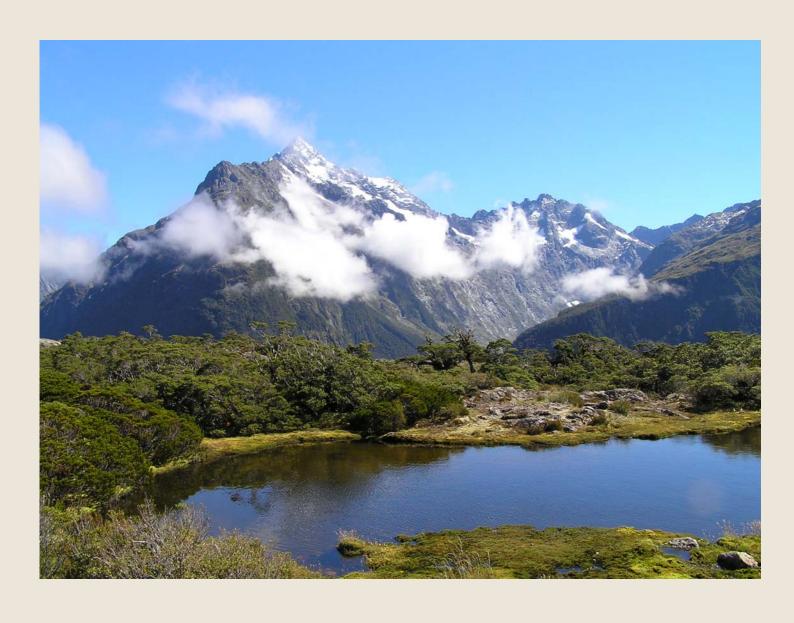


Key Summit Day Visitor Survey

September 2011



Key Summit Day Visitor Survey

Michael Harbrow & Lyndsay Murray Southland Conservancy Department of Conservation PO Box 743 Invercargill 9840

SEPTEMBER 2011

Mt Christina from Key Summit. Photo — Sarah Murray

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1. Executive summary

This report summarises the results of a survey of 402 day walkers on the Key Summit Track carried out between January and March 2011. The survey was carried out as part of a wider programme to assess the effects of aircraft activity at sites along the Milford Aerodrome flight path and to build up a picture of use and satisfaction at sites within Fiordland National Park. It follows a similar survey undertaken in 2007. In this report results have been compared with the 2007 survey and with those from other walks in the region.

Overall, respondents were highly satisfied with their experience on the Key Summit Track. More than 90% of respondents were satisfied with the track and car park facilities and more than 90% agreed that they had felt safe on the track, been able to experience nature and scenery and been able to relax and reduce stress. Most aspects of the experience on the Key Summit Track scored well in comparison to other tracks in the region. The average trip satisfaction score was 8.1 out of 10.

The effects of aircraft, large or commercial groups and crowding along with interpretation and visitor flows around Howden Hut were all identified as areas for further monitoring and management. Aircraft were found to have annoyed a moderate number of respondents at Key Summit in 2011, however, levels of annoyance had not changed significantly since 2007. Annoyance remained well below the 25% management threshold set in the Fiordland National Park Management Plan. The survey found that fourteen percent of respondents were annoyed to some degree by hearing or seeing helicopters and 10% by planes. Moderate levels of annoyance were also recorded for large groups (12%) and for commercial / guided groups (10%) but these levels had also not changed significantly since the previous survey.

The level of crowding on the track increased from 41% in 2007 to 51% in 2011. Crowding has reached a level where management action is recommended to avoid issues in the future should numbers increase. The report notes that, to be effective, measures will need to target independent, rather than commercial visitors. Concessions are already limited under the Fiordland National Park Management Plan and independent visitors make up the majority of users on the Key Summit Track. To address crowding it is recommended that the Department promote alternatives to the Key Summit Track, encourage use in the morning and late afternoon and improve visitor flows around the shelter and car park.

Use of Howden Hut by day visitors was found to have increased since the last survey although there was no evidence of widespread crowding or dissatisfaction at this location among either day visitors or multi day trampers. In 2011 19% of respondents visited Howden Hut compared to 10% in 2007. The report recommends that the Department continue to monitor use of Howden Hut. Further management may be required if day visitor use continues to increase or if there are changes to the current pattern of commercial use.

Respondents gave mixed messages in relation to interpretation on the track despite the recent upgrade of interpretation signage. Twelve percent of respondents indicated that they had not been able to "learn about the area's plants and animals" or "learn about the area's landscape and geology" on the track. This appears to relate to the accessibility rather than the quality of the information provided. The report recommends that the existing interpretation signage be placed outside the Divide Shelter to make it more

visible, especially if toilet facilities are moved away from this area. It also recommends hut wardens regularly check to ensure that there are adequate supplies of the self guided walk brochure.

It is recommended that this survey be repeated in the 2015/16 summer season.

2. Introduction

This report presents the results of a survey of 402 day visitors to Key Summit, Fiordland National Park, carried out between the 6th of January and 10th of March 2011.

A major objective of the survey was to monitor the effects of aircraft activity on track users at a key site on the Milford Aerodrome flight path. This information was collected as part of an ongoing broader monitoring programme looking at the effects of aircraft activity on recreational users of Fiordland National Park. Supplementary information was collected regarding visitor use of and satisfaction with facilities, as well as visitors' perceptions of crowding and the extent to which commercial groups and other visitors affected their experience.

The survey replicates a previous survey carried out on the track in 2007 (Visser & Harbrow 2007). Further discussion of issues arising from aircraft landings at Milford Aerodrome is presented in separate summary reports for previous seasons (Harbrow 2007, 2008, Oyston 2010).

2.1 Setting and management approach

The study area for this survey was the Key Summit Track which begins at the Divide car park on the Milford Road (State Highway 94). Walkers initially follow the Routeburn Track, climbing steadily to a track junction at the tree line. The Summit itself is reached approximately 4 km and 1 - 2 hours walk from the car park. Key Summit is a popular site for day visitors due to the beautiful views down the Hollyford Valley and across to Lake Marian and the MacKenzie Saddle. Many overnight trampers walking the entire Routeburn Track also visit Key Summit as a side trip.

Key Summit is managed pursuant to the provisions of the Fiordland National Park Management Plan 2007 and sits within the Routeburn Track High Use setting. The area is managed to protect the Routeburn Track as an overnight, multi-day walking opportunity and to minimise conflict with other competing uses. The Plan sets out a number of restrictions on commercial guiding, aircraft landings, camping and the provision of additional facilities and infrastructure in order to preserve the experience for users of the Great Walk.

2.2 Visitor use

The Key Summit Track is one of the most popular day walking locations in Fiordland National Park. A track counter located just off the turnoff from the Routeburn Track has recorded an average of approximately 16000 visitors per year over the past 12 seasons (Figure 1).

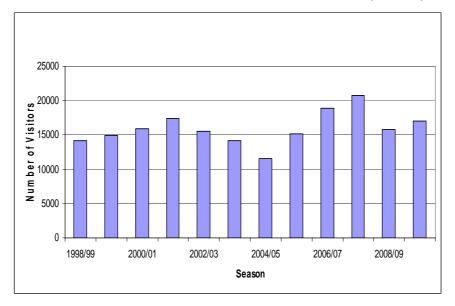


FIGURE 1: ESTIMATED NUMBER OF VISITORS TO KEY SUMMIT 1998/99- 2009/10

Information from the counter reveals that the number of walkers visiting Key Summit significantly decreased in 2004/05 (attributed in part to a moratorium placed on commercially guided day walkers). Visitor numbers then increased, peaking at over 20,000 in 2007/08. The decrease in visitors since then could be attributed to reduced tourism numbers owing to the global financial crisis.

A track counter is also in place along an unmarked route from Key Summit to the Greenstone Valley. While this route is not maintained by the Department, it is detailed in Moir's Guide South a guide published by the New Zealand Alpine Club (McNeil 2007). It receives frequent use, with more than 2700 passes over the counter being recorded in 2010. The exact level of use is unknown, as it is uncertain how much of this total represented return trips (with walkers crossing the counter twice) and how many trips were one way. The physical impacts from high levels of foot traffic over sensitive alpine vegetation on Key Summit is of concern to the Department and is discussed further in section 2.3 of this report.

The overall number of visitors to Fiordland is expected to grow over the next five years. Official tourism forecasts for the Fiordland Region predict a 13.9% increase in total visits from 1, 085,040 to 1,260,356 visits between 2010 and 2016 (Ministry of Tourism 2010). International visits, which make up the majority of activity, are expected to increase by 26.2% (Ministry of Tourism 2010). Increases in international tourism will be offset by a predicted 1.5% decrease in domestic visits. Domestic tourism is expected to drop slightly from 296,947 visits in 2010 to 292,439 visits in 2016 (Ministry of Tourism 2010). It is likely that the low and declining resident population in neighbouring regions, distance from main population centres and higher fuel prices will contribute to declining domestic tourism.

An important caveat is that these forecasts were made prior to recent natural disasters in New Zealand and Japan which are likely to have flow on effects on tourist numbers.

2.2.1 Concession use

Currently only a small proportion of visitors to Key Summit are commercial visitors, however, the number of allocated visitor days allows the potential for a much level of commercial use. As of July 2011 there were 25 concessions for guided day walks to Key Summit with an allocation of approximately 15 100 visitor days per annum. The number of operators has decreased since the previous survey with 29 concession holders recorded in 2007, holding an estimated 13,000 annual visitor days (Visser & Harbrow 2007). Under the Fiordland National Park Management Plan a limit of 20,000 visitor days has been set for guided day walks to Key Summit (DOC 2007).

The limit of 20,000 visitors is much lower than the allocation of 38,586 which existed in June 2007, when the Plan became operative (T. Swift, Department of Conservation pers. com.) A management decision in 2006 sought to reduce this number by placing a common expiry date upon all concession holders. This decision along with voluntary reductions resulted in an allocation of 12 921 guided visitor days per year by the end of 2007. Surplus allocation of approximately 7000 visitor days per annum will be progressively allocated back to existing concessionaires via a proposed competitive allocation process currently being developed (T. Swift pers. com.) This process was also applied to four high use or back country visitor settings with concessioned actives in Fiordland National Park. The others are the Kepler Track (Brod Bay to Mount Luxmore), Gertrude Saddle Track and Lake Marian Track.

2.3 Visitor impacts

Increasing visitor use has given rise to concerns about impacts on both the physical and social environment at Key Summit and attempts have been made to manage these impacts. These issues are discussed below.

2.3.1 Physical impacts

The most significant concern relating to physical impacts at Key Summit is damage caused by visitors walking off the marked track. Trampling and damage to the sensitive alpine cushion plants at Key Summit is of concern to DOC as noticeable impacts and damage have been recorded in the past. This has occurred in the area adjacent to the summit boardwalk and also along the ridge south of the current track. In 2004 this damage led to the development of a defined area for viewing Lake Marian which included signage and seating. This created an obvious barrier for visitors to stop, and as a result there now appears to be less evidence of tracking off the boardwalk. Despite this "the damage to the alpine plants could take some years to recover" (V. Crosbie, Department of Conservation pers. com.) Signage outlining the sensitivity of the alpine plants appears to be successful at keeping people off the fragile area and on tracks. Some research into the effects of trampling on the alpine vegetation has been undertaken at Key Summit and this is discussed further in Section 2.4.

Inappropriate disposal of human waste has also been an issue at Key Summit in the past. As a result of this, a toilet has been installed near the summit, in addition to those at Howden Hut and the Divide car park.

2.3.2 Social impacts

The main social impacts of concern at Key Summit are crowding, noise from aircraft and the effects of commercial groups. With respect to crowding, the Department of Conservation aims to manage recreational experiences so that the majority of visitors do not feel crowded (Visser & Harbrow 2007). This is in line with a threshold of 50% proposed by Shelby et al. (1989) and supported by the Department's visitor survey SOP (Corbett et al. 2006). Where this level is exceeded and visitor numbers are expected to increase, Shelby et al. (1989) advise further study and management action should be undertaken to address the issue. Previous research at Key Summit in 2007 found that 41% of respondents felt crowded to some degree on the track and it was felt that increasing numbers could lead to greater problems with crowding in the future (Visser & Harbrow 2007). This was one of the drivers for the current study.

Another concern for the Department is the potential effect of aircraft overflights on visitor experience. Milford Aerodrome in Fiordland National Park receives more than 7000 landings per annum (Oyston 2010) and a number of popular walks and tramps, including the Key Summit Track are directly beneath the aerodromes main flight paths. Flights to and from Martins Bay and the Hollyford airstrip may also affect visitors at Key Summit.

Levels of commercial activity at Key Summit have also been a concern in the past also and limits have been imposed.

2.4 Previous studies

Nine visitor surveys have been carried out on the Routeburn Track over the last 15 years (Harbrow & Visser 2010) however, only one has included day walkers at Key Summit (Visser & Harbrow 2007). Instead, most studies have targeted multi day trampers. Two recent studies (Tourism Resource Consultants 2007, Harbrow & Visser 2010) included day visitors at the Glenorchy end of the track.

The effects of physical impacts have also been studied. A study undertaken by Squires (2007) on the resistance and resilience of different plant communities to trampling found that cushion bog vegetation near Key Summit was more resilient to trampling then tussock herbfield vegetation found at other sites within Fiordland and Mt Aspiring National Parks. Despite this, the effect of 500 'passes' over the cushion bog site was the removal of 73% of the original vegetation cover. This type of vegetation was also found to be slow to recover after trampling (Squires 2007). This highlights the need for visitors to remain on marked tracks.

3. Methods

The survey took place on 10 days over a 3 month period. Surveying was carried out in a variety of weather conditions including both fine and wet/overcast days. Surveys were handed out on the 6th, 7th, 11th, 21st & 23rd January; 1st, 8th & 22nd of February and 9th & 10th of March. The surveyor was on site for up to 5 hours each day (normally 11 am to 4 pm).

The survey captured both guided and independent day walkers when they had completed their walk at the Divide car park. All day visitors were approached with a survey form, but respondents who were aged under 16 or those who were non-visitors (such as DOC staff or guides) were excluded or otherwise not included in the analysis.

Surveys were self completed, with the surveyor on hand to collect survey forms and provide assistance if necessary. A postal return option was given to those who were in a hurry. Forms and envelopes were left in zip-lock bags on windscreens for visitors who hadn't returned to their vehicles by the time the surveyor was due to leave. Generally two forms were left as this has historically been the most commonly reported group size at this site (Visser & Harbrow 2007). More forms were left if a vehicle obviously had more then two occupants. Forms were also supplied to either commercial guides or bus drivers to give to their clients to fill in once they had returned. This minimised any potential disruption to their schedules. A copy of the survey questionnaire is attached as Appendix 1.

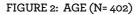
In order to quantify non-response rates, the total number of forms distributed or left for day walkers to complete was recorded, along with the number of visitors who refused or could not complete a survey.

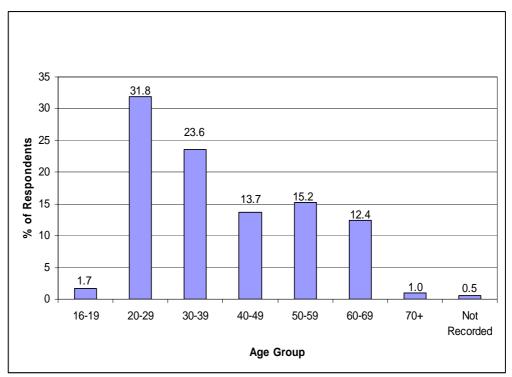
Data from questionnaires was entered into a Microsoft Excel spreadsheet and analysed using Excel and SPSS.

4. Results

A total of 650 visitors were approached over the 10 days of the survey with the numbers each day ranging from 5 to 105. Four hundred and two surveys were completed providing an overall response rate of 61.8% and a maximum margin of error of $4.9 \%^1$. Of the 402 responses 307 were returned on site and 95 by mail. The key findings of the survey are presented below.

4.1 Demographics

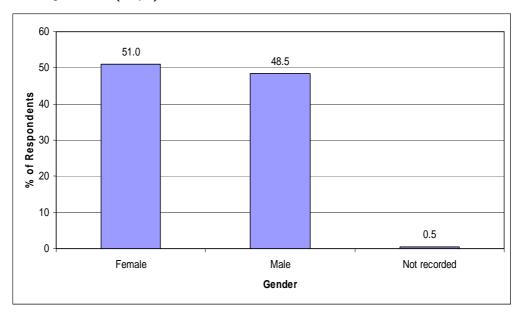




The largest age group of respondents (Figure 2) was the 20-29 age group (32% of respondents) followed by those in the 30-39 age group (24% of respondents). The least common age group was 70+, with only 1% of respondents falling into this age bracket. 57% of respondents were under 40 years of age.

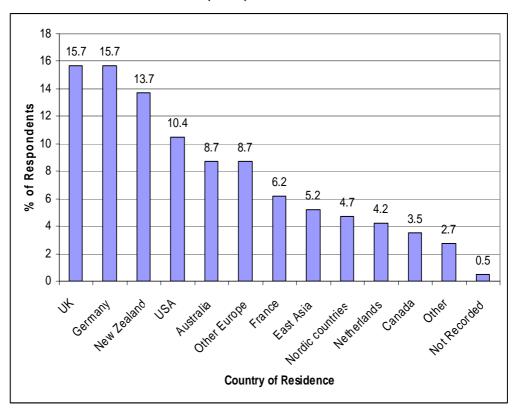
The margin of error refers to the potential error arising from sampling when making inferences about a larger population e.g. everyone who walks the Key Summit Track during the summer season. Error figures should be viewed alongside other information such as response rates, the methodology and the survey instrument used. The figure given is the maximum margin of error and may be conservative. It has been calculated using the formula $(=0.98/\sqrt{\text{sample size}})^*100$ and gives the maximum size of the 95% confidence interval for a simple random sample. Few surveys undertaken