rangatira Chairlift provides access uphill from the Top o' the Bruce as the Rock Garden Chairlift was recently removed. A gondola at Whakapapa has been planned for many years, previously being a chondola proposal which takes both chairs and cabins. The gondola towers and sheave assemblies, platforms and ladders are identical to chairlift towers to the extent that parts are interchangeable between chairlifts and gondolas of the same specifications.

The addition of the gondola will safeguard against the risk of not having any lift access up or down to the Top o' the Bruce in the event of a malfunction or necessary maintenance to the Rangatira Chairlift. The gondola will also provide for lift access to Knoll Ridge Café when inclement weather prevents the use of chairlifts due to the risk of exposure to lift users. The gondola will also compliment the current summer activities on offer at Whakapapa reducing the risk to patrons exposed to the elements.

It is also proposed to remove the Waterfall Express Chairlift which is comprised of 17 towers and utilitarian upper and lower terminal buildings.



Image 7 - Proposed gondola alignment

4.2 Lower Terminal

The proposed lower terminal will be the drive terminal, containing the engine and running equipment for the gondola and cabin storage. The lower terminal will be located on the edge of Happy Valley near the Rangatira lower terminal, the new Happy Valley access elevator, Lorenz' Café and the Happy Valley Café as shown in the following image.







Image 8 - Lower Terminal Location

It is proposed to locate the terminal building on the valley edge with the cabins to be stored in a basement when not in use. This allows the footprint of the building to be minimised, avoiding the need for a separate cabin storage building or enlarging the terminal building to provide for cabin storage on one floor level. The terminal will consist of the gondola manufacturer's terminal structure with an architecturally designed building enveloping the structure. The proposed basement cabin storage area is approximately $820m^2$ and the upper floor will be approximately $805m^2$. The height of the building varies from approximately 10.5m at the south end of the building to approximately 10.5m at the north end from existing ground level. From the south the structure will appear as single level due to the majority of the basement being located below ground level. The building will be clad in timber, precast dark concrete slabs and ironsand coloursteel to blend with the summer rockfield landscape at Whakapapa. HB Architecture has undertaken the design for the terminal buildings and also designed the award winning Knoll Ridge Café.





Image 9 - Artist's impression of lower terminal building (circled)

Earthworks for the lower terminal will lower the building into the landscape as much as practicable.

Previously a ski bridge was proposed to service skiers arriving from uphill to enter the gondola terminal building. The design has since been amended and a ski bridge is no longer required.

4.3 Towers

The proposed gondola will extend from the Top o' the Bruce to Knoll Ridge. The rise in elevation is from approximately 1,631m asl to 1,816m asl. The length of the gondola will be approximately 1,833m and at this stage in the preliminary design approximately 14-16 towers are anticipated. The concept tower locations are shown on the appended plans and described in detail in the appended ecological and landscape assessments. The provisional heights are shown in the following table and vary from 9.7m to 21.5m with an average of 15.37m.

Tower	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Height (m)	9.7	11	15.3	16.0	15.8	13.7	16.9	13.7	13.8	13.2	21.5	16.0	17.4	14.9	18.5	18.5





The following images are of existing 10 seater gondolas throughout the world.









Images 10-13 - Existing 10 seater gondolas

The tower foundations will be engineered for the specific conditions of each site, however the generic foundation plan is shown below with a footprint of approximately 3.5m by 3.5m.

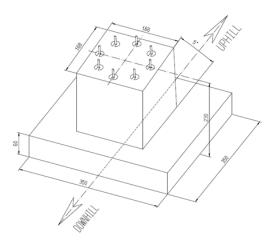


Image 14 - Generic tower foundation plan





Alternative Tower Locations

The ecological and landscape assessments have been based on the tower locations shown in plans 2009-128-743 and 744. An alternative tower location design has been provided by Leitner to reduce the number of towers within a lahar path and is included in Appendix 6. The alignment of the alternative design is the same as the assessed design however it includes two less towers (total of 14) and the following:

- towers 1 5 remain the same
- tower 6 moves a few metres and is still within modified ground (the edge of an existing access track)
- tower 7 is removed
- towers 8 10 become towers 7 9 and the locations are unchanged
- tower 11 becomes tower 10 and moves approximately 10m downhill
- tower 12 becomes tower 11 and moves approximately 50m downhill
- tower 13 is removed
- proposed tower 13 is approximately 20m uphill of tower 14
- proposed tower 14 is located immediately outside the terminal building
- towers 15 and 16 are removed.

The ecological assessment provided by Nicholas Singers states that above 1,800m asl and specifically on lava pavement and scoria-fields, there is less than 1% of vegetation cover. Proposed towers 10 and 11 of the alternative design are located at 1841m and 1844m asl respectively and therefore adverse ecological effects from the proposed changes to these towers and any towers located further uphill are not anticipated. Below this elevation, the only changes are to tower 6 and the removal of tower 7. The tower 6 location is still within modified ground and so no adverse ecological effects of the proposed change is anticipated.

The alternative design tower heights vary from approximately 10.06m high to 21.11m high with an average height of approximately 14.84m. As the alignment of the gondola is the same in both designs, the tower heights are similar or less and there are two less towers in the alternative design the alternative design is not expected to exacerbate the landscape effects of the proposal.

4.4 Upper Terminal

The upper terminal will be located at Knoll Ridge near the Knoll Ridge Café and Waterfall Express upper terminal. The upper terminal will not contain the engine or cabin storage. The terminal will be adjacent the Knoll Ridge Café with the new paved area between the two buildings located on the south side of the café. This will provide for customers to easily access the Knoll Ridge Café through the existing entry and RAL staff will be able to enter the service entry with goods and kitchen waste. Currently products and waste are transported to and from the Knoll Ridge Café with oversnow transport such as groomers. The gondola will allow more efficient transport for servicing the Café.

The upper terminal will consist of the lift provider's terminal structure (similar to the Rangatira terminals) and an architecturally designed building that wraps around three of the four elevations.

The terminal structure will be approximately 250m² and the terminal building which partially wraps around it will be approximately 235m². The terminal building will be approximately 5m high at the





south end whilst the terminal structure will be approximately 8.5m high at its southern extent, and higher on the northern approach where the ground drops away. The ground level will be raised with rocks at the northern end of the terminal.

The terminal building will be clad with stone, vertical timber weatherboards, glass and timber fins. The roof will be ironsand coloured. The materials match the Knoll Ridge Café, provide articulation of the walls and reduce reflections.



Image 15 - Upper terminal west elevation showing architecturally designed building in foreground (coloured) with proposed gondola terminal structure (grey) behind and existing Knoll Ridge Café (line sketch) at rear

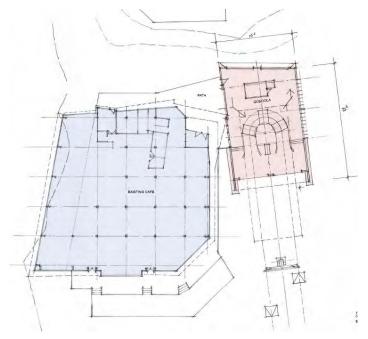


Image 16 - Floor plan of proposed gondola upper terminal (red) and the existing Knoll Ridge Café (grey)





4.5 Construction

Construction of the gondola is the same as construction of an equivalent capacity chairlift. The same chairlift construction methodology will be employed for the gondola with each terminal and tower site managed individually for sediment and erosion control. Where practicable, machinery, equipment and materials will be moved using a temporary material ropeway which dramatically reduces the requirements for helicopter movements during the construction phase. The balance of heavier loads may be moved over snow and a number of loads may be helicoptered to site depending on proximity to the material ropeway. The construction project may span two summers with installation of some towers in the first summer and during the second summer completion of the gondola and removal of the Waterfall Express top terminal and some of the Waterfall Express towers.

The lower terminal is readily accessible from the Top o' the Bruce area, as are all the towers to Hut Flat (towers 1-9).

A Construction Management Plan will be provided to DoC and Ruapehu District Council for approval prior to commencement of works.

4.6 Removal of the Waterfall Express Chairlift

The Waterfall Express Chairlift towers and upper terminal building are proposed to be removed alongside the new gondola construction. The lower terminal building will be retained due to critical services located within it including sewerage handling and snowmaking pump stations. The removal of the chairlift will be done in stages. The towers will be removed via helicopter or material ropeway backloads during the transportation of the new gondola towers onto the site during the gondola construction season (the second construction season if staged). The top terminal will also be removed from the site during the gondola construction season with existing services relocated to the Knoll Ridge Café and existing adjacent structures.

The foundation sites of the Waterfall Express Chairlift will be rehabilitated over a period of five years starting from the season after the gondola construction (i.e. if the gondola is constructed in summer 2019, then the Waterfall foundation sites will be rehabilitated over the summers of 2020 to 2024). Each foundation site will be managed individually in regards to sediment and erosion control.

5. STATUTORY CONSIDERATIONS

5.1 Resource Management Act 1991

Part 6 - Resource Consents

Section 88 - Making an Application

It is considered that the Application meets all the requirements of Section 88. The assessment of effects is proportionate to the scale of potential effects that may be attributed to the proposal in accordance with Section 88(2)(b).





Section 104 - Consideration of Applications

- 1. When considering an application for a resource consent and any submissions received, the consent authority must, subject to Part 2, have regard to
 - a) any actual and potential effects on the environment of allowing the activity; and
 - ab) any measure proposed or agreed to by the applicant for the purpose of ensuring positive effects on the environment to offset or compensate for any adverse effects on the environment that will or may result from allowing the activity; and
 - b) any relevant provisions of
 - i) a national policy statement:
 - ii) a New Zealand coastal policy statement:
 - iii) a regional policy statement or proposed regional policy statement;
 - iv) a plan or proposed plan; and
 - c) any other matter the consent authority considers relevant and reasonably necessary to determine the application.

The Regional Policy Statement and the District Plan are considered in Section 9 of this Report. The TNPMP is a relevant consideration under Section 104(1)(c) of the RMA and is also considered in this report. There is no permitted baseline relevant to new gondolas.

National Policy Statements

There are currently five National Policy Statements being:

- National Policy Statement on Electricity Transmission
- National Policy Statement for Renewable Electricity Generation
- New Zealand Coastal Policy Statement
- National Policy Statement for Freshwater Management
- National Policy Statement on Urban Development Capacity

No national policy statements are considered relevant to the proposal.

National Environmental Standards

There are currently the following national environmental standards:

- National Environmental Standards for Air Quality
- National Environmental Standard for Sources of Drinking Water
- National Environmental Standards for Telecommunication Facilities
- National Environmental Standard for Electricity Transmission Activities
- National Environmental Standards for Assessing and Managing Contaminants in Soil to Protect Human Health





Only the National Environmental Standards for Assessing and Managing Contaminants in Soil to Protect Human Health (**NESCS**) is considered relevant to this proposal. The NESCS controls the following activities:

- 1. Removing or replacing all, or part of, a fuel storage system.
- 2. Sampling the soil.
- 3. Disturbing the soil.
- 4. Subdividing the land.
- 5. Changing the land use.

The proposal involves disturbing soil. The NESCS applies only to land which contains a HAIL activity or previously contained a HAIL activity or where it is more likely than not that an activity or industry described in the HAIL is being or has been undertaken on it. The proposed gondola alignment has not, does not and is not likely to have contained a HAIL activity. Accordingly further assessment or resource consent under the NESCS is not required.

5.2 Conservation Act 1987 and Tongariro National Park Management Plan

RAL operates under a concession (licence) granted under the Conservation Act 1987. The TNPMP stipulates the process for new infrastructure proposals within the Ski Area. The process and approval is referred to as a 'Works Approval'. Works approvals are to be classified as either minor or major at the discretion of the Conservator. Major works approvals are processed over a period of 40 working days including public notification. Minor works approvals are not notified and are to be processed within 20 working days excluding any further information request. The relevant objectives and policies of the TNPMP are considered in section 9.2 of this report.

DISTRICT PLAN PROVISIONS

The Ruapehu District Plan requires discretionary activity resource consent for chairlifts and gondolas.

PA3.2.1 Rules

PA3.2.1.3 Discretionary Activities

Applications will be assessed against but not limited to, the relevant Assessment Criteria outlined in Section PA3.7 below.

(b) Ski lifts and gondolas

Relevant Objectives and Policies - PA2.2 and PA2.3

Hazardous Substances

No new bulk diesel tanks are proposed for the gondola. The fuel tank of the engine complies with the permitted activity conditions for Protected Areas (i.e. 1000kg maximum volume of diesel) and is permitted under HS3.2.1 of the District Plan.





Section HS3.3 covers the General Conditions requirements for storage of the substance – including the following aspects:

- HS3.3.1 Hazardous facilities site design
- HS3.3.2 Hazardous facilities site layout
- HS3.3.3 Storage of hazardous substances
- HS3.3.4 Site drainage systems
- HS3.3.5 Hazardous facilities spill containment system
- HS3.3.6 Hazardous facilities wash down areas
- HS3.3.7 Hazardous facilities storage tanks
- HS3.3.8 Hazardous facilities waste management
- HS3.3.9 Hazardous substances and new organisms (HSNO)

The proposal will comply with these requirements.

7. CONSULTATION

The upgrade and renewal of infrastructure as proposed in this application was identified in the Whakapapa IDP 2011. The IDP was provided to Tūwharetoa Maori Trust Board, Ngāti Hikairo and DoC in 2011.

Consultation with lwi regarding the gondola proposal commenced in 2016. The proposal has been through various design reviews and refinements starting with a new gondola, café and all-weather snowmaking unit in the western terrain, a major upgrade of the Top o' the Bruce plaza and through to the current gondola alignment to Knoll Ridge. The number of design iterations is well into double figures and each time RAL have engaged with lwi and made further to address effects raised during the dialogue. In August 2017 a letter of support for the project was received from Te Ariki Sir Tumu Te Heuheu, Paramount Chief – Ngāti Tūwharetoa. The letter noted that RAL would still also need to seek formal support from Te Rūnanganui o Ngāti Hikairo ki Tongariro.

RAL provided a further Consultation Document for the current proposal to the Te Pae Maunga board and Te Rūnanganui o Ngāti Hikairo ki Tongariro on 24 November 2017 at a meeting attended by Ross Copland, CEO of RAL. Subsequent to that meeting a letter has been received from Ngāti Hikairo advising that they support the developments of the IDP including the Whakapapa Gondola as presented. Te Pae Maunga is a board comprised of three lwi representatives, three RAL representatives and an independent chair, Sir Michael Cullen. The board was established to ensure a close relationship between lwi and RAL is maintained. RAL have communicated with the Ngāti Tūwharetoa Hapu Forum through Te Pae Maunga.

Consultation was undertaken with Ruapehu Ski Club as the gondola alignment is in close proximity to the club buildings. The club representatives expressed concern for safety in the event of a catastrophic tower collapse or derailment and these issues were addressed with an engineer's assessment of the risk. The ecological and landscape effects assessments have also been provided to Ruapehu Ski Club. RAL have undertaken consultation with the Ruapehu Mountain Clubs Association (RMCA) who represent all the club huts located at Whakapapa at their 2017 AGM and by way of the Mt Rupaehu CEO Forum meetings. The CEO forum was formed to provide quarterly





meetings between RAL and other stakeholders that RAL did not already have structured engagement processes with. The forum was open to applications and now consists of a focus group of approximately 30 voluntary members from clubs, businesses and interested parties. A letter from RMCA is appended and confirms that the proposal is supported.

8. ASSESSMENT OF ENVIRONMENTAL EFFECTS

Resource Consent is sought to install a gondola to replace the removed National Downhill Chairlift. In addition the Waterfall Express Chairlift towers and upper terminal building will be removed. Given the subject site's location within a National Park, the significant cultural values of the mountain, outstanding landscape values, World Heritage status and potential hazards, any proposals for change need to be carefully designed and managed to minimise adverse effects. Whakapapa Ski Area has been managed by RAL for more than 60 years. RAL utilises the same earthworks contractors for each mountain project due to the unique nature of the site and desire to avoid or minimise adverse effects through knowledge and skill retention. Doppelmayr or Leitner (international ropeway engineers) oversee the construction of chairlifts and gondolas. Accordingly, a high level of expertise is utilised in order to design and manage the project with respect to cultural, visual and ecological effects. The visual and landscape effects have been assessed by a qualified and experienced landscape architect. The ecological effects have been assessed by a qualified and experienced ecologist. Consultation with lwi has resulted in written support from the Paramount Chief of Ngāti Tūwharetoa and Te Rūnanganui o Ngāti Hikairo ki Tongariro. The landscape and ecological assessments are appended and a summary of the effects is provided here based on the full assessments. Also included below is an assessment of the effects in regards to hazards, noise, infrastructure, recreational values, cultural values and economic conditions. The assessment criteria of PA3.13.1 of the District Plan and 4.1.16 and 5.2 of the TNPMP have been considered in the writing of the following assessments.

8.1 Visual and Landscape Effects

The Tongariro National Park has World Heritage status for both cultural and landscape values. It is also recognised as an outstanding landscape and natural feature in both the Horizons Regional Policy Statement and the Ruapehu District Plan.

The visual and landscape assessment prepared by Kara Scott concludes that the gondola location is within an incised landform with a confined visual catchment, the proposal is in an already modified area and the proposed alignment results in the area formally utilised as the National Downhill Chair to remain as a restored part of the mountain – and the potential visual and landscape effects will be no more than minor.

The removal of the Waterfall Express Chairlift towers and upper terminal positively contributes to the minimising of visual effects on the landscape. The removal of the Waterfall Express Chairlift including its upper terminal building will offset some of the visual effects of the proposed gondola. The Waterfall Express Chairlift has 17 towers and the gondola will have 14-16 towers. The gondola also replaces the National Downhill Chairlift which was located in the west area of Whakapapa and had 17 towers. Although the gondola towers have larger cross arms than the chairlift towers at the Ski Areas there will be a reduction in the number of individual structures as a result of the proposal.





The gondola terminal buildings have been architecturally designed to the highest standards. The dark colours and various claddings such as stone walls, timber vertical weatherboards and timber fins ensure that the terminal buildings are attractive and blend into the summer rockfield landscape. The upper terminal has been designed to complement the existing Knoll Ridge Café. The Waterfall Express Chairlift upper terminal will be removed and does not exhibit the same landscape sensitive design as the Knoll Ridge Café or the proposed gondola terminal building. Accordingly the removal of the utilitarian style Waterfall Express Chairlift upper terminal is expected to have positive effects on the landscape and visual amenity of the locality.

The towers and cabins will also be finished in dark colours to minimise the disruption to the summer landscape.

The gondola will be located in a part of the Ski Area that already contains ski lifts and buildings and does not extend the area of infrastructure outwards, thereby minimising the affected area.



Image 17 - Artist's impression of proposed gondola upper terminal and the existing Knoll Ridge Café (with the Waterfall Chairlift upper terminal building removed)



Image 18 - Existing Site showing the difference in architectural design for the Knoll Ridge Café (left) and Waterfall Express Top Terminal building (to be removed)





8.2 Earthworks, Construction and Ecological Effects

8.2.1 New gondola and associated structures

Earthworks will be required for the buildings and tower sites. Each earthworks site will be managed individually in terms of sediment and erosion control to ensure adverse effects are less than minor. Works will be managed in order to minimise the time that each site is exposed. The terminal and tower sites have been chosen for their relative ease of development in terms of topography and physical features (such as avoidance of streams) as well as design requirements such as providing ease of skier movement and interaction with existing ski trails and buildings. A comprehensive Construction Management Plan, which will include earthworks controls, will be developed for the project.

Noise will occur during the earthworks and construction phase of the project which is outside of the peak visitor season. Noise will generously comply with the District Plan standards given the large distance to the Ski Area boundaries.

Each proposed tower or building site will be managed individually. Runoff from excavated material will be protected via silt fences on the downhill side. Coir logs will be used to provide sediment control in the event of heavy rain. The excavated material will be moved and naturalised as soon as the foundations are completed. A bunded wash down area will be constructed in a carpark for the concrete trucks or portable wash down devices used in a carpark. Only the washing of the chutes and skips will be permitted. The waste will be disposed of outside of the Tongariro National Park. The wash down area will be inspected at least weekly to ensure that the bund is structurally sound. Equipment and machinery (excluding small hand tools etc.) to be used shall be thoroughly steam cleaned prior to transporting into the Park, to ensure that all seeds and other undesirable materials are removed. A temperature of greater than 100°C is required to kill some seeds so water blasting is not sufficient.

The proposed gondola top terminal is located in the upper reaches of the ski area where vegetation is sparse to almost non-existent. The Top o' the Bruce area is heavily modified and the proposed lower terminal site is considered to have no ecological value. Many of the tower sites are in previously disturbed ground.

As undertaken by RAL on previous construction projects, any vegetation within the areas of disturbance will be harvested and used in site rehabilitation following completion of works. Surface rocks will be carefully harvested and stored onsite to protect their weathered surfaces and any vegetation. These rocks will be replaced with the weathered surface facing up during storage and used for site rehabilitation on the completion of construction at each site.

In developing and constructing previous skiing facilities RAL has developed best practice design, construction and restoration methodology. RAL has achieved accreditation under the international benchmark for Environmental Management Systems, ISO14001 and also Qualmark Gold Sustainable Tourism Business accreditation. Stormwater will be controlled and a Construction Management Plan will be prepared and provided to lwi, the Department of Conservation and Ruapehu District Council.



cheal

An ecological assessment has been undertaken by Nicholas Singers which confirms that the lower terminal location is highly modified with no flora. The upper terminal and some of the towers 11-16 are located in the high altitude un-vegetated zone (less than 1% vegetation cover). Mr Singers' states -

The return stations are both located in areas with little or no vegetation. The bottom return station occurs on a formed track, while the top return station is on scoria field at the uppermost limit of vascular plants. All towers (T1-T10) assessed occur in previously modified areas with little or no vegetation cover (See Appendix). Towers 11 to 16 were not sampled....Towers have been sited to places of very low vegetation cover, most of which have either been previously developed or modified. For this reason the impact is very minor. The upper terminal has very limited vegetation cover and habitat being largely non-vegetated. Further the construction methodology involving removal and re-siting of affected vegetation will remedy most of the direct impact.

Mr Singers' report raises concern with the existing scale of freedom walkers in the Ski Area which has resulted in vegetation loss and erosion. The number of visitors walking the Tongariro Alpine Crossing has risen from approximately 20,000 in 1992 to over 100,000 in 2015. In recent years the anecdotal number of freedom walkers has also increased in the Park with the filming of the Lord of the Rings and The Hobbit significantly contributing to the popularity of some tracks and locations such as Meads Wall. Although walker numbers aren't recorded in the Ski Area and aren't comparable to the significant numbers using the Tongariro Alpine Crossing, it is still believed that there has been a large increase. RAL has advised that during summer, the majority of walkers in the Whakapapa Ski Area park in the RAL free carparks and walk to Meads Wall and / or upwards from the Top o' the Bruce without using the chairlifts. Those summer walkers that do utilise the chairlifts often explore the Hut Flat area from the Rangatira Chairlift, around the Knoll Ridge Café and walk to the top of Knoll Ridge or to the Skyline from the top of the Waterfall Express Chairlift. The Knoll Ridge and Skyline areas are naturally relatively devoid of vegetation due to the high altitude and climatic conditions and so are less vulnerable to plants being trampled by walkers. Hut Flat is lower on the mountain and contains more vulnerable vegetation. There are a number of club huts at Hut Flat with associated human activity. Currently the Rangatira Chairlift provides access to Hut Flat and chairlift users then have a short walk to the Waterfall Express Chairlift which provides access to Knoll Ridge. The proposed gondola will provide direct access to Knoll Ridge from the Top o' the Bruce without stopping at Hut Flat. The gondola is intended to operate all year round with dual operation of the Rangatira and gondola during the ski season and sole operation of the gondola during summer. Without the Rangatira operating continually in summer there will be no chairlift access to Hut Flat which may result in less pedestrians in this area and consequently less damage to vegetation.

