

The contribution of skiing to the Queenstown-Lakes economy



The Doolans, photo credit: Benje Patterson (2020)

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This report was prepared by:

Benje Patterson

benje@benjepatterson.co.nz

www.benjepatterson.co.nz

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NZ Ski Limited, owner of:

- Coronet Peak
- The Remarkables

Real Group Limited, owner of:

- Cardrona
- Treble Cone.



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Executive summary

This report has been commissioned by NZ Ski Limited and Real Group Limited to assess the contribution of skiing to the Queenstown-Lakes economy. Analysis is based around the four major ski areas operated by these entities – Cardrona, Coronet Peak, The Remarkables, and Treble Cone.

The focus of analysis is on the 2019 ski season, in order to provide a baseline understanding of the sector that is not distorted by public health restrictions from the Covid-19 pandemic. Nevertheless, evidence from the 2020 ski season is also considered.

What does this report cover?

Economic and employment effects estimated in the report stem from the spending of skiing holidaymakers during their time in Queenstown-Lakes District. The analysis assumes that skiing is a key reason for these visitors to have come to the area.

Spending associated with local skiers is not included within the economic impacts as it is likely that Queenstown-Lakes residents would simply spend their household budget on other things in the district had they not taken to the slopes. Nevertheless, the social and cultural wellbeing benefits of skiing are addressed because skiing is a key part of locals' identity and contributes to physical and mental health.

Alongside these wellbeing considerations, ski area visitation is also compared to the usage of other transportation and recreational infrastructure. Thinking of ski fields as a type of infrastructure is important because the Treasury's Living Standards Framework highlights that a broad range of infrastructures can enhance the economic and social wellbeing of New Zealanders¹.

The future state of skiing in Queenstown-Lakes is also considered in light of the significant pipeline of future investment that the ski areas wish to make. This investment is important to replace current infrastructure, and to ensure the future sustainability and enjoyment of the future skiing experience. Although investment in physical ski field infrastructure may raise environmental concerns, with appropriate mitigations in place, responsible investment can play a key role in maintaining the economic, social, and cultural wellbeing of Queenstown-Lakes.

About the ski fields

Queenstown-Lakes' four major ski areas are Cardrona, Coronet Peak, The Remarkables, and Treble Cone. Cardrona and Treble Cone are closer to Wanaka and are owned by Real Group Limited, while Coronet Peak and The Remarkables are on the Queenstown side of the district and are owned by NZ Ski Limited.

The four ski areas have a total daily capacity of 17,000 skiers, distributed as follows:

- Cardrona – 5,500 skiers
- Coronet Peak – 5,000 skiers
- The Remarkables – 4,000 skiers
- Treble Cone – 2,500 skiers.

¹ The Treasury's Living Standards Framework (LSF) can be [found here](#). The LSF guides central government's budgeting, investment, and strategic decision making. The Treasury's [definition of infrastructure](#) captures not just physical assets related to transport, water, and energy, but also digital infrastructure and social assets. Ski areas could be considered to be a social asset to the Queenstown-Lakes area, in a similar way to other types of social assets like sports centres, community halls, and libraries.

Key findings of the report

Key findings of each section of the report are given below.

Economic impact of the ski fields

- There were about 885,000 skier days in Queenstown-Lakes in 2019. Skier days are the total days spent by skiers at the ski fields – a person skiing for two days represents two skier days.
- Locals from Queenstown-Lakes accounted for about one out of every five of these skier days (167,000) with the remaining skier days (approximately 718,000) being visitors.
- Alongside the 718,000 days spent up the mountain by visitors, these visitors were estimated to spend a further 911,000 days off the mountain.
- Previous research has shown that the average holidaymaker spends approximately 30% more on ski days than on other days during their holiday.
- Skiing holidaymakers in Queenstown-Lakes during the 2019 ski season spent an estimated \$430.9 million, which was the equivalent of \$207.5 million of economic value add (GDP). GDP is the economics equivalent of an accounting profit.
- Ski tourism GDP is equivalent to 14% of Queenstown-Lakes' entire tourism industry and equates to 6.3% of the district's entire economy across all industries.
- Alongside the effects of ski tourism accruing directly to Queenstown-Lakes, the rest of Otago also benefits from spillover. Ski tourism GDP across the whole of Otago was \$233.8 million in 2019.
- Skier days in Queenstown-Lakes fell (32%) from 885,000 in 2019 to 599,000 in 2020.
- Skiing GDP almost halved (down 45%), falling from \$207.5 million in 2019 to \$114.6 million in 2020. A key factor behind this relatively steeper decline in GDP is because domestic visitors to Queenstown-Lakes typically spend less per day than the international visitor they replaced.

