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People & Places

High-level economic assessment of the Powerhouse Funicular Railways Queenstown Regional Development

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1. Contents

2. Executive summary

This report gives a high-level assessment of how the proposed Powerhouse Funicular Railways Queenstown Regional Development (the Project) meets the purpose of the Fast-Track Approvals Act to deliver significant regional or national benefits. These potential benefits have been assessed against the fast-track project eligibility criteria in the Act.

2.1. Scope of this assessment of significant benefits

This high-level economic assessment has been commissioned by Bowen Peak Limited to support a fast-track application for the proposed Powerhouse Funicular Railways Queenstown Regional Development project. The project integrates a funicular railway system (Powerhouse Suburban Funicular Railway and the Powerhouse Saddle Funicular Railway) from the Powerhouse Precinct and Powerhouse International Convention Centre development, with connections into a new residential suburb (Fernhill Heights) and access to Te Taumata o Haketikura Saddle and a new ski area (Bowen Peak Ski Area).

This report has focussed on economic and demographic considerations to support interpretations regarding how the Bowen Peak Limited proposal might meet the purpose and eligibility criteria for being a regionally or nationally significant fast-track project under the Fast-Track Approvals Act. This analysis is only a high-level initial review based on the broad scope of the proposal known at present. Detailed design work on the project is ongoing and estimates contained in this report will need to be reviewed and refined as further project details become clear and other fast-track applications come to light.

The **purpose of the Fast-Track Approvals Act (2024)** is outlined in Section 3 of the Act:

> **3 Purpose:** The purpose of this Act is to facilitate the delivery of infrastructure and development projects with significant regional or national benefits.

The **eligibility criteria** for assessing a fast-track application are outlined in Section 22. Section 22(1)(a) stipulates that Ministers must consider whether the project would have **significant regional or national benefits.** Considerations for establishing the significance of the project are given in Section 22(2)(a) and Section 22(2)(b):

> 22(a): For the purposes of subsection (1)(a), the Minister may consider—
>
> (a) whether the project—
>
> (i) has been identified as a priority project in a central government, local government, or sector plan or strategy (for example, in a general policy statement or spatial strategy), or a central government infrastructure priority list:
>
> (ii) will deliver new regionally or nationally significant infrastructure or enable the continued functioning of existing regionally or nationally significant infrastructure:
>
> (iii) will increase the supply of housing, address housing needs, or contribute to a well-functioning urban environment (within the meaning of policy 1 of the National Policy Statement on Urban Development 2020):
>
> (iv) will deliver significant economic benefits:
>
> (v) will support primary industries, including aquaculture:

(vi) will support development of natural resources, including minerals and petroleum:
(vii) will support climate change mitigation, including the reduction or removal of greenhouse gas emissions:
(viii) will support climate change adaptation, reduce risks arising from natural hazards, or support recovery from events caused by natural hazards:
(ix) will address significant environmental issues:
(x) is consistent with local or regional planning documents, including spatial strategies:

(b) any other matters the Minister considers relevant.

The Fast-Track Approvals Act does not define what a region is. When reasonable and sufficient data is available, this report has used Otago Region boundaries to align with political boundaries of the Otago Regional Council, as such boundaries are commonly the default regional definition used by government. However, it is worth noting that these political geographies do not align with the economic geography of the region. People and businesses don't go about their day-to-day activities constrained by political boundaries. Instead, their lives revolve around where they choose to work, live, play, and do business.

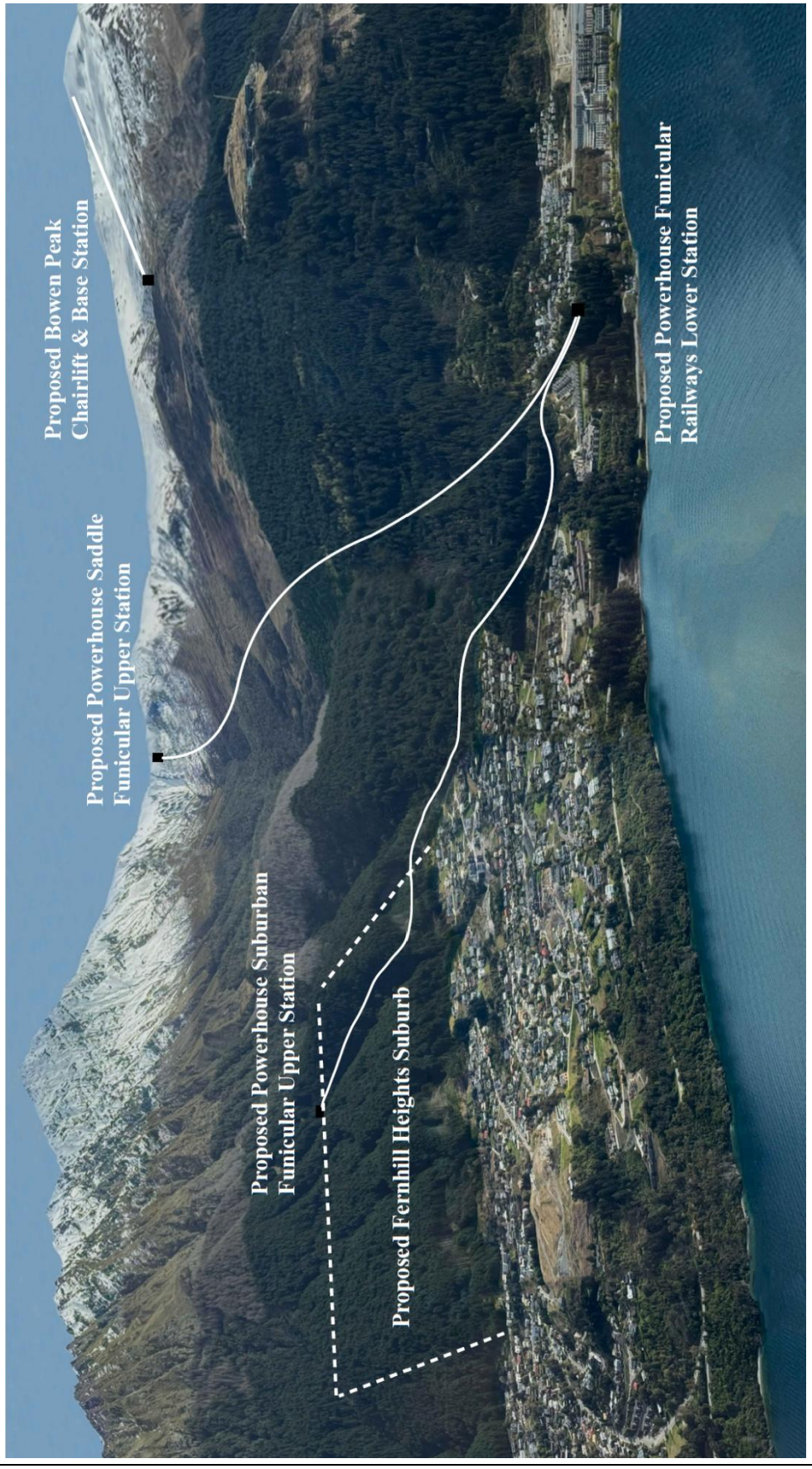
In the case of Otago, diverging patterns of economic development, population and commuter flows, and industry specialisations, have meant that there are very distinct subregional economic geographies between coastal areas of Otago (Dunedin, Clutha, and Waitaki) and Inland Otago (Queenstown Lakes as the centre of a subregion that also connects with Central Otago). As such, it has become common practice within economic development initiatives in Otago to consider Inland Otago (centred on Queenstown) as a benchmark region in its own right – for example, assessments by the Ministry of Business, Innovation, and Employment's (MBIE) former Otago Regional Skills Leadership Group specifically considered impacts on Inland Otago[1], while Queenstown Lakes District Council and Central Otago District Council intend to negotiate a regional deal together as an Inland Otago subregion[2].

2.2. Background to the Powerhouse Funicular Railways Queenstown Regional Development

The proposal is to develop two funicular railways ('Suburban' and 'Saddle' funiculars) that connect a retail, hospitality, and conferencing precinct from down below (Powerhouse Precinct, including the Powerhouse International Convention Centre), with a proposed higher residential suburb (Fernhill Heights), along with sightseeing, recreation, and conservation activities up the Te Taumata Hakitekura Saddle and Bowen Peak (including the Bowen Peak Ski Area/mountain bike park and Ben Lomond Predator-free Sanctuary).

[1] See here: https://www.mbie.govt.nz/business-and-employment/employment-and-skills/regional-skills-leadership-groups/otago/regional-workforce-plans/regional-workforce-plan/otago/
[2] See here: https://lwb.co.nz/issues/issue-985/

Figure 1 – Photomontage of main project elements – Bowen Peak Limited



Detailed design work of the proposed Powerhouse Funicular Railways Queenstown Regional Development is ongoing, but for the purposes of this high-level assessment of the potential regional significance of the project, the following project elements have been considered:

1. Development of the Powerhouse Precinct within One Mile Recreation Reserve to provide retail, hospitality and tourism offerings, along with the new Powerhouse International Convention Centre (new events facility with 1,500-person auditorium for international conferences).
2. High-density housing to facilitate 250 alpine chalets (each with four apartments), along with 20 transitional alpine chalets (each with two apartments) between Fernhill and the proposed new suburb 'Fernhill Heights', over a 56-hectare privately-owned property above Fernhill. In total, these chalets will provide for 1,040 housing units, with 5% committed to the Queenstown Lakes Community Housing Trust for affordable housing.
3. Two modern new funicular railways, powered by electric motors, comprising the 'Suburban' funicular to connect the Powerhouse Precinct with the top of the proposed new Fernhill Heights suburb (and top of the Wynyard downhill mountain bike trail), and the 'Saddle' funicular to connect the Powerhouse Precinct with the Te Taumata o Haketikura Saddle, the proposed new Bowen Peak Ski Field and mountain bike park, and also connect with the upper Ben Lomond mountain bike trails, and proposed Ben Lomond Predator-free Sanctuary.
4. The top station building of the Saddle funicular will include an engine room, bar/restaurant, retail, guest services for the ski area, two 30-bed bunk rooms for teenage outdoor education groups, public shelter, public toilets, and a 4WD ambulance base.
5. Predator-free fencing within One Mile Recreation Reserve to create a new Powerhouse Predator-free Sanctuary covering 3 hectares for protected breeding sites for New Zealand native birds, along with a new Ben Lomond Predator-free Sanctuary near the top of the One Mile Creek Valley covering 180 hectares also for protected breeding sites.
6. Wilding pine removal and New Zealand native planting within the One Mile Recreation Reserve, with construction of a new fibreglass boardwalk (walking trail) from the Powerhouse up to Mid-Way Clearing to safely reopen the start of the closed Ben Lomond One Mile Creek walkway.

2.3. Key findings

The proposed developments within the Powerhouse Funicular Railways Queenstown Regional Development are an integrated package of a scale and impact which are judged to be regionally and nationally significant under the Fast-Track Approval Act.

All analysis in this high-level economic assessment of significance has been made based on assumptions regarding the project package as it stands at present:

- As further design work occurs, and the Powerhouse Funicular Railways Queenstown Regional Development project evolves, estimates will need to be refined further.
- Considerations related to tenure of landholdings, commercial factors (e.g. capital raising and delivery partners), and climate (including snowpack) have been out of scope of the analysis.
- It is also worth noting that other potential projects, including other Fast-Track applications could be put forward in the local area which might introduce trade-offs and influence more precise and detailed future assessments of the significance of Powerhouse Funicular Railways Queenstown Regional Development project proposal.

Looking specifically at the fast-track eligibility criteria in the Act, there is evidence of regional and national significance of the Powerhouse Funicular Railways Queenstown Regional Development project under the following criteria within Section 22(a):

(ii) will deliver new regionally or nationally significant infrastructure or enable the continued functioning of existing regionally or nationally significant infrastructure:

- The Powerhouse Surburban Funicular Railway (Section 4) and Powerhouse Saddle Funicular Railway (Section 5) are a form of "rapid transit services" that is consistent with the definition of nationally significant infrastructure in the National Policy Statement on Urban Development (2020).
- The Suburban funicular has capacity to carry more than 60% of residents of Fernhill Heights (Section 4) across morning peak windows, which exceeds the 35%-50% public transport targets for Queenstown endorsed by NZTA, Otago Regional Council, and QLDC.
- The Bowen Peak ski lift (Section 5.2.2) is regionally significant infrastructure because ski area infrastructure (including aerial lifts) is regionally significant infrastructure in the Proposed Otago Regional Policy Statement (2021) Hearing Panel Report.

(iii) will increase the supply of housing, address housing needs, or contribute to a well-functioning urban environment (within the meaning of policy 1 of the National Policy Statement on Urban Development 2020):

- The proposed 1,040 housing units within Fernhill Heights would be anticipated to house at least 2,180 people (Section 4).
- 2,180 people is equivalent to 7.6% of projected population growth across Queenstown Lakes from 2024-2053 and 2.7% of Otago's population growth.
- This estimate of potential residents in Fernhill Heights is conservative because of the use district-wide assumptions related to vacant housing – by providing a well-functioning urban environment, with integrated public transport, nearby job opportunities, and affordable housing, a higher rate of home occupancy is potentially achievable. If the suburb's rate of unoccupied housing ends up being half the District average (closer to what persists elsewhere in New Zealand) then Fernhill Heights might house 2,593 people (see Section 0 for more).

(iv) will deliver significant economic benefits:

- Up to 175 jobs are projected to be associated with the Powerhouse Precinct and Powerhouse International Convention Centre (PICC) (see Section 3), and a further 150 jobs on average associated with activities accessed by the Saddle funicular (Section 5).
- Up to $127 million annually of new visitor spending on retail and hospitality directly within the Powerhouse Precinct, and by delegates at the PICC (Section 3) across their Queenstown stay. A further from $120 million a year would be spent on activities accessed by the Saddle funicular (including sightseeing, nature experiences, biking, skiing) (Section 5).
- The Saddle funicular is projected to carry 1.1 million passengers per year – with 1.0 million of these passengers sightseeing, biking, or viewing the Ben Lomond Predator-free Sanctuary (Section 5.2.1) and 100,000 passengers skiing at the Bowen Peak Ski Area (Section 5.2.2).
- The PICC is anticipated to host 39,000 delegates per year – the equivalent of one 500-1,000 delegate event each week (or three 250 delegate events a week) (Section 3).

- **Section 22(a)(vii): will support climate change mitigation, including the reduction or removal of greenhouse gas emissions**.
  - The transport integrations of the Powerhouse Precinct with Fernhill Heights and the Te Taumata o Hakitekura Saddle include the installation of two electrified funicular railways. These funiculars will enable direct public transport access to housing, sightseeing, and recreation that is electrified, rather than relying on combustion engines.

3. Benefits assessment of project elements related to the Powerhouse Precinct

This section assesses the potential project benefits stemming from the Powerhouse Precinct and how these might meet eligibility criteria in the Fast-Track Approvals Act. Although the Powerhouse Precinct's benefits are assessed separately here, it is important to emphasise that the Precinct sits at the core of the integrated Powerhouse Funicular Railways Queenstown Regional Development. Not only does the Precinct offer its own array of benefits (retail, hospitality, and events), but it also a gateway for public transportation via the two funicular railways. These funiculars integrate the Precinct with the new Fernhill Heights suburb, as well as sightseeing/recreation at the Te Taumata o Hakitekura Saddle (and the Bowen Peak ski area and mountain bike park) and nature experiences within the Ben Lomond Predator-free Sanctuary – Sections 4 and 5 assess the benefits of these other project features.

3.1. Assumptions related to the Powerhouse Precinct

The following assumptions about the Powerhouse Precinct have been used in the analysis:

- **Commercial activity** within the Powerhouse Precinct is proposed to centre on the following:
  - A mix of **retail and hospitality** businesses – with a gross floor area of **3,000 m2**.
  - **The Powerhouse International Convention Centre (PICC)** – with a GFA of **2,500 m2** for events of **up to 1,500 delegates**, comprising a 1,500 m2 auditorium (that can be divided smaller with moveable walls), 500 m2 of breakout rooms, and 500 m2 of auxiliary space.
- The Powerhouse Precinct will be **styled as a New Zealand native theme park** with wilding pines removed and native plantings and predator-free fencing installed to encourage native bush regeneration and native birdlife to flourish. Commercial activity and buildings in the Powerhouse Precinct will be consistent with the New Zealand native theme. Native sanctuaries will include:
  - A **3-hectare predator-fenced sanctuary (Powerhouse Predator-free Sanctuary)** within the Powerhouse Precinct itself.
  - A **much larger 180-hectare predator-fenced sanctuary (Ben Lomond Predator-free Sanctuary)** is proposed to be situated up the hill. Ticketing to the Ben Lomond Predator-free Sanctuary will occur within the Precinct, with access available via the Powerhouse Saddle Funicular Railway (see below). Detailed analysis of the benefits related to Ben Lomond Predator-free Sanctuary are be included in Section 5.1, which considers the proposed Powerhouse Saddle Funicular Railway and the sightseeing/recreation/nature experiences that the funicular enables access to.
- **Transport integrations** for the Precinct will include the following:
  - **Terminal stations for two funicular railways** (powered by electric motors), which integrate the Precinct into residential and sightseeing/recreation opportunities. The **Powerhouse Suburban Funicular Railway** will provide residents with access to Fernhill Heights (benefits of this are explored in detail in Section 4), while the **Powerhouse Saddle Funicular Railway** will provide sightseeing and recreational access to the Ben Lomond Predator-free Sanctuary, as well as Te Taumata o Hakitekura Saddle and the proposed Bowen Peak Ski Area and mountain bike park (see Section 5).
  - A **carparking building for 500 cars**.
  - A bus loop which integrates the Powerhouse Precinct and funicular railways as a **node within the wider Queenstown bus public transport network**.
  - A new fibreglass **boardwalk** (walking trail) from the Powerhouse Precinct up to Mid-Way Clearing to safely reopen the start of the closed Ben Lomond One Mile Creek walkway

Figure 2 – Powerhouse Precinct concept plan – Baxter Design

3.2. Potential benefits of the Powerhouse Precinct

This subsection introduces the potential benefits of the proposed Powerhouse Precinct at the One Mile Recreation Reserve. The benefits assessed in this subsection will primarily focus on the commercial activity directly within the Precinct (i.e. the 3,000 m2 of hospitality and retail businesses, alongside the convention centre with capacity for up to 1,500 delegates).

It is acknowledged that there are also benefits from the Precinct acting as a gateway to the Fernhill Heights suburb (via the Suburban Funicular), as well as the departure point for the Saddle Funicular that takes visitors to sightseeing/recreation at the Te Taumata o Hakitekura Saddle (which includes the Bowen Peak ski area and mountain bike park) and nature experiences within the Ben Lomond Predator-free Sanctuary. However, these benefits related to these two funiculars and housing/activities associated with them will be explored in sections 4 and 5.

The range of commercial activities based directly within the Powerhouse Precinct will generally be targeted towards servicing the visitor market, but commercial activities in the Precinct will also play an important role in the lives of local residents. Not only will local residents wine and dine in the Precinct, but the Powerhouse Precinct will also offer job opportunities that are convenient to Fernhill Heights residents. We will firstly consider retail and hospitality activities within the Precinct.

> The 3,000 m2 of hospitality and retail space in the Powerhouse Precinct could employ around 75 people. This estimate is based on an assumed average of 40 square metres per employee[3].

A retail and hospitality space of this size would comfortably cater for 1,000 customers at any time, based on previously published data by Market Economics suggesting that an average of 3.4 square metres of commercial space is required in Queenstown Lakes to satisfy demand by the local population and visitors to the District[4]. If we were to assume that 10% of customers were locals (of Fernhill Heights or from other parts of Queenstown), then there would be capacity to host 900 visitors to the District at any time.

Being able to comfortably service 900 visitors to the District at any time within the hospitality and retail businesses of the Powerhouse Precinct is necessary given expectations of the number of visitors who would be using the Saddle Funicular each day. It is shown in Section 5 that the Saddle Funicular could average about 2,750 visitors within its 3,000 passengers a day (sustained through anticipated growth in visitor numbers to Queenstown). Many visitors, who ride the Saddle Funicular, will utilise hospitality in the Precinct at either end of their experience, while there will also be other visitors who only make use of the Precinct. If we assume that the equivalent of around half the visitors who ride the Saddle Funicular

[3] This estimate of 40 square metres per employee is consistent with standard benchmarks used elsewhere. For example, a 2015 study by BERL (Upper North Island Industrial Land Demand) showed that retail businesses typically have 40-45 square metres per worker, while food and beverage outlets have a greater employment density of as much as 25 square metres per worker. If we assume that the Powerhouse Precinct will have 40 square metres per employee then this gives us a relatively conservative estimate of employment.

[4] This is an implied demand benchmark calculated from the Business Development Capacity Assessment for Queenstown Lakes District was prepared by Market Economics in 2017 and is available here: https://www.qldc.govt.nz/media/0dme2op0/pdp-s32-general-industrial-zone-appendix-2-business-development-capacity-assesment-2017-2019.pdf. There have been no publicly released recent updates to Business Development Capacity Assessment assumptions in Queenstown Lakes, even though an updated Housing Development Capacity Assessment was released in 2021.

each day make use of the Precinct then this alone could push close to 1,500 visitors each day into the Precinct's retail and hospitality businesses.

> Visitor spending within retail and hospitality businesses in the Powerhouse Precinct could equate to about $27 million per year. This estimate assumes an average of 1,500 visitors to the Precinct each day spend an average of $50 per person[5].

It is important to note the following regarding this visitor spending estimate on retail and hospitality:

- This $27 million visitor spending estimate is only what visitors are projected to spend on retail and hospitality in the Precinct. On top of this, there will be additional spending by visitors who also ride the Saddle Funicular and bundle that with recreation (e.g. ski, bike), and nature experiences (i.e. Ben Lomond Predator-free Sanctuary). The potential additional spending from visitors associated with these Saddle funicular-related activities will be explored in Section 5.
- There will also be spending by local Queenstown residents on retail and hospitality in the Precinct. However, this spending by locals has not been estimated. It is standard practice in economic impact analysis to only capture new money entering the local area, such as from growth in the number of visitors to Queenstown who stay longer in the resort to enjoy the attraction. For that reason, spending associated with local Queenstown residents is excluded because it is likely these locals would simply spend their household budget on other things in Queenstown had they not wined and dined in the Precinct.

The New Zealand native theme for the Precinct, with its setting among regenerating native plantings and access into wildlife sanctuaries, where protected breeding of native birds will occur, would be appealing to visitors to Queenstown. The International Visitor Survey shows that about one third (31%) of travellers who include Queenstown in their New Zealand holiday will specifically visit a wildlife sanctuary at some point during their trip[6].

Alongside the retail and hospitality offerings developed within the Powerhouse Precinct, the Powerhouse International Convention Centre (PICC) will also be constructed.

The proposed PICC would be a new conference/function facility spread across 2,500m2 of floorspace, with the ability within its main auditorium to cater for up to 1,500 people (for international conferences). Alongside opportunities to attract very large conferences of more than 1,000 delegates, which is something not presently available in the Queenstown market, the PICC will also provide Queenstown with a suitable venue for increasing its share of the 500-1,000 delegate conference market. When it comes to smaller events, the PICC will be designed to have the ability to simultaneously run more than one smaller to mid-sized conferences (e.g. of 100 to 250 delegates) using moveable walls and dedicated breakout spaces.

[5] Calculations from MBIE's International Visitor Survey (June 2024 year) show that the average international traveller, who visits Queenstown, spends $444 per day. Other evidence from Infometrics Regional Economic Profile (2023) shows that about 36% of international visitor spending goes into hospitality and general retail (excluding food and fuel retailing). If we assume that the Powerhouse Precinct is on average the destination for one of three daily dining opportunities (i.e. breakfast, lunch, dinner) and some retailing happens before or after the hospitality experience then this would equate to about 12% of visitor spend, which against a daily budget of $444 per day is around $50 per day per visitor.

[6] Source: Calculations from MBIE's International Visitor Survey (June 2024 year)

The existing business events venues in Queenstown across the June 2024 year hosted 401 business events, which attracted 59,128 delegates[7]. However, 91% (365) of these events had less than 250 delegates. Of the remaining 9% (36) of larger events, there were no events with over 1,000 delegates and just 19 events had 500-1,000 delegates, while 17 events fell into the 250-500 delegate range.

Queenstown's lack of larger business events is not because there isn't the demand, rather Queenstown is missing out because appropriate facilities do not currently exist to readily cater for larger conferences. If we look across New Zealand over the past 12 months there were 49 business events with more than 1,000 delegates, 189 that attracted 500-1,000 delegates, and a further 710 that had 250-500 delegates.

If the PICC were able to host the equivalent of one 500-1,000 delegate event each week (or three 250 delegate events) then this could encourage the number of delegates attending business events in Queenstown each year to rise from 59,000 to 98,000 delegates[8] (a 66% increase). Such an increase could bring an additional $100 million of spending into the resort each year – comprising $30 million on the events themselves, and a further $70 million by delegates during the rest of their stay (on accommodation, activities, etc)[9].

Running the PICC will require a significant amount of staffing. The Christchurch Convention Centre (Te Pae) which in its first year of operation aimed for about 70,000 delegates (about twice the PICC projection) has reported having about 200 staff. Of these 50 were full-time, and 150 were parttime during events. It is assumed that the PICC will require similar staffing to delegate ratios.

It is anticipated that the PICC will require approximately 100 staff, with a quarter being fulltime, and the remainder being parttime during events.

Attracting these additional business delegates to the PICC in Queenstown would target a different market to the larger convention centres in Auckland, Wellington, and Christchurch. Queenstown is a very different destination for business events than our large cities, with Queenstown offering the allure of destination conferencing with amazing activities and stunning scenery to keep delegates happy outside of the conference, while the main cities offer logistical and cost practicalities that still make them attractive for some types of events.

As a major international tourist destination, Queenstown would be able to target growth in business events from international markets. The Australian market would be the key enabler of this potential growth, with Queenstown being an easy option to reach through direct flight connections to Melbourne, Sydney, and Brisbane. Data from Tourism Research Australia (part of the Australian Trade and Investment Commission) shows that there were over 6 million delegates attending corporate and business events in Australia over the last 12 months[10]. For the PICC to reach the target of attracting another approximate

[7] Source: Business Events Data Programme, funded by Business Events Industry Aotearoa (BEIA), Regional Tourism Organisations New Zealand (RTNZ), and Tourism New Zealand.
[8] It is assumed that there are an average of 750 delegates per week – this may be achieved via one 750-delegate event or three 250-delegate events.
[9] It is assumed that the PICC receives $500 of revenue per delegate including event management, venue hire, catering, etc – this is based on the assumption that of a $1,000+GST conference ticket, that half will end up with the PICC and the other half spent on other disbursements. For delegate spending outside of the PICC, it is assumed that the typical delegate stays 3 nights and spends $444 per day (consistent with what the International Visitor Survey shows is spent daily by the average visitor who includes Queenstown in their trip).
[10] Data accessed here: https://www.tra.gov.au/en/economic-analysis/business-events-data (30/01/25).

39,000 delegates to Queenstown from growing the New Zealand business events market then it would need to attract the equivalent of less than 1% of the Australian business events market. Attracting business events to Queenstown is imaginable, as the resort is already a very appealing destination for Australian travellers for touristic purposes, with Australians currently comprise almost one third of international visitor spending in Queenstown Lakes[11].

On top of the benefits from the PICC and the rest of the Powerhouse Precinct listed in this subsection, there are also significant benefits from the transport integrations of the Precinct, in particularly via its funicular railway integrations with Fernhill Heights and the Te Taumata o Hakitekura Saddle. The funiculars are powered by electric motors. These benefits will be considered in Sections 4 and 5, in the context of the housing, sightseeing, recreation, and conservation experiences which they support.

3.3. Assessing the Powerhouse Precinct benefits against eligibility criteria

Based on the high-level benefits assessment provided above in section 0 of this report, it is likely that the **Powerhouse Precinct components of the Powerhouse Funicular Railways Queenstown Regional Development project will support the delivery of significant benefits**.

These potential significant benefits from the Powerhouse Precinct (which also incorporates the Powerhouse International Convention Centre) would relate to the **following eligibility criteria** in the Fast-Track Approvals Act:

- **Section 22(a)(iv): will deliver significant economic benefits.**
    - **Up to 175 jobs associated with the Powerhouse Precinct and Powerhouse International Convention Centre (PICC)**: The retail and hospitality businesses within the Powerhouse Precinct could support approximately 75 new jobs, while the Powerhouse International Convention Centre could generate 100 new jobs.
    - **Up to $127 million of new spending annually in Queenstown associated with the Powerhouse Precinct and the effects of conferences**: Visitor spending on retail and hospitality within the Precinct could total $27 million per annum, with the PICC adding a further $100 million of delegate spending to the Queenstown economy ($30 million spent directly on conferencing, and $70 million spent by delegates on other aspects of their Queenstown visit).
    - The PICC is anticipated to host 39,000 delegates per year – the equivalent of one 500-1,000 delegate event each week (or three 250 delegate events).
- **Section 22(a)(vii): will support climate change mitigation, including the reduction or removal of greenhouse gas emissions**.
    - The transport integrations of the Powerhouse Precinct with Fernhill Heights and the Te Taumata o Hakitekura Saddle include the installation of two electrified funicular railways. These funiculars will enable direct public transport access to housing, sightseeing, and recreation that is electrified, rather than relying on combustion engines.

[11] Calculations from Infometrics Regional Economic Profile 2023 (accessed 30/01/25) showed that Australian visitors accounted for 31% of all international visitor spending in Queenstown Lakes in 2023.

4. Benefits assessment of project elements related to Fernhill Heights suburb (with funicular access)

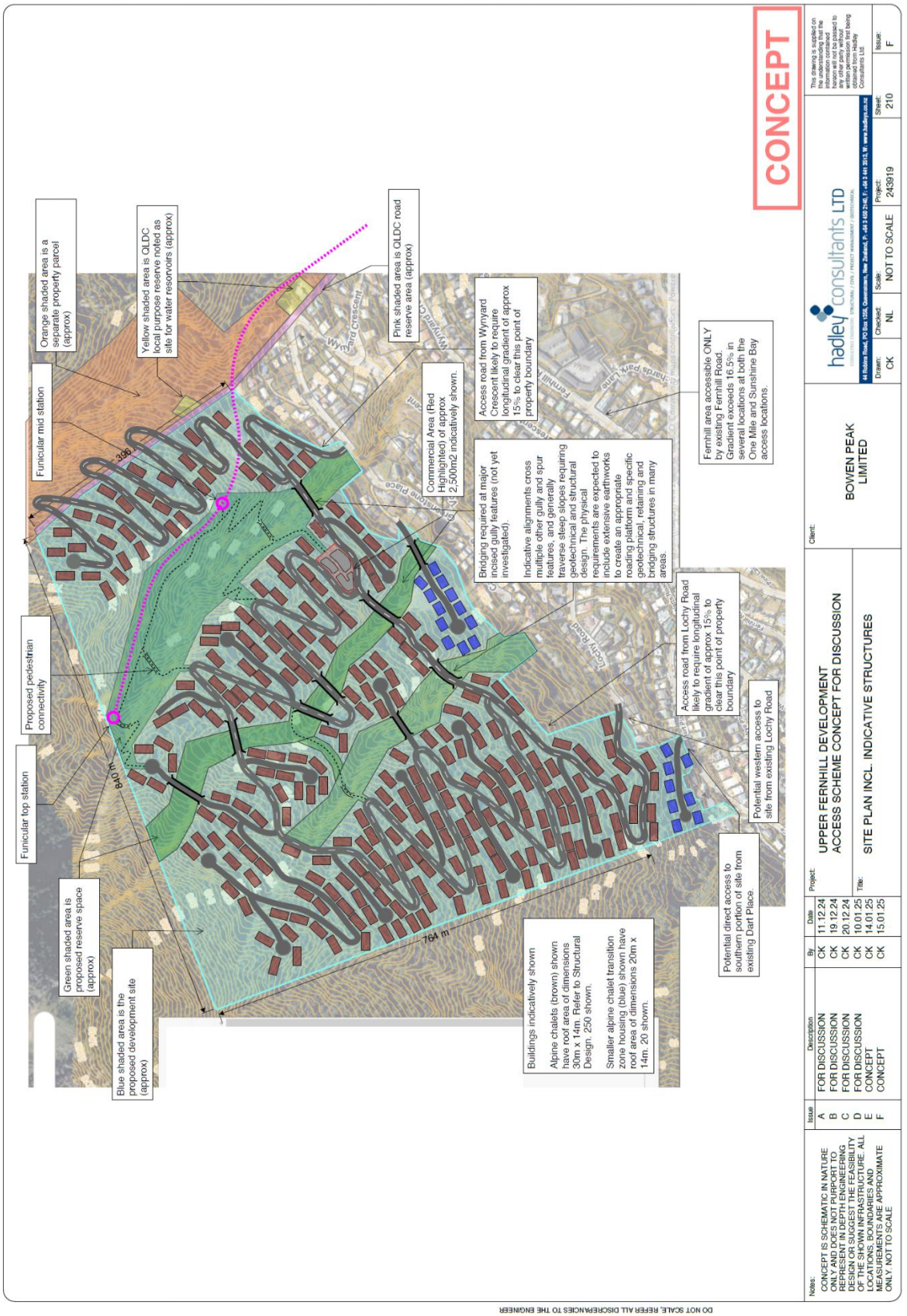
This section assesses the potential project benefits stemming from the Fernhill Heights suburb that includes funicular access, and how these might meet eligibility criteria in the Fast-Track Approvals Act.

4.1. Assumptions related to the Fernhill Heights suburb

The following assumptions about the new Fernhill Heights suburb have been used in the analysis:

- The suburb will involve the construction of:
    - **250 large alpine chalets** – each chalet will include 2x4-bedroom and 2x2-bedroom apartments. This effectively means 1,000 housing units in total across the large chalets.
    - **20 paired smaller alpine chalets** to act as a transition between Fernhill and Fernhill Heights – each smaller paired chalet will house a 2-bedroom apartment so there would be 40 housing units in total (i.e. 20 pairs of 2) across these smaller paired chalets.
    - **In total there would be 1,040 housing units** across the large and smaller paired chalets.
- Affordable housing will be included in Fernhill Heights. It is my understanding that an agreement has been reached to give 5% of sections to the Queenstown Lakes Community Housing Trust, and for them to then be responsible for building similar alpine chalets on those sites.
- Indicatively the 1,040 proposed housing units (which include 3,080 bedrooms) will result in **at least 2,180 residents**. The calculation of the indicative resident population draws on the following assumptions:
    - An average household size of 2.89 residents per household has been assumed to ensure consistency with Census 2023 results for Queenstown Lakes.
    - Approximately 27.5% of Queenstown Lakes homes ultimately end up unoccupied due to a high prevalence of holiday homes and private visitor accommodation.
    - The district-wide assumption related to unoccupied housing provides for a conservative resident population estimate for Fernhill Heights. By providing a well-functioning urban environment, with integrated public transport, nearby job opportunities, and affordable housing, a higher rate of home occupancy is potentially achievable for Fernhill Heights. If the rate of unoccupied housing were halved (to closer the New Zealand average), then the population of the suburb would reach 2,593 people.
- The applicant is aiming to deliver the first chalets in 2027, with construction activity spread across an approximate 10-year period until the suburb is fully built-out.
- Fernhill Heights is planned to include integrated public transport via the proposed Powerhouse Suburban Funicular Railway that connects the suburb directly to the Powerhouse Precinct, with onward connections onto other public transport options. The Suburban Funicular is powered by an electric motor and would be able to carry approximately 500 passengers per hour per direction, and is anticipated to be a $60 million investment. Half of this investment would be local construction work to install the railway, while the other half will go to the Swiss company (indicatively Garaventa, see quote in Appendix 8) to import the rails, funiculars, and other associated parts and design work (CHF 15 million).
- The Suburban funicular will also give mountain bikers access to top of the Wynyard downhill mountain bike trail.

Figure 3 - Proposed Fernhill Heights chalet plan



4.2. Potential benefits of Fernhill Heights suburb

This subsection introduces the potential benefits of the proposed Fernhill Heights residential suburb to be provided for within the Powerhouse Funicular Railways Queenstown Regional Development.

Queenstown Lakes has longstanding housing shortages that have been exacerbated further over recent years because of ongoing rapid population growth:

- The Queenstown Lakes Homes Strategy (2021-2031)[12] identified housing as one of the biggest challenges facing the district, with insufficient housing supply at the centre of the challenge.
- Kāinga Ora, the Ministry of Housing and Urban Development, QLDC and Queenstown Lakes Community Housing Trust's Queenstown Lakes District Joint Housing Action Plan (2023-2028) highlighted that the District needs 17,000 new homes between 2021 and 2051[13].
- The 2021 Queenstown Lakes District Housing Development Capacity Assessment (HDCA) identified increasing demand for higher density housing, with half (49%) of long-term dwelling demand growth anticipated to be for attached dwellings, while attached housing only currently makes up 16% of Queenstown Lakes' housing stock. Fernhill Heights offers high-density housing.
- The HDCA showed only 38% of plan-enabled additional housing capacity is practical to develop in the long-term because the remainder is not commercially feasible or infrastructure serviced.
- The 2023 Census showed that 27.5% of Queenstown Lakes homes ultimately end up unoccupied due to a high prevalence of holiday homes and private visitor accommodation. By comparison, nationally unoccupied housing represents just 10.9% of the New Zealand housing stock.
- Queenstown Lakes is growing at three times the rate of the rest of New Zealand. The District's population has grown by an average of 5.3%pa a year across the 10 years to 2024 – which equated to an additional 2,100 residents on average each year. In comparison, New Zealand's population growth has averaged 1.7%pa over the same period[14].

Over the next 30 years, there is expected to be significant population growth within Queenstown Lakes and more generally across Otago Region that will drive up demand for housing:

- Queenstown Lakes population is expected to expand by a further 8,500 people by 2033 and 28,679 people between now and by 2053[15]. Neighbouring Central Otago District's population is expected to expand by 2,700 from 2024-2033 and 7,238 from 2024-2053[16].
- Projected population growth by QLDC over the long-term is conservative when you consider that population growth over the past decade averaged almost 2,100 additional residents on average each year. Extrapolating recent population growth trends over a 30-year period would lead to more than 60,000 extra residents, which is over twice the rate of growth projected by QLDC.
- Otago's population is expected to rise by 27,800 from 2024-2033 and 80,617 from 2024-2053.[17].

[12] Available here: https://www.qldc.govt.nz/media/mp3bzxvr/queenstown-lakes-homes-strategy_final.pdf
[13] Available here: https://www.qldc.govt.nz/media/dtuhktca/qldc_joint-housing-action-plan.pdf.
[14] Source: Statistics New Zealand Subnational Population Estimates 2024.
[15] Source: Queenstown Lakes District Council (QLDC) Demand Projections to 2053 (2024 update). Available here: https://www.qldc.govt.nz/media/xkjbu5ua/qldc-demand-projections-2024.pdf. Note that QLDC's projections are very similar to Statistics New Zealand's high side projection scenario.
[16] Source: Statistics New Zealand Subnational Population Projections to 2048, 12 December 2022 update. The medium scenario for Central Otago has been taken at it most closely resembles population estimates since 2018. Projections to 2048 have been extrapolated out to 2053 for consistency with QLDC projections.
[17] Source: Statistics New Zealand Subnational Population Projections to 2048, 12 December 2022 update. The high scenario for Otago has been taken at it most closely resembles population estimates since 2018. Projections to 2048 have been extrapolated out to 2053 for consistency with QLDC projections.

A large amount of additional housing supply will be required to accommodate this projected population growth. Factoring in average household sizes and unoccupied dwelling rates in Queenstown Lakes, the proposed 1,040 housing units in Fernhill Heights would house at least 2,180 people[18]. This estimate of potential residents in Fernhill Heights is conservative because of the use district-wide assumptions related to vacant housing – by providing a well-functioning urban environment, with integrated public transport, nearby job opportunities, and affordable housing, a higher rate of home occupancy is potentially achievable. If the suburb's rate of unoccupied housing ends up being half the District average (closer to what persists elsewhere in New Zealand) then Fernhill Heights might house 2,593 people.

To put in perspective how the additional housing supply in the Fernhill Heights suburb would stack up against projected population growth – the conservative estimate of 2,180 residents in the 1,040 housing units would be sufficient to house 7.6% of projected population growth across Queenstown Lakes from 2024-2053 and 2.7% of Otago's population growth[19].

Although details are still to be finalised, it is also worth noting that Bowen Peak Limited has been consulting with the Queenstown Lakes Community Housing Trust to provide a quantum of affordable housing within Fernhill Heights. As at the date of writing this Report, I understand that the applicant and the Housing Trust have reached a Heads of Agreement that the applicant will transfer 5% of the residential allotments to the Housing Trust at nil consideration. On the current project parameters that would enable 52 housing units to be developed by the Housing Trust. Any affordable housing that is provisioned for would support social wellbeing outcomes across the District, with the Housing Trust recently reporting it has over 1,300 eligible households on its waiting list[20].

In addition to the ongoing benefits from lifting the housing supply, there will also be a range of one-off significant economic impacts that will occur because of spending on planning, design, engineering, infrastructure, site preparation, and building processes to develop Fernhill Heights.

The residents of the Fernhill Heights suburb would also provide a significant amount of labour into the local workforce which would support generation of economic activity. Calculations from Infometrics suggests that job numbers in Queenstown Lakes are currently equivalent to around 65.9% of residents being active participants in the workforce[21], while the average productivity of each job is a $134,492 contribution to GDP per job. If 65.9% of residents in Fernhill Heights were in the workforce then this would equate to 1,436 workers.

Collectively the labour supplied by 1,436 potential workers among the 2,180 residents of the proposed Fernhill Heights suburb could generate $193 million of GDP annually to the local economy.

These additional workers would gradually enter the workforce over time, given that there is an approximate 10-year build programme (see Appendix 7) planned for housing in Fernhill Heights.

[18] This estimate has used assumptions from the 2023 Census that there are 2.89 residents for each occupied dwelling in Queenstown Lakes, and that 27.5% of dwellings are unoccupied.
[19] Relative to the Inland Otago subregion (Queenstown Lakes and Central Otago) the 2,180 residents in Fernhill Heights would equate to 6.1% of projected Inland Otago population growth from 2024-2053.
[20] Source: Queenstown Lakes Housing Trust Annual Report 2024, available here: https://www.qlcht.org.nz/assets/Uploads/QLCHT-Annual-Report-2024.pdf.
[21] Source: Calculations from Infometrics Queenstown-Lakes Economic Profile 2024 (accessed 31/01/25) which showed filled jobs of 34,521 in Queenstown Lakes across the March 2024 year and a population of 52,400 as at June 2024.

The idea that Queenstown Lakes businesses in future could demand enough extra workers to provide 1,436 jobs for Fernhill Heights residents is reasonable considering long-term employment trends:

- Over the past decade, more than 12,000 jobs were created within Queenstown Lakes businesses, at an average annual rate of more than 1,200 new jobs per year[22]. Over two thirds of this job growth was within the Queenstown and the Whakatipu Basin side of the District.
- Neighbouring Central Otago created about 3,600 jobs over the past decade, at an average annual rate of around 360 new jobs per year[23]. About 78% of this job growth was in Cromwell.

The integration of public transport connections into Fernhill Heights with the $60 million Powerhouse Suburban Funicular Railway (powered by electricity) provides opportunities for residents to access employment and education using lower emissions transportation options:

- About 175 jobs could be created directly in the Powerhouse Precinct itself (including among retail and hospitality businesses, and the convention centre) (see Section 0), with a further 150 jobs on average across the year associated with supporting experiences and activities accessed by the Saddle funicular (e.g. sightseeing, nature experiences, biking, skiing) (see Section 5.2).
- There are also already a significant number of labour market opportunities within a 20-minute walk of the Powerhouse Precinct, given there are currently almost 10,000 workers in businesses in downtown Queenstown areas[24].
- Onward public transport connections will enable workers to access employment in Frankton and beyond. There will also be opportunities for students to utilise existing school bus routes.

The carrying capacity of the Powerhouse Suburban Funicular Railway would be approximately 500 passengers per hour per direction. Assuming that people generally leave the house each morning to go about daily activities across a 2.5-hour window (e.g. 6:30am to 9am), then at least 1,250 residents could regularly be using the funicular during morning peak windows for work, education, or leisure.

> The ability of the funicular to carry 1,250 residents across morning peaks (6:30am to 9am) would equate to almost 60% of Fernhill Heights residents regularly using public transport. By comparison, the recent Queenstown Public Transport Business Case[25] (endorsed by NZTA, Otago Regional Council, and QLDC in June 2024) has set targets of a 35% to 50% public transport share of people movements (depending on the suburb) by 2053.

Funicular railways are consistent with definitions of nationally significant infrastructure:

- The National Policy Statement on Urban Development (2020) specifically states that nationally significant infrastructure includes “rapid transit services” that are defined as “any existing or planned frequent, quick, reliable and high-capacity public transport service that operates on a permanent route (road or rail) that is largely separated from other traffic”.

From a resident’s perspective, there are potential other social wellbeing considerations for Fernhill Heights location, above and beyond the potential housing and economic impacts. The suburb would be located with convenient access directly from each resident’s front door into outdoor activities, including skiing and biking. A large cross-section of Queenstown Lakes residents enjoy these types of activities:

[22] Source: Calculations from Infometrics Queenstown-Lakes Economic Profile 2023 (accessed 29/01/25).
[23] Source: Calculations from Infometrics Central Otago Economic Profile 2023 (accessed 29/01/25).
[24] Source: Calculations from Statistics New Zealand’s Business Demography (2024) statistics of filled jobs in businesses in downtown Queenstown suburbs (Queenstown Central, Queenstown East, Warren Park, Fernhill).
[25] Available here: https://tinyurl.com/vefbdkwe.

- 51% of Queenstown-Lakes residents exercise almost daily and 28% exercise 3-4 times a week[26]
- 5,313 Queenstown-Lakes residents have been estimated to mountain bike[27]
- 167,072 skier days are attributable to Queenstown-Lakes residents a year[28].

Although the Suburban funicular will primarily be developed to provide access for Fernhill Heights residents, it also has the benefit of giving mountain bikers convenient access to top of the Wynyard downhill mountain bike trail. The Queenstown mountain bike economy will be explored in Section 5.2.1.

4.3. Assessing Fernhill Heights benefits against eligibility criteria

Based on the high-level benefits assessment provided above in section 0 of this report, it is likely that the **Fernhill Heights components of the Powerhouse Funicular Railways Queenstown Regional Development project will support the delivery of significant regional and national benefits[29]**. These potential significant regional benefits from the Fernhill Heights suburb (with funicular rail access) would relate to the **following eligibility criteria** in the Fast-Track Approvals Act:

- **Section 22(a)(ii): will deliver new regionally or nationally significant infrastructure or enable the continued functioning of existing regionally or nationally significant infrastructure.**
    - Fernhill Heights suburb will be integrated into the public transport network with the Powerhouse Suburban Funicular Railway. This funicular railway is a form of "rapid transit services" that is consistent with the definition of nationally significant infrastructure in the National Policy Statement on Urban Development (2020).
    - The suburban funicular has capacity to carry more than 60% of residents across morning peak windows, which exceeds the 35%-50% public transport targets for Queenstown endorsed by NZTA, Otago Regional Council, and QLDC.
- **Section 22(a)(iii): will increase the supply of housing, address housing needs, or contribute to a well-functioning urban environment (within the meaning of policy 1 of the National Policy Statement on Urban Development 2020).**
    - The proposed 1,040 housing units within Fernhill Heights would be anticipated to house at least 2,180 people. 2,180 people is equivalent to 7.6% of projected population growth across Queenstown Lakes from 2024-2053 and 2.7% of Otago's population growth.
    - Fernhill heights contributes to a well-functioning urban environment, through integrated public transport, nearby job opportunities, and affordable housing.
- **Section 22(a)(iv): will deliver significant economic benefits.**
    - Labour supplied by residents of the proposed Fernhill Heights suburb could support generating $193 million of GDP annually in the Queenstown Lakes economy.
- **Section 22(a)(vii): will support climate change mitigation, including the reduction or removal of greenhouse gas emissions**.
    - Fernhill Heights would be integrated into public transport networks using an electrified funicular railway rather than a transport option relying on combustion engines.

[26] Source: QLDC Quality of Life 2023 Report, available here: https://tinyurl.com/ytjemhj5
[27] See: Benje Patterson (2022), The contribution of biking to the Queenstown-Lakes economy
[28] See: Benje Patterson (2021), The contribution of skiing to the Queenstown-Lakes economy
[29] This judgement regarding the potential for significant benefits from Fernhill Heights has been assessed individually on its own merits. The degree to which the potential housing supply from Fernhill Heights could interact with other potential housing projects in Queenstown Lakes have not been considered. The future housing supply landscape across the District is likely to evolve depending on the other Fast-Track projects which may be approved in the local area and so trade-offs with other projects should be considered.

5. Benefits assessment of the Saddle funicular and associated recreation and nature experiences

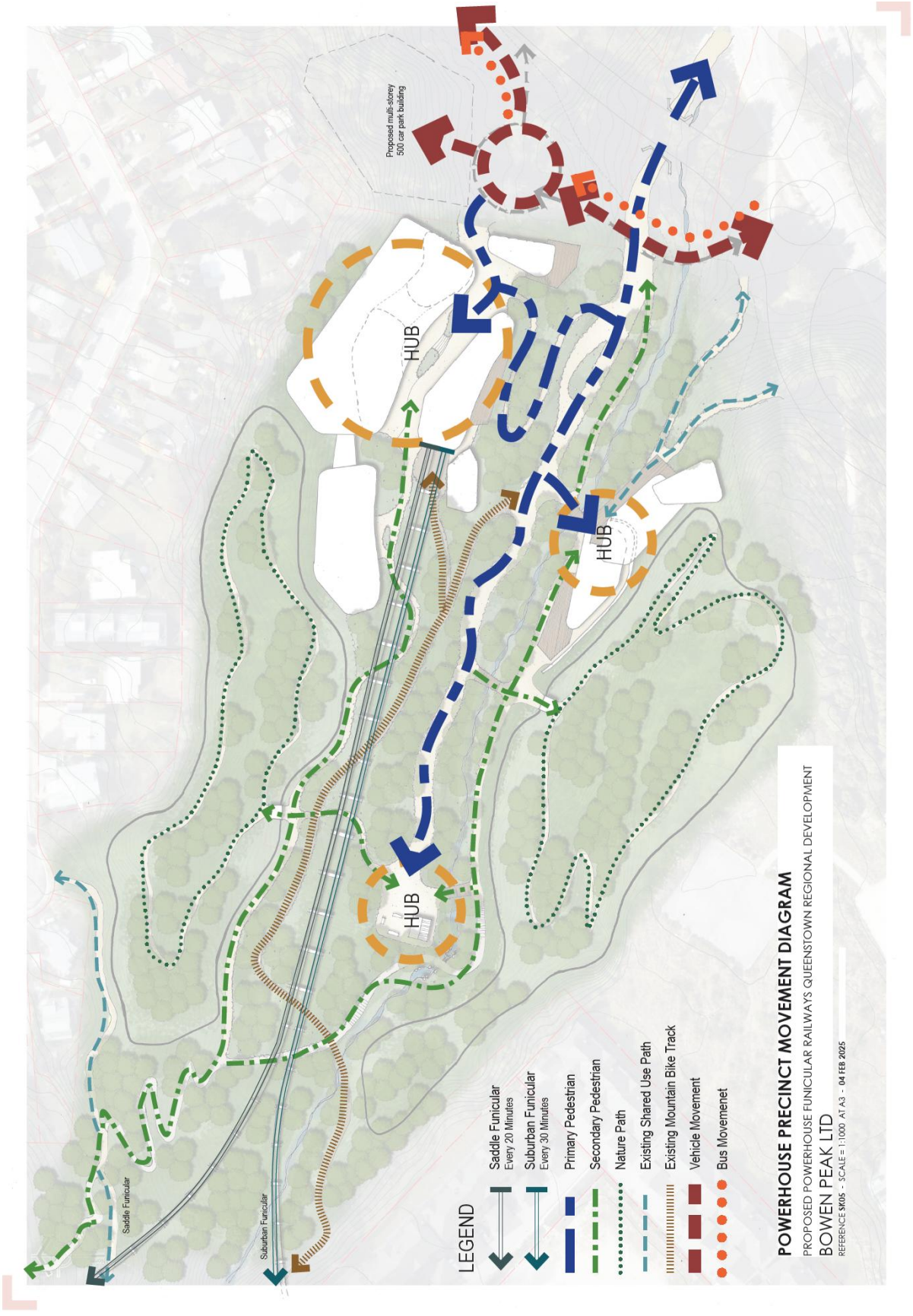
This section provides an assessment of the potential benefits of the Powerhouse Saddle Funicular and the associated activities which it unlocks. The Saddle Funicular connects the Powerhouse Precinct with the Te Taumata o Haketikura Saddle, the proposed Bowen Peak Ski Field and mountain bike park, and links to the upper Ben Lomond mountain bike trails, and the proposed Ben Lomond Predator-free Sanctuary.

5.1. Saddle funicular and associated activities

The analysis regarding the Saddle funicular and activities rest on the following assumptions:

- The **Powerhouse Saddle Funicular Railway** would connect the Powerhouse Precinct at the One Mile Recreation Reserve with the Te Taumata o Haketikura Saddle. The Saddle funicular could carry approximately 770 passengers per hour per direction, and is anticipated to be a $94 million investment. Half of this investment would be local construction work to install the railway, while the other half would go to the Swiss company (indicatively Garaventa, see quote in Appendix 8) to import the rails, funiculars, and other associated parts and design work (CHF 23.5 million).
- The **funicular's top station** at Te Taumata o Haketikura Saddle would include an engine room, bar/restaurant, retail, guest services for the ski area, two 30-bed bunk rooms for teenage outdoor education groups, public shelter, public toilets, and a 4WD ambulance base.
    - The top station would be a destination in its own right for visitors seeking sightseeing and dining opportunities, while it will also give people convenient access into walking trails to explore the alpine environment.
    - Skiers and mountain bikers of the adjacent Bowen Peak Ski Area and mountain bike park will also utilise the top station as a 'base building'.
- The proposed **Bowen Peak ski area and mountain bike park** is planned to be constructed to the east of the Te Taumata o Haketikura Saddle to access terrain on Bowen Peak. A 6-passenger detachable $25 million chairlift (indicatively Doppelmayr, see Appendix 9 for a photo of a similar chairlift in Queenstown) is proposed to be installed, with a maximum carrying capacity of 2,400 people per hour for winter operations. The ski area would be unique in that it could directly be accessed on foot from downtown Queenstown using the funicular and ski lift, rather than other ski areas which require bus or car access to their base.
    - **Skiing on Bowen Peak** is south-west facing and would have approximately the same elevation as nearby Coronet Peak and cover over 50 hectares. Although detailed snow modelling has not been gathered to date, for the purposes of this report it is assumed that there would be sufficient snow coverage to meet demand.
    - **A mountain bike park** would be constructed in the ski area boundaries to enable lift-accessed mountain biking opportunities during summer months, in much the same way as occurs in other nearby ski areas (such as Coronet Peak and Cardrona). Connections into existing upper Ben Lomond mountain bike trails would also be available.
- **The Ben Lomond Predator-free Sanctuary** would be a 180-hectare predator-fenced sanctuary located partway between the Powerhouse Precinct and the Taumata o Haketikura Saddle. Entry to the Sanctuary would be ticketed, in the same way that occurs at Zealandia in Wellington.
    - Access to the Sanctuary would primarily be via the Saddle funicular. Alternatively, guests would be able to access the Sanctuary by taking advantage of a new fibreglass boardwalk (walking trail) from the Powerhouse Precinct up to Mid-Way Clearing that would allow for the reopening of the Ben Lomond One Mile Creek walkway.

Figure 4 – Powerhouse Precinct movement diagram – Baxter Design



5.2. Potential benefits of the Saddle funicular and other associated activities

This subsection introduces the potential benefits of the proposed Saddle funicular and the other associated activities which the funicular enables access to. It was already shown in Section 0 that funicular railway is a form of "rapid transit services" that is consistent with the definition of nationally significant infrastructure in the National Policy Statement on Urban Development (2020).

> It is estimated that the Saddle funicular could carry at least 1,100,000 passengers per year (3,000 per day). This would comprise approximately 1,000,000 passengers riding the funicular for sightseeing, biking, and viewing the Ben Lomond Sanctuary, with a further 100,000 passengers attributable to skiers. Over 90% of these passengers would be expected to be visitors to Queenstown Lakes (an average of almost 2,750 visitors), with the rest locals.

The Saddle funicular would be an efficient, electrified transport option meaning that it would offer lower emissions than sightseeing and recreational activities in Queenstown that require transport options currently reliant on combustion engines. The funicular base terminal would be accessible on foot from downtown Queenstown.

Visitor demand for the Saddle funicular would be driven by a combination of tapping into anticipated increased in visitor numbers by QLDC, as well as encouraging the existing visitor base to stay longer in Queenstown through offering new high-quality attractions.

There would be a large amount of additional spending and employment in Queenstown supported by visitors who ride the Saddle funicular and pay for associated activities and experiences:

- These visitors would be anticipated to directly spend $120 million annually on the funicular and associated experiences (with approximately $20 million per annum associated with winter skiing, and the other $100 million attributable to sightseeing, biking, and the sanctuary)[30].
- Employment associated with activities accessed by the Saddle funicular would average 150 staff across the year, with a peak of 250 in winter, primarily due to the high staffing requirements of a ski area, while summer employment is tentatively assumed to be about half of this level[31]. This employment would be on top of what directly occurs at the Powerhouse Precinct.

More detailed analysis and benchmarking of the potential demand for the Saddle funicular and its associated activities is given below. The analysis is split into:

- Section 5.2.1 considers the Saddle funicular passengers riding the funicular for non-ski reasons.
- Section 5.2.2 looks at Saddle funicular passengers associated with the Bowen Peak Ski Area.

[30] This additional visitor spending has been formed by assuming that 90% of Saddle funicular passengers (both non-ski and ski) are visitors, and that a visit to the Saddle funicular adds a half day for a non-skier and a full day for a skier to each visitor's holiday. It is further assumed that during this additional time spent in Queenstown half the visitor's budget goes on the Saddle funicular and activities associated with it (e.g. sightsee, bike, nature experiences, ski), while the other half is necessary for things like additional accommodation, rental car hires, etc. For reference, the average Queenstown visitor spends $444 per day (refer to Section 0).

[31] Detailed analysis of employment related to operating the Bowen Peak Ski Area is included in Section 5.2.2 by leveraging off operational information from existing ski areas in Queenstown. Detailed analysis of summer employment has not been performed – such employment will be as much determined by safety and operational considerations as it is by demand factors. For reference Skyline Gondola has previously reported using as few as 125 staff to run its Queenstown Gondola, luge, and dining complex when it has lean staffing and up to 250 with peak staffing (See here: https://tinyurl.com/4z99w8vc).

5.2.1. Benefits of Saddle funicular (non-ski related activities)

The estimate of about 1,000,000 passengers per year who would ride the Saddle funicular for sightseeing, biking, and viewing the Ben Lomond Predator-free Sanctuary is reasonable when you consider how many passengers are currently carried by Skyline Queenstown Gondola (which offers sightseeing, luge, biking)[32]. Within this 1,000,000 passenger estimate – about 150,000 would visit the Ben Lomond Predator-free Sanctuary, 100,000 would bike, and the remaining 750,000 passengers would primarily ride the Saddle funicular for sightseeing purposes[33].

For benchmarking purposes, the following has been assessed about Skyline's current size:

- Skyline Queenstown Gondola reported annual passenger numbers of 976,429 immediately before Covid-19 in 2020[34], which equates to an average of 2,675 passenger per day.
- If just over 90% of these passengers were visitors then this would suggest 2,500 visitors per day ride the Skyline Gondola, with the remaining 175 passengers being local residents (which equates to 63,875 local resident rides per year or just over one ride on average for every Queenstown Lakes resident each year).
- At present across Queenstown, there are currently an average of 20,371 visitors in the resort each day[35], which means that the 2,500 estimated visitors daily carried by Skyline is equivalent of about 12.5% of all visitors riding the Skyline Gondola on any given day.

As a point of comparison, New Zealand's only other funicular, the Wellington Cable Car carried 1.2 million passengers in the June 2019 year at its pre-Covid peak, with calculations from recent data suggesting that about 66% of passengers are visitors, while the rest are mainly commuters[36].

It is reasonable to assume that the Saddle funicular would be at least as attractive to visitors and locals for sightseeing, biking and nature experiences as the Skyline gondola:

- The Saddle funicular will run to a higher altitude than the Skyline gondola and so will also be able to offer great views, in addition to an alpine experience.
- The base terminal of the Saddle funicular at the One Mile Recreation Reserve would be located with similar convenience to downtown Queenstown – about 1.1 kilometres from the Steamer Wharf compared to Skyline which is 700 metres from the Wharf.
- The design of the funicular's top station at Te Taumata o Haketikura Saddle, including retail and hospitality, will also be an appealing destination for sightseers, and would be a convenient starting point for people wanting recreational activities, such as walking and biking, as well as accessing the adjacent Bowen Peak Ski Area and mountain bike park.

[32] Bowen Peak skier numbers are assumed to be additional to this benchmark, as they are a very specific winter-based product that will appeal to a completely different visitor subset than any of the activities and experiences currently bundled together with the Skyline Gondola offering. Skier numbers have been benchmarked in the next subsection against the rest of the Queenstown ski industry.
[33] Groups using the 60 bed bunk accommodation at the top station for teenage education groups have not been specifically considered within the analysis. It is noted that with 90% occupancy across the year this would account for approximately 20,000 guest nights.
[34] Source: Skyline New Developments Prospectus June 2023 – Global leader in gravity based attractions
[35] Calculated using data for the June 2024 year from Visitr – Visitor Volume Estimates of daily visitor numbers in Queenstown from mobile phone monitoring. This is a data source purchased from tourism data company Visitr by Destination Queenstown.
[36] Source: Wellington Cable Car Limited Annual Report (2023).

The Saddle funicular's passenger demand for sightseeing, biking, and viewing the Ben Lomond Predator-free Sanctuary can largely be driven by expected growth in the total number of visitors coming to Queenstown. Visitor projections from QLDC suggest that visitor numbers to Queenstown are anticipated to rise by almost 50% within 10 years and double by 2053.

QLDC projections show there will be more than 20,000 additional visitors per day by 2053, on top of the 20,000 visitors per day who already currently visit Queenstown on average[37]. This means that the overall size of the visitor pie in the resort seeking out experiences each day will be larger.

On top of the Saddle funicular helping to service demand from underlying growth in Queenstown's visitor numbers, some of the Saddle Funicular's passenger numbers may come from providing a new experience that encourages existing visitors to stay longer in Queenstown:

- The proximity of the Saddle funicular top station to Skyline Gondola's top station on Bob's Peak mean that there will also be some passengers who bundle the two attractions together. For example, some passengers, may take the Saddle funicular up to the top station and then walk down to Bob's Peak and take the Skyline Gondola back down.
- The expansive 180-hectare Ben Lomond Predator-free sanctuary will help satisfy latent demand in Queenstown for wildlife experiences. It was demonstrated in Section 0 that about one third (31%) of travellers to New Zealand, who include Queenstown in their holiday, will specifically visit a wildlife sanctuary at some point during their time in New Zealand. Similar large-scale predator-free wildlife sanctuaries in New Zealand, such as the 225-hectare Zealandia sanctuary in Wellington, attract around 150,000 visitors per year[38].

It is imaginable that at least 150,000 visitors (out of the 1,000,000 non-ski passengers of the Saddle funicular) will specifically choose to bundle a visit to the Ben Lomond Predator-free Sanctuary into their activity package.

Alongside sightseers and visitors to the Ben Lomond Predator-free Sanctuary, another driver of Saddle funicular passengers would be mountain bikers. There is likely to be a high degree of demand within the mountain biking community for the terrain which is opened up by the Saddle funicular by way of its connection into the upper Ben Lomond mountain bike trails, and the proposed mountain bike park development within the Bowen Peak Ski Area (explored deeper in Section 5.2.2).

To paint a picture of potential demand from bikers, a 2022 report commissioned by Rod Drury from Benje Patterson[39] highlighted the following economic impacts of biking to the Queenstown-Lakes economy:

- $158 million of annual spending in Queenstown-Lakes was supported by bike visitors in 2021 and this was anticipated to grow to $210 million by 2026.
- Bike visitor spending in Queenstown-Lakes was approximately equivalent to 37% of the size of the ski economy.
- The total number of bikers in Queenstown-Lakes was projected to rise from 181,947 in 2021 to 243,282 by 2026, with more than 90% of these being visitors.

[37] Visitor demand projections for Queenstown (Whakatipu Ward) are part of QLDC's Demand Projections (2024 update). Available here: https://www.qldc.govt.nz/media/xkjbu5ua/qldc-demand-projections-2024.pdf
[38] Source: Zealandia Annual Report 2023/25.
[39] See: Benje Patterson (2022), The contribution of biking to the Queenstown-Lakes economy, available here: https://www.benjepatterson.co.nz/bikings-contribution-to-the-queenstown-lakes-economy/

If the bike economy grows at a similar rate to QLDC's projected growth in visitor numbers then there could be an additional 200,000 bikers visiting Queenstown each year by 2053, in addition to the more than 200,000 visiting bikers a year likely to already be coming to the resort as of 2024.

If one in four bikers visiting Queenstown use the Saddle funicular once during their Queenstown experience, then that could mean potential future demand of 100,000 bikers a year using the Saddle funicular (out of the 1,000,000 non-ski passenger rides of the Saddle funicular).

5.2.2. Benefits of Saddle funicular (Bowen Peak Ski Area)

The estimate of 100,000 Saddle funicular rides attributable to skiers at the Bowen Peak Ski Area has been estimated based on an analysis of patterns of skier demand across the rest of the Queenstown Lakes ski industry, coupled with an assessment of the capacity that would be added by skiing on Bowen Peak.

A 2021 report jointly commissioned by NZSki and RealNZ from Benje Patterson highlighted the following economic impacts of skiing on the Otago economy in 2019 before the Covid-19 pandemic[40]:

- $431 million of annual spending in Queenstown-Lakes was supported by ski visitors in 2019. Approximately 1,777 jobs were directly generated by the ski areas.
- There were 885,000 skier days at Queenstown-Lakes District's four major ski resorts (Coronet Peak, Remarkables, Cardrona, Treble Cone) during the 2019 ski season. Visitors accounted for about 80% of these skier days. Average daily usage of the ski areas was approximately 7,080 skiers, with average daily usage during the peak month (August) sitting at 10,334 skiers.
- Maximum daily skier capacity at Queenstown Lakes' ski resorts was assessed at 17,000 skiers per day in 2019, which implies that ski areas were running at an average of 42% of their maximum capacity across the entire season and 61% during the peak month of August.
- Skier capacity could rise to 27,500 skiers per day once the Cardrona's Soho expansion and the Remarkables' Doolans expansion are complete.
- Unlike hotels, ski areas typically do not want to reach full capacity. Internal research on customer satisfaction by the ski resorts has shown that capacity issues (eg. lift queues) were among the key detractors identified by guests as being detrimental to their ski experience. Any investment that allows for a greater and more comfortable throughput of skiers can help alleviate future risks of such pressures.

The proposed Bowen Peak Ski Area would have one 6-seater detachable chairlift capable of carrying up to 2,400 skiers per hour. If we assume that utilisation of the Bowen Peak Ski Area's capacity across the season is similar to other local ski area's (42%) then this would mean about 1,000 skiers per day

[40] See: Benje Patterson (2021), The contribution of skiing to the Queenstown-Lakes economy, available here: https://tinyurl.com/ytykry55

(1,500 on peak days). Across a 100-day ski season this could lead to about 100,000 skier days per year on Bowen Peak[41].

If demand for skiing grows at a similar rate to QLDC's projected growth in visitor numbers then skier demand would double by 2053. In comparison, the increase in ski field capacity based on Cardrona and the Remarkable's planned expansions represents only about a 62% increase to total ski area capacity, suggesting that there is still likely to be sufficient demand for Bowen Peak's ski capacity given that its chairlift (2,400 skiers per hour) would represent less than 10% of future local ski field capacity (27,500 skiers per day).

The Bowen Peak Ski Area would be via an electrified funicular railway within walking distance from downtown Queenstown, rather than by bus and private cars up a long mountain access road as is currently the case with other ski areas in Queenstown. The electrified access to the ski area would offer lower emissions mountain access than current transport options to ski areas. Although gondolas are currently proposed to access Coronet Peak and Cardrona, reaching the base terminals of these access gondolas would still require bus or private car transport from downtown Queenstown.

In addition to winter skiing, the Bowen Peak Ski Area would include the construction of a mountain bike park, so that mountain bikers could enjoy lift-accessed bike terrain in summer. The additional summer demand by bikers to use the Bowen Peak chairlift have been assumed to be captured within the assumption of 100,000 bike passengers a year using the Saddle funicular estimated in Section 5.2.1.

There would be a large number of jobs created to run the Bowen Peak Ski Area. Industry average data from 2019 showed that there were 1,777 ski area jobs across Queenstown Lakes' four ski resort against average daily skier numbers of 7,080 skiers, suggesting there were 0.25 ski field jobs created for every skier. These jobs include all roles, ranging from lift operations, ski rental, instructors, ski patrol, hospitality, guest services, road maintenance, transport, etc.

Given industry average ratios of staff to skiers, there are likely to be about 250 people employed during winter to staff the Bowen Peak Ski Area (and associated services such as winter staffing of the top station).

The regional significance of skiing to Otago has also influenced the Proposed Otago Regional Policy Statement (2021). The Hearing Panel Report on the Proposed Policy Statement recommended that ski area infrastructure be recognised as "regionally significant infrastructure" in Otago[42]. The Report also recommended that ski area infrastructure has the same meaning as in clause 3.21(1) of the National Policy Statement for Freshwater Management (2020)[43], which explicitly identifies ski area transportation mechanisms (i.e. aerial lifts such as gondolas) as being examples of such ski area infrastructure.

[41] This 100-day season has been tentatively assumed for the purposes of demonstrating a potential order-of-magnitude number of skiers which could be serviced across a season by a single lift ski area. Note that the typical maximum ski season length in Queenstown is generally no longer than 125 days. In practice, season length and snowpack will vary between mountains and year-to-year depending on weather systems and mountain-specific factors such as elevation, aspect, and snowmaking and grooming infrastructure.

[42] See: Proposed Otago Regional Policy Statement (2021) Hearing Panel Report (released March 2024), pages 245-7, available here: https://www.orc.govt.nz/media/phfm2wp3/report-and-recommendations-of-the-non-freshwater-and-freshwater-hearings-panels-to-the-otago-regional-council.pdf

[43] Clause 3.21(1) states that ski area infrastructure is "infrastructure necessary for the operation of a ski area and includes: transport mechanisms (such as aerial and surface lifts, roads, and tracks); facilities for the loading

The proposed Bowen Peak ski lift within the Bowen Peak ski area would be regionally significant infrastructure as per the Proposed Otago Regional Policy Statement (2021) Hearing Panel Report.

5.3. Assessment of Saddle funicular and other associated activities against eligibility criteria

Based on the high-level economic assessment provided above in section 5.2 of this report, it is likely that the **Saddle funicular and other associated activities (including the Bowen Peak Ski Area) would deliver regionally and nationally significant benefits**.

These significant benefits would relate to the **following eligibility criteria** in the Fast-Track Approvals Act:

- **Section 22(a)(ii): will deliver new regionally or nationally significant infrastructure or enable the continued functioning of existing regionally or nationally significant infrastructure.**
    - The Powerhouse Saddle Funicular Railway is a form of "rapid transit services" that is consistent with the definition of nationally significant infrastructure in the National Policy Statement on Urban Development (2020).
    - The Bowen Peak ski lift is regionally significant infrastructure because ski area infrastructure (including aerial lifts) is identified as regionally significant infrastructure in the Proposed Otago Regional Policy Statement (2021) Hearing Panel Report.
- **Section 22(b)(iv): will deliver significant economic benefits.**
    - The Saddle funicular is projected to carry 1.1 million passengers per year – with 1.0 million of these passengers sightseeing, biking, or viewing the Ben Lomond Predator-free Sanctuary, and 100,000 skiing on Bowen Peak at the Bowen Peak Ski Area.
    - Visitors, who ride the Saddle funicular, would be anticipated to directly spend $120 million annually on the funicular and associated experiences (approximately $20 million per annum is projected to occur from winter skiing, and the other $100 million is attributable to the sightseeing, biking, and visiting the sanctuary).
    - Employment associated with experiences and activities accessed by the Saddle funicular would average 150 staff across the year, with a peak of 250 in winter, primarily due to the high staffing requirements of a ski area.
- **Section 22(a)(vii): will support climate change mitigation, including the reduction or removal of greenhouse gas emissions**.
    - The Saddle funicular allows for electrified summer and winter mountain access to the proposed Bowen Peak Ski Area, with a base terminal located within walking distance of downtown Queenstown. In comparison, other ski areas in Queenstown are currently reliant on busses and private vehicles for access from Queenstown.

or unloading of passengers or goods; facilities or systems for water, sewerage, electricity, and gas; communications networks; and snowmaking and snow safety systems."

6. Concluding remarks

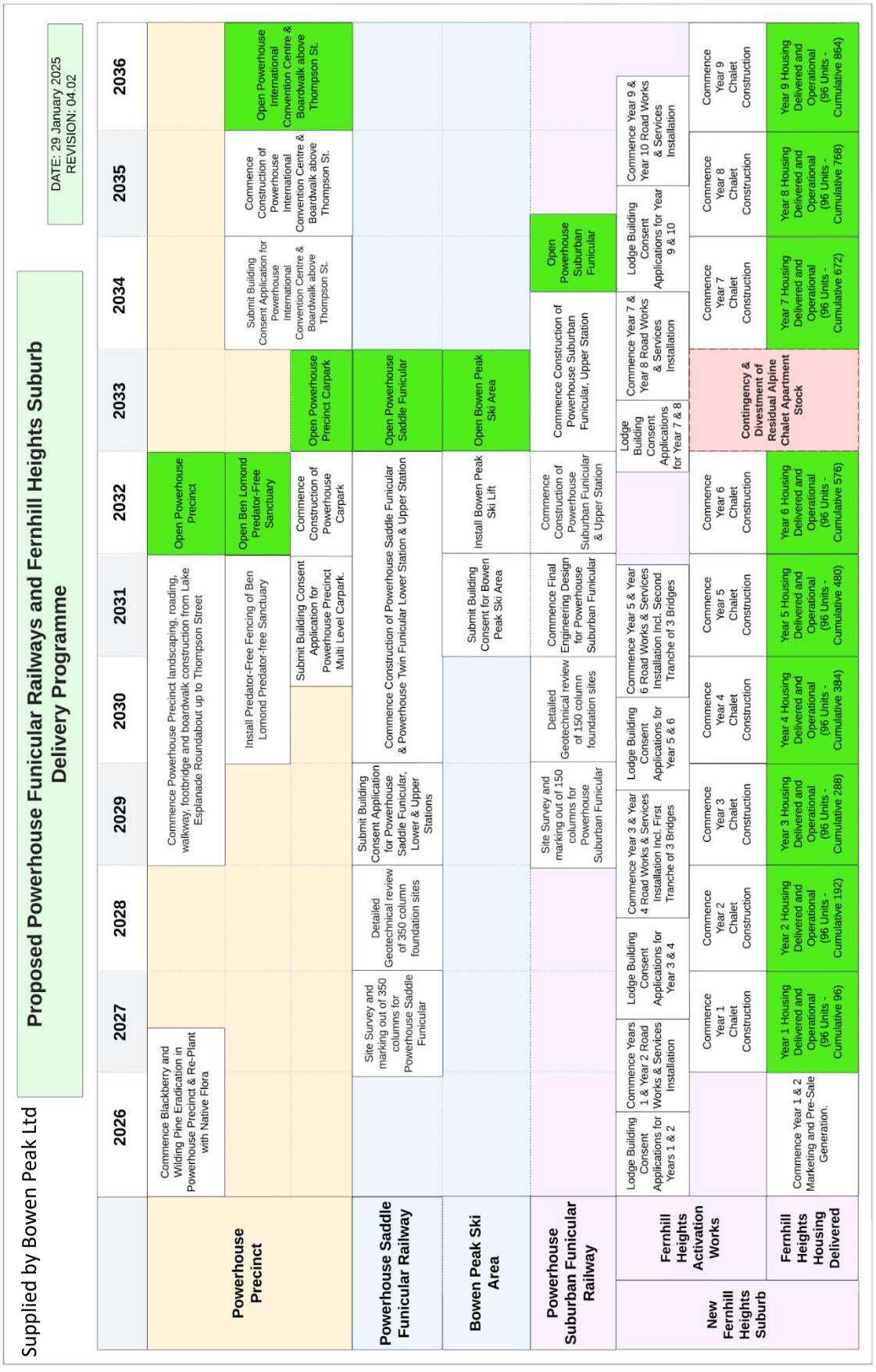
The package of proposed developments within the Powerhouse Funicular Railways Queenstown Regional Development project are of a scale and impact which are judged to be regionally and nationally significant under the Fast-Track Approval Bill.

This report has provided economic evidence to show that the proposed Powerhouse Funicular Railways Queenstown Regional Development project is likely to meet several of the eligibility criteria. These include the following in Section 22(a) of the Act:

> (ii) will deliver new regionally or nationally significant infrastructure or enable the continued functioning of existing regionally or nationally significant infrastructure:
> (iii) will increase the supply of housing, address housing needs, or contribute to a well-functioning urban environment (within the meaning of policy 1 of the National Policy Statement on Urban Development 2020):
> (iv) will deliver significant economic benefits.
> (vii) will support climate change mitigation, including the reduction or removal of greenhouse gas emissions.

All analysis in this high-level assessment of significance has been made based on assumptions regarding the scale and scope of the project package as it stands at present. Considerations related to tenure of landholdings, commercial factors (e.g. capital raising and delivery partners), and climate (including snowpack) have been out of scope of the analysis. As further design work occurs, and the project package evolves, estimates will need to be refined further. It is also worth noting that other potential projects, including other Fast-Track project applications could be received in the local area which might introduce trade-offs and have a bearing on more detailed economic significance considerations of the Powerhouse Funicular Railways Queenstown Regional Development project.

7. Appendix – Proposed delivery programme



Benje Patterson
People & Places

8. Appendix – Garaventa funicular quotation

Garaventa

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Bowen Peak Limited
Attn: Director/s
336 Broadway Avenue
Palmerston North 4414
New Zealand

Sales

Damian Zenklusen
Project Manager
T +41 33 334 68 80
damian.zenklusen@garaventa.com

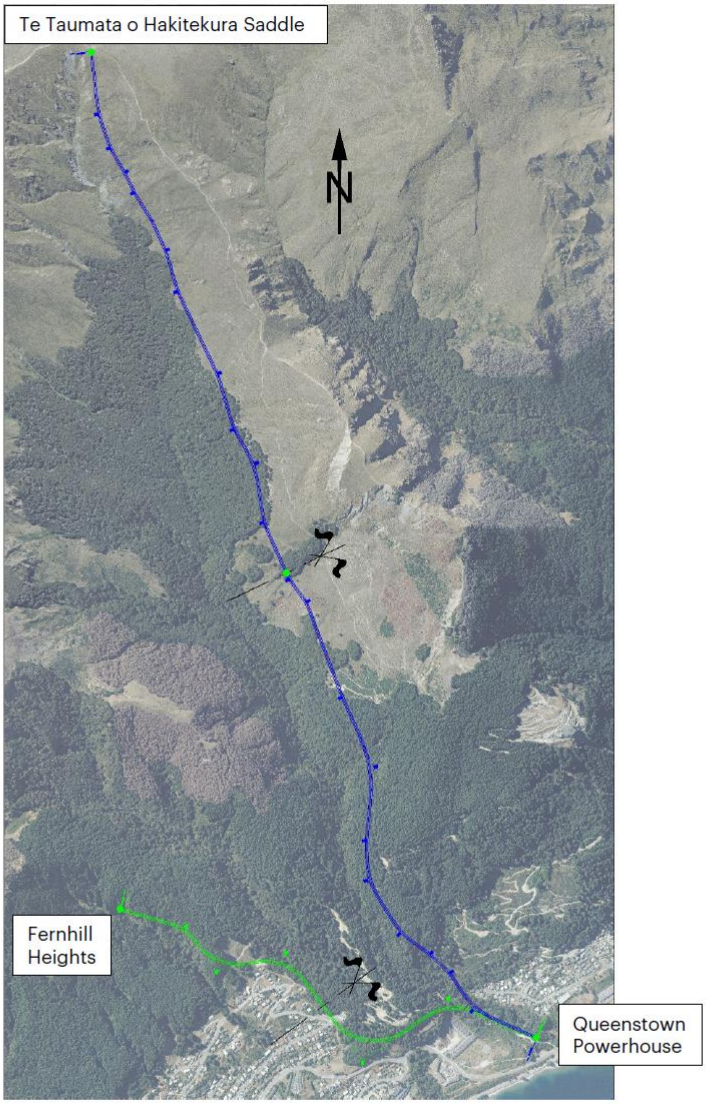
Rotkreuz 23. January 2025

Price Indication: 120-FUL Powerhouse Saddle Funicular & 70-FUL Powerhouse Suburban Funicular

121-FUL Sierre Montana

After analysing various variants and several discussions, we agreed to focus on the track lines as shown hereafter.

Garaventa



The feasibility of the Saddle Funicular (blue line) in regard of the ropeway technology is given. However we see some challenges to resolve at the Suburban Funicular (green line) due to the given topography. Here we will have to spend some more time and have a detailed look.

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This price indication is based on the following documents and information:

- Document: *Proposed Powerhouse Funicular Railway, Bowen Peak Chairlift and Fernhill Heights Funicular 29 Oct 2024.pdf*
- Point cloud data received October 29th, 2024
- Different discussions about the project

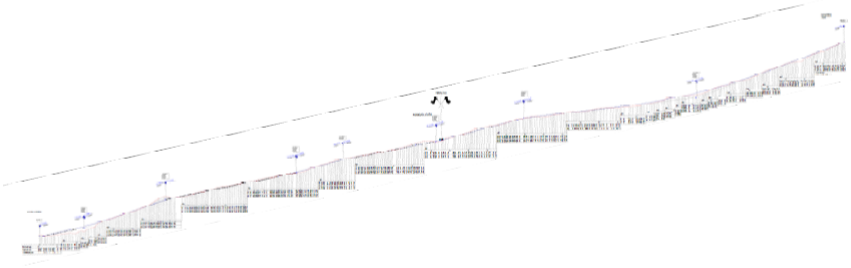
For a more detailed offer, we need a survey of the ground incl. all buildings and the stairs and we need to discuss the position and elevation of the stations.

Both Funiculars have a twisting track, but are following gently the terrain slope (see also longitudinal profiles). The longitudinal profiles are proposed to get a good compromise between bridge height and visual bridge impact, ride experience and some given technical restrictions.

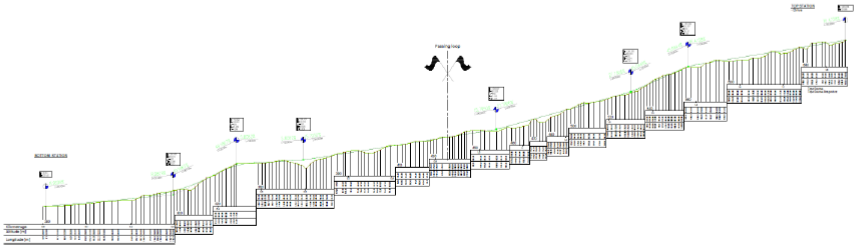
For both funiculars it is proposed to have concrete foundations approx. every 12m. The continuous steel bridge is supported either with steel columns or will be fixed by means of sliding supports directly to the concrete foundation. It is also imaginable to build some track sections on a concrete bed.

The stations are built locally including local architectural requirements to fit with the site-specific aspects. The drives are proposed to be located at the top stations. The bottom stations then are simple structures containing very little electromechanical equipment.

Possible longitudinal Profile for the 120-FUL Powerhouse Saddle Funicular



Possible longitudinal Profile for the 70-FUL Powerhouse Suburban Funicular



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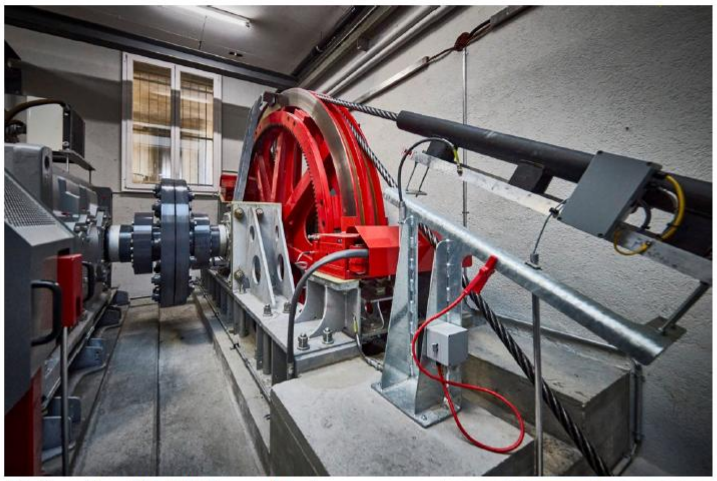
Each Funicular is proposed to be built as a classic funicular with 2 cars travelling in opposite direction and with a common passing loop at the centre of the track. The friction drive will be positioned in the top station.



Friction drive, 121-FUL Sierre - Montana

Passing loop, 121-FUL Sierre - Montana

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Main Technical data

	Saddle FUL		Suburban FUL	
• No. of passengers in each cabin	120	pax	70	pax
• Length of travel (inclined length)	4'385	m	1'880	m
• Difference in elevation	985	m	380	m
• Upper haul rope diameter (6x19 Seale compacted)	55	mm	35	mm
• Lower haul rope diameter (6x19 Seale compacted)	30	mm	20	mm
• Max. travel speed	11.0	m/s	5.0	m/s
• Cycle time (incl. stopping time of 1.5 min)	9.3	min	8.5	min
• No. of trips per hour	6.45		7.1	
• Hourly capacity per hour and per direction	770	pph	500	pph
• Passing loop	yes		yes	
• Req. motor nominal power approx.	1'050	kW	250	kW
• Req. motor peak power	2'300	kW	400	kW

120-FUL Badaling; China

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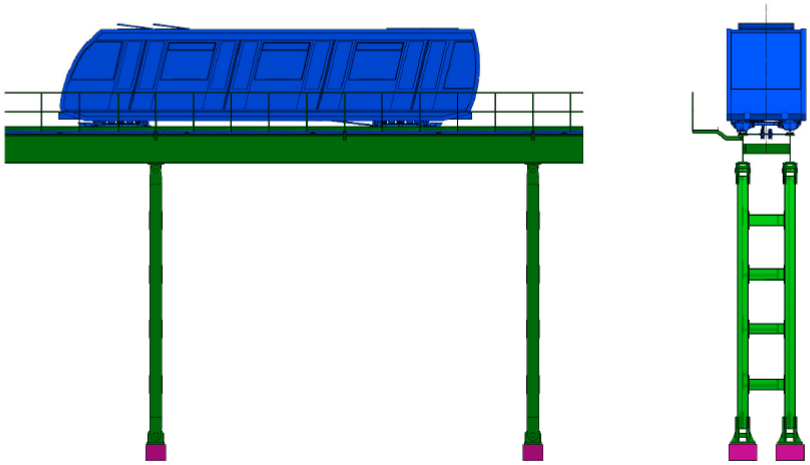
Specification of Garaventa's scope of work

- Technical detail design / engineering / CE certification of safety components
- Layout and situation drawing
- Station foundation drawings up to platform level
- Bridge foundations, columns and bridge guideway drawings
- Manufacturing drawings for the steel parts (longitudinal beams and its connections, walkways)
- Supply of rails and rail fasteners
- Supply of rail parts and fasteners for the passing loop
- Rail installation works and rail welding
- Haul ropes
- Line sheaves
- Complete vehicles; capacity of 120 resp. 70 passengers per car
- Drive bullwheel and counterwheel
- Service brake units acting on high speed shaft, deceleration controlled
- Emergency brake units acting on drive bullwheel resp. drive winch
- Hydraulic units with all accessories for brake controls
- Complete main drives incl. gearboxes, couplings and AC drive motor
- Steel support frames for complete drive unit incl. anchor bolts
- Buffers in top and bottom station
- Switches for approach and fix point control
- Platform doors on the entry side of both stations
- Electrical controls with complete electric equipment
- Shipping costs to CIP port New Zealand
- Installation supervision
- Testing and commissioning
- Relevant technical documentation required for the acceptance by the authorities as well as operation manual, drawings and part lists in English language for our scope of works



Blue color: electromechanical components: design and supply by Garaventa
Green color: steel bridge and column supports (infrastructure): only design by Garaventa
Magenta color: concrete foundations: only design by Garaventa

Garaventa

Works explicitly not included in our scope of works

- Power supply, transformer with electrical disconnect etc.
- Concept and civil construction of stations
- Civil engineer and architect
- All civil works
- Construction of platforms
- Manufacturing and supply of steel bridge, columns and evacuation stair
- Track construction works incl. maintenance and evacuation stair
- Control rooms
- Construction of foundations of stations
- Surveys, geological reports etc.
- Permits, taxes, duties, VAT, etc.
- Installation staff in addition to the Garaventa staff
- Excavations
- Passenger guiding and ticketing system
- Public address system in terminals (if any)
- Video system (if any)
- Lighting, heating, air conditioning
- Access roads to sites
- Local transports and heavy lifting equipment / mobile cranes for installation works
- Transport from sea port to construction site
- Temporary material ropeway for construction (if required)
- Relocation of utilities above and underground (if any)

Cost estimation for the electromechanical equipment

120-FUL Powerhouse Saddle Funicular

Engineering and supply of electromechanical equipment
as per specification above (VAT not incl.) CHF 23'500'000. —

120-FUL Powerhouse Suburban Funicular

Engineering and supply of electromechanical equipment
as per specification above (VAT not incl.) CHF 15'000'000. —

Attached you find also data sheets of installations with similar size of car.

We hope that our price indication meets your expectations and we would be pleased to discuss and optimize the project together with you.

Yours sincerely,

Marcel Nussbaumer
Head of Sales

Damian Zenklusen
Project Manager Sales

9. Appendix – example of similar Queenstown chairlift

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