Gondolas are a tourist attraction in themselves and the proposed gondola will allow RAL to operate on days when the weather conditions make chairlift rides too unpleasant and potentially dangerous in regards to exposure. Increases in tourist numbers due to the gondola are expected due to being able to operate in inclement weather, providing for less able-bodied persons (e.g. elderly and disabled) and appealing to a demographic who do not want an adventure type of activity but want to appreciate the scenery in comfort. There may be some increase in walkers produced by the gondola and so monitoring, and any remediation shown to be necessary, is proposed. Mitigation of the existing issues with freedom walkers is not able to be addressed through the gondola consent as it does not relate to the effects of the proposed activity. The existing, and increasing, pressure on vegetation from freedom walkers needs to be managed and although this is not RAL's responsibility they have proposed to erect signage to increase awareness of the damage to alpine vegetation caused by walking off track. It is proposed to install educational





signage within the gondola terminals and within bathrooms in the Ski Area to raise awareness of the vulnerability of the native alpine plants and encourage walkers to keep to tracks. Examples of similar types of signage are shown below.





Images 19 & 20 - Examples of signage

Accordingly this potential effect is to be managed effectively in order to ensure that effects are less than minor.

Recommended conditions of consent are included in this report and further detail is provided in the appended Ecological Assessment completed by Nicholas Singers.

8.2.2 Removal of Waterfall Express Chairlift

The removal of the Waterfall Express Chairlift towers and buildings will have no adverse ecological effects however earthworks will be required to remove the foundations.

Each of the Waterfall foundation sites will be managed individually in relation to sediment and erosion control. They will be removed over a period of five years, starting after the season of the gondola construction. The ground will be restored and any plants disturbed will undergo the usual harvesting and replanting.

8.2.3 Summary

Overall, the adverse effects of the proposal on the area's locality are expected to be less than minor due to:

- Site selection which has avoided ecological significant areas,
- Many of the sites are in previously disturbed ground,
- Proposed vegetation harvesting and re-use method,
- Earthworks management to avoid sediment entering waterways,
- Construction management and control of hazardous substances,
- Monitoring and management of freedom walker effects related to the gondola, and
- Steam cleaning of equipment prior to establishment on site.





8.3 Cultural Values

The entire mountain is of cultural and spiritual significance to the lwi affiliated to it and the mountain is subject to a Treaty claim. It is our understanding that earthworks, structures and upgrades on the mountain can have adverse effects on cultural values; however an assessment of the cultural effects can only be competently made by the affected tangata whenua.

Over the years, RAL has changed many aspects of its upgrade plans and operations to demonstrate respect for the cultural significance of the mountain. An Indicative Development Plan (IDP) is periodically produced by RAL for the Whakapapa and Turoa Ski Areas as a requirement of the TNPMP. Over time, the scale of intended development on the mountain reflected in the IDPs has been significantly reduced. The downscaling of the development plans is in part out of respect for the cultural values of the mountain.

Operational changes at the Ski Areas have also occurred to accommodate the values of tangata whenua. Sponsorship is provided to the Kura Kaupapa skiing and snowboarding snow academies which provide opportunities for children to learn to ski. Also RAL supports work programs and preemployment training when requested. Sponsorship is also provided to local primary and secondary schools for skiing and snowboarding which improve the accessibility children and youth have to the mountain. Tangata whenua have often expressed their interest in safety on the mountain. RAL have robust health and safety practices in place and in the event of a serious accident on the Ski Areas lwi are notified immediately so that karakia and other cultural protocols can be performed. RAL provides the opportunity for Tangata Whenua to talk to new RAL staff at inductions to encourage an understanding of the mountain's significance and to engender respect for the mountain.

Another major response to cultural values is the ongoing and intended reduction of structures within the Tuku. The most recent example of this is the removal of the Waterfall T-bar which extended into the Tuku with its replacement, the Delta Chairlift, terminating prior to the Tuku. The proposed gondola will not be located within the Tuku.

As part of the Whakapapa licence renewal, RAL proposed a board with representatives from both Ngāti Tūwharetoa and RAL. This was accepted by Ngāti Tūwharetoa and a relationship agreement signed. Subsequently the Te Pai Maunga Board has been established with three Ngāti Tūwharetoa representatives, three RAL representatives and one independent chairperson. The board has been briefed on the gondola proposal various times over the last year. It is understood that the board favoured the current proposal which utilises the existing Knoll Ridge Café over the previous proposal which had the gondola located to the west and included the construction of a new café at the upper terminal.

Consultation with lwi has commenced and support has been received from the Paramount Chief of Ngāti Tūwharetoa. Ross Copland, CEO of RAL, met with the Te Pae Maunga Board and Te Rūnanganui o Ngāti Hikairo ki Tongariro on the 24th November 2017. A copy of the Gondola Consultation Summary Document which was provided at the meeting is included in Appendix 8. Subsequent to the meeting a letter of support has been received from Te Rūnanganui o Ngāti Hikairo ki Tongariro. It is understood that the Rūnanganui is supported by Ngāti Tūwharetoa.





8.4 Hazards and Safety

The mountain contains many potential hazards such as eruptions, lahar flows, avalanches, exposure due to terrain and climatic conditions etc. RAL have a Safety Management System to deal with all risks and contingency plans for evacuations in the event of eruptions. Whakapapa has a ski patrol service, medical centre with emergency and X-ray facilities and rescue dogs. RAL also promote responsible behaviour on the slopes, provide warning signage where appropriate and invest in education such as the Avalanche Awareness Courses which are run in conjunction with the Mountain Safety Council. Safety information is also provided on the RAL website. The Ruapehu Alpine Rescue Organisation (RARO) was established in 1990 and is a collaborative effort by four main organisations being the Police, DoC, Sir Edmund Hilary Outdoor Pursuits Centre and RAL. RARO is a volunteer based group responsible for carrying out alpine search and rescue work in and around the Tongariro National Park.

Summit Hazard Zone

The Summit Hazard Zone is an area identified at the summit of the mountain where an increased risk of injury from volcanic eruption exists. The Ski Area boundaries are outside of the Summit Hazard Zone. If a volcanic eruption does occur at Ruapehu, an audio alarm will sound from a series of speakers located around the Ski Area, at the same time a message is sent to Ski Area Managers for evacuation operations to commence.

Lahars

Lahar paths have been mapped from previous events and topography. Map 7 of the TNPMP shows three primary lahar paths and various secondary paths. The major lahar paths are west to Mangaturuturu River, northwest to Whakapapaiti Stream and east to the Whangaehu River near Tukino Ski Area. Lahars have occurred in each decade since 1945 and most have been directly associated with eruptions. The Whangaehu River lahar path is the likely crater lake dam-break route and was the location of the Tangiwai Disaster in 1953. The Whakapapaiti Stream route is within or adjacent the Whakapapa Ski Area but not in proximity of the proposed gondola. The proposed gondola crosses the Whakapapanui Stream secondary lahar path.

The Eastern Ruapehu Lahar Alarm and Warning System, (ERLAWS) is comprised of sensors and real time monitoring primarily due to the risk of a dam-break lahar affecting the Whangaehu River which is outside of the Ski Area.

The Ski Area has an Eruption Detection System which, in the event of a volcanic eruption likely to cause a lahar, sets off sirens and loudspeakers to direct ski area users away from valley floors to higher ground.







Image 21 - Excerpt of Volcanic Hazards Whakapapa Map

The location of new infrastructure on the mountain requires a weighing up of several factors such as terrain suitability for skiing, potential visual effects, potential cultural effects, extent of earthworks required, interaction with other infrastructure and features, avoidance of ecologically sensitive areas and hazard avoidance or management. Ideally, all infrastructure would be located away from potential lahar paths but as there are many other factors to consider in determining optimal locations, it is not always possible to fully avoid the hazard.

The proposed gondola lower terminal and the lower third of the gondola line are to be located within a lahar safe area. The profile shows towers 10-13 within a potential lahar path however an alternative profile has been developed to remove towers 12 and 13 from the lahar path. Approximately eleven of the Waterfall Express Chairlift towers are within the same potential lahar path. The Waterfall Express Chairlift is to be removed. The few gondola towers which may be located within a potential lahar path shall be engineered to withstand a lahar. This may involve strengthening of the towers and foundations or installation of deflection devices as shown in the following image. A condition of consent is suggested in section 10 of this report. As the lahar path is within a valley, the visual effect of any strengthening works will be limited in regards to the locations which it can be viewed from.

Given that the proposed gondola terminals will be outside of the lahar paths, the few towers likely to be within a lahar path will be specifically engineered for the lahar hazard, the removal of the Waterfall Express Chairlift which is largely within a lahar path, and the significant systems in place for managing the risk, it is considered that the lahar hazard is appropriately addressed.





Image 22 - Example of deflection devices at the base of ski lift towers

Gondola Safety

Chairlifts and gondolas themselves can pose a risk to human safety if not property maintained. Accordingly, chairlifts and gondolas are maintained and operated, including being inspected annually prior to the ski season by an auditor, as per the Approved Code of Practice for Passenger Ropeways in NZ. The Queenstown Skyline Gondola was established approximately 50 years ago and has not suffered any fatalities. The Rotorua Skyline Gondola was established in 1985 and similarly has an excellent safety record. Reportedly a counterweight cable snapped at the Rotorua gondola in 2003 and occupants were evacuated from the cabins by ladders or abseiling without any serious injuries. The gondola was upgraded in 2005.

Modern detachable gondolas include a number of safety features. An example of safety features is provided by Dopplemayr below.

The Rope Position Detection (RPD) system is the unrivalled safety standard for ropeway installations. It is the only system that can recognize a rope deviation from the liner groove at an early stage and consequently reduce the risk of deropement. Operational failures can be virtually excluded. As soon as the rope leaves the center of the groove, the ropeway is automatically slowed down. This reduces the kinetic energy present in the ropeway and consequently the hazard potential to a minimum.

In every respect, the unique RPD safety system is always one step ahead. Continuous monitoring of the rope position using advanced technology guarantees absolute operational efficiency for ropeway operators and maximum safety for their customers.

From the bottom station, along the line to the top station and back again. Real-time system checks can be performed conveniently and quickly from the control room before starting operations and during operations. RPD pinpoints the source of any error and indicates tower and switch number on the display as part of the fault report. That means maximum safety for the entire installation and for all passengers.

The RPD at a glance

Weather-resistant and extremely resilient

- Withstands temperatures ranging from -33 °C to +55 °C
- Integrated lightning protection
- Operates with non-contact sensors and a bus system¹⁰

34 /54

¹⁰ Information obtained from Doppelmayr https://www.doppelmayr.com/en/products/comfort-solutions-and-options/rpd-rope-position-detection/





From the Doppelmayr gondola brochure:

The complete grip opening and closing operation, for example, is checked by electronic and mechanical monitoring equipment which immediately stops the lift in the event of a malfunction. The entire brake system is also state of the art and is constantly analyzed for further optimization potential.

Personal Safety

The proposed gondola allows persons to travel up the mountain and access views and the Knoll Ridge Café without exposure to the elements of any notable duration. Accordingly persons that are ill-prepared for the alpine conditions will remain indoors through the gondola trip and access the gondola from Lorenzs' Café and Knoll Ridge Café from the gondola with only short walks in the open (approximately 20m from Lorenzs' building and approximately 5m to Knoll Ridge Café). Accordingly the risk of hypothermia is significantly reduced. Anecdotally, RAL have witnessed an increasing number of visitors to the Ski Area that are not properly prepared for the sometimes harsh climatic conditions. Accordingly providing an all-weather lift should provide noticeable benefits to visitor comfort and safety.

Another benefit of the gondola is its ability to transport injured persons downhill to the Top o' the Bruce area where the medical centre is located. For many injuries the chairlifts are an unsuitable mode of transport, meaning that transport on groomers or ski tow with rescue sled are the only methods of transporting an injured person down to the medical centre. Depending on the location of the injured person, the gondola may provide a suitable transport mode to the medical centre which could help ease distress of the injured person.

Detachable gondolas also allow adaptable boarding and unloading speeds – providing for safer boarding and unloading. The speed of loading is just 0.3m/s for a gondola compared with 0.7m/s for a detachable chairlift or up to 2.2m/s for a fixed grip chairlift¹¹.

Accordingly there will be positive effects for visitor comfort and safety as a result of the proposed gondola.

Proximity to Ruapehu Ski Club Buildings

The proposed gondola is within close proximity of the Ruapehu Ski Club buildings at Hut Flat. The location of the buildings has presented a challenge to the design and as a result the proposal has been through many reiterations in order to address this challenge. Overnight when not in use, or in blizzard conditions, ice can build up on the cable and ice fall can present a hazard. Management of this hazard has been given careful consideration and the gondola does not pass over any existing buildings. The gondola cable will be located almost centrally from the two Ruapehu Ski Club buildings and the buildings are located centrally between the two nearest towers. The type of gondola allows the cable to run at night without the cabins to prevent ice build up. Accordingly this hazard has been addressed.

At the request of Ruapehu Ski Club RAL engaged Leitner ropeway engineers to conduct a study reviewing the possibility of the haul rope ever contacting one of the adjacent Hut Flat lodge buildings under a catastrophic failure scenario (e.g. devastating earthquake or eruption). Even under the scenario of a complete collapse of the lift towers above and below Hut Flat engineers

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¹¹ Personal communication with Ross Copland of RAL 24 January 2018





concluded the maximum deviation of the haul ropes would not permit them to strike either lodge building with several metres of safe clearance even in the event of a failure of this magnitude.

Evacuation from the Mountain

The gondola provides a secondary route (coupled with the Rangatira Chairlift) down the mountain in the event of extreme weather or other hazards (such as fire or eruption) that necessitate evacuation. Accordingly it significantly improves the evacuation time if run together with the Rangatira Chairlift.

In regards to evacuation, the removal of the Waterfall Express Chairlift will not decrease the capacity for evacuation, as the gondola will be able to provide for evacuation and the gondola is contained, resulting in better protection of its passengers from the elements, which is particularly important in an extreme weather evacuation scenario. It also travels much faster resulting in a reduced trip time.

In the event of storm or wind conditions that prevent the gondola from being able to be safely operated, persons can remain inside the cabins till RAL's rescue team reaches each individual cabin. The gondola is expected to be able to withstand winds of up to 270 km/hr¹² whilst still operating and RAL will close the lifts as a precaution if conditions are expected to near design strengths.

Construction Hazards

Heavy machinery and blasting during construction is a hazard. The construction period will be undertaken outside of the ski season, thereby minimising the number of people potentially exposed to the hazard. The public will be excluded from the areas of work during construction. The RAL Safety Management System will apply to contractors and RAL staff during construction. Further information on the management of hazards during earthworks and construction will be included in the Construction Management Plan. RAL and their contractors are experienced in managing the interface between visitors and construction areas. It is likely that the Waterfall Express and Knoll Ridge Sightseeing operation will be ceased during a 3 month period over the construction to reduce the risk to members of the public travelling up on the Waterfall Express Chairlift adjacent to the construction zone. Depending on the outcome of a detailed Safety Analysis, RAL may elect to maintain operation of the Rangatira Express Chairlift during this period for members of the public.

Overall, hazards are managed appropriately.

8.5 Noise

The gondola is equipped with state-of-the-art direct drive technology which eliminates the need for a traditional gearbox dramatically reducing the audible noise from the drive station. The drive itself is barely audible at all with the only real noise coming from the haul rope itself passing over the towers and bullwheel. Even these sounds are dramatically reduced due to the use of anti-vibration technology to limit resonance within the station and towers. Compared with the existing Waterfall Express, this is a huge benefit and feature of the project given the sensitivity of the environment in which it operates. Noise from the gondola will generously comply with the District Plan noise standards due to the large separation distance between the lifts and the legal boundaries. The

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¹² Personal communication with Ross Copland of RAL, 24 January 2018





nearest buildings to the drive terminal are RAL buildings and so club lodges are not expected to be affected by noise from the engine. The gondola engine is expected to generate a fraction of the noise level of existing chairlift engines, none of which have generated any known noise complaints.

Noise will occur during construction of the gondola and the removal of the Waterfall Express Chairlift, with helicopter movements and construction noise (e.g. excavators). This will occur over a relatively short period and be undertaken to minimise disturbance to Park visitors as much as practicable.

8.6 Demand on Infrastructure

It is hoped that the gondola project will attract more visitors to the Ski Area. The Ski Area infrastructure is designed for the demand of the ski season peak days. The gondola project is aimed not only at skiers but improving the experience for sightseers who will use the gondola and services all year round. RAL encourages skier patronage on non-peak days with specials on midweek lift passes. The gondola project is not aimed at increasing peak days but is intended to:

- improve the facilities and comfort for skiers,
- increase sightseer patronage outside of the ski season,
- increase sightseer patronage on days which are not suitable for outdoor activities,
- widen the demographics of visitors to include less able-bodied visitors, and
- reduce the risks associated with having only one lift uphill from the Top o' the Bruce area.

Outside of the ski season there are many surplus carparks within proximity of the Top o' the Bruce and the proposed gondola is not expected to generate a demand for carparks that exceeds the current supply.

The current parking facilities provide approximately 1800 car parks and 8 bus parks. RAL provide a free bus shuttle service from carparks to the Top o' the Bruce and have recently commenced shuttle services from Taupo, Turangi, National Park, Whakapapa Village and Ohakune - all during the ski season. The parking facilities are designed for the peak days and additional car parks are not considered necessary for the gondola project. The number of staff during the day within the ski season is unlikely to increase notably as a result of the gondola project however it is likely to provide more work days to existing staff due to less closed days. Many Whakapapa RAL staff are provided with staff quarters and or shuttle services which decreases the demand for staff parking spaces. It is hoped that the gondola will provide more work days and work certainty for RAL staff with the ability and demand for wet weather operation available due to the gondola.

Water is supplied from the snowmaking reservoir (sourced from a spring) and some roof collected water storage. There is ample capacity within the water system and existing Regional Council resource consent to provide for existing demand and no increase in peak water demand is expected from the gondola project.

Wastewater is reticulated to the Department of Conservation Whakapapa Village Treatment Plant. RAL was a significant financial contributor to the scheme however the system was found to be suffering from infiltration of groundwater and stormwater and the disposal system was not functioning at its design capacity. An upgrade to the disposal system is underway and maintenance has been undertaken to reduce infiltration.





Overall, the gondola is not aimed at increasing peak visitor numbers but allows visitors to utilise the Ski Area on days that are currently unsuitable due to a lack of indoor activities available. The existing infrastructure is considered suitable to cater for any potential increase in visitor numbers resulting from the gondola due to the fact that the numbers are likely to increase on non-peak days.

8.7 Recreational Values

The opportunity to ski is valued by many Tongariro National Park visitors. The proposed works aim to increase skiers' enjoyment of the ski area terrain, particularly during less optimal weather conditions. The Ski Area is also enjoyed by non-skiers, evidenced by visitors to the Ski Area outside of the ski season.

The gondola is required to replace the National Downhill Chairlift and also the Rockgarden Chairlift, both of which have recently been removed. It is also proposed to remove the Waterfall Express Chairlift as a part of this proposal. In conjunction with the removal of the Rockgarden Chairlift, the Centennial Double Chairlift was upgraded to a quad chairlift (Rangatira Chairlift). Currently the Rangatira is the only chairlift that provides uphill and downhill access from and to the Top o' the Bruce. Accordingly there is risk in having only one lift, with no backup lift for times of maintenance or emergency evacuations. Accordingly the gondola will not only provide a new route but provides a necessary second route uphill and downhill from the Top o' the Bruce. The gondola can provide for both skiers and sightseers.

Potentially the gondola will provide a new type of facility for sightseers as it allows for uphill and downhill transport without the passengers being exposed to the wind and cold that can make chairlift rides uncomfortable for visitors and skiers alike. The gondola is particularly well suited to sightseeing young families, the elderly, injured or disabled due to the ease of use. It provides for pushchairs which currently are unable to be used on the mountain.

Accordingly, the upgrade will provide a greater opportunity for sightseers and non-skiers whilst also providing skiers with comfortable transport to the upper Ski Area.

8.8 Economic Benefits

The Whakapapa and Turoa ski areas contribute considerably to the local economy. An economic impact study commissioned in 2001 concluded that the ski areas directly contributed 2,142 jobs and a total of \$45.6 million to communities around Mount Ruapehu. 13

RAL employs approximately 750 staff members at both ski areas during winter, with approximately 400 of these being at Whakapapa. RAL pays out more than \$10 million annually in wages and salaries, with a large proportion of this money being spent in the local region. In the eighteen months prior to 30 April 2017, RAL invested approximately \$22 million at Whakapapa Ski Area¹⁴. Although the 2016/17 year had a reduced number of visitors to the Ski Area in winter due to adverse snow conditions, the two Ski Areas still attracted 291,000 winter visitors¹⁵.

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¹³ New Zealand Tourism Research Institute (2001). 'Mount Ruapehu Ski-Fields: An Economic Impact Study'. A study for the Ski Areas Association of New Zealand. Retrieved 28 April 2008 from: http://nztri.aut.ac.nz/triweb/documents/RuapehuSkiReport.pdf

¹⁴ RAL (2017) Annual Report

¹⁵ RAL (2017) Annual Report





RAL is also actively involved in a range of employment initiatives aimed at ensuring that local people have opportunities to work in the local ski industry.

The provision of high-quality skiing infrastructure is integral to the functioning and ongoing economic success of the Whakapapa and Turoa Ski Areas. This ongoing economic progress also extends to the surrounding communities of the central North Island. It is vital that the infrastructure and facilities at the Whakapapa and Turoa Ski Areas keep pace with the demands of modern skiers and other visitors. The ski areas must remain competitive with the other varied recreational and holiday opportunities which are available, including those offered by South Island ski areas. Without the ongoing and necessary replacement and improvement of facilities and services the wider economic benefits will eventually diminish and dissipate.

The gondola will provide a unique opportunity for RAL to expand the currently narrow annual window of core business operation. Currently more than 90% of revenue is being earned during the 4 month long ski season which can be heavily affected by adverse weather conditions. The gondola also provides for a wet weather activity in an area that lacks indoor activities. This will improve the financial viability of the Ski Area and provides an activity for tourists to undertake in the case of bad weather – making stays in the area more attractive to out of town visitors which is hoped to have a positive effect on tourist numbers and economic growth for the surrounding areas such as National Park, Whakapapa Village, Ohakune and Turangi. As such, the gondola will diversify and spread financial risk for RAL and provide benefits to the wider area.

8.9 Summary of Effects

The gondola project is expected to result in positive recreational and economic effects. Adverse landscape and ecological effects will be minimised and managed to ensure adverse effects are less than minor. Hazards have been considered and provided for appropriately. Written support from lwi has been provided.

9. RELEVANT POLICY DOCUMENTS

9.1 Ruapehu District Plan

Protected Areas Introduction:

The Protected Areas Zone applies to the land depicted on the Ruapehu District Plan Maps as:

- (a) Amenity Policy Area.
- (b) Protected Areas- Conservation.
- (c) Protected Areas -Reserve.

These areas form subsets of the Protected Areas Zone and cumulatively make up the entire Protected Areas Zone in this Plan. Amenity Policy Areas are areas set aside by DOC to provide for the development and operation of recreation and public amenities and related services at a scale and intensity which is not generally appropriate elsewhere in the National Parks. These include part of the Turoa and Whakapapa Ski Areas.





PA 2.2.1 Objective

(a) Protection of the natural, amenity, historic, recreational and cultural values in the Protected Areas Zone.

PA 2.2.2 Policies

- (a) To protect significant indigenous vegetation and significant habitats of indigenous fauna.
- (b) To recognise and provide for the protection of Māori cultural values within the Protected Areas Zone, including to manage development within the area gifted by Horonuku Te Heuheu in 1887 within the Tongariro National Park so that adverse environmental effects are avoided, remedied or mitigated.
- (c) To protect the intrinsic values of ecosystems.
- (d) To maintain and enhance amenity values by ensuring that the adverse effects of inappropriate subdivision, land use and development are avoided, remedied or mitigated so as not to compromise the characteristics and features that create amenity value in the Protected Area Zone.
- (e) To protect the finite characteristics of the Protected Areas Zone.
- (f) To recognise Tongariro National Park and, in particular, the volcanoes as an outstanding natural feature, and to require protection of the Park and the volcanoes from the adverse effects, if any, associated with land use and development.
- (g) To recognise, maintain and enhance the qualities and characteristics of the Protected Areas Zone that contribute to people's appreciation of the pleasantness, aesthetic coherence and cultural and recreational values of the area.
- (h) To ensure that the use and development of resources avoids, remedies or mitigates adverse effects on historic heritage in the Protected Areas Zone.
- (i) To protect outstanding landscape values from inappropriate use and development.

The proposal is consistent with Objective PA 2.2.1 and its underlying policies. Ecosystems will be protected through the provisions of the CMP. Consultation has been undertaken with lwi to provide for cultural values. The visual and landscape effects have been assessed and the proposal will not compromise the amenity values of the site and the landscape values that make the volcanoes an outstanding natural feature. The gondola will be entirely within the Amenities Area and is consistent with the purpose of this area. The proposal will enhance the recreational values of the area in accordance with policy (g). No adverse effect on historic heritage are anticipated.

PA 2.3.1 Objective

(a) Use and development of the Protected Areas Zone by individuals and groups as a natural and as a recreational resource, while ensuring that any adverse effects on the environment are avoided, remedied or mitigated.

PA 2.3.2 Policies

- (a) To require all use and development be designed and sited so as to ensure that any adverse effects on the natural character and landscape values of an area are avoided, remedied or mitigated.
- (b) To ensure that sewage is disposed of in a manner such that any adverse effects on the environment are avoided, remedied or mitigated.
- (c) To require all use and development to avoid, remedy or mitigate adverse noise effects.





- (d) To require that the use and development of land within Tongariro National Park does not significantly detract from the amenity or intrinsic values of Tongariro National Park and, in particular, the volcanoes.
- (e) To require all development within Whakapapa Village to maintain the visual quality of views both into, and at, the village.
- (f) To promote the upgrading of existing or new facilities which replace existing facilities that improve environmental outcomes, including energy efficiency and amenity values.
- (g) To restrict the area of site disturbance required for any development.
- (h) To recognise the positive effects of some development and use of the Tongariro National Park including the Ruapehu skifield on the District's economic and social wellbeing and recreational values.

The proposal is supported by objective PA 2.3.1 as the activity will enhance recreational values whilst avoiding or mitigating adverse effects. The location of structures has been carefully considered to avoid or minimise adverse effects on the natural character and landscape values of the mountain. Noise from the construction periods will be temporary and helicopter use is important to avoid any unnecessary machinery movements over the sensitive landscape. The proposed gondola will replace the National Downhill Chairlift and Waterfall Express Chairlift in accordance with policy (f) and will improve recreational amenity values. The area of disturbance will be restricted and minimised wherever possible for both the removal of the Waterfall Express Chairlift and the new gondola construction. The proposal has a clear beneficial impact for the community's economic, recreational and social wellbeing.

PA 2.4.1 Objective

(a) To limit or avoid risks to people and property in areas subject to natural hazards.

PA 2.4.2 Policies

- (a) To control the location of development to minimise the risks of them being affected by natural hazards.
- (b) To work with other agencies to ensure that risks to people and property in Protected Areas are avoided, remedied or mitigated.

In accordance with Objective PA 2.4.1 hazards have been considered and addressed. As discussed in section 8.4 of this report, the Waterfall Express lower terminal and approximately eleven towers are within a potential lahar path and these will be removed and replaced with the gondola which has approximately three towers within the same lahar path. The affected towers will be engineered specifically to withstand a lahar. The proposed gondola terminal buildings are outside of any lahar paths and the Summit Hazard Zone. There are extensive warning and alarm systems for eruptions. Accordingly the natural hazards are appropriately addressed.

Outstanding Natural Features and Landscapes:

NL 2.2.1 Objective

(a) The protection of the values of outstanding natural features and landscapes from inappropriate subdivision, use and development both within and adjoining nearby those identified areas.



NL 2.2.2 Policies

- (a) To protect outstanding natural features and landscapes from inappropriate subdivision, use and development both within and adjoining nearby those identified areas. In determining inappropriate subdivision, use and development the following will be taken into account the degree to which the activity:
 - (i) Would adversely affect the values specified in Policy NL 2.2.2(c).
 - (ii) Is necessary to provide for the social or economic wellbeing of communities, or to provide essential utilities or services to the public; and,
 - (iii) Avoids any significant adverse cumulative effects on the characteristics and values of those outstanding natural features and landscapes;
 - (iv) While ensuring that, in all cases, any modification of the features or landscapes is consistent with the purpose of the Act. 2, 6, 18;
 - (v) To recognise other agencies role in the protection of outstanding natural features and landscapes.
 - (vi) To protect, from inappropriate subdivision, use and development, the specified values associated with the following outstanding natural features or landscapes:
 - (viii) Tongariro National Park (particularly the volcanoes) and specifically its:
 - (1) Visual and scenic characteristics, particularly its visual prominence.
 - (2) Recreational values.
 - (3) Scientific value, particularly the volcanic landscape.
 - (4) Ecological value, particularly the mountainous ecology and the extensive tussock grasslands and wetlands supporting rare indigenous flora.
 - (5) Cultural values and importance to tangata whenua.

The proposed activity is not an inappropriate development in regards to Objective NL 2.2.1 and Policy NL 2.2.2 above. The recreational values of the mountain will be enhanced by the proposal whilst potential effects on other values will be mitigated. The proposed 15-16 tower gondola will replace the 17 tower National Downhill Chairlift and 17 tower Waterfall Express Chairlift. The proposed gondola will be located in an area that is already affected by infrastructure, buildings and ski lifts and therefore allows undeveloped areas to remain as such, thereby limiting the landscape effects of the proposal.

Overall, the proposal is considered consistent with the relevant objectives and policies of the District Plan.

9.2 Tongariro National Park Management Plan

The TNPMP was prepared in accordance with the National Parks Act 1980 and sets out DoC's proposed intentions for managing Tongariro National Park. This includes specific management intentions for Amenities Areas and the Park's Ski Areas, including Whakapapa Ski Area. Relevant objectives and policies from the TNPMP are considered below.





4.1 General Objectives and Policies

4.1.3 Landscape

Objectives

- To retain the natural landscape of Tongariro National Park in perpetuity.
- b. To restore landscape values where adverse effects of development or exotic plants have not caused irreversible consequences.
- c. To ensure that infrastructure is designed and located to avoid impacts on landscape values.

Policies

- 1. Facilities should be designed and sited to avoid impacts on landscape values.
- 2. Design of infrastructure should ensure that it will blend into the environment, reducing the impact of facilities on the landscape.
- 3. Where infrastructure is redundant it will be removed.
- 4. Any earthworks carried out should not exacerbate natural erosive processes or have adverse impacts on watercourses.

The location of the gondola within an existing area of development and infrastructure avoids or mitigates effects on landscape values. The adverse effects of the increased bulk of terminal buildings will be mitigated by architectural design to ensure it blends into the environment as much as feasible in accordance with Policy 2 above. Furthermore the gondola replaces the Waterfall Express Chairlift and National Downhill Chairlift and so results in a net reduction in the number of structures. All towers will be ironsand colour to blend with the summer rockfield landscape. The location of the gondola lower terminal building limits its visibility. In accordance with objective (b) a Rehabilitation Plan will be prepared and implemented for the removal of the Waterfall Express Chairlift. Also, rock placement and vegetation harvesting and replanting will be undertaken at the gondola tower sites. Earthworks will be managed to avoid erosion or adverse effects on watercourses in accordance with policy 4. Accordingly, we consider the proposal to be consistent with the landscape objectives and policies of the TNPMP.

4.1.7.1 Indigenous Plants

Objectives

- a. To protect indigenous plants within Tongariro National Park.
- b. To protect and enhance ecosystems, to provide for self-sustaining populations of indigenous plants.
- c. To prevent further local extinction of indigenous plants from the park.
- e. To restore and enhance plant ecosystems at sites disturbed by human-induced activities.

Policies

- 1. Special measures should be taken to protect rare, endangered, and endemic species.
- 2. Regeneration of areas which have been modified or damaged by human induced activities or animal pests may be assisted by restoration planting.

The works will be carried out in accordance with the ecological assessment undertaken by Nick Singers in order to protect ecosystem values and therefore the proposal accords with the objectives and policies of 4.1.7.1.





4.1.16 Works Approvals

Objective

a. To ensure that projects undertaken within TNP as a result of agreed works approvals do not adversely affect national park values and are undertaken in a controlled and monitored manner.

The Policies of 4.1.16 set out timeframes and processes for the consideration of works approval applications. It is proposed that the works will be undertaken in a controlled and monitored manner in accordance with the above objective. The policies guide the classification of works approvals as either minor or major and the process for non-notification, notification and consultation. Works approvals are considered major if they meet the criteria set out in Policy 3; such as new major infrastructure, adverse effects on park values and recreational opportunities, when there is likely to be significant public or tangata whenua interest which cannot be satisfied except via public notification or new work is outside the amenities area boundary.

4.2.4 Amenities Areas

Objective

a. The effects of large scale development and intensive use within Tongariro National Park should be confined to existing amenities areas which provide appropriate management to avoid or mitigate impacts.

The proposed gondola is entirely within the Amenities Area in accordance with 4.2.4. It is noted however that the TNPMP makes specific allowance for ski lifts to be located outside of Amenities Areas.

5.2.1 Management of Existing Ski Areas

Objectives

- a. To maximise the recreational experience of skiers in TNP through the highest quality ski area operation.
- b. To assess future development and growth of ski areas against the overriding constraints of preserving natural resources and historical and cultural heritage.
- c. To minimise the adverse effects of ski area operations within ski areas.
- d. To ensure that the operation of ski areas does not adversely affect the experience of park visitors, the natural landscape, and the biophysical environment beyond ski area boundaries.
- e. To ensure tangata whenua have opportunity for input into the development and management of the ski areas.
- f. To limit the effects of large-scale development and intensive use to existing amenities areas.

Policies

- 2. All major infrastructure including ski-lifts, buildings, car parks, roads, and other major earthworks should wherever possible, be located within the amenities areas at Whakapapa and Turoa in order to avoid or mitigate environmental impacts and protect the park in its natural state. To provide for skiing within ski areas, exceptions may be allowed for locating ski-lifts and associated facilities outside of amenities areas where these cannot reasonably be located inside amenities areas.
- 5. All ski area planning and services will be of a high standard, appropriate to a park of Tongariros' environmental quality and international stature.





- 6. A range of skiing opportunities compatible with national park values and objectives will be fostered.
- 8. No further ski area extensions, new ski areas or licences to operate ski area activities should be approved.
- 9. No extension of infrastructure for ski area management should be permitted beyond 2300m at the Whakapapa and Tukino ski areas and 2325 at Turoa Ski Area.
- 11. Every proposal for ski area development will be prepared in a staged process in consultation with the conservator (works approvals and indicative development plans).

The proposal is entirely consistent with the objectives and policies for the management of existing ski areas. The proposal does not breach the carrying capacity identified in the TNPMP and will be entirely within the Amenities Area and below 2,300m asl. The proposed gondola terminal buildings have been designed by an award winning architect to a high standard in accordance with policy 5. The proposal will benefit both skiers and other visitors to the Ski Area in accordance with objective a. The adverse effects of the proposal are minimised by numerous aspects of the proposal in accordance with objective c. Consultation with tangata whenua has been undertaken over an extended timeframe and feedback has shaped the proposal in accordance with objective e. The proposal has been designed in consideration of natural, cultural and heritage values in accordance with objective b.

5.2.4 Landscape Planning

Objective

 To protect the landscape values of Tongariro National Park, utilising landscape planning methodologies.

Policies

- 1. Areas of high natural value within the ski areas will be identified. Special consideration will be given to maintaining these values or minimising impact on them if development affecting these areas is necessary. This process is ongoing and will at least be undertaken during the assessment of an application for physical works.
- 2. Improvement or upgrading of existing facilities, in preference to the construction of new facilities, will be encouraged and if necessary, required.
- 3. Where existing facilities are replaced and new ones constructed, the redundant facilities and structures will be removed and the land will be restored to as near its original state as possible. The exception to this provision is the removal of septic tanks which form part of the Whakapapa Ski Area and village sewage scheme, where removal will be considered on a case by case basis. Also refer to Section 4.1.17 Waste, Discharges, Contaminants and Noise.
- 4. Disused structures, cables or construction foundations, such as concrete pads for ski lift towers, will be removed by the ski area in accordance with the agreed indicative development plan.
- 5. Any application for major works and/or terrain modification requiring disturbance of over 100 cubic metres of material will include an assessment, by an appropriately-qualified expert, of the landscape impacts of the activity against the values of this plan.
- 6. Site disturbance of new areas required for ski area infrastructure should be minimised.
- 7. The reintroduction of fines and seed source material from the site in order to provide a microclimate for plants will generally be required.





- 8. All disturbances of vegetated areas will require the preparation of a restoration plan to be approved by the department prior to work starting. That plan will be prepared by a suitably-qualified expert and will aim to restore disturbed areas to their original states.
- 9. All colour schemes used will be approved by the department. Dark matt colours are generally the most effective in the context of the volcanic environment.
- 10. The visual impact of ski area structures on areas of the park outside the ski area increases significantly with altitude. Therefore, particular attention will be given to the siting and design of lifts and buildings on the higher parts of the ski area, to reduce their visual impact. Any application will require an environmental assessment by an appropriately-qualified expert. This assessment will be peer reviewed by the department's technical specialists.
- 11. Disposal of material from terrain modification work should not be permitted unless there is a direct correlation with another prior-approved work requiring that clean material.
- 12. Any earthworks application and approval will contain an earthworks management plan which identifies mitigation methods to avoid or minimise impacts on visitors to the park or on the environment as a result of events such as extreme rainfall.

The proposal is consistent with the objectives and policies for landscape planning. A qualified and experienced landscape architect has provided an assessment of the visual and landscape effects. Redundant infrastructure will be removed. Dark colours have been chosen in accordance with policy 9. A rehabilitation plan for the removal of the Waterfall Express Chairlift will include the reintroduction of fines and seed source material in accordance with policy 7.

5.2.12 Ski-Lift Construction and Maintenance

Objective

a. To undertake lift construction and maintenance in a way that minimises adverse impacts on natural resources, historical and cultural heritage, and park visitors.

Policies

- 1. Concessionaires will adhere to all statutory requirements, to the TNP Bylaws 1981 and to the Approved Code of Practice for Passenger Ropeways in New Zealand in the construction and maintenance of all ski-lifts and tows in their licence areas.
- 2. When components or structures are dismantled for maintenance, that maintenance should be undertaken inside a lift maintenance facility or outside the park, where at all practical.
- 3. No sandblasting, spray-painting or use of contaminants should be undertaken in a way which enables those elements to enter the general environment.
- 4. Applications contrary to 2 and 3 above should be declined.
- Where applications contrary to 2 and 3 above are received the department will:
 - Publicly notify the application, acknowledging the wide public interest in this matter.
 - Consult with tangata whenua.
 - Consult with the Tongariro/Taupo Conservation Board and seek its recommendation.
 - Require a full environmental impact assessment undertaken by appropriately qualified specialists.

The proposal is consistent with the objective and policies of 5.2.12. The lift construction will be undertaken with methods that minimise adverse effects. Any necessary spray-painting will be undertaken within workshops or outside of the Park.





5.2.13 Public Safety

Objective

- a. To take all reasonable precautions to provide for the safety of ski area visitors.
- b. To promote safe and responsible attitudes to use of ski areas through educational and interpretive means.

Public safety has been considered and provided for in accordance with Section 5.2.13 of the TNPMP. The Construction Management Plan will provide additional detail on visitor safety during construction and risks from natural hazards have been assessed in 8.4 of this report. RAL promote safe and responsible attitudes through various means to visitors and staff.

Overall, the proposal is consistent with the TNPMP.

9.3 One Plan Regional Policy Statement

The One Plan decisions were released in August 2010 and the Plan is under appeal. An interim decision on the appeals has recently been released by the Environment Court. Relevant chapters of the One Plan Regional Policy Statement (RPS) include Chapter 4 Te Ao Māori, Chapter 7 Indigenous Biological Diversity, Landscape and Historic Heritage, and Chapter 10 Natural Hazards.

Chapter 4 Te Ao Māori

Objective 4.1 Resource Management

b. Kaitiakitanga must be given particular regard and the relationship of hapu and iwi with their ancestral lands, water, sites waahi tapu and other taonga (including waahi tupuna) must be recognised and provided for through resource management processes.

The mountain is of particular significance to tangata whenua and cultural values and concerns have shaped the form of the current proposal. Written approval has been received from Te Rūnanganui o Ngāti Hikairo ki Tongariro.

Objective 7-2 Outstanding Natural Features and Landscapes, and Natural Character

- (a) The characteristics and values of:
 - (i) The Region's outstanding natural features and landscapes, including those identified in Schedule F.
 - (ii) The natural character of the coastal environment, wetlands, rivers and lakes and their margins are protected from inappropriate subdivision, use and development.

Policy 7-7: Regionally outstanding natural features and landscapes

The natural features and landscapes listed in Schedule F Table F1 must be recognised as regionally outstanding. All subdivision, use and development directly affecting these areas must be managed in a manner which:

- (aa) avoids any significant adverse cumulative effects on the characteristics and values of those outstanding natural features and landscapes, and
- (a) except as required under (aa), avoids adverse effects as far as reasonably practicable and, where avoidance is not reasonably practicable, remedies or mitigates adverse effects on the characteristics and values of those outstanding natural features and landscapes.





The proposal is consistent with the relevant objectives and policies of chapter 7 of The One Plan. The Maunga is an ONFL and the proposal has been designed in accordance with the landscape values. Various aspects of the proposal, such as the location, architectural design and colours, avoid or mitigate adverse effects on the ONFL values.

Chapter 10 Natural Hazards

Objective 10-1 Effects of Natural Hazards Events

The adverse effects of natural hazard events on people, property, infrastructure and the wellbeing of communities are avoided or mitigated.

The natural hazards at the site have been considered and methods employed to mitigate potential effects.

The proposal is not contrary to the relevant One Plan Objectives and policies.

9.4 Long Term Plan 2015 - 2025

Outcomes sought for the District identified in the Long Term Plan include the social wellbeing, economic wellbeing, cultural wellbeing and environmental wellbeing. I consider the proposal accords well to the LTP.

Social Wellbeing

Healthy Communities and People

Caring for our People

- That there is access to affordable and effective health and education services.
- That the impact of waste on our environment is minimised.
- That leadership is trusted, transparent, accountable and visionary, and takes an active approach to finding solutions.

Safe and Secure Living

Providing Safe Living

- Core infrastructure (water, wastewater, waste management and minimisation, power, and roading) keeps pace with growth demand.
- Excellent standards of safety and welfare are promoted and respected.
- Zero tolerance to crime and violence.

Economic Wellbeing

Thriving and Prosperous Lifestyles

Providing Opportunities

- That our economy prospers.
- That our community provides effective role models, good parenting, career and life skills guidance for youth.
- That employment opportunities for school leavers are encouraged and supported.
- Our transportation and communication is reliable and meets the needs of users.
- That alternative means of energy generation are promoted and available.

That there is a range of quality retail, entertainment, educational, health care, business and services to retain families and skilled workers to our District.





- That there is a wide range of employment opportunities to encourage growth and provide career progression.
- That economic diversity and core economic strengths are encouraged.

Cultural Wellbeing

Vibrant and Diverse Living Providing for Diversity

- That the traditions, values and history of all ethnic groups are understood, embraced, respected, and celebrated.
- That effective activities and facilities for youth are provided.
- That excellence and achievement in sport, arts/cultural pursuits, community service and businesses are supported, recognised and rewarded.
- That people work towards common goals and issues, and speak positively about our community.
- That events and festivals that are within our District are fostered and celebrated.

Environmental Wellbeing

Our Places - Natural and Beautiful Caring for our Environment

- That the community works together to ensure that our environment is accessible, clean and safe, and that our water, soil and air meets acceptable, affordable standards.
- That the promotion of our District includes our natural rivers, bush and mountains as well as the built heritage, agriculture and railways.

Consultation on the 2018-2028 Long Term Plan is yet to commence and therefore the 2018-2028 LTP has not been considered.

10. RECOMMENDED CONDITIONS OF CONSENT

The conclusions of the Assessment of Environmental Effects are made on the basis that the following recommended conditions (or similar requirements) being imposed should consent be granted.

- That a detailed Construction Management Plan be provided to Council for approval 10 working days prior to the commencement of onsite works.
- If any human remains, artefacts or evidence of historical human occupation are uncovered during construction the consent holder shall cease work immediately and secure the area; advise Ngati Hikairo, Te Pae Maunga, Ruapehu District Council and the Department of Conservation; abide by the provisions of the Historic Places Act 1993.
- All stormwater from the proposed buildings shall be collected and disposed of in a manner that does not cause erosion or scouring.
- The foundations relating to the Waterfall Express Chairlift towers shall be removed/partially removed over a period of five (5) years commencing the construction season following the gondola construction.





- The Waterfall Express Chairlift upper terminal building shall be removed within 24 months of the gondola becoming operational.
- A rehabilitation plan shall be prepared and provided to the Department of Conservation for approval for the disturbed Waterfall Express Chairlift sites. The plan shall include but not be limited to:
 - The reintroduction of fines and seed source material from the site in order to provide a microclimate for plants will generally be required below 1800m asl.
 - Intended visual and ecological result
 - Any new planting
- A monitoring and management plan shall be prepared and implemented to address the potential effects of freedom walkers who access the Ski Area using the proposed gondola. The draft monitoring and management plan shall be provided to DoC for approval within six months of the gondola construction commencing (or earlier). The monitoring and management plan shall include:
 - Locations to be monitored
 - Frequency and method of monitoring
 - Proposed signage and signage locations
 - Proposed marking of existing tracks
 - Procedure to be implemented if adverse effects are identified

11. NOTIFICATION

11.1 RMA Public Notification

Under Section 95A of the RMA public notification of the application is not precluded. Section 95A specifies that a consent application must be publicly notified if it is required to be publicly notified by the District Plan or a rule in a NES, or the Council decides that the activity will have or is likely to have adverse effects on the environment that are more than minor (in accordance with Section 95D) or the applicant requests public notification. The applicant is not requesting public notification and public notification is not required by the District Plan or a NES rule.

Section 95D(a) requires Council to disregard any effect on persons who own or occupy land on which the activity will occur or any land adjacent to the subject site. Also Section 95D(b) allows Council to disregard the effects related to the permitted baseline.

As discussed in section 8 of this report, the adverse effects of the proposal are not expected to be more than minor. This is due to:

- The replacement nature of the proposal replacing the National Downhill Chairlift (17 towers) and Waterfall Express Chairlift (17 towers) with the gondola (14-16 towers) mitigating visual effects and effects on infrastructure demand
- The location of the proposed gondola and terminal buildings the bottom terminal sitting within a dip in the topography and the gondola line being in an area that already contains





chairlifts, and the top terminal adjacent existing built form - mitigating or avoiding adverse landscape effects

- The bottom terminal and most of the towers are to be located on previously modified land mitigating ecological effects
- Construction methods to mitigate ecological effects, such as harvesting and replanting vegetation in disturbed areas
- In regards to cultural effects, written approval from the Paramount Chief of Ngāti Tūwharetoa and Te Rūnanganui o Ngāti Hikairo ki Tongariro has been received
- In regards to safety effects the gondola terminal buildings are outside of lahar paths and the
 many of the existing Waterfall Express Chairlift towers are within a lahar path and will be
 removed. Approximately two gondola towers may be within a lahar path and these will be
 engineered and constructed to withstand a lahar.

An application can also be notified if special circumstances apply. There are no special circumstances that warrant public notification.

11.2 RMA Limited Notification

Section 95B specifies the criteria for limited notification of resource consent applications. The application is not precluded from limited notification by the District Plan or a NES rule.

Under Section 95E Council must determine whether any persons are affected, including protected customary rights groups or persons who have a statutory acknowledgment on the land or adjacent to the proposal.

Under Section 95E(1) of the RMA a person is considered affected in relation to an activity, if the activity's adverse effects on the person are minor or more than minor (but are not less than minor).

Section 95E(3)(a) of the RMA stipulates that a person is not an affected person if the person has given written approval to the activity. The Paramount Chief of Ngāti Tūwharetoa and Te Rūnanganui o Ngāti Hikairo ki Tongariro have provided written approval.

The gondola passes in close proximity to the Ruapehu Ski Club buildings at Hut Flat. The gondola passes behind the lodge building and thereby does not obstruct the view of Mt Ngauruhoe to the northeast from the lodge. The club buildings sit centrally between the two nearest proposed towers. The gondola design has been through many reiterations to address the issues associated with the proximity of the club buildings, including changes to the alignment and the type of lift. The current design provides the optimum separation distance from the lodge buildings and allows the cable to run without cabins at night to reduce ice build-up and the risks associated with it. Written support from Ruapehu Mountain Clubs Association has been provided. Ruapehu Mountain Clubs Association represents 53 club lodges located at Mt Ruapehu (47 or which are located within Whakapapa Ski Area) with approximately 20,000 members – including Ruapehu Ski Club. Accordingly Ruapehu Ski Club is not considered an affected party.

Accordingly the application can be processed and decided on a non-notified basis.





11.3 Works Approval Notification

An assessment of the notification requirements for the Works Approval has been provided to DoC and the removal of two chairlifts in conjunction with the proposed gondola may be considered a special circumstance which allows for the application to be processed without public notification.

12. PART 2 ASSESSMENT

Part II - Purpose and Principles

Section 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 wellbeing 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.
 - b). Safeguarding the life-supporting capacity of air, water, soil, and ecosystems.
 - c). Avoiding, remedying, or mitigating any adverse effects of activities on the environment.

The application is not contrary to the purpose of the Resource Management Act 1991. The proposal demonstrates the sustainable development and use of Ski Area whilst any actual or potential adverse effects on the environment have been avoided, remedied or mitigated. The proposal provides for wellbeing, health and safety.

Section 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:

- (b) The protection of outstanding natural features and landscapes from inappropriate subdivision, use, and development.
- (c) The protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna.
- (e) The relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu and other taonga.
- (h) The management of significant risks from natural hazards.

The mountain is an outstanding natural feature and landscape and accordingly the proposal has been designed to ensure that it does not constitute inappropriate development within an existing modified environment (s 6b). Indigenous vegetation within areas to be disturbed shall be harvested and replanted at the completion of works (s 6c). The relationship of Maori with the mountain is of





national importance and written support from the Paramount Chief of Ngāti Tūwharetoa and from Te Rūnanganui o Ngāti Hikairo ki Tongariro has been provided (s 6e). The risk of natural hazards has been provided for and towers within a lahar path will be designed and constructed specifically for this hazard (s 6h).

Section 7 - Other Matters

Section 7 of the Act requires the Council to have particular regard to the following matters:

- (a) Kaitiakitanga
- (aa) The ethic of stewardship.
- (b) The efficient use and development of natural and physical resources.
- (ba) The efficiency of the end use of energy.
- (c) The maintenance and enhancement of amenity values.
- (d) Intrinsic values of ecosystems.
- (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 project will improve amenity for skiers (s 7c). The amenity value of the area and the quality of the environment (s 7f) will not be degraded by the proposal. The ecological effects have been assessed by Nicholas Singers (s 7d) and the landscape and visual effects have been assessed by Kara Scott (s 7c and 7f). The effects of climate change will be incorporated into the engineer's design for the lahar risk to the relevant towers (s 7i). Kaitiakitanga and stewardship has been recognised with lwi consultation and reiterations to the project in response to cultural values and concerns (s 7a and 7aa).

Section 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 <u>Treaty of Waitangi</u> (Te Tiriti o Waitangi).

The mountain is subject to a Treaty of Waitangi claim. The proposal will not impede or influence the Treaty claim process.

13. CONCLUSION

Resource consent is sought for the gondola project at the Whakapapa Ski Area, Mt Ruapehu. The proposed gondola will replace the National Downhill Chairlift and provides a replacement for the Waterfall Chairlift. Visual and ecological effects have been considered by relevant experts and will be managed and mitigated through various means. The proposal will enhance the recreational values of the Ski Area.



cheal

The mountain is of great significance to tangata whenua. The gondola will be within a modified area and outside of the Tuku. Written support has been received from the Paramount Chief of Ngāti Tūwharetoa and from Te Rūnanganui o Ngāti Hikairo ki Tongariro.

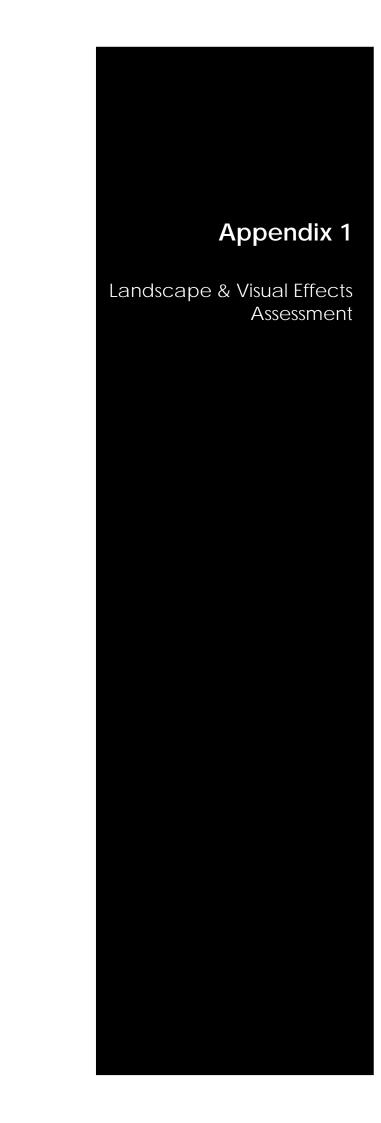
The proposed activity is consistent with the relevant policies and objectives of the District Plan, TNPMP and The One Plan. Public notification is not required under the RMA and written approval has been provided by affected parties.

Overall, we consider the proposal is consistent with Part II of the Resource Management Act 1991 and achieves the purpose of the RMA.

We certify that the information contained herein is in accordance with the requirements of the Resource Management Act 1991, and that the Applicant has a legal obligation to comply with any Conditions imposed should the application be approved.

The lodgement fee for a non-notified Land Use Consent will be provided to the District Council via online banking and it is understood that invoices will be sent to the applicant from Ruapehu District Council and the Department of Conservation for the actual processing fees.

ELLA TENNENT CHEAL CONSULTANTS LIMITED 2 February 2018



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Landscape and Visual Assessment of Environment Effects

Proposed Knoll Ridge Gondola Whakapapa Ski Area

Prepared for: **Dave Mazey, Ruapehu Alpine Lifts Ltd** Private Bag 71902 Mt Ruapehu 3951

Issue; 1/02/2018

Disclaimer:

This document is for internal use and has been prepared using information and data that is sourced from external documents and information from third parties. Where possible, we have attempted to verify the accuracy of this material but accept no responsibility or liability for any inaccuracies or omissions from that material that may affect the accuracy of the assessment or recommendations made in this report. It should not be construed that we have conducted an audit of any of the information used in this report or any of the individuals, companies or organisations consulted while preparing the document.

We reserve the right, but are under no obligation, to revise or amend our report if any additional information (particularly about the assumptions we have relied upon) which exists on the date of our report, but was not drawn to our attention during its preparation, subsequently comes to light.

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Report prepared by:	
	Kara Scott
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Reviewed by:	
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Executive Summary

This report provides a landscape and visual assessment of the proposed Knoll Ridge Gondola extending from the Top of the Bruce Plaza to Knoll Ridge Café, at Whakapapa Ski Area on the western slopes of Mount Ruapehu.

Whakapapa Ski Area is within the Tongariro National Park, a World Heritage Area and an Outstanding Natural Landscape. The Park is recognised for its many values, in particular; cultural, scenic, wilderness, ecological and recreation. Proposed development within the Tongariro National Park must be appropriate for the location, compatible use, and not detract from the ongoing protection of these values. This report assesses the potential landscape and visual effects of the proposed activity.

The proposed gondola replaces the capacity taken by the former National Downhill Chair and Rockgarden Chair. The proposed gondola will become the main access to the Knoll Ridge Café. The Waterfall Express Chair, towers, and top terminal are proposed to be removed to enable efficient and well-integrated access for the Gondola to Knoll Ridge Café.

The proposed gondola is within an existing built part of the ski area – within the amenities area, and within a topographically incised part of the mountain that is less visible to the surrounding landscape. This has benefits from a landscape and visual perspective in ensuring that development of the ski area does not extend into pristine parts of the mountain.

From a landscape character and visual amenity perspective; the site context, limited visibility, and specific design elements of the proposed will result in potential landscape and visual effects being no more than minor.

1 Introduction

Ruapehu Alpine Lifts (RAL) is proposing a new gondola with terminal buildings and cabin storage. The lower terminal building is proposed to be sited between the Top of the Bruce Plaza and the Rangatira Express terminal, and will include the cabin storage area. The upper terminal is proposed to be immediately adjacent to the Knoll Ridge Café. The existing Waterfall Express Chair (which currently services the Knoll Ridge Café) and existing upper terminal building are proposed to be removed. The existing lower terminal building on Hut Flat is proposed to be retained for storage and workshop purposes, and may form part of a future lift upgrade proposal.

The proposed gondola terminal buildings are intended to provide an overall coherent design that complements the existing architecture and infrastructure of the Whakapapa Ski Area. The proposed top gondola terminal building is designed to architecturally integrate with the award-winning design of the Knoll Ridge Café.

The proposal requires an assessment of landscape and visual effects because it is within the highly sensitive landscape of Mount Ruapehu, and the Ruapehu District Plan and Tongariro National Park Management Plan require the landscape and visual effects of large scale proposed buildings, ski lifts, and gondolas to be assessed.

This report provides an assessment of the actual or potential landscape and visual effects of the two proposed terminal buildings and the proposed gondola alignment.

1.1 Assessment Methodology

The landscape and visual assessment methodology used in this report includes:

Background:

- Visiting the site (31 October 2016, and 20 June 2017)
- Photo taking photos in this report were taken during the site visits, plus additional photos taken October 2015, January 2017. The photos are used to visually explain the site context.
 The assessment is not based on the photos alone.
- Identifying the aspects of the proposal that are relevant to assessing potential landscape and visual effects.
- Appraisal of the existing landscape and determining the visual catchment considering the surrounding visual audience and proximity to the site.
- Identifying the relevant planning provisions for assessing potential landscape and visual effects.
- Identifying the potential landscape and visual effects to be assessed.

Assessment:

- Consideration of the potential landscape and visual effects of the proposed activity against relevant policies; to guide the assessment and provide a measure to assess the potential landscape and visual effects. A summary assessment against the relevant provisions is provided in Appendix 1.
- Consideration of the site requirements for the proposed gondola alignment, and specific design measures proposed to avoid potential significant adverse effects.

Specific cultural values are not assessed in this report, as these have been assessed and consulted in a separate process by RAL.

2 Context

2.1 The Site

The site extends from the Top of the Bruce Plaza, over Hut Flat and the Waterfall to Knoll Ridge Café on the western slopes of Mount Ruapehu. This part of the mountain is identified by Department of Conservation as part of the "amenities area", under section 4.2.4 of the Tongariro National Park Management Plan, and in accordance with the National Parks Act 1980. Amenities areas are set aside for public amenities and related services appropriate for the public use and enjoyment of the national park. At Whakapapa, the landscape of the lower amenities area is highly modified, consisting of club lodges, ski lifts and chalets, car parking spaces, cat tracks and chair storage. The density of buildings is highest at the Top of the Bruce Plaza, which is the entry area to the Whakapapa Ski Area.

The proposed gondola will extend approximately 1.8km from the Top of the Bruce Plaza, to the west side of the Knoll Ridge Café. The following image shows the approximate alignment in blue, the terminal points at the Top of the Bruce building to Knoll Ridge Café in red, and the typical incised nature of the topography in between in yellow cross section line. The altitude of the Top of the Bruce Plaza is 1,620masl, and the Knoll Ridge Café is around 2,000masl.

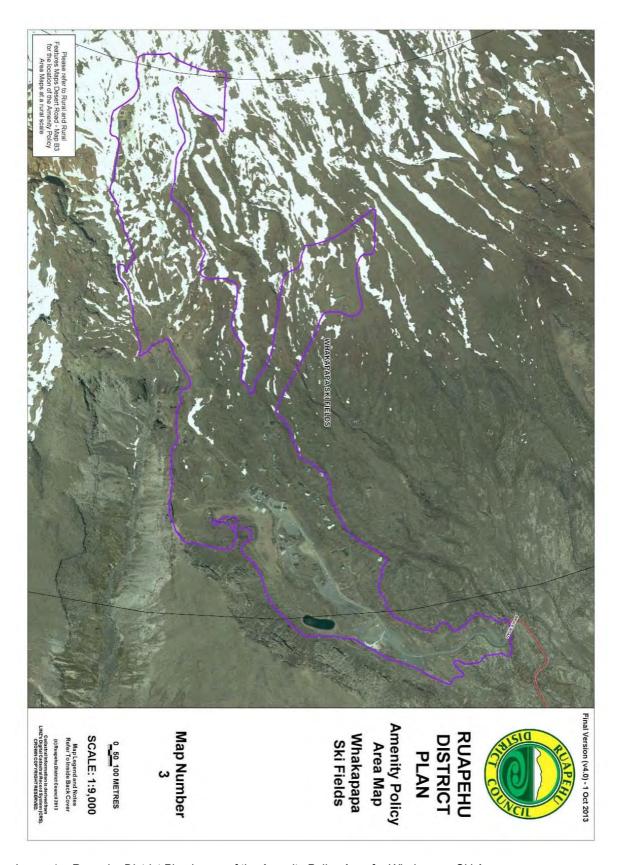


Image 1 – Ruapehu District Plan image of the Amenity Policy Area for Whakapapa Ski Area.



Image 2 – Aerial photo of the entrance to Whakapapa Ski Area showing the Top of the Bruce Plaza at Iwikau Village, and Knoll Ridge Café on the upper mountain.

The Top of the Bruce Plaza is a highly modified part of the ski area with existing visitor buildings and carparking spaces and separated by the turnaround at the Top of the Bruce Road. This area currently has a mixture of administrative buildings, ticketing, café, retail, rentals, and carparking spaces and entrance to ski lifts.



Image 3 – View from the top ski area car park looking south east towards the Top of the Bruce Plaza at the centre, and Happy Valley to the left. Photo taken January 2017. Note the Happy Valley access lift has been constructed since the photo was taken.

TOP OF THE BRUCE TO KNOLL RIDGE

The Top of the Bruce to Knoll Ridge is also a highly modified part of the mountain. While it is less densely developed than the Top of the Bruce area, Iwikau Village extends approximately half way up the slope at Hut Flat, where several mountain club lodges are located. There are also existing ski area facilities, including the Rangatira Express and Waterfall Express Chairs, Delta Quad Chair, terminal buildings, chair and ski area storage facilities. The Rockgarden Chair that has recently been removed formerly aligned parallel with the Rangatira Express, and the proposed gondola follows much of this alignment to Hut Flat. From Hut Flat the proposed Gondola will follow the approximate alignment of the Waterfall Express, except for Hut Flat where it will cross closer to the existing club lodges.



Image 4 – Aerial view to Knoll Ridge Café, and yellow line indicating a cross section of the topography.



 ${\it Image 5-View from Hut Flat towards the Waterfall Express Chair, showing the incised nature of the topography.}$



Image 6 – View from above Iwikau Village viewing west towards the Top of the Bruce Plaza.

2.2 The Surrounding Landscape Character

The surrounding landscape is the western slopes of the outstanding alpine landscape and culturally significant Mount Ruapehu. It is a volcanic landform that rises steeply form the central plateau area, and creates a dominant land feature as the tallest peak in the North Island.

The landscape character within the surrounding vicinity of the site is a moderately built environment. The wider area is populated with ski chalets, club lodges, ski area infrastructure, roading carparking, and cat tracks. The buildings have been individually constructed at various times; the ski chalets by RAL, and the club lodges by individual club groups. The resulting character is somewhat ad hoc with various styles; however, the buildings tend to have similar characteristics. These are; dark colours that integrate with the summer landscape, weathered natural materials such as wood and stone, and dark roof colours.

New and replacement buildings being constructed by RAL in the Whakapapa Ski Area are being designed with a consistent suite of materials; which are primarily iron sand colour steel, corten steel, precast concrete, weathered timber, and measures to reduce glass reflectivity. As a result, more consistency and design narrative of buildings is beginning to emerge at Whakapapa Ski Area with a mountain vernacular. This has a significant landscape and visual benefit of integrating building structures with the overall outstanding mountain landscape.



Image 7 - Photo showing the east side of the Knoll Ridge Café, and an example of the suite of materials being used on the Whakapapa Ski Area buildings – dark iron sand colour steel, weathered timber cladding, corten steel, tinted windows. Photo taken October 2015.

2.3 Visual Catchment

TOP OF THE BRUCE PLAZA AREA

The lower parts of the mountain tend to have a confined visual catchment due to intervening surrounding topography. Iwikau Village is generally visually confined to the immediate surrounding area due to the incised nature of the landform particularly around the Top of the Bruce Road area, and some very intermittent and distant views to State Highway 47.

The main viewing audience to the Top of the Bruce Plaza is the immediate surrounding car parking area on the Bruce Road, and views from the above club lodges.

TOP OF THE BRUCE TO KNOLL RIDGE

The visual catchment of the area from the Top of the Bruce to the Knoll Ridge varies considerably with location and elevation. From the Knoll Ridge Café, views extend to State Highway 48 (Bruce Road) and beyond. From these locations, the Knoll Ridge Café becomes discernible by eye only when approaching the Chateau Tongariro building some 6.4km away. Beyond this the building is visually difficult to detect. From this location, the lower part of the ski area from Knoll Ridge to the Top of the Bruce along with lwikau Village is obscured by intervening topography.

The nearest view when ascending the Bruce Road, is at Scoria Flat where the Knoll Ridge Café, along with the Waterfall Express Chair and Iwikau Village is located around 3.6km away. Here the Ski Area operations gradually become more visible within the incised valley extending between the two areas.



Image 8 - Google Earth image of the west slopes of Mount Ruapehu, showing the approximate visual catchment (shown in pink outline) from the site (shown by red circles).



Image 9 - Photo from State Highway 48 viewing towards Mount Ruapehu and the Chateau Tongariro. Knoll Ridge Café is highlighted with a small red circle.



Image 10 - Photo from The Bruce Road near Scoria Flat to upper Mount Ruapehu. Knoll Ridge Café and Top of the Bruce Plaza is highlighted with a small red circle.

3 The Proposal

3.1 Proposed Activity

BOTTOM TERMINAL AT THE TOP OF THE BRUCE PLAZA

The proposed bottom terminal building sits between the Rangatira Express terminal and Lorenz's Café building in the Top of the Bruce Plaza. It incorporates cabin storage into the lower level. The cabin storage level is proposed to be situated below existing ground level. The building utilises the same suite of materials for the Whakapapa Ski Area landscape. This includes weathered timber

cladding, dark tinted precast concrete, ironsand colour steel roofing and cladding, accents of corten steel, and mesh screens over glass faces to assist in reducing glass reflectivity, as well as protect glass areas from weather.



Image 11: Architect's impression of north-west elevation bottom terminal building adjacent to the Rangatira Express terminal at Top of the Bruce Plaza. Note the gondola cabins and towers are not shown in this image, and the elevator is shown as an impression.

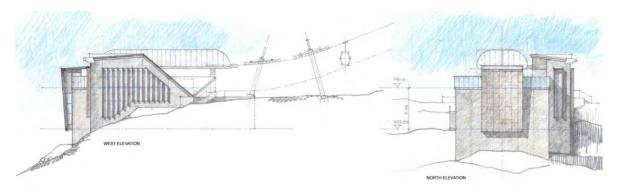


Image 12 - Architect's sketch of the proposed bottom terminal and chair storage building west and north elevations.

GONDOLA ALIGNMENT

The proposed gondola chair will consist of 15-16 tubular towers ranging in height from 9.7m to 21.5m high with an average of 15.37m. The proposed alignment generally follows the former Rockgarden Chair and Waterfall Express Chair alignment (to be removed). The gondola will require one wire per direction – two overhead wires.



Image 13: Example of gondola proposed for Whakapapa Ski Area.



Image 14: Photo from The Bruce Road near at the entrance to Iwikau Village, showing approximate location of the proposed gondola alignment in red line.

TOP TERMINAL BUILDING AT THE KNOLL RIDGE CAFÉ

The alignment requires a new top terminal building. The proposal is for this terminal to be adjacent to the west side of the existing Knoll Ridge café. The terminal structure will be approximately 8.5m high at its southern extent, and higher on the northern approach where the ground drops away. The ground level will be raised with rocks at the northern end of the terminal.



Image 15: Architect's impression of north-west elevation towards the existing Knoll Ridge Café (left) and proposed top chair terminal building to the right.



Image 16: Architect's drawing of north elevation towards the existing Knoll Ridge Café (behind) and proposed top chair terminal building (front).



Image 17: Architect's drawing of north elevation towards the existing Knoll Ridge Café (behind) and proposed top chair terminal building (front).

Specific design elements have been incorporated into the proposed buildings to maintain the suite of materials for the Whakapapa Ski Area landscape. This includes weathered timber cladding, ironsand colour steel roofing and cladding (including roller doors), timber fins over windows, and accents of corten steel.

The proposed gondola towers are to be painted ironsand to blend with the summer landscape.

The top terminal of the Waterfall Express Chair will be removed. The Waterfall Express Chair top terminal is currently located near the Knoll Ridge Café and the proposed gondola top terminal.



Image 18: Waterfall Express Chairlift Top Terminal Building to be removed (photo supplied by Ross Copland)

3.2 Planning Context

The relevant planning provisions are the Ruapehu District Plan and the Tongariro National Park Management Plan.

In summary the relevant landscape and visual considerations are:

- The protection of outstanding natural features and landscapes from inappropriate development within the Ruapehu District Plan and protection of conservation areas in the Tongariro National Park Management Plan.
- The functional, technical, and operations constraints of activities within outstanding natural features and landscapes.
- Recognition and provision for operation, maintenance and upgrading of existing infrastructure within outstanding natural features and landscapes.
- Proposed works to conform to the Indicative Development Plan.
- Proposed buildings located within the anticipated Amenities Area of the Tongariro National Park Management Plan.

3.3 The Whakapapa Indicative Development Plan 2011

Section 10 of the Whakapapa Indicative Development Plan signals a proposed gondola in the west area of the ski area that replaces the capacity of the former National Downhill Chair. This alignment was investigated and no longer considered desirable. From a landscape and visual perspective; the current proposal to align the gondola from the Top of the Bruce Plaza to the Knoll Ridge Café is considered far more beneficial. This is because the current proposed alignment is retained within the existing amenities area; whereas the former proposed western alignment in the indicative development plan moved into an undeveloped part of the mountain. This former alignment also proposed a new café and therefore more infrastructure within an unbuilt part of the mountain. The current proposed alignment utilises the existing Knoll Ridge Café and therefore minimises the level of built development. The proposed alignment effectively replaces the alignment of the former Rockgarden Chair, and proposed removal of the Waterfall Chair towers and upper terminal enables the gondola to be constructed with the lowest profile practicable.

3.4 Potential Adverse Landscape and Visual Effects

The relevant actual or potential effects of the proposed development are;

- Landscape and Visual effects of new proposed terminal buildings where they do not currently exist.
- Landscape and Visual effects of the gondola cabins and larger towers than currently exists.

Landscape and visual effects will also arise from the removal of the Waterfall Express towers and upper terminal building.

4 Assessment of Landscape and Visual Effects

4.1 Bottom Terminal and Cabin Storage Building Top of the Bruce Plaza – Potential Landscape and Visual Effects of New Building

The proposed bottom terminal and cabin storage building is considered appropriate in this instance. The reasons for this are:

- 1. the proposed building is appropriately located in an area of the mountain that is set aside for intensive Ski Area infrastructure,
- the proposed building combines compatible uses (cabin storage, loading and unloading) under one roof as opposed to being disjointed throughout the plaza, and

 the proposed building utilises a design and suite of building materials bespoke to the Whakapapa Ski Area, improving on the ad hoc nature of the existing plaza buildings.

The proposed development overall is located within the amenities area of the Whakapapa Ski Area. Policy 5.2.1.2 of the Tongariro National Park Management Plan is for all major infrastructure including buildings to be located within this amenities area (while exception is made for ski lifts). The proposed development is consistent with this policy.

The Top of the Bruce Plaza is within a visually confined location. While at a higher elevation on the mountain – the Plaza area is not easily visible to the wider viewing areas beyond the Ski Area, due to intervening topography being within an incised valley. The Top of the Bruce Plaza, and therefore the proposed lower terminal building; is mainly visible to the immediate surrounding area and is viewed in the context of the more intense development of lwikau Village – including club chalets, roading and parking, ski infrastructure and existing ski area buildings.

The proposed site is a brown field development – it is already highly modified. The proposed development – while introducing a new building – will be limited to the existing modified area and will not result in pristine areas of the mountain being affected. Objective 5.2.3 of the Tongariro National Park Management Plan is to concentrate the intense land use of base areas on already-disturbed areas, and Policy 5.2.3.13 is for new developments in the base area to modify a minimum area of natural topography consistent with planned functions. The proposed development is consistent with this policy.

4.2 Gondola Alignment - Potential Landscape and Visual Effects of New Alignment

The proposed gondola will introduce a new chair lift alignment, where one does not currently exist. The lift will replace the capacity formally taken by the former National Downhill Chair, and is in a similar location to the Rockgarden chair that has been removed, and the Waterfall Express Chair, which is to be removed.

The proposed gondola alignment is considered appropriate in this instance. The reasons for this are:

- the proposed gondola is within the amenities area and an already modified part of the mountain,
- 2. the proposed alignment is within an incised valley that is mostly visually obscure from the surrounding Tongariro National Park, and
- 3. the proposed alignment results in the area formally utilised as the National Downhill Chair to remain as a restored part of the mountain.

The proposed gondola is located within the amenities area of the Whakapapa Ski Area. Policy 5.2.1.2 of the Tongariro National Park Management Plan is for all major infrastructure to be located within this amenities area (while an exception is provided for ski lifts). The proposed gondola is consistent with this policy.

The area between the Top of the Bruce and Knoll Ridge is a relatively visually confined location. The lower part of the proposed gondola to Hut Flat follows a similar alignment to the former alignment of the Rockgarden Chair. This will be mainly visible to the immediate surrounding area and is viewed in the context of the more intense development of lwikau Village – including club chalets, roading and parking, ski infrastructure and existing ski area buildings. The potential adverse landscape and visual effects on these users are therefore considered to be no more than minor.

The proposed gondola alignment from Hut Flat to Knoll Ridge is visually confined to the area surrounding the incised valley. This part of the alignment will have a greatest visual effect on users of the ski area and club lodges around the Hut Flat area. Here the towers will be more dominant to this visual audience when compared to the current ski infrastructure in Hut Flat. While this has the potential to have a negative impact from this viewing location, the towers will be viewed in the context of the existing ski area operations. This has a wider landscape benefit when compared to aligning the proposed gondola to a currently undeveloped part of the ski area – as was originally proposed in the indicative development plan.

The visual effects of these towers will be confined to the incised valley area surrounding the Waterfall, and not clearly seen to wider viewing audience due to intervening topography and distance. The proposed towers are tubular and painted ironsand to assist with integrating with the summer landscape. Painted tubular towers also minimise the more industrial character that lattice towers can have in the landscape.

The Waterfall Express Chairlift is comprised of seventeen towers between its terminals at Hut Flat and Knoll Ridge. Within the same area the gondola will have up to eight towers. The Waterfall Express Chair and upper terminal are to be removed and so there will be a net decrease in the number of towers within this area. This will have a benefit in landscape and visual terms to the level of infrastructure in this part of the Ski Area.

4.3 Top Terminal Building at Knoll Ridge Café - Potential Landscape and Visual Effects of New Building

The proposed top terminal is considered appropriate in this instance. The reasons for this are:

- 1. The proposed building is within the amenities area and an already modified part of the mountain.
- 2. The proposed building is designed to fit cohesively with the existing Knoll Ridge Café and places the infrastructure within one area.

3. The proposed building location results in the area formally utilised as the National Downhill Chair to remain as a restored part of the mountain.

The proposed top terminal location adjacent to the Knoll Ridge Café building will increase the bulk and scale of the existing café building. This is designed to architecturally fit cohesively with the café building through consistent use of materials and design elements. The connection to the Knoll Ridge Café ensures that undeveloped parts of the ski area are not impacted by new buildings. The removal of the Waterfall chair will result in the removal of the current top terminal building, which will further reduce the visual effect of separate building structures on prominent parts of the mountain. The Waterfall Express Chair was constructed in the 1980s and is more utilitarian with less sensitive landscape design that the Knoll Ridge Café and proposed gondola terminal building.

The proposed Gondola Top Terminal structure utilises sensitive building materials and design for the outstanding mountain landscape – as utilised on other new built structures in the Ski Area. This includes ironsand coloured colour steel, weathered timber cladding, timber fins over windows, and concrete panels. The overall character integrates with the mountain summer landscape, and like the Knoll Ridge Café; will sit equally well in the winter landscape. The Tongariro National Park introduction statement to Building Development notes:

Buildings should be finished in natural and low-reflectivity materials and foundations. Walls or piles should be screened. Colour finish will be in accordance with the Tongariro National Park Building Code. Sensitive treatment of the landscape around buildings is required, to integrate buildings visually with the summer landscape.

The proposed materials and design elements of the Gondola Top Terminal structure are consistent with this statement.

5 Conclusion

The proposed Knoll Ridge Gondola and terminal buildings replace existing lifts and buildings that have been developed in an ad hoc manner.

The proposed development is at the entrance to the ski area at Iwikau Village up to the existing Knoll Ridge Café; this part of the mountain is highly modified and is visually confined to the viewing audience in this location. This has benefits from a landscape and visual perspective in that the proposed development – although larger in scale than what currently exists; is in an area set aside for development for the purposes of public enjoyment of the National Park.

The proposed design uses the same suite of design materials used on other new structures at Whakapapa – such as the Knoll Ridge Café – to reinforce the sensitive design of built structures in the outstanding landscape of Mount Ruapehu.

The proposal will be viewed in the context of the existing densely built character of lwikau village, and will not affect pristine parts of the National Park. Iwikau Village and the amenities area is the appropriate location for this type of activity to occur.

The proposed gondola will introduce a new chair lift alignment, where one does not currently exist, however it is near the removed Rockgarden Chair and existing Waterfall Express Chair which is proposed to be removed. The lift will replace the capacity formally taken by the National Downhill Chair that has since been removed. Also, the Waterfall Express Chair towers and top terminal will be removed. The proposed removal of the Waterfall Express Chair and top terminal will enable overall better integration of the gondola development with the site on more prominent parts of the mountain, and results in a net reduction in the number of towers.

While the proposed gondola alignment is new, it is considered appropriate in this instance. The reasons for this are:

- 1) the proposed gondola is within an already modified part of the mountain in the main part of the ski area.
- 2) the proposed alignment is within an incised valley that is mostly visually obscured from the rest of the surrounding Tongariro National Park, and
- 3) the proposed alignment results in the area formally utilised as the National Downhill Chair to remain as a restored part of the mountain.

From a landscape character and visual amenity perspective; the site context, limited visibility, and specific design elements of the proposed development will result in potential landscape and visual effects being no more than minor.



Whakapapa Gondola: Ecological Assessment

Prepared for: Ruapehu Alpine Lifts





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Date: December 2017

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Executive Summary

This report has been prepared for Ruapehu Alpine Lifts. The report describes the ecology of the proposed Gondola alignment within the Whakapapa Ski Area and assesses the ecological effects of this infrastructure development project on the area. It is expected that due to the small foot print of construction, the siting of buildings in un-vegetated areas, and the siting of towers in previously disturbed areas, there will be near minimal direct impact. With potential increase in summer use of the Gondola some additional indirect impacts on vegetation and soils may occur from walkers, which could accumulate over time. As such it is recommended that visitor impacts are managed to ensure minimal off-track use to avoid vegetation damage.

Introduction

Ruapehu Alpine Lifts Ltd (hereafter referred to as RAL) operate the Whakapapa Ski Area. The Whakapapa Ski Area is located on the north western side of Mt. Ruapehu, an active andesitic volcano of at least 200,000 years age (Molloy & Smith 2002). The Ski Area is approximately 500 hectares in size (DOC 2006). The 10 year plan for the Whakapapa Ski Area (RAL 2011) proposes several multi-million dollar investments upgrading ski-lifts and developing new snow-making infrastructure. One development currently in the planning stages is a 1816 m gondola which starts immediately northeast of the "Top of the Bruce Café" and rises to approximately 2014m a.s.l. to the Knoll ridge café (Figure 1).

The gondola will have return stations at either end, with sixteen towers at regular intervals. The bottom return station will be situated on land previously modified by past developments with minimal ecological value while the gondola towers and top return station and will be situated within previously disturbed areas or intact alpine habitat.

The Environment and Ecology

Situated between approximately 1631 m and 2014 m a.s.l. the gondola alignment is entirely within the high alpine environment and experiences cold average temperatures, frequent frosts which occur in all months of the year (Scott 1977) and a very short growing season. Rainfall is frequent and comparatively high being exposed to the prevailing westerly flows — and likely to be considerably greater than the 2914 mm average at Chateau Tongariro at 1119 m a.s.l. (Atkinson 1981). Rainfall events are often intense and in combination with the steep terrain result in high levels of soil disturbance along the numerous (mostly) ephemeral streams and channels. Outside of summer, precipitation often falls as sleet and snow and during winter, the Ski Area is covered for many months with snow.

The area is naturally dynamic and is frequently, wholly or partially disturbed by volcanic activity such as being covered in volcanic ash during eruptions. Lahars from Mt Ruapehu Crater Lake also occur within the catchments of the Whakapapanui and Whakapapaiti Streams and areas which experience lahars or flash floods are almost entirely devoid of plant life.

The physical terrain is highly varied with areas of bare lava bed rock and lava bolder-fields, cliffs and areas of accumulated scoria and ash in the small areas of low gradient terrain. Bare rocks and boulders are a dominant feature especially at higher altitude and can comprise more than 80% of the surface cover. Vegetation is only common adjacent to and between boulders where soil depth is

greatest, and where some protection from the environment is provided. Vegetation is stunted being less than 20cm high and composed of a small number of species capable of growing in high alpine conditions. The soil is raw and composed of andesitic ash and scoria, emitted during eruptions along with fine wind-blown particles, and has very little organic matter. Soils are of low to very low fertility and are moderately acidic due to the inputs from eruptions. Despite being extremely free draining, periods of moisture deficit almost never occur (Scott 1977).

A site investigation was undertaken to assess ecological concerns specifically what indigenous species are present around the existing structures and to consider potential effects of construction on ecological values present including following construction. This was undertaken considering the ecological values at Whakapapa Ski Area. Several recommendations have been made.

Ecological Assessment Methodology

Two separate ecological assessments have been used to describe the vegetation pattern and ecology of the area.

For a previous ecological assessment for a proposed gondola (Singers & Bayler January 2017), vegetation was sampled along the altitudinal gradient on the approximate gondola alignment, from the "Top of the Bruce" to approximately 2000 m a.s.l. In this assessment vegetation was both quantitatively sampled and qualitatively assessed while walking along the alignment. Plots were initially located remotely on mapped contour lines at 20 m contour intervals (using GIS) along the length of the alignment. This method was undertaken because the exact location of tower foundations was not known and a broader understanding of vegetation changes was required.

This study has been included in this report because it is highly informative in describing the vegetation pattern, e.g. vegetation cover, plant diversity in relation to altitude and landform variability.

Current Assessment

Vegetation sampling was undertaken at the approximate location of the gondola tower foundations and returns station buildings. Vegetation sampling occurred with 10 x 10 m reconnaissance description plots (Recce plots) were made at the GPS locations of the tower foundations. Recce plots are a standard field protocol used for describing the structure and composition of a diverse range of vegetation types. At each plot plant species diversity, vegetation height, vegetation cover in height tiers, aspect, slope, altitude, substrate and drainage are recorded. In addition, characteristics detailing the condition of the vegetation were also recorded, such as animal browse as these can be important in the analysis of the vegetation patterns (Hurst & Allen, 2007).

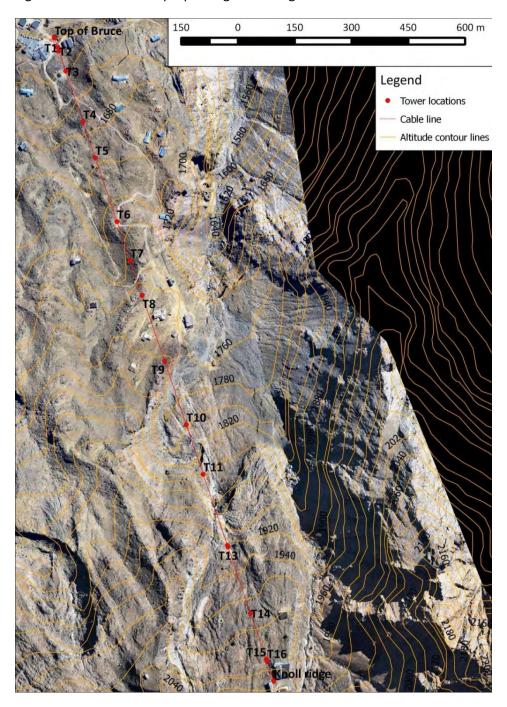
In the field, plots were located to approximately +/- 3 m using a handheld Garmin Rino GPS unit. Slope and aspect were measured for all plots using a hand held clinometer and a compass.

Tower sites from T1 to T10 were visited. Towers 11 to 16 were not visited because the previous assessment (Singers & Bayler January 2017) had shown that above 1800 m a.s.l. and specifically on lava pavement and scoria-fields, there is less than 1% of vegetation cover. For this reason these tower sites were not assessed.

Analysis of vegetation pattern was investigated including:

- Species diversity along the altitudinal gradient
- Vegetation cover along the altitudinal gradient
- Differences in vegetation communities with respect to environmental variables including slope, aspect, and soil/rock cover.
- Species present and cover at the location of tower foundations.

Figure 1: Location of the proposed gondola alignment towers and return stations



Results

General vegetation pattern

(from Singers & Bayler January 2017)

Two broad trends are apparent related to altitude and the combined factors of slope and corresponding parent materials. Plant species cover and diversity are influenced strongly by altitude and both measures decline with increasing altitude as the tolerances of species to high alpine conditions restrict their occurrence. At 1640 m the total vegetation cover was recorded at 40%, made up of 17 species, while above 2000 m a.s.l vegetation cover was less than 1% made up of only five species.

Slope and the corresponding differences in surface parent material also strongly influence both plant diversity and cover. Flat "scoria-fields" sites (<5° slope) are largely non-vegetated with an average cover of 92% of non-vegetated parent materials of which sand (volcanic ash) and scoria are abundant. Three plots sampled flat sites below 1770 m a.s.l and on average only had a total vegetation cover of 8.7%. Conversely, on steeper slopes which ranged from 6 to 30° slope, parent material cover still averaged 75% though, largely andesitic lava boulders and bed rock and limited sand and scoria. In these communities total vegetation cover averaged 25%, and below approximately 2000 m is dominated by curled leaved neinei (*Dracophyllum recurvum*), mountain snowberry (*Gaultheria colensoi*) and bristle tussock (*Rytidosperma setifolium*). Curled leaved neinei is the most common plant in this community ranging from 3 – 16% cover, with lesser proportions of mountain snowberry and bristle tussock. On andesitic lava pavement and above 2000 m very little vegetation is present. On lava pavement vegetation only occurs within cracks and fissures in the rock, though red lantern moss (*Andrearea rupestris*) and crustose lichens are attached to bare lava.

Current Assessment

The return stations are both located in areas with little or no vegetation. The bottom return station occurs on a formed track, while the top return station is on scoria field at the uppermost limit of vascular plants. All towers (T1–T10) assessed occur in previously modified areas with little or no vegetation cover (See Appendix). Towers 11 to 16 were not sampled.

The high alpine vegetation communities sampled are indigenous dominant, occupied by a relatively species poor community of plants adapted to high alpine environmental conditions. A total of 11 species of high alpine adapted indigenous plants were recorded. No exotic plants were observed.

Bristle tussock, mountain carrot (*Anisotome aromatica*), *Brachyglottis bidwillii* and snowberry (*Gaultheria colensoi*) were found in four out of the ten plots measured. The vegetation at tower site 10 had the highest species diversity with nine species recorded. Tower sites 4 and 9 and 10 had the highest vegetation cover at 9% and 5%, all other tower had between 0 and 2% vegetation cover.

Table 1: Physiogeography of the proposed gondola tower sites (habitat; DV = developed, M= modified habitat, DR = *Dracophyllum* rockland, BF = boulderfield, SF = scoriafield).

	Base	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Knoll
Habitat		DV	DV	DV	M/SF	М	DV	BF	M/	M/	DV							
									DR	DR								
Approximate		1620	1620	1640	1670	1687	1736	1751	1770	1785	1803	1840	1920	1920	1970	1995	1995	2010
altitude (m)																		
Aspect							0	240	80	350	300							
Slope					<2	<2	<2	23	7	<5	<5							
Total un-					91	99	98	98	98	95	95							
vegetated																		
cover %																		
Scoria/sand					75	9	28	30	50	15	65							
Boulders/					15	90	70	68	48	80	30							
lava																		
Total		0	0	0	9	<1	2	2	2	5	5							
vegetation																		
cover %																		

Table 2: Plant species recorded and cover in Recce plots at tower sites (✓ = present but less than 1%).

Species name	Common name	Tower site															
		T1	T2	T3	T4	T5	T6	T7	T8	Т9	T10	T11	T12	T13	T14	T15	T16
Anaphalioides	ever-lasting daisy								✓	✓	✓						
bellidioides																	
Anisotome aromatica	mountain carrot							✓	✓	✓	✓						
Brachyglottis bidwillii					1%		✓	✓	✓	✓							
Celmisia spectabilis	mountain daisy				✓						√						
Coprosma perpusilla																	
Dracophyllum	curved leaved				2%	✓											
recurvum	neinei																
Epilobium glabellum	willowherb																
Euphrasia cuneata	eyebright																
Gaultheria colensoi	snow berry				✓	✓	✓		1%	2%	✓						
Gentianella bellidifolia	gentian					✓		✓		✓	✓						
Kelleria dieffenbachii	native thyme																
Luzula crinata																	
Parahebe spathulata																	
Poa colensoi	blue tussock							✓			1%						
Raoulia albosericea	silver raoulia																
Rhacomitrium	woolly moss				2%		1%		✓	1%							
lanuglosum																	
Rytidosperma	bristle tussock				4%	✓		1%	✓	1%	1%						
setifolium																	
Wahlenbergia	harebell																
рудтаеа																	

Assessment of significance of habitat

This development proposal was assessed using the very recent Department of Conservations Guidelines for Assessing Ecological Values (Davis *et.al.* 2015). These guidelines are aimed at assisting DOC staff to assess ecological values in a consistent and robust way. However, the guidelines are not specific to DOC, as the approach outlined can be used by others involved in ecological assessments (e.g. councils). The assessment has entirely been assessed on the values of the vegetation and plant communities present because very limited fauna occurs at this altitude and the species known to occur here are primarily common and or mobile species so are unlikely to be affected (e.g. alpine grasshoppers and pipit).

This process identified that the surrounding area is significant and while the method is not designed to rank significance (on a numerical scale), would likely would be placed as being highly significant because two criteria scored high, two criteria scored medium and one criteria scored low. This is unsurprising given that the development is within a national park of high ecological integrity. Whilst the area surrounding the tower sites is highly significant, great care has been taken with the siting of towers to place them in areas where there has been previous development and vegetation loss and/or natural rock/ scoria gaps.

The five criteria used for this assessment process were:

- i. representativeness,
- ii. diversity and pattern,
- iii. rarity and special features,
- iv. naturalness, and
- v. ecological context.

The three management criteria — Long term viability, Fragility and Threat and Management Input were not assessed. The criteria and justifications for their significance score is presented below.

Representativeness — Low to High

Justification = general off track/trail plant communities/habitat present on the gondola alignment are entirely typical and expected of high alpine Mt. Ruapehu vegetation and are essentially climax alpine communities. However both return stations and towers occur in previously modified vegetation which have very limited cover or are devoid of high alpine vegetation.

<u>Diversity and Pattern — Low to Medium</u>

Justification = the plant communities/habitat along the Gondola alignment are native dominant but are composed predominantly of two species poor communities, "curled leaved neinei rockland" and "scoria-field". Modified areas lack ecological diversity and natural pattern.

Rarity and Special Features – Low

Justification = the communities/habitat are species poor and are dominated by relatively common and widespread species that occur in the high alpine ecosystem on Mt Ruapehu.

Naturalness – Low to High

Justification = Unmodified plant communities/habitat present are almost entirely native dominant and are ecologically functional with negligible pressures or threats from introduced weeds, animal pests or human pressures. Infrastructure (towers and return stations) have for the most been located in modified areas or areas of minimal vegetation cover.

Ecological Context – Low to Medium

Justification = the plant communities/habitat present are part of a much larger area of identical or similar habitat present above the tussock-line on Mt Ruapehu.

Determination of effects

The Gondola development project consists of a lower terminal at the top of the Bruce, up to 16 towers to support the cable lines, and an upper terminal at Knoll Ridge.

The lower terminal will be sited entirely in a developed/modified area of compacted gravel/ base course material. The area has high visitor use and almost no natural values and as such its construction will have no loss of ecological values.

Towers (1, 2, 3, 6 & 10) occur in an essentially non-vegetated developed habitat. Towers (4, 5, 7, 8, & 9) have also had some localised modification or have very low vegetation cover. Towers (11–16) occur in the very high alpine zone above 1800m a.s.l where vegetation is very limited in cover (<1%) and diversity.

Tower structures have a concrete foundation of approximately 5 x 5 m³ or where they coincide with outcrops or solid rock will be bolted on directly to this without the need for any excavation. Construction involves firstly removing all vegetation from the affected zone, which includes the foundation and an approximate 3 m radius surrounding it, which is required space for construction and temporary storage of fill. The area of excavation at each tower site is likely to be approximately 8 x 8 m. Very limited vegetation will need to be relocated though some clumps around tower 4 may need to be removed. Any vegetation moved will need to be "heeled-in" and covered with shade cloth to reduce evapotranspiration which has shown in past development projects to be very effective at assisting relocated plants to establish. It is expected from past developments that minimal plant death will occur following this process.

During construction excavated material will be loaded into large woven industrial plastic 1 m³ fadges. These will be stacked on top of each other, to minimise the actual area impacted. In total approximately very limited (estimated <200 m²) of high alpine vegetated habitat will be disturbed or occupied by the tower footings. Once the foundation is built, excavated fill will then be relocated around the towers or used elsewhere where fill is required.

The upper terminal will be attached to the Knoll Ridge Café. The footprint of the upper terminal is approximately 685 m^2 in size. The terminal will be located on largely non-vegetated rock so will have minimal environmental impact.

Significance of effects

The assessment of significance has identified that the high alpine habitat and plant communities present within the general environment around the proposed development are ecologically significant, but the loss of habitat dominated by high alpine vegetation is very small, < 200m², especially compared to the extent of identical or similar habitat within the wider national park. Towers have been sited to places of very low vegetation cover, most of which have either been previously developed or modified. For this reason the impact is very minor. The upper terminal has very limited vegetation cover and habitat being largely non-vegetated. Further the construction methodology involving removal and re-siting of affected vegetation will remedy most of the direct impact.

While this development will be mostly used for winter snow sports, it does have the potential to increase (unplanned) foot use of currently unmodified and highly ecologically significant parts of the Whakapapa Ski Area. Recreational walkers will inevitably be drawn to the edge of spectacular places, such as the amphitheatre, and then may also choose to walk down hill to Hut Flat and Iwikau Village via the existing track east of the amphitheatre or by making their own way. Over time the accumulated effects of freedom walkers here could result in loss of vegetation through repeated foot damage of plants, informal tracks developing and potentially exacerbating erosion.

Human physical foot damage is the greatest impact on high alpine vegetation within the Whakapapa Ski Area, though currently is largely contained to a few high use sites. The alpine plants present are extremely sensitive to foot damage and are easily killed with repeated trampling. Consequently while the ecological impact of the construction of the gondola is minimal, there is potential for increasing impacts overtime due to unmanaged freedom walkers. It is noted that there is already extensive freedom walking over the Ski Area in summer and an increase in summer visitors due to the gondola could exacerbate this. An example of significant foot damage and erosion was seen on the informal track on Yankee Ridge up from Hut Flat in our previous report (Singers & Bayler, 2017). Anecdotally the extent of this vegetation damage and soil erosion appears to be increasing since 2013 (Singers 2013) and is an example of what could occur more widely in future without careful management of freedom walkers. Figure 2 highlights that there is not a well-defined track for walkers and the width of damage is much wider than what a typical track width would be. Although Knoll Ridge is naturally relatively devoid of vegetation and the proposed gondola will provide direct access to Knoll Ridge from the Top o' the Bruce without stopping at Hut Flat, there is still a risk that increased foot traffic will cause significant levels of erosion.

Recommendations

- Any vegetation that needs to be moved be "heeled-in" in suitable habitat close by and covered with shade cloth to reduce evapotranspiration. This has been shown in past development projects to be very effective at assisting relocated plants to establish.
- Coordinate with the Department of Conservation with regards to freedom walkers to manage and minimise damage for the whole Ski Area, especially in such heavy usage areas as Mead's Wall.
- Improved signage and marketing encouraging summer users to "tread lightly" and keep to formed tracks and poled routes.

Figure 2: Severe erosion from casual walkers, Yankee Ridge. Photo 5th January 2017.



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Appendix: Photos

Figure 3: Looking towards Tower sites 1 and 2. The area is completely modified.



Figure 4: Tower site 3. Entirely developed site.



Figure 5: Tower site 4. Tower is to be located within non-vegetated, modified area (centre). The site has probably been affected by past development. Around the outside of the tower site are clumps of woolly moss, bristle tussock, mountain daisy, snowberry and *Brachyglottis bidwillii* growing in ash/scoria soil.



Figure 6: Tower site 5. Site has been totally modified by past development.



Figure 7: Tower site 6. 2% cover of *Brachglottis bidwillii*, snowberry and woolly moss around edges. Site has been impacted by past development.



Figure 8: Tower site 7. Boulderfield of limited vegetation cover (2%) of mountain carrot, *Brachyglottis bidwillii*, gentian, blue tussock and bristle tussock.



Figure 9: Tower site 8. Located at the top of ridge in a highly modified site consisting mostly of subsoil with limited vegetation cover (2%).



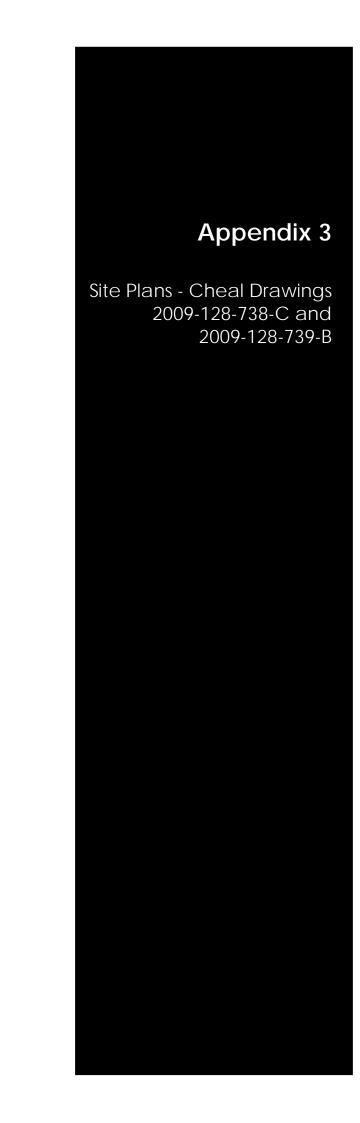
Figure 10: Tower Site 9. Ridge top with high levels of erosion, possibly modified by previous construction. Vegetation cover of 5%.



Whakapapa Gondola: Ecological Assessment. Prepared for Ruapehu Alpine Lifts. © Nicholas Singers Ecological Solutions Ltd. NSES Ltd Report 29:2017/18, December 2017.

Figure 11: Tower site 10. Possibly the site of previous construction as it appears disturbed. Dominated by compacted boulders/ gravel. Vegetation cover 5%. This site has the highest diversity of species.









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Asbuilt utilities may have other services in close proximity which are not shown for the purposes of this plan.

Reduced Levels are in terms of Moturiki Vertical 1953 Origin : IS 1 (Workshop) R.L. : 1546.35m

Alignment position is preliminary.

See plan series 2009-128-730-737 for Proposed Gondola alignment long sections

Potential Lahar routes have been digitised from the Otway et. al. report (1995)

Proposed Gondola Tower positions are preliminary and have been taken from Leither-Poma of America drawing P50206, dated September 2017.

Proposed Top and Bottom Station locations have been taken from from Leither-Poma of America drawings P50206 and US3040.474 Rev G.



5m Contour interval

С	11/10/17	Towers and Lahar Path added	MR	AGM	ET
В	21/09/17	Load level amended	MR	AGM	AGM
Α	20/09/17	Information	MR	AGM	AGM
Rev	Date	Amendment	Ву	Chk	App

Project Title

Ruapehu Alpine Lifts Ltd Bruce Road Mt Ruapehu

Proposed Alignment 11

Surveyed			1
Designed			
Drawn	M. Ryder	20/09/17	MR
Checked	A. Moss	20/09/17	AGM
Approved	A. Moss	20/09/17	AGM

INFORMATION

Scale A1

1:1500

Drawing Number

2009-128-738

А3

С





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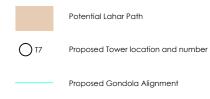
Alignment position is preliminary.

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5m Contour interval

23						
M						
4						
3	В	11/10/17	Towers and Lahar Path added	MR	AGM	ET
	Α	20/09/17	Information	MR	AGM	AGM
7	Rev	Date	Amendment	Ву	Chk	App

Ruapehu Alpine Lifts Ltd Bruce Road Mt Ruapehu

Proposed Alignment

Surveyed		l	I
Designed			
Drawn	M. Ryder	20/09/17	MR
Checked	A. Moss	20/09/17	AGM
Approved	A. Moss	20/09/17	AGM

INFORMATION

Scale A1

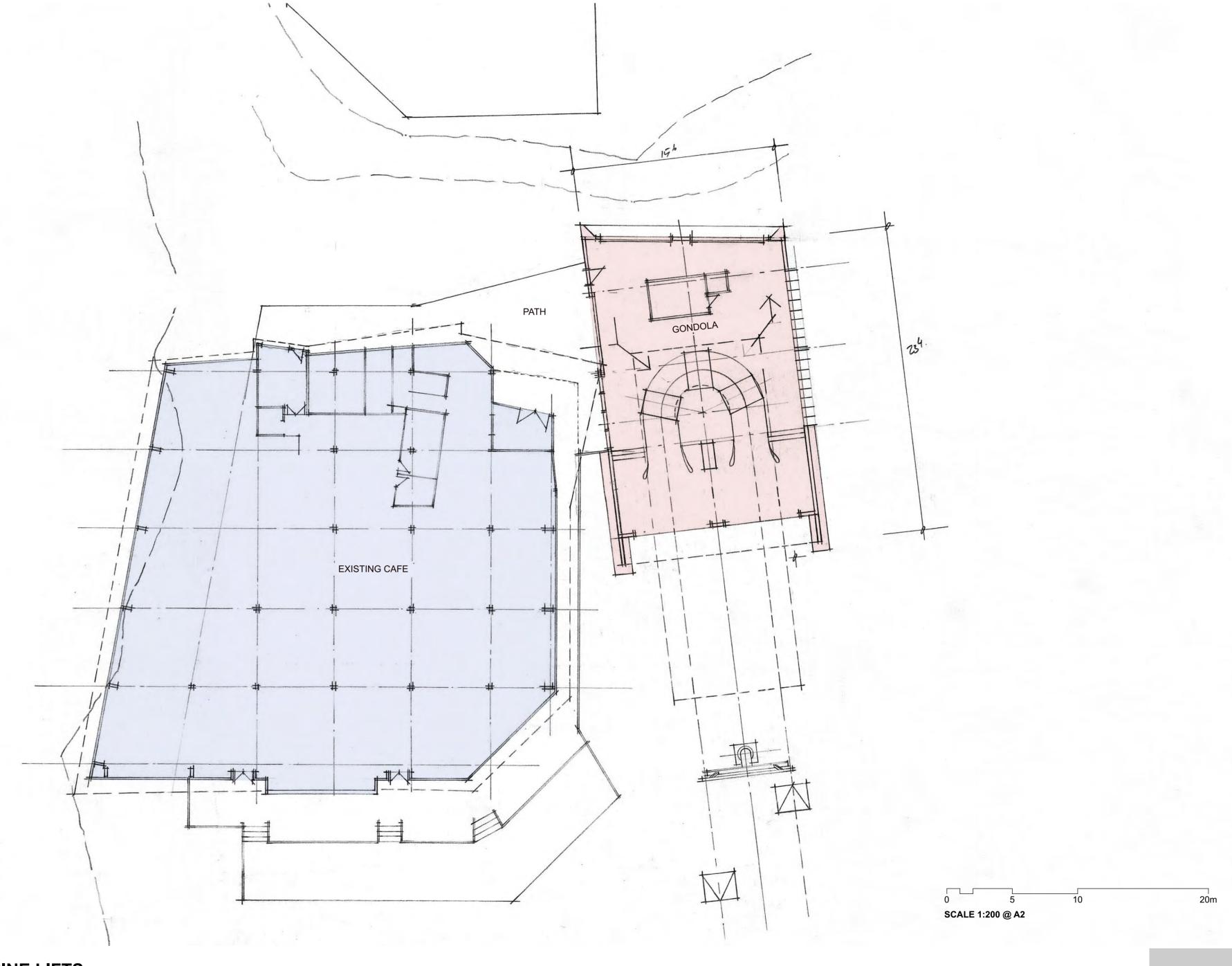
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Drawing Number

2009-128-739

В







RUAPEHU ALPINE LIFTS
PROJECT NO.

DESIGN PHASE:

5330

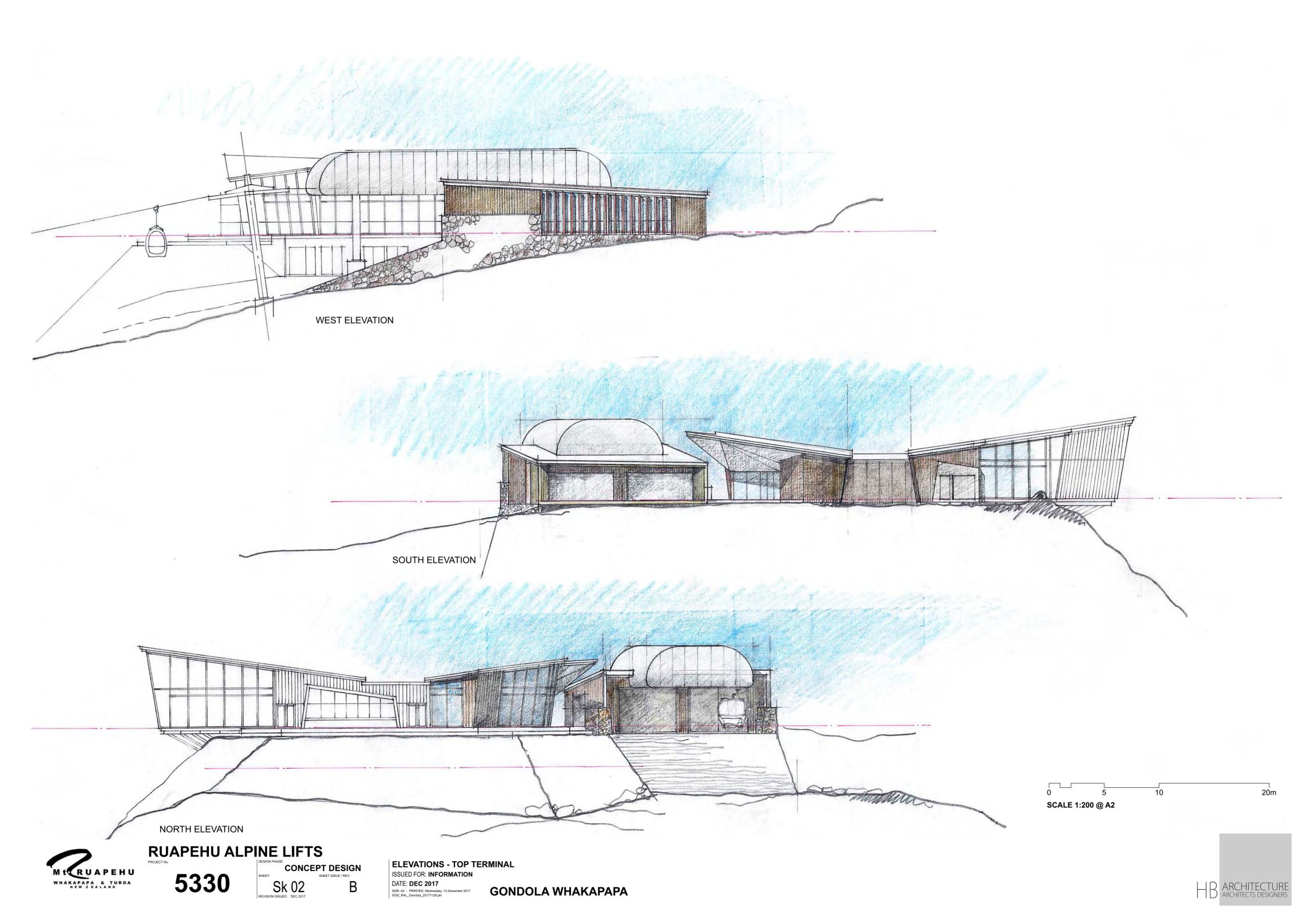
CONCEPT DESIGN
SHEET: Sk 01
REVISION ISSUED: DEC 2017

CONCEPT FLOOR PLAN - TOP TERMINAL ISSUED FOR: INFORMATION

ISSUED FOR: INFORMATION
DATE: DEC 2017
SIZE: A2 - PRINTED: Wednesday, 13 December 2017
5330_RAL_Gondola_20171128.pln

GONDOLA WHAKAPAPA





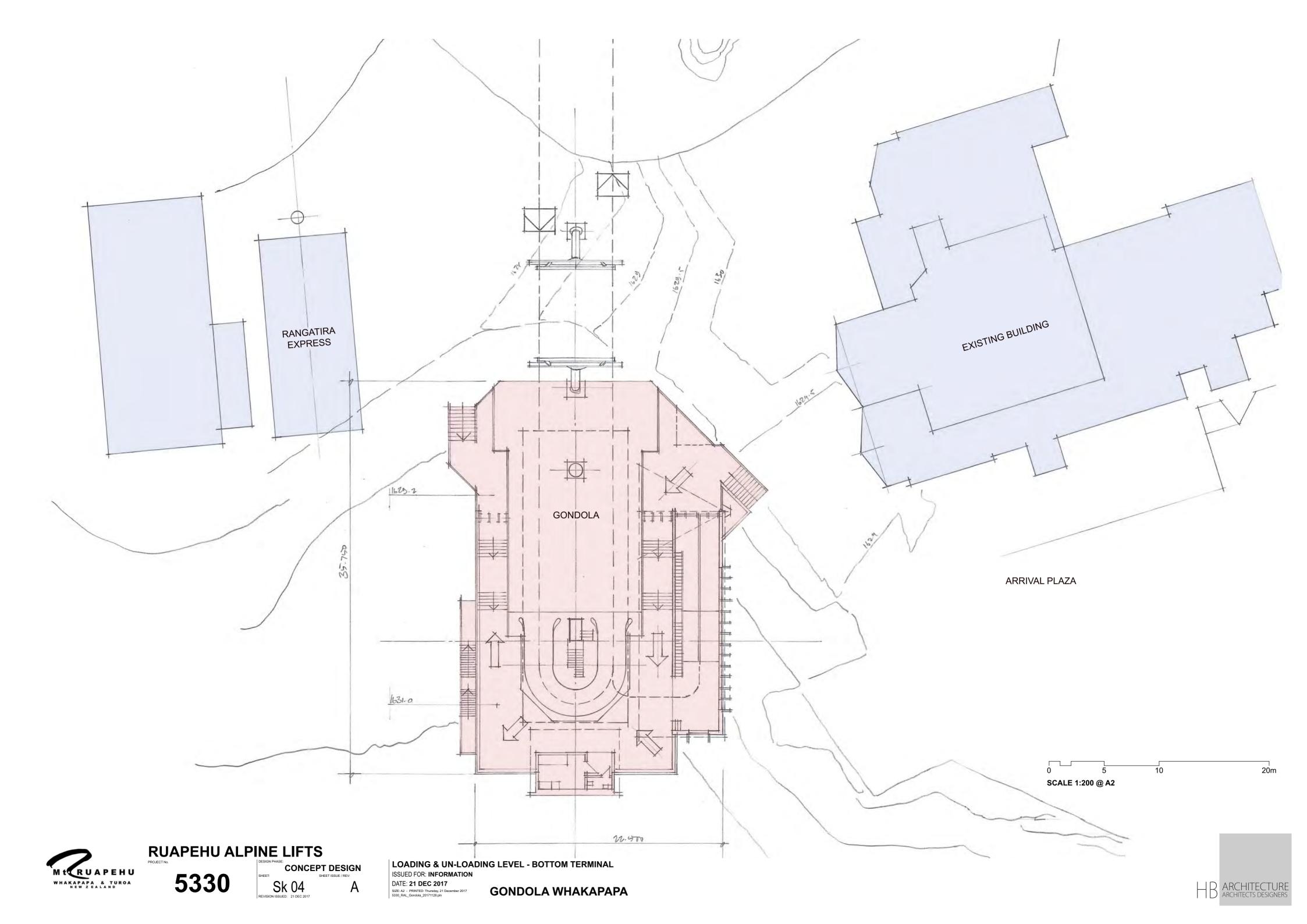


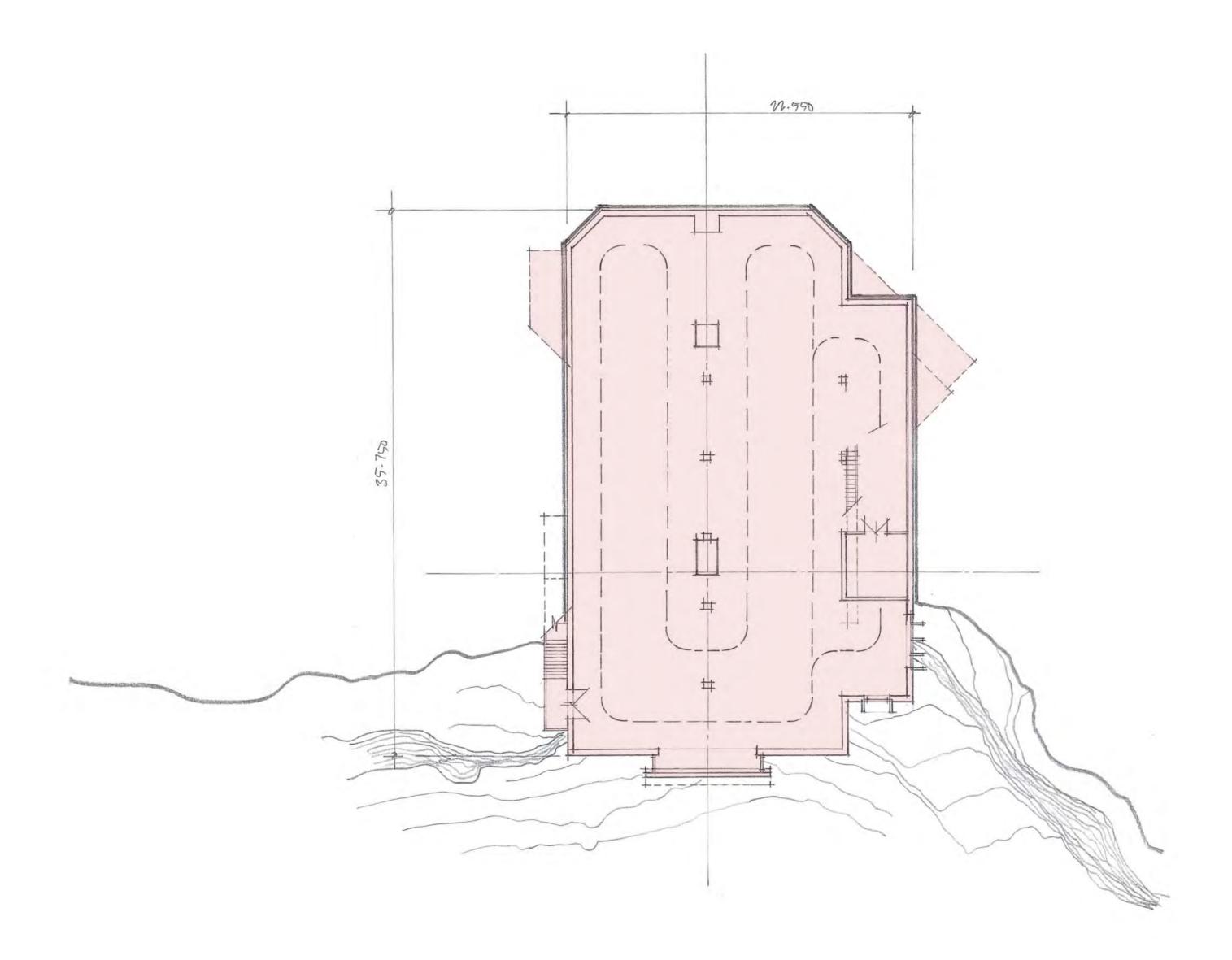


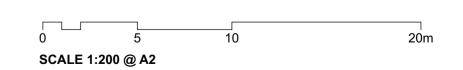
RUAPEHU ALPINE LIFTS

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Sk 03









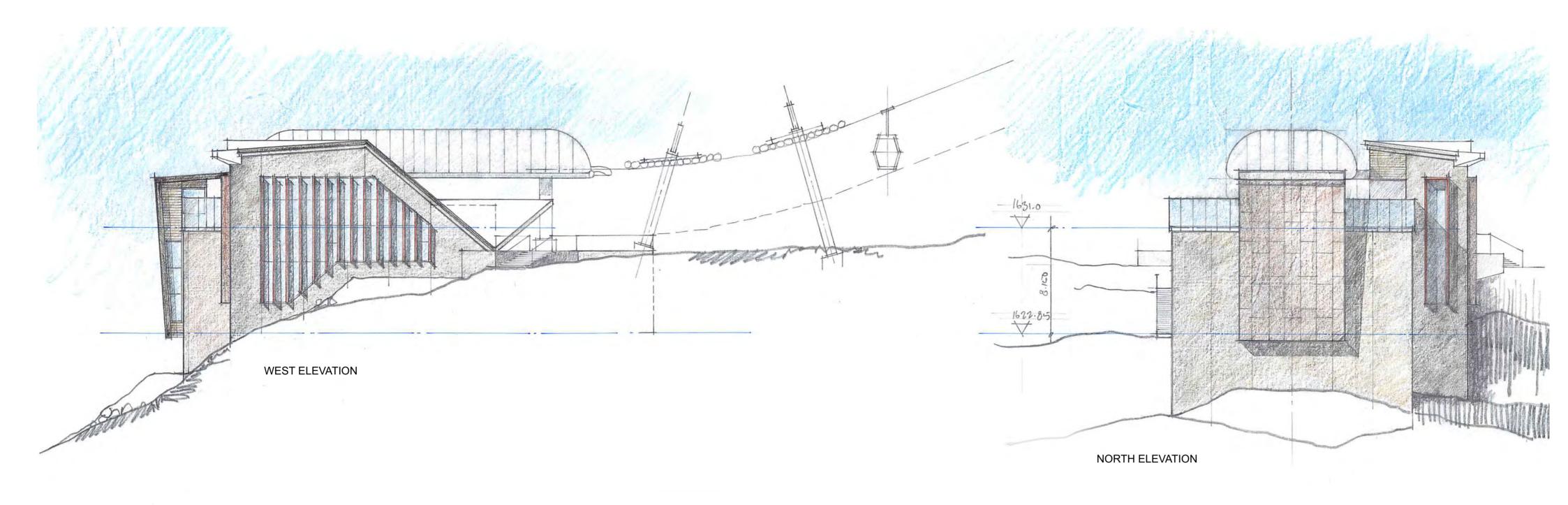
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PROJECT NO. DESIGN PHASE:

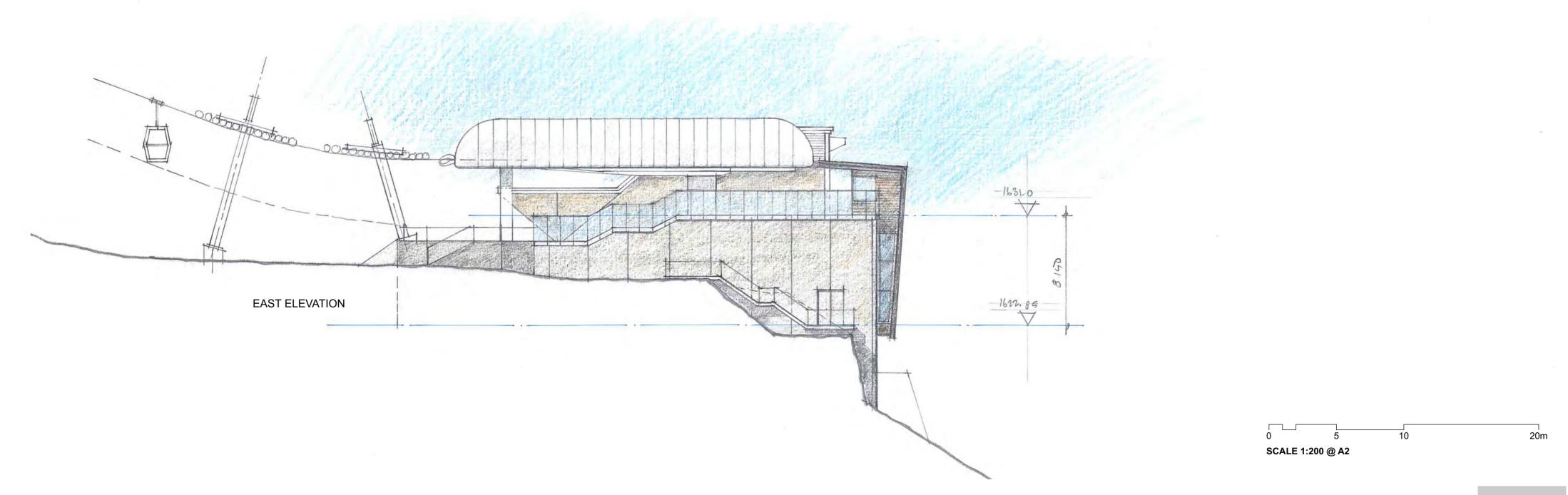
CONCEPT DESIGN
SHEET ISSUE / REV: 5330 Sk 05 SION ISSUED: 21 DEC 2017

CABIN STORE - BOTTOM TERMINAL ISSUED FOR: INFORMATION

DATE: **21 DEC 2017**SIZE: A2 - PRINTED: Thursday, 21 December 2017
5330_RAL_Gondola_20171128.pln **GONDOLA WHAKAPAPA**









RUAPEHU ALPINE LIFTS
PROJECT NO.

DESIGN PHASE:

CONCEPT DESIGN
SHEET ISSUE / REV: Sk 06 SION ISSUED: 21 DEC 2017

ELEVATIONS - BOTTOM TERMINAL ISSUED FOR: INFORMATION

DATE: **21 DEC 2017**SIZE: A2 - PRINTED: Thursday, 21 December 2017
5330_RAL_Gondola_20171128.pln **GONDOLA WHAKAPAPA**







RUAPEHU ALPINE LIFTS

5330

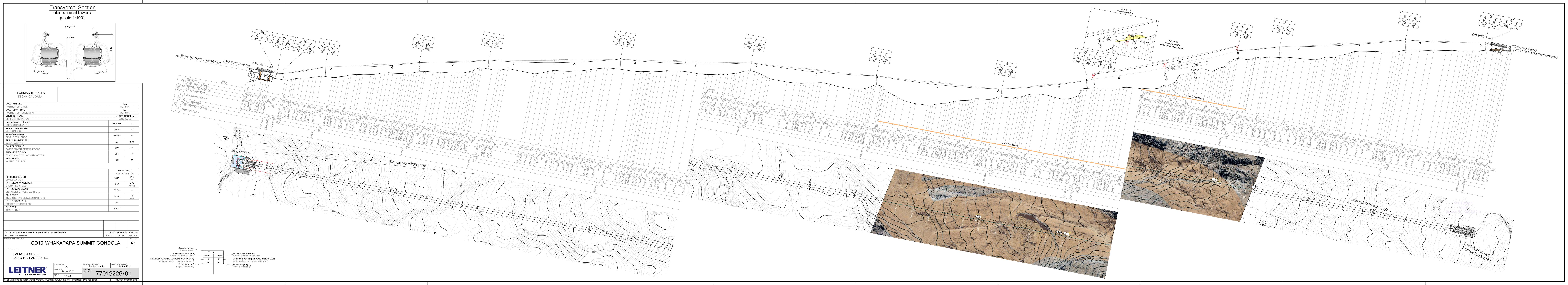
CONCEPT DESIGN Sk 07

ARCHITECTS IMPRESSION - BOTTOM TERMINAL ISSUED FOR: INFORMATION
DATE: 31 JAN 2018
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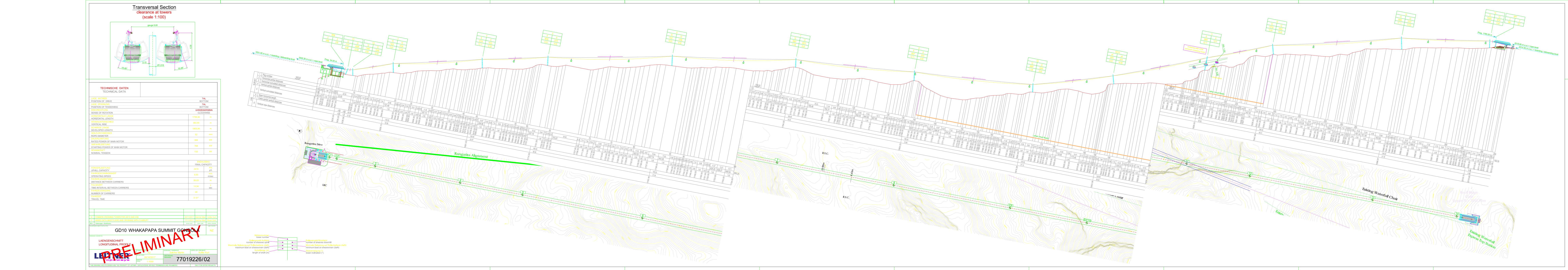
GONDOLA WHAKAPAPA

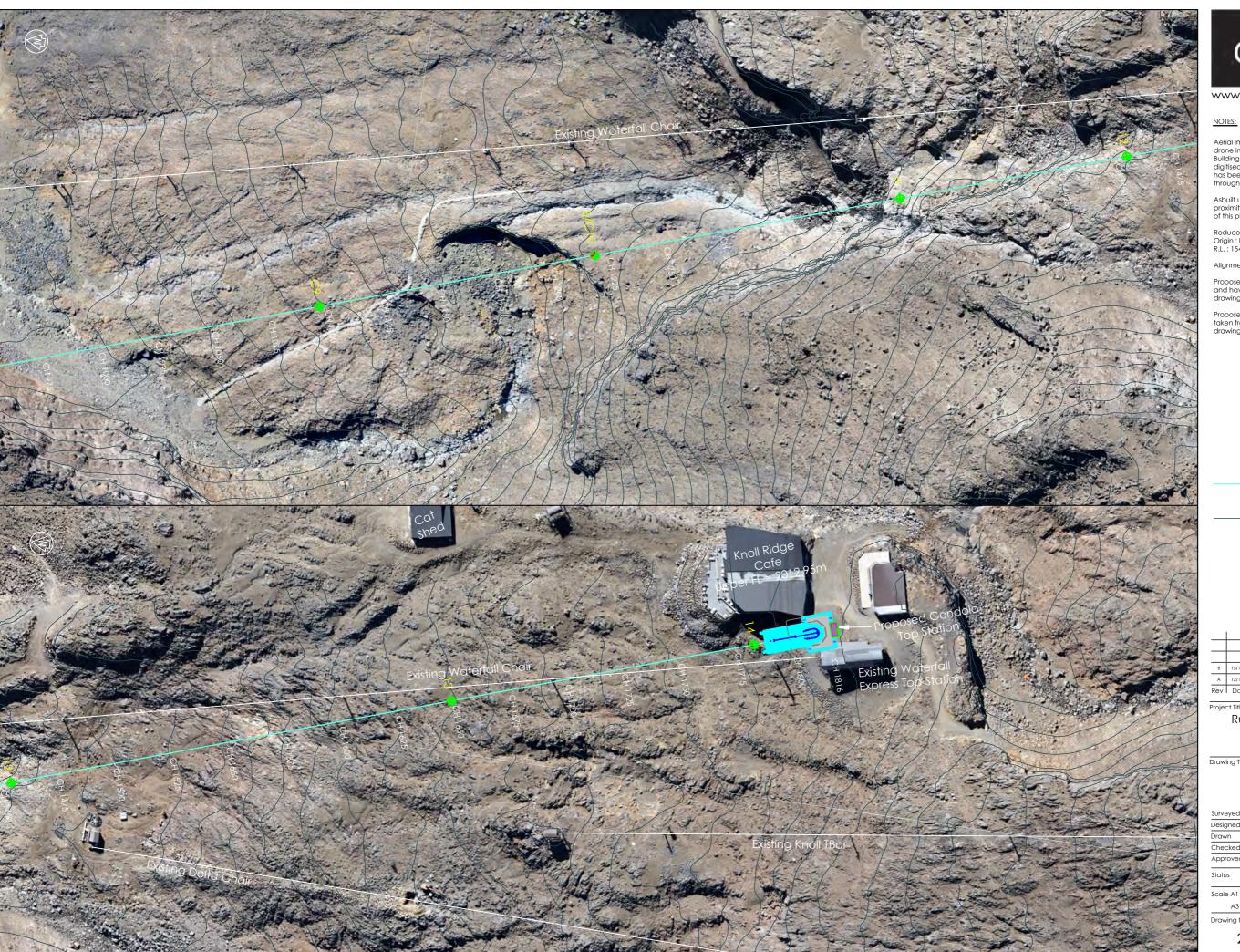














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Reduced Levels are in terms of Moturiki Vertical 1953 Origin : IS 1 (Workshop) R.L. : 1546.35m

Alignment position is preliminary.

Proposed Gondola Tower positions are preliminary and have been taken from Leither Ropeways drawing 77019226/02, dated 22/11/2017

Proposed Top and Bottom Station locations have been taken from Leither Ropeways drawing 77019226/02, dated 22/11/2017

Proposed Gondola Alignment

5m Contour interval

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В	15/12/17	Tower positions changed	MR	ET	ET
A	12/10/17	Information	MR	AGM	ET
Rev	Date	Amendment	Ву	Chk	App
	A	A 12/10/17	A 12/10/17 Information	A 12/10/17 Information MR	A 12/10/17 Information MR AGM

Ruapehu Alpine Lifts Ltd Bruce Road Mt Ruapehu

Proposed Gondola Site Plan Alternative Profile

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Designed			
Drawn	M. Ryder	12/10/17	MR
Checked	A. Moss	12/10/17	AGM
Approved	E. Tennent	12/10/17	ET

INFORMATION

1:1500

Drawing Number

2009-128-744





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Proposed Gondola Alignment

5m Contour interval

					\Box
В	15/12/17	Tower positions changed	MR	ET	ET
А	12/10/17	Information	MR	AGM	ET
Rev	Date	Amendment	Ву	Chk	App
	A	A 12/10/17	A 12/10/17 Information	A 12/10/17 Information MR	A 12/10/17 Information MR AGM

Ruapehu Alpine Lifts Ltd Bruce Road Mt Ruapehu

Proposed Gondola Site Plan Alternative Profile

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Designed			
Drawn	M. Ryder	12/10/17	MR
Checked	A. Moss	12/10/17	AGM
Approved	E. Tennent	12/10/17	ET

INFORMATION

Scale A1

1:1500

Drawing Number

2009-128-743

В



TE PAE MAUNGA

PO Box 311 Turangi 3353 | P: 0800 KOTAHI (568 244) | E: hinemoa@hekainga.co.nz

25 August 2017

TO WHOM IT MAY CONCERN

At a recent hui of the Te Pae Maunga Governance Group for Whakapapa Ski Area, the CEO and Chair of Ruapehu Alpine Lifts (RAL) presented a proposal for the development of the Alpine Aerial Tram on

Whakapapa ski field.

Ngāti Tuwharetoa representatives on Te Pae Maunga were impressed with the way the project has addressed the key environmental, cultural and social concerns we had when it was first proposed in the Indicative Development Plan for Whakapapa Ski Area in 2011. Since then the project has been modified substantially with a focus on removing unnecessary new structures from the mountain, substantially reducing the required earthworks and providing year-round employment and economic development opportunities for our people. Importantly, this project is focused on improving the quality of the visitor experience and reducing the number of 'closed days', rather than increasing the quantity of people

visiting the maunga on peak days.

Ngāti Tuwharetoa has a long history of working with RAL in a relationship based on good faith, collaboration, open and honest communication and mutual respect for the maunga. Some of the initiatives undertaken by RAL this year such as removal of the old Meads Wall Café and Bridge Hut buildings at Whakapapa show genuine commitment to our shared values and a willingness to undertake

restorative work on the maunga.

RAL have informed us the free transport service provided to their customers this winter has removed approximately 3000 cars from the National Park every busy weekend reducing congestion, pollution and

the risk of accidents. They take their shared role as Kaitiaki for Whakapapa seriously.

We are confident the proposed Aerial Tramway will be an asset for the region and will add value to the surrounding area, which will benefit from a more even distribution of visitors throughout the year who will choose to stay longer in the region. We support the opportunity to provide more employment and investment in the rohe including supporting the economic development aspirations of our own people

through Te Hau Kainga Tuwharetoa.

I would like to positively endorse the Alpine Aerial Tram project and support the request by Ruapehu Alpine Lifts Ltd for Government financial support to make this project happen.

Nāku noa, na

Te Ariki Sir Tumu Te Heuheu

Paramount Chief - Ngāti Tuwharetoa



TE RŪNANGANUI O NGĀTI HIKAIRO KI TONGARIRO



PO Box 338, Turangi 3353 | M: 021 2288315 | E: patai@ngathikairo.co.nz

1 December 2017

Ross Copland Ruapehu Alpine Lifts **Bruce Road MT RUAPEHU**

BY EMAIL

Te Rūnanganui o Ngāti Hikairo ki Tongariro ("Rūnanganui") represents the hapū and whanau that affiliate to the three marae; Papakai, Otukou and Hikairo. Each papakainga has their own domestic bodies; such as marae trustees, marae committees and kaumatua. However at the hapū level, the three marae have a representative body which is known as Te Rūnanganui o Ngāti Hikairo ki Tongariro.

It is in this forum that the Rūnanganui manage issues pertaining to the area of Ngāti Hikairo ki Tongariro; of which extends into the Ruapehu District, including Tongariro National Park and Ruapehu (including Whakapapa Village), Tongariro Forest, Kaimanawa and other areas about the Whakapapa.

At a recent Te Rūnanganui hui held on the Friday 24 November 2017, The trustees unanimously moved a resolution in support of the proposed activities and developments outlined in Ruapehu Alpine Lifts 10-year indicative plan. As part of the proposed activities the trustees also agreed that a working relationship be established between RAL and Te Rūnanganui to monitor the progress of the developments and work through any matters as they may arise.

Ngāti Hikairo ki Tongariro remain optimistic that the formation of a strong robust working relationship with Ruapehu Alpine Lifts is the most appropriate mechanism to address not only the expectations of each respective entity, but also provide for the protection and enhancement of "Ngā Pae Maunga".

Nāku nā

Hinemoa Wanikau Administration

ON BEHALF OF TE RŪNANGANUI O NGĀTI HIKAIRO KI TONGARIRO

Te Ngaehe Wanikau

Chair - Otukou Marae

OpScorunda

Chair - Hikairo Marae

Chair - Papakai Marae



Ruapehu Alpine Lifts

Whakapapa Ski Area

Gondola Proposal – Summary Document

09/128 23 November 2017





1. INTRODUCTION

As outlined in the Indicative Development Plan 2011, Ruapehu Alpine Lifts Ltd (RAL) proposed to replace the National Downhill Chairlift with a chondola (chairlift and gondola combined) at Whakapapa Ski Area. Preliminary research soon identified that a gondola would be more appropriate than a chondola, although essentially the same type of lift. Originally proposed was a new café adjoining the gondola's upper terminal above the Amphitheatre. Preliminary engineering has identified risks to the project primarily in relation to wind and ice effects on the gondola. This has prompted a rethink of the project and a change to the alignment and the type of gondola. It is now proposed for the gondola to extend from near the Top o' the Bruce to the existing Knoll Ridge Café. A new café for the gondola is no longer proposed.

The following sections provide a description of the proposal, which will require Resource Consent from Ruapehu District Council and Works Approval from the Department of Conservation. The proposal is entirely within the Amenities Area boundaries and the tuku is avoided. RAL seek your input into this proposal.

GONDOLA

Background Information

Last summer RAL continued with demolition of the National Downhill Chairlift which extended through the centre of the Ski Area southwest from the Top o' the Bruce area. Also the Waterfall Chairlift was removed and the Centennial Chairlift upgraded (now known as the Rangatira Chairlift).

RAL are committed to upgrading Ski Area infrastructure where necessary and simultaneously providing environmental and cultural benefits where possible. An example of this is the long term net reduction of infrastructure within the Tuku.

The gondola is expected to provide for better utilisation of the Knoll Ridge Café in unpleasant weather conditions as patrons will be able to ride the gondola without being exposed to severe temperatures and weather. This will provide more certainty to visitors and RAL staff. It is proposed to utilise the gondola all year round. Currently the chairlifts operate outside of the ski season during suitable weather.

The gondola will also provide for less able-bodied persons to experience the Maunga.

The current proposal provides environmental benefits compared to the previous chondola proposal, such as –

- The proposed gondola will be located next to other existing chairlifts, narrowing the area affected by infrastructure and limiting potential visual and landscape effects,
- Much of the alignment is in previously modified land,
- The proposal requires less earthworks than the chondola and café proposal, and
- The gondola will allow better utilisation of the existing Knoll Ridge Café instead of constructing a new café in a different location.

RAL functions as a public benefit entity with all profits reinvested in the mountain and shareholders are not provided with dividends or any financial benefits.



Proposed Gondola Upper Terminal

The upper terminal will be located at approximately 2014.5m asl, immediately west of the Knoll Ridge Café. The terminal will be connected to the Knoll Ridge Café with a new foyer allowing easy access between the two buildings. The terminal building will be approximately 430m² and the new foyer will be approximately 200m². The terminal building and foyer have been designed by the same award winning architect who designed the Knoll Ridge Café. The building will be comprised of recessed windows, vertical weatherboards, stonework and an ironsand coloursteel roof.

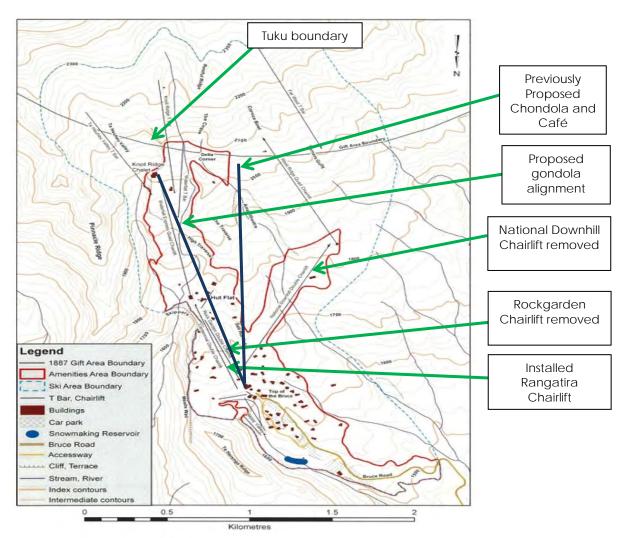


Image 1 - Location Plan



Image 2 - Upper terminal west elevation, existing Knoll Ridge Café shown behind in black and white

Proposed Gondola Alignment

The proposed alignment includes 15 to 16 towers from the lower terminal to Hut Flat and to the top terminal at Knoll Ridge. The alignment has been influenced by several factors including:

- avoidance of areas of high ecological value,
- preference to utilise previously disturbed land,
- the location of existing club buildings,
- potential lahar paths,
- landscape effects,
- preference to minimise the scale of earthworks, and
- skier requirements.

The alignment is in relatively close proximity of the Rangatira Chairlift and Waterfall Express Chairlift. The proposed gondola will be west of these two lifts except near the upper terminal where the gondola will cross the Waterfall Express Chairlift to terminate close to the Knoll Ridge Café. Many of the proposed tower sites are in modified areas and tower heights vary from approximately 8m to 16m. This is comparable to the height of chairlift towers at Whakapapa.



Image 3 - Hut Flat (club huts)



Proposed Gondola Lower Terminal

The Top o' the Bruce area contains the RAL offices, medical centre, Lorenzs' café, retail shop and ticketing area as well as carparking and access to the Happy Valley beginners' area. There are many club huts/lodges established in this area. The Rangatira Chairlift extends from the rear of the Top o' the Bruce area uphill to Hut Flat. It is proposed to locate the lower terminal, which contains the engine for the gondola, between the Rangatira terminal and Lorenzs' café and retail shop, on the edge of Happy Valley. This area has been previously modified. The gondola cabins will be stored under the terminal building when not in use. Earthworks will be required near the terminal to create a small ski bridge.



Image 4 - View from the proposed gondola lower terminal west towards club huts and Top o' the Bruce buildings

Effects

The proposed gondola will not extend into the Tuku.

The gondola will replace the National Downhill Chairlift and is another step towards RAL's goals of upgrading infrastructure, providing more all-year round activities, meeting commercial and profit requirements and creating a net reduction in the number of lifts on the mountain and in the Tuku.

The landscape and visual effects are mitigated by the following factors:

- Bespoke architectural design of the buildings,
- Recessive colours on buildings and gondola towers,
- Use of recessed windows (allowing shadows to reduce the potential for glare),
- Use of stonework at the terminal buildings,
- The gondola will be located next to the Rangatira and Waterfall Express Chairlifts and the Knoll Ridge Café limiting the area affected by infrastructure and buildings,
- Reducing the height of towers as much as practicable, and
- Careful site selection for the gondola alignment and the terminal locations.

The ecological effects are mitigated by the following factors:

- Careful site selection for the towers and buildings, avoiding any ecologically sensitive areas,
- Minimising earthworks through site selection and the use of rock pining where possible,
- The Top o' the Bruce area is highly modified and so ecological values there are low,
- The upper areas are relatively devoid of vegetation due to the climatic conditions,



- Earthworks will be managed to avoid sedimentation of streams, and
- Any indigenous vegetation which must be disturbed will be harvested, maintained and replanted as works are completed.

The proposed gondola provides a second route up or down the mountain and so provides added safety in an emergency event. Three of the proposed towers will be located in a potential lahar path and these towers will be structurally designed to provide additional resistance from the force of a lahar. The Ski Area has an Eruption Detection System which, in the event of a volcanic eruption likely to cause a lahar, sets off sirens and loudspeakers to direct ski area users away from valley floors to higher ground.

The gondola is outside of the Summit Hazard Zone. RAL have a Safety Management System to deal with all risks and contingency plans for evacuations in the event of eruptions. Whakapapa has a ski patrol service, medical centre with emergency and X-ray facilities and rescue dogs. RAL also promote responsible behaviour on the slopes, provide warning signage where appropriate and invest in education such as the Avalanche Awareness Courses which are run in conjunction with the Mountain Safety Council. Safety information is also provided on the RAL website. The Ruapehu Alpine Rescue Organisation (RARO) was established in 1990 and is a collaborative effort by four main organisations being the Police, DoC, Sir Edmund Hilary Outdoor Pursuits Centre and RAL. RARO is a volunteer based group responsible for carrying out alpine search and rescue work in and around the Tongariro National Park.

Chairlifts and gondolas are maintained and operated, including being inspected annually prior to the ski season by an auditor, as per the Approved Code of Practice for Passenger Ropeways in NZ. Detachable gondolas also allow adaptable boarding and unloading speeds – providing for safer boarding and unloading.

Benefits of the proposed gondola include:

- Provision of uphill access for less able-bodied persons to experience the Maunga, and the gondola is particularly well suited to elderly persons. The gondola combined with the existing Knoll Ridge Café provides for a greater range of visitors;
- The ability to operate in inclement weather. This allows tourists with an activity regardless of the weather, allowing more certainty when booking holidays. This is expected to have a beneficial economic impact on the wider locality;
- Better utilisation of the Knoll Ridge Café;
- More certainty to RAL staff due to the ability to operate in inclement weather;
- Skiers that sustain injuries on the upper mountain are able to be transported to the medical centre in a gondola cabin. This provides more comfort than using a chairlift or groomers or ski tow with rescue sled, which may assist in easing the distress of the injured person. RAL staff may also be able to administer first aid to the patient within the gondola cabin.
- The gondola provides an upgrade to the standard of facilities;
- The gondola provides a second route up or downhill and therefore provides for the continued operation of the Ski Area when the Rangatira or Waterfall Express Chairlifts are undergoing maintenance;
- The gondola provides for quicker evacuation from the Ski Area in an emergency event;
 and
- The gondola provides for both skiers and non-skiers.



3. SUMMARY

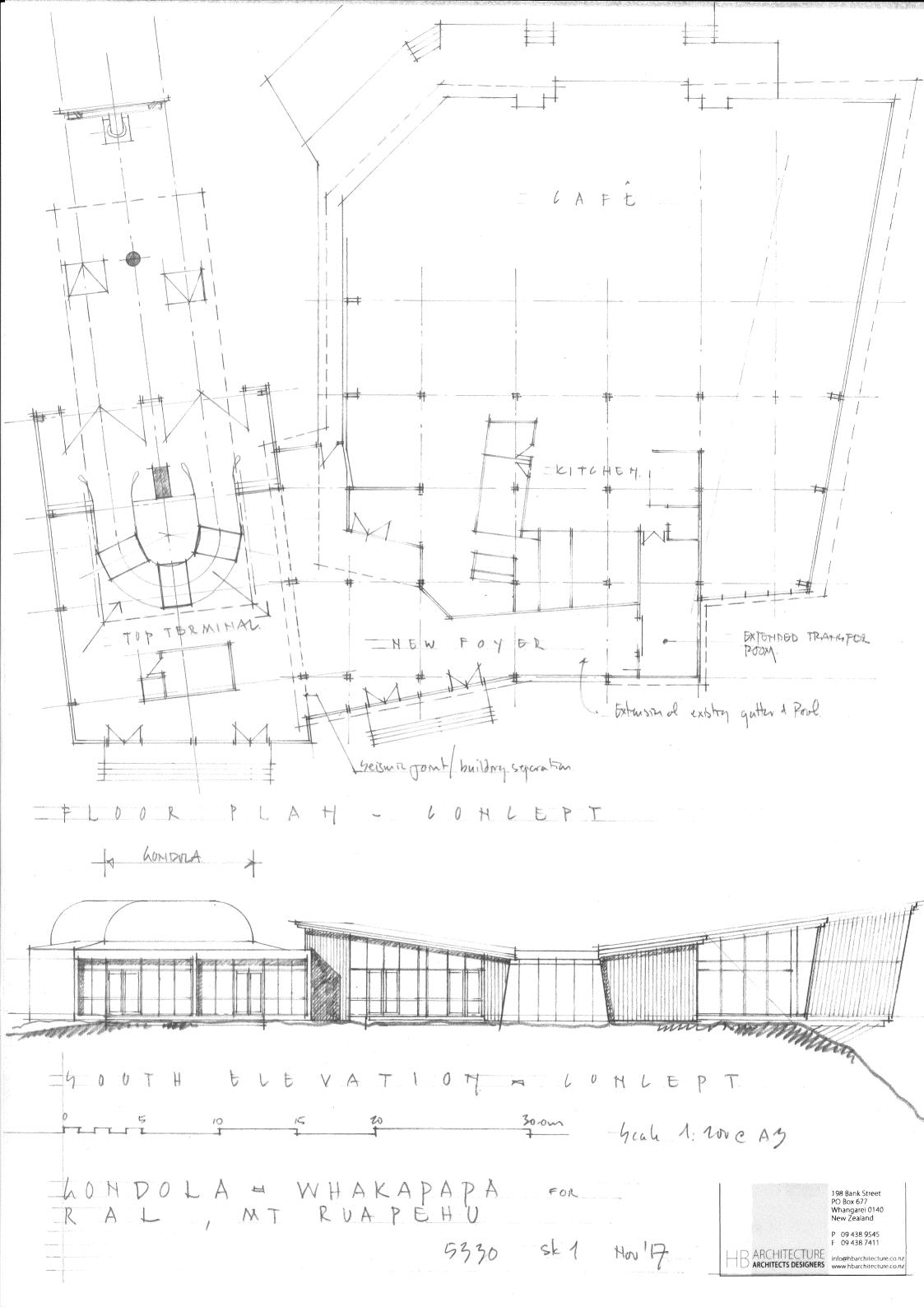
The Gondola proposal is summarised as follows:

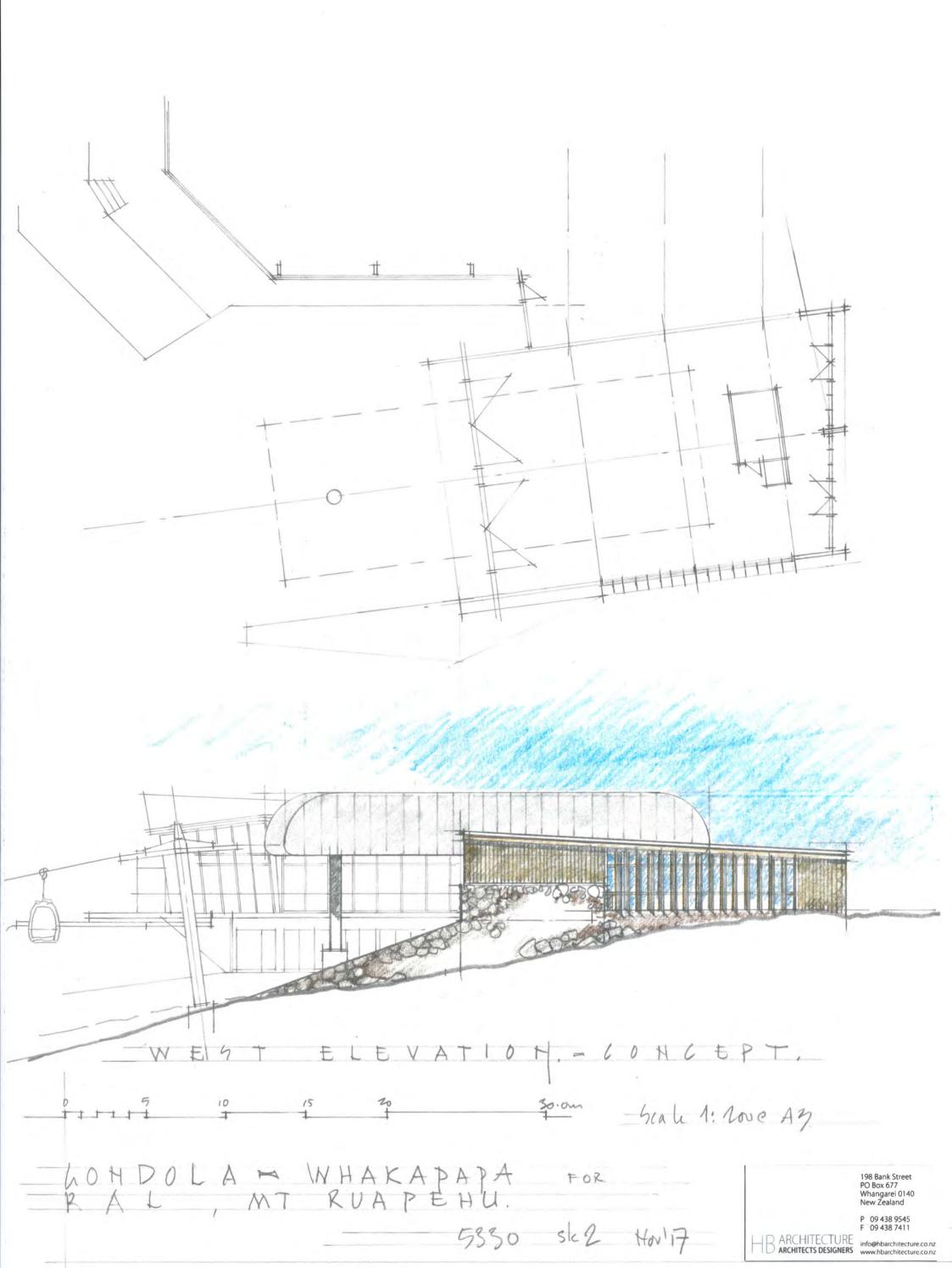
- An 1,800m long gondola is proposed to provide access from near the Top o' the Bruce to the Knoll Ridge Café;
- The gondola will not extend into the Tuku;
- The gondola replaces the National Downhill Chairlift which has recently been removed;
- Earthworks will be minimised by careful site selection and rock pining where possible. The proposal is within a modified area of the Maunga. Earthworks will be controlled with a Construction Management Plan to ensure sediment does not enter waterways, and to ensure public safety etc;
- The gondola will avoid any alpine flush areas, streams or any ecologically sensitive areas.
 Any indigenous vegetation within the areas of works will be harvested, maintained and replanted at completion of works;
- The gondola will provide for a wide range of visitors including sightseers;
- The gondola will be located near existing chairlifts and buildings and so will not extend the area affected by infrastructure;
- The terminal buildings have been designed by the award-winning architect who designed the Knoll Ridge Café and include features that mitigate visual and landscape effects;
- The gondola will provide a necessary second lift uphill from the Top o' the Bruce area ensuring that the Ski Area (above Happy Valley) can continue to function when the Rangatira Chairlift is undergoing maintenance or is unsuitable due to weather conditions;
- The gondola provides for significantly quicker evacuation from the Ski Area in an emergency event;
- The gondola will consist of approximately 15-16 towers;
- The gondola is expected to improve revenue by providing a visitor activity suitable for use all year round and in inclement weather; and
- The tower heights have been reduced as much as practicable and are similar in height to existing chairlifts at Whakapapa.

4. FEEDBACK

RAL seek your feedback on the proposal to install a gondola at Whakapapa Ski Area. RAL are keen to continue to meet with lwi in order to discuss any issues, clarify details, gain feedback on the proposal, hear how any cultural effects can be mitigated and how cultural sensitivity can be incorporated into the proposal. Ross Copland can be contacted on 07 892 4000 or rcopland@mtruapehu.com

CHEAL CONSULTANTS LIMITED 23 November 2017









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Asbuilt utilities may have other services in close proximity which are not shown for the purposes of this plan.

Reduced Levels are in terms of Moturiki Vertical 1953 Origin : IS 1 (Workshop) R.L. : 1546.35m

Alignment position is preliminary.

See plan series 2009-128-730-737 for Proposed Gondola alignment long sections

Proposed Gondola Tower positions are preliminary and have been taken from Leither-Poma of America drawing P50206, dated September 2017.

Proposed Top and Bottom Station locations have been taken from from Leither-Poma of America drawings P50206 and US3040.474 Rev G.

-3	O 17	Proposed Tower location and nur
		Proposed Gondola Alignment
		5m Contour interval

Α	12/10/17	Information	MR	AGM	ET
Rev	Date	Amendment	Ву	Chk	App

Ruapehu Alpine Lifts Ltd Bruce Road Mt Ruapehu

Proposed Gondola Site Plan

Surveyed	1		1
Designed			
Drawn	M. Ryder	12/10/17	MR
Checked	A. Moss	12/10/17	AGM
Approved	E. Tennent	12/10/17	ET

INFORMATION

Scale A1

1:1500

Drawing Number

2009-128-743





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Proposed Tower location and number Proposed Gondola Alignment 5m Contour interval

Α	12/10/17	Information	MR	AGM	ET
Rev	Date	Amendment	Ву	Chk	App

Ruapehu Alpine Lifts Ltd Bruce Road Mt Ruapehu

Proposed Gondola Site Plan

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Checked	A. Moss	12/10/17	AGM
Approved	E. Tennent	12/10/17	ET

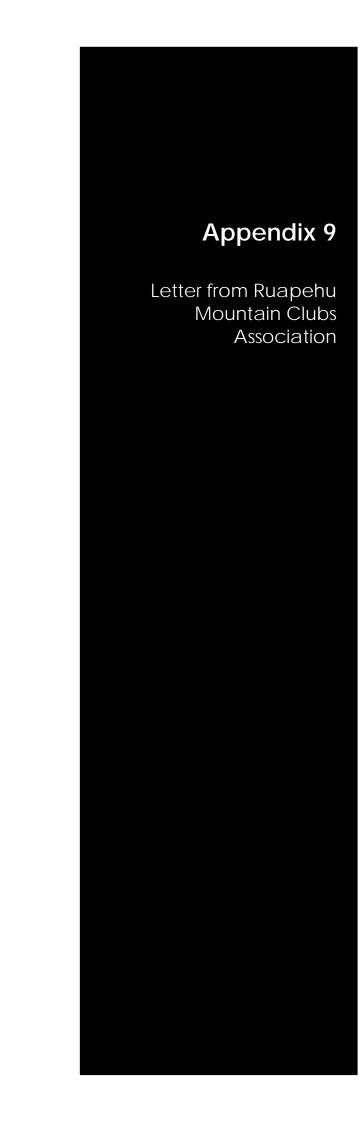
INFORMATION

Scale A1

1:1500

Drawing Number

2009-128-744



Letter of Support for the Proposed Whakapapa Summit Gondola

On behalf of the Ruapehu Mountain Clubs Association.

25th January 2018

The Ruapehu Mountain Clubs Association Represents the 52 Mountain Clubs in and around the Tongariro National Park area. The clubs, as a whole body, have a membership which is approximately 20,000 people who come to the Whakapapa Ski area to tramp, ski, snowboard, sightsee, and generally enjoy the National Park.

Over the years of late our members have watched with concern, the ageing infrastructure of the lifts in the Whakapapa Ski area. We have all been delighted to now have the Rangatira lift, which makes a huge difference to the transportation of people up the Mountain. We are also very keen to see the ageing Express Chairlift replaced.

We have been informed of the general plan for the Whakapapa Summit Gondola. We support this project for many reasons.

Firstly, it will replace ageing infrastructure which unfortunately has breakdown problems which are a danger to the health and safety of the users of the Express Chair, and also those who have to service it. Replacement will also offer infrastructure which is more in tune with the whole maunga of the area and will be less visually obtrusive, plus offer the benefits of new technology as far as people movement and anti-icing, which is a significant problem in our particular area. This in turn will mean easier, more timely opening and crowd movement.

As we are in a World Heritage National Park, and given the significant cultural importance of the area to the local Iwi, and of course all New Zealanders, having infrastructure which is in keeping with this importance must surely be a high priority.

The benefits of such a new lift cannot be overstated. The Club members we represent will benefit in being able to pursue their activities in a far better, safer manner, as will the general visitors.

This in turn will mean trickle down benefits to the local area, with increased visitor capacity and the guarantee of a better overall visitor experience. This should lift the local economy and even out the income stream of the local economy, as the proposed lift will be able to operate all year round in any weather.

We offer our support to the project and will be happy to make any further written or oral submissions to anyone who requires them.

Jo Bouchier

President RMCA