Employment effects of the ski fields

- As many as 7,362 filled jobs could have been supported by skiing holidaymakers' spending in Queenstown-Lakes during the 2019 ski season.
- The ski fields themselves accounted for 1,777 of these jobs in 2019, which implies that there were 5,585 off-mountain jobs supported by skiing holidaymakers over the winter months.
- Alongside the 7,362 seasonal jobs in Queenstown-Lakes supported by ski tourism, there were a further 1,286 seasonal roles supported in other parts of Otago during the winter of 2019.
- Seasonal employment supported by ski tourism fell from 7,362 jobs in 2019 to 4,843 in 2020.
- With fewer higher spending international visitors in town, the proportion of off-mountain employment supported by the industry also eased. In the 2019 season, it was estimated that there were approximately three off-mountain jobs for each on-mountain job, while in the 2020 season there was closer to a two to one ratio of off to on-mountain employment.

Skiing's role in locals' identity and wellbeing

- Skiing and other recreational pursuits are an integral part of Queenstown-Lakes residents' lives.
- There were approximately 3.5 skier days per Queenstown-Lakes resident in the 2020 ski season, compared to just 0.2 skier days per person across all of New Zealand during the 2020 ski season.
- Queenstown Lakes District Council's Quality of Life Survey (2019) highlighted that sport and recreation was the most common way for people to maintain social networks and connections.
- Participation in skiing and other types of sport and recreation also have benefits for the mental wellbeing and physical health of Queenstown-Lakes residents.

Ski fields' usage compared to other infrastructure

- Ski area visitation was compared against the usage of other transportation and recreational infrastructure. The data shows that total average daily usage across the ski areas meets or exceeds most other types of infrastructure.
- Queenstown-Lakes' ski areas had a total average daily usage of 7,080 skiers per day in 2019.
- Average usage across the ski areas exceeds average daily usage over the year for passenger transportation infrastructure at Queenstown Airport (6,451 passengers per day), Dunedin Airport (2,952 per day), Milford Sound cruise terminal (2,090 per day), and Port Otago cruise terminal (1,716 per day during the cruise season).
- Ski field usage is at least as busy as some state highways in Queenstown-Lakes District. For example, State Highway 6 at Hawea averaged 3,531 vehicle movements each day in 2019, which equates to 7,062 people if you assumed an average of two passengers per vehicle.
- Ski area usage is higher than recreational infrastructure used for cycling. For example, 340,000 people used the Queenstown Trails in the June 2019 year, at an average of 932 people per day.

Future development considerations

- Queenstown-Lakes ski fields have significant pipelines of intended future investment, mostly focussed on Cardrona and The Remarkables.
- Cardrona plans to develop skiing in Soho Basin, which could welcome more than 10,000 skiers at one time (up from 5,500 at present).
- The Remarkables plans to develop skiing in The Doolans, which could expand the ski area's capacity from its current level of 4,000 skiers to around 10,000 skiers at one time.
- Ski fields have also signalled they will invest in infrastructure renewals within the existing footprints of their mountains. This investment will focus primarily on factors such as access (roading and carparking), guest services (cafes and base facilities), power and 3 waters infrastructure, snowmaking, lifts, and trails.
- Under a scenario where skier numbers at Cardrona and The Remarkables double, the contribution of skiing holidaymakers to Queenstown-Lakes GDP would increase by 69% from \$207.5 million in 2019 to \$350.5 million after the investments.
- The number of seasonal jobs supported by skiing holidaymakers would increase by more than 5,000, from 7,362 in 2019 to 12,433 under this scenario.
- Visitor growth under this scenario isn't a given – future opportunities for visitor numbers could end up being more limited compared to pre-Covid trends, partly as a result of tourism social licence considerations in destination marketing. A greater reluctance to travel long-haul may also limit the recovery of tourism, but this problem is likely to be smaller with Trans-Tasman skiers.
- Even if it eventuates that the future upside to visitor numbers is much lower, ski field investments can still create benefits by improving the guest experience.
- Internal research on customer satisfaction by the ski fields shows a reduction in guest experience metrics on days where capacity pressures are reached. Any investment that allows for a greater and more comfortable throughput of skiers can help alleviate future risks of such pressures.
- Investments are not just for skiers but will also seek to create opportunities for year-round activities up the mountains. A year-round offering can offer steadier employment and create businesses that are less reliant on snowfall and so are more resilient in poor snowfall years.
- Some of the investments, particularly those in 3 waters, as well as other remediation work, can improve environmental outcomes.

Economic impact of the ski fields

This section introduces the results and steps involved in calculating the economic effects of spending by skiing holidaymakers during their time in Queenstown-Lakes District.

The analysis assumes that economic activity associated with skiing does not simply displace activity that may have occurred anyway in Queenstown-Lakes' economy. For that reason, spending associated with local skiers is not included within the economic impacts as it is likely that Queenstown-Lakes residents would simply spend their household budget on other things in the district had they not taken to the slopes. For visitors, it is assumed that skiing is a key reason for their visit to the District.

The analysis of economic impacts is centred on the 2019 ski season to give a pre-Covid baseline before public health restrictions disrupted activity. Nevertheless, calculations are also performed for the 2020 ski season as a point of reference.

Alongside the economic impacts that accrue directly to Queenstown-Lakes, a region-wide perspective is also taken to understand the spillover effects of Queenstown-Lakes' ski economy on the rest of Otago.

Summary findings

Key findings of this section include:

- There were around 885,000 skier days at Queenstown-Lakes District's four major ski resorts during the 2019 ski season.
- Locals from Queenstown-Lakes accounted for about one out of every five of these skier days (167,000) with the remaining skier days (approximately 718,000) being visitors.
- Alongside the 718,000 skier days spent up the mountain by visitors, these visitors were estimated to spend a further 911,000 days off the mountain.
- Previous research has shown that the average holidaymaker spends approximately 30% more on ski days than on other days during their holiday.
- It is estimated that total expenditure by skiing holidaymakers in Queenstown-Lakes during the 2019 ski season was \$430.9 million, which was the equivalent of \$207.5 million of economic value add (GDP).
- Ski tourism GDP is equivalent to 14% of what Queenstown-Lakes' entire tourism industry generated in GDP across 2019, and equates to 6.3% of the district's entire economy across all industries.
- Alongside the economic impacts of ski tourism that accrue directly within Queenstown-Lakes, the rest of Otago also benefits from some spillover. Previous research has shown that skiers spend approximately one day travelling through other parts of Otago for every five days they spend within Queenstown-Lakes.
- After factoring in this spillover, it is estimated that skiing tourism GDP across the whole of Otago was \$233.8 million in 2019. This estimate is equivalent to 11% of Otago's entire tourism GDP and 1.7% of Otago's entire economy across all industries in 2019.
- Skier days in Queenstown-Lakes fell one third (32%) from approximately 885,000 in 2019 to 599,000 in 2020.
- Skiing GDP almost halved (down 45%), falling from \$207.5 million in 2019 to \$114.6 million in 2020. A key factor behind this relatively steeper decline in GDP is because domestic visitors to Queenstown-Lakes typically spend less per day than the international visitor they replaced.

Ski numbers and visitor days

During the 2019 ski season there were around 885,000 skier days at Queenstown-Lakes District's four major ski resorts. Locals from Queenstown-Lakes accounted for about one out of every five of these skier days (167,000) with the remaining skier days (approximately 718,000) being skiing holidaymakers who were visiting the district.

Table 1 – Skier days at Queenstown-Lakes' ski fields

Total skier days at Queenstown-Lakes' four major ski fields during the 2019 season		
<i>Indicatively split into skiers' origins using a representative sample of the ski areas' sales databases</i>		
Skier origin	Skier days	Share of total
Locals: Queenstown-Lakes residents	167,072	19%
Visitors:	Rest of Otago	91,832
	Elsewhere in New Zealand	231,077
	International	394,694
Total skier days in Queenstown-Lakes	884,675	100%

A skier's visit includes not just the time they spend up the mountain, but also days spent relaxing, wining, dining, and enjoying other activities. As such, to deepen our understanding of the total economic impacts from skiing holidaymakers in Queenstown-Lakes, we translated skier days into total visitor days². The following table shows visitor days in the district by skiing holidaymakers across their holiday in the resort.

Table 2 – Visitor days in Queenstown-Lakes by skiing holidaymakers

Total visitor days in Queenstown-Lakes by skiing holidaymakers during the 2019 season			
<i>Visitors' skier days scaled to include non-ski days across the rest of their Queenstown-Lakes visit</i>			
Origin of visitor	Skier days	Non-ski days	Total visitor days
Rest of Otago	91,832	36,444	128,276
Elsewhere in New Zealand	231,077	322,781	553,857
International	394,694	551,331	946,025
Total visitor days by skiing holidaymakers	717,603	910,555	1,628,158

In total, there were approximately 1.6 million visitor days by skiing holidaymakers across their time in Queenstown-Lakes during the 2019 ski season. Of these visitor days, 718,000 days were up the mountain, while approximately 911,000 days were spent off the mountain.

² Calculations from previous research by the New Zealand Tourism Research Institute (The Economic Significance of the Southern Lakes Ski Areas, 2005) suggests that skiing holidaymakers to Queenstown-Lakes spent approximately 1.4 days spent off the mountain to every day they spent on the mountain. This figure has been used in the current report, apart from visitors from other parts of Otago where one day less of off-mountain time has been assumed for each ski day. This assumption has been made to factor in less travel time moving within the region and the increased likelihood of shorter weekend-based ski trips.

Expenditure by skiing holidaymakers

The next step in calculating the economic impacts of skiing holidaymakers is to estimate how much these visitors spent across their time within the district.

The average domestic visitor is estimated to spend just over \$200 per day in Queenstown-Lakes, compared to almost \$260 per day for international visitors³. Previous research has shown that the average holidaymaker spends approximately 30% more on ski days than on other days during their holiday⁴.

These daily spend estimates by holidaymakers are given in the following table⁵.

Table 3 – Estimated average daily spend in Queenstown-Lakes for ski and non-ski days

Average daily spend by skiing holidaymakers in Queenstown-Lakes during the 2019 ski season <i>Estimates of average daily spend calculated from Statistics NZ data (IVS, DVS, CPI)</i>		
	Average daily spend (\$)	
Origin of visitor	Ski day	Non-ski day
Domestic visitor	\$263	\$203
International visitor	\$333	\$257

The daily spend estimates were then applied to visitor days to generate total expenditure by skiing holidaymakers in Queenstown-Lakes. The results are summarised in the following table.

Total expenditure by skiing holidaymakers is the gross revenue that flows into the tills of Queenstown-Lakes businesses during the skiers' time on and off the mountain.

Table 4 – Total expenditure by skiing holidaymakers in Queenstown-Lakes across their visits

Total expenditure by skiing holidaymakers in Queenstown-Lakes during the 2019 ski season <i>Calculated by applying average daily spend estimates to total visitor days by skiing holidaymakers</i>	
Origin of visitor	Total spend (\$ millions)
Rest of Otago	\$31.6m
Elsewhere in New Zealand	\$126.2m
International visitor	\$273.1m
Total expenditure by skiing holidaymakers	\$430.9m

It is estimated that total expenditure by skiing holidaymakers in Queenstown-Lakes during the 2019 ski season was \$430.9 million, with almost two thirds of this spending by international visitors and the rest by domestic visitors.

³ These spending estimates were formed using data from the Statistics New Zealand International Visitor Survey and the discontinued Domestic Visitor Survey (inflated using the Consumer Price Index), as well as average stay lengths in commercial accommodation statistics.

⁴ This premium for ski days is estimated from the 2012 Domestic Visitor Survey.

⁵ All spending figures exclude GST because GST revenue accrues directly to central government, with the level of government spending within Queenstown-Lakes not tied in any way to its GST revenue share.

GDP generated skiing holidaymakers spend

The final step in calculating the economic impacts of skiing holidaymakers is to convert the \$430.9 million estimate of total expenditure into economic value add (GDP)⁶. Table 5 shows that skiing holidaymakers are estimated to have contributed to \$207.5 million of GDP in the 2019 ski season⁷.

Table 5 – Economic value add (GDP) from spending by skiing holidaymakers

GDP from spending by skiing holidaymakers in Queenstown-Lakes during the 2019 season		
<i>GDP from spending by skiing holidaymakers against GDP from all of tourism (and total economy)</i>		
Skiing GDP (\$m, 2019 pricing)	As % of annual tourism GDP	As % of district's total annual GDP
\$207.5m	14.5%	6.3%

To give some perspective, this \$207.5 million skiing GDP estimate is equivalent to 14% of what Queenstown-Lakes' entire tourism industry generated in GDP across 2019, and equates to 6.3% of the district's entire economy across all industries.

Skiing's share is particularly sizeable when you consider the ski season only runs for one third of the year, between June and October.

It is worth noting that alongside their winter operations, both Cardrona and Coronet Peak currently offer summer activities. Summer operations are currently very small relative to the scale of winter operations, but summer offerings are growing rapidly. Summer activities have not been quantified within the report, but the potential benefits of future growth in them are commented on later in the report.

Broader regional effects

Alongside the economic impacts of ski tourism that accrue directly within Queenstown-Lakes, the rest of Otago also benefits from some spillover. This spillover occurs because many visitors to Queenstown-Lakes also take time before or after their ski holiday to enjoy other parts of Otago. Previous research has shown that skiers spend approximately one day travelling through other parts of Otago for every five days they spend within Queenstown-Lakes⁸.

Table 6 – Spillover effects from ski tourism in Queenstown-Lakes into the rest of Otago

Spending and GDP from skiing holidaymakers in Queenstown-Lakes spills over into the rest of Otago			
<i>Total Otago effects factoring in skiers visiting elsewhere in Otago (\$ million, 2019 pricing)</i>			
	Direct	Net spillover	Total region
	Queenstown-Lakes	Rest of Otago	Otago
Expenditure by skiing holidaymakers	\$430.9m	\$38.7m	\$469.6m
GDP from skiing holidaymakers	\$207.5m	\$26.3m	\$233.8m

⁶ Total expenditure shouldn't be confused with GDP. Total expenditure is essentially revenue, while GDP is the economics equivalent of accounting profit. The key difference between an economic and accounting profit is that an economic profit considers the value added for both capital owners and labour (workers) across the economy, while an accounting profit only focusses on returns to the capital owner of the business in question.

⁷ Total expenditure was converted to GDP using a multiplier of visitor spending to GDP calculated with data extracted on 14/10/21 from Infometrics Queenstown-Lakes [Economic Profile](#).

⁸ This calculation was made from evidence contained within the New Zealand Tourism Research Institute's 2005 study into skiing in the district.

Table 6 shows that the net effect⁹ of this spillover from skiing holidaymakers is equivalent to a further \$26.3 million of GDP for other parts of Otago, on top of the \$207.5 million of GDP that accrues directly to Queenstown-Lakes. This takes the total GDP effect of skiing holidaymakers in Otago to \$233.8 million.

Otago's \$233.8 million estimate of skiing tourism GDP is equivalent to 11% of Otago's entire tourism GDP and 1.7% of Otago's entire economy across all industries in 2019.

Comparison of 2019 pre-Covid scenario to 2020

The analysis to date in this report has been based around the 2019 ski season. This has given a baseline understanding of the economic impacts of skiing before Covid disrupted international travel.

It is also useful to consider how the ski season fared during 2020 in a predominantly domestic ski season. This comparison makes sense given that international travel is anticipated to take a number of years to recover to pre-Covid baselines once borders reopen.

Table 7 shows that skier days fell one third (32%) from approximately 885,000 in 2019 to 599,000 in 2020. This decline would have been much worse had it not been for a sharp lift in skiing by locals and domestic visitors.

Table 7 – Comparison of skier days between the 2019 and 2020 ski seasons

Total skier days at Queenstown-Lakes' four major ski fields for 2019 vs 2020 season		
<i>Indicatively split into skiers' origins using a representative sample of the ski areas' sales databases</i>		
Skier origin	2019 skier days	2020 skier days
Queenstown-Lakes residents	167,072	168,228
Visitors	Rest of Otago	91,832
	Elsewhere in New Zealand	231,077
	International	394,694
Total skier days in Queenstown-Lakes	884,675	599,412

The decline in spending and GDP from skiing holidaymakers is estimated to have been much steeper between 2019 and 2020 than the fall in skier days. Table 8 shows that skiing GDP almost halved (down 45%), falling from \$207.5 million in 2019 to \$114.6 million in 2020.

A key factor behind this relatively steeper decline in GDP is because domestic visitors to Queenstown-Lakes typically spend less per day than the international visitor they replace.

Table 8 – Comparing spending and GDP from skiing holidaymakers between the 2019 and 2020 seasons

Spending and GDP from skiing holidaymakers in Queenstown-Lakes, 2019 vs 2020 seasons		
<i>Total spending by skiing holidaymakers (\$ million) and GDP from this spending (\$ million, 2019 pricing)</i>		
	2019 season	2020 season
Expenditure by skiing holidaymakers	\$430.9m	\$227.1m
GDP from skiing holidaymakers	\$207.5m	\$114.6m

⁹ The spillover effect for the rest of Otago is the additional economic activity gained from skiing holidaymakers travelling through other parts of the region. This spillover effect has been expressed in net terms so that region-wide effects avoid counting the portion of Queenstown's gains that came from Otago skiers. Although Otago skiing holidaymakers' spending is new money into Queenstown, it isn't new money from a region-wide perspective as it has simply come from a shifting of household budget internally within the region.

Employment effects of the ski fields

This section outlines the level of employment in Queenstown-Lakes supported by skiing holidaymakers' spending. Alongside employment that accrues directly to Queenstown-Lakes, a region-wide perspective is also taken to understand the spillover effects of Queenstown-Lakes' ski economy on the rest of Otago.

It is important to note that these calculations are based on the theoretical level which could be supported by the spending which is attracted to the area by skiing holidaymakers. Actual employment outcomes may differ depending on individual businesses' hiring behaviour within the winter season.

Employment estimates

The spending by skiing holidaymakers in Queenstown-Lakes supports a considerable amount of employment in the district across the ski season.

It is estimated that as many as 7,362 filled jobs could have been supported by skiing holidaymakers' spending in Queenstown-Lakes during the 2019 ski season¹⁰. Evidence provided by the ski fields suggests that the ski fields themselves accounted for 1,777 of these jobs, which implies that there were 5,585 off-mountain jobs supported by skiing holidaymakers over the winter months. In other words, there appear to be roughly three off-mountain jobs to each on-mountain job.

Table 9 – Estimates of employment in Queenstown-Lakes supported by skiing holidaymakers, 2019

Employment in Queenstown-Lakes supported by skiing holidaymakers' spending, 2019 season <i>Author's estimate of total filled jobs, on/off-mountain split using ski fields' employment data</i>	
	Filled jobs
On-mountain employment	1,777
Indicative off-mountain employment	5,585
Total seasonal jobs supported by ski tourism	7,362

Because the ski season on average across the four ski fields lasted approximately four months in 2019 (125 days average), these 7,362 filled seasonal jobs are equivalent to 2,520 annualised jobs. To put this ski employment in perspective, Infometrics estimated that there were 30,173 filled roles in Queenstown-Lakes on average across the March 2019 year.

Broader regional effects

Alongside employment that is supported directly within Queenstown-Lakes from ski tourism, there is also additional employment supported within the rest of Otago from skiing holidaymakers travelling through other parts of the region before and after their holiday.

It is estimated that alongside the 7,362 seasonal jobs in Queenstown-Lakes supported by ski tourism, there are a further 1,286 temporary seasonal roles supported in other parts of Otago during the winter of 2019. This takes the total employment across Otago supported by ski tourism to as many as 8,647 temporary jobs across the ski season.

¹⁰ A filled jobs estimate was formed by using a multiplier of tourism GDP to jobs (calculated with data extracted on 14/10/21 from Infometrics Queenstown-Lakes [Economic Profile](#)), alongside an adjustment for the average ski season length in 2019.

Table 10 - Estimates of employment across Otago supported by skiing holidaymakers, 2019

Employment across Otago supported by skiing holidaymakers' spending, 2019 season			
<i>Total Otago employment effects factoring in skiers visiting elsewhere in Otago (filled jobs)</i>			
	Direct	Net spillover	Total region
	Queenstown-Lakes	Rest of Otago	Otago
Seasonal jobs from ski tourism	7,362	1,286	8,647

Because the ski season on average across the four ski fields lasted approximately four months in 2019 (125 days average), these 8,647 filled seasonal jobs across Otago are equivalent to 2,960 annualised jobs. To put this ski employment in perspective, Infometrics estimated that there were 129,373 filled roles in Otago on average across the March 2019 year.

Comparison of 2019 pre-Covid scenario to 2020

The employment analysis to date in this report has been based around the 2019 ski season. This has given a baseline understanding of the employment supported by ski tourism before Covid disrupted international travel.

It is also useful to consider how a predominantly domestic ski season in 2020 influenced employment. This comparison makes sense given that international travel is anticipated to take a number of years to recover to pre-Covid baselines once borders reopen.

Table 11 shows that seasonal employment supported by ski tourism fell 34% from 7,362 seasonal jobs in 2019 to 4,843 in 2020. What's more, with fewer higher spending international visitors in town, the proportion of off-mountain employment supported by the industry also eased. In the 2019 season, it was estimated that there were approximately three off-mountain jobs for each on-mountain job, while in the 2020 season there was closer to a two to one ratio of off to on-mountain employment.

Table 11 - Comparing employment supported skiing holidaymakers between the 2019 and 2020 seasons

Employment in Queenstown-Lakes supported by skiing holidaymakers' spending, 2019 vs 2020		
<i>Author's estimate of total filled jobs, on/off-mountain split using ski fields' employment data</i>		
	2019 season	2020 season
On-mountain employment	1,777	1,469
Indicative off-mountain employment	5,585	3,374
Total seasonal jobs from ski tourism	7,362	4,843

Skiing's role in locals' identity and wellbeing

The economic and employment impact calculations so far did not factor in spending associated with local skiers. This type of exclusion of locals' spending is usual in economic assessments of visitor attractions. The underlying assumption is that Queenstown-Lakes residents would simply spend their household budget on other things in the district throughout the year had they not taken to the slopes over winter.

Nevertheless, there are still benefits of locals skiing beyond direct economic and employment impacts. These benefits are more holistic in nature – focussing more on social and cultural wellbeing. In short, skiing feeds into locals' identity and contributes to their physical and mental health.

The role of skiing in day-to-day life and identity

Skiing and other sporting and recreational pursuits form an integral part of Queenstown-Lakes residents' lives.

In per capita terms, there were approximately 3.7 skier days for each Queenstown-Lakes resident in the 2019 ski season, and 3.5 skier days per resident in the 2020 ski season. By comparison, nationally across New Zealand there were just 0.2 ski days per New Zealander during the 2020 ski season.

Queenstown-Lakes' residents' high propensity to ski is an important contributor to the identity of many people in the district and influences the sense of belonging people have to the local area.

Queenstown Lakes District Council's Quality of Life Survey (2019) highlighted that sport and recreation was the most common way that people in the district maintain social networks and connections. In 2019, 37% of Queenstown Lakes residents connected with social networks via sport and recreation.

Mental and physical health

Participation in skiing and other types of sport and recreation also have benefits for the mental wellbeing and physical health of Queenstown-Lakes residents.

At a national level, a 2017 Sport New Zealand report (The Value of Sport) found with regards to mental wellbeing that:

- 82% of people agree that sport and other physical activities help to motivate people and to create a sense of purpose.
- 89% of people agree that being active helps relieve stress and is good for mental health.

The Sport New Zealand research also found with regards to physical health that:

- 92% of people agree that being active keeps people physically fit and healthy.
- 91% of people state 'health and fitness' as their primary reason for taking part.

Although these specific subjective findings have not been directly tested in the local context, the Queenstown Lakes District Council's 2019 Quality of Life Survey showed that people who exercise more are likely to have a higher quality of life across a variety of general indicators of wellbeing.

Ski field usage compared to other infrastructure

This section compares ski area visitation against the usage of other transportation and recreational infrastructure. Thinking of ski fields as a type of infrastructure is important because the Treasury's Living Standards Framework highlights that a broad range of infrastructures can enhance the economic and social wellbeing of New Zealanders. Benchmarks of infrastructure usage supplement the economic and social data by providing a broader comparison of relevancy to everyday life.

The total daily capacity of Queenstown-Lakes' four major ski fields is currently approximately 17,000 skiers per day, with half this capacity at the ski fields on the Queenstown side of the district (Coronet Peak and The Remarkables) and the other half at the Wanaka ski fields (Cardrona and Treble Cone).

During the 2019 ski season, there were several days where some of the ski areas reached or exceeded these capacity levels. Capacity pressures were most acute at The Remarkables (3 days) and Cardrona (3 days).

Table 12 – Daily capacity at Queenstown-Lakes ski fields and times capacity reached during 2019 season

Daily skifield capacity across Queenstown-Lakes District		
<i>Daily skier capacity at each skifield and number of times capacity reached (2019 pre-Covid baseline)</i>		
	Daily capacity (skiers)	Days capacity reached (2019)
Cardrona	5,500	3
Coronet Peak	5,000	0
The Remarkables	4,000	3
Treble Cone	2,500	0
Total daily capacity	17,000	

Table 13 on the next page shows that total average daily usage across these ski areas compares highly to other forms of transportation and recreational infrastructure.

Key points regarding the use of ski infrastructure compared to other infrastructure include:

- Across the entire 2019 ski season, Queenstown-Lakes' ski areas had a total average daily usage of 7,080 skiers per day. This average usage across the ski areas exceeds average daily usage over the year for passenger transportation infrastructure at Queenstown Airport (6,451 passengers per day), Dunedin Airport (2,952 per day), Milford Sound cruise terminal (2,090 per day), and Port Otago cruise terminal (1,716 per day during the cruise season).
- The ski fields' average daily usage of 10,334 people during its peak month of the 2019 season (August) was also significantly higher than peak months at Queenstown Airport (7,286 per day) and Milford Sound (3,571).
- Queenstown-Lakes' ski areas' average usage is higher than recreational infrastructure used for cycling. For example, there were 340,000 users of the Queenstown Trails across the June 2019 year, which equates to an average of 932 people per day.
- Ski field usage is at least as busy as some state highways in Queenstown-Lakes District. For example, the Waka Kotahi monitoring site on State Highway 6 at Hawea averaged 3,531 vehicle movements each day in 2019. If you assume two passengers per vehicle then this reading would represent 7,062 people movements per day, which compares to the ski fields' average of 7,080 skiers per day. Two passengers per vehicle is a generous assumption compared with standard vehicle occupancy rates in most New Zealand studies.

Table 13 – Average daily usage of Queenstown-Lakes ski fields compared to other infrastructure, 2019

Daily usage of skifields compared to other infrastructure		Daily usage
<i>Author calculations of pre-Covid daily usage (2019 or where specified), base data from various sources</i>		
Total daily usage across the four skifields		
	Average across 2019 ski season	7,080
	Average during peak month (August)	10,334
Comparisons to daily usage of other infrastructure (transport and recreational)		
State highway traffic count (2019 vehicle numbers from Waka Kotahi)		
	Average across each Queenstown-Lakes monitoring site	11,873
	Average at busiest monitoring site (Frankton)	26,918
	Average at quietest monitoring site (Hawea)	3,531
Queenstown Airport (passenger numbers from Queenstown Airport Corporation)		
	Average across winter 2019 (Jun-Sep)	6,451
	Average during busiest month (Jan) of June 2019 year	7,286
Dunedin Airport (passenger numbers from Dunedin Airport)		
	Average across June 2019 year	2,952
Port Otago (cruise passenger numbers from Port Otago newsletter)		
	Average across 2018/19 season (1 Oct to 12 Apr)	1,716
	Peak day (approximate volume)	6,000
Milford Sound (people taking a scenic cruise, base data from Milford Sound Tourism)		
	Average across June 2019 year	2,090
	Average during busiest month in 2019 (February)	3,571
Queenstown Trails (trail users from Queenstown Trails Trust Annual Report)		
	Average across June 2019 year	932

Future development considerations

This section considers the effects of future developments at Queenstown-Lakes' ski fields. It provides a scenario for the potential future economic effects from increasing the size of the skiable terrain within the district, as well as a discussion of the more holistic benefits of replacing existing infrastructure.

Queenstown-Lakes ski fields have significant pipelines of intended future investment. These plans are long-term by nature and will remain a focus for the ski industry, even if current disruptions due to Covid-19 have created uncertainty regarding the specifics of investment decision making over the short-term.

What is the nature of these investments?

Most of the investment pipeline for ski field infrastructure investment currently being considered is focussed on Cardrona and The Remarkables.

- **Cardrona's** investment pipeline centres on infrastructure renewals and improvements within the ski area's existing footprint, as well as a proposed expansion into the adjacent Soho Basin. Cardrona's 2018 acquisition of Soho brought with it 500ha of skiable terrain, which brings the possibility of more than doubling the ski area to 900ha, and when fully developed could welcome more than 10,000 skiers at one time (up from 5,500 at present).
- **The Remarkables'** investment pipeline centres on infrastructure renewals and improvements within the ski area's existing footprint, as well as a proposed expansion into the adjacent Doolans Basin ('The Doolans'). The proposed infrastructure improvements and expansion could expand the ski area's capacity from its current level of 4,000 skiers to around 10,000 skiers at one time.

What both Cardrona's and The Remarkables' investment intentions have in common is that they unlock new, relatively high-altitude terrain. This terrain offers relatively more reliable natural snow cover and more favourable snowmaking conditions than some existing terrain in Queenstown-Lakes District.

Alongside investment in new terrain, the ski fields have also signalled they will invest in infrastructure renewals within the existing footprints of their mountains. This investment will focus primarily on factors such as access (roading and carparking), guest services (cafes and base facilities), power and 3 waters infrastructure, snowmaking, lifts, and trails. These investments will not just consider skier demands but will also seek to create opportunities for year-round use of the mountains with summer activities like biking, hiking, sightseeing, and other adventure activities. Some of the investments, particularly those in 3 waters, as well as other remediation work, can improve environmental outcomes.

Strategic aims align with a wellbeing approach

Infrastructure investment across Queenstown-Lakes ski resorts includes a mix of replacement, improvement, and expansion work. Conversations with the ski fields' leadership have highlighted that the strategic aims of investment are broad. Some investment is focussed on increasing the throughput of skiers, while some investment is about more holistic strategic outcomes, including those related to the environment, skier experiences, employment stability, and locals' perceptions of the ski fields.

The broad nature of this strategic focus is consistent with a wellbeing, or living standards, approach to investment. Such approaches are widely used within other types of infrastructure investment. For example, central Government decision-making draws on the Treasury's Living Standards framework, while local government decision-makers have a legislative requirement under the Local Government Act 2002 to consider the social, economic, environmental, and cultural wellbeing of communities.

What is the potential scale of economic effects?

In the most optimistic investment scenarios for both The Remarkables and Cardrona, investment would take the capacity of each resort to around 10,000+ skiers per day. This would represent an almost doubling of Cardrona's current capacity and a more than doubling of The Remarkables' capacity.

The effects on Queenstown-Lakes' ski tourism economy could be significant if ski field infrastructure improvements attract more visitors. Table 14 shows GDP and employment from ski tourism in a scenario where annual skier days at Cardrona and The Remarkables double from their 2019 level¹¹.

Table 14 – GDP and jobs effect of a scenario where Cardrona/Remarkables double their ski visitors

Potential GDP and employment effects of Cardrona and The Remarkables expansions		
<i>GDP + jobs supported by skiing holidaymakers, 2019 vs scenario where Cardrona/Remarkables double</i>		
	2019 season	After investment
Annual GDP from skiing holidaymakers (2019 pricing)	\$207.5m	\$350.5m
Seasonal jobs from ski tourism	7,362	12,433

Under this scenario, the contribution of skiing holidaymakers to Queenstown-Lakes GDP would increase by 69% from \$207.5 million in 2019 to \$350.5 million after the investments. The number of seasonal jobs supported by skiing holidaymakers would increase by more than 5,000 from 7,362 in 2019 to 12,433.

What are some of the other effects?

The calculations above give an order of magnitude estimate of the potential economic effects under a scenario where expansions at Cardrona and The Remarkables attract more visitors to Queenstown-Lakes. The visitor growth under this scenario isn't a given – future opportunities to grow visitor numbers into Queenstown-Lakes could end up being more limited compared to pre-Covid trends.

More limited future growth in visitors could partly be a response to an increased focus by regional tourism organisations on prioritising value over volume in future marketing (to maintain tourism's social licence). A greater reluctance to travel long-haul after Covid-19 may also limit the recovery of tourism, although this problem is likely to be smaller with the important Trans-Tasman ski market.

Nevertheless, even if it eventuates that the future upside to visitor numbers is much lower than the scenario painted in Table 14, investment in improving and expanding ski field infrastructure can still have far reaching benefits for the on-mountain experience for locals and existing visitors alike.

Internal research on customer satisfaction by the ski resorts has shown that capacity issues (eg. lift queues, parking, and other congestion) were among the key detractors identified by guests as being detrimental to their ski experience. The ski resorts also identify a reduction in guest experience metrics on days where capacity pressures are reached. Any investment that allows for a greater and more comfortable throughput of skiers can help alleviate future risks of such pressures.

Ski fields' infrastructure investment is not just about the winter season, but is also about improving on-mountain facilities that can be used for sightseeing and other recreational pursuits at other times of year. Summer operations are currently very small compared to winter operations across all the ski fields, but offer strong future growth prospects. A year-round offering can offer steadier employment to locals and create business models that are less reliant on snow fall and so are more resilient in poor snowfall years.

¹¹ Further assumptions under this scenario assume that Coronet Peak and Treble Cone maintain their peak level from recent seasons, while the split between locals and visitors across all four resorts remains the same.

Concluding comments

The analysis in this report has highlighted the significant role that skiing in Queenstown-Lakes plays for economic and employment outcomes within the district, as well as the importance of skiing for the identity of locals. Alongside the benefits that directly accrue within Queenstown-Lakes itself, there are also significant spillover benefits into the rest of Otago. In short, the data shows that the economic and employment effects of skiing are regionally significant.

Ski areas can be considered to be a form of recreational infrastructure that contributes to economic and wellbeing outcomes alike. Total average daily usage across the ski areas in Queenstown-Lakes is higher than most other forms of transportation and recreational infrastructure in the district and across the region.

Future investment in Queenstown-Lakes' ski fields is not just about the potential economic benefits from attracting new visitors, but also about the improvements the investment could bring to the guest experience for locals and existing visitors alike. Investment in infrastructure that can be used during the summer season also offers opportunities to enhance economic and social resilience by offering more year-round employment and offsetting the negative effects of poor snowfall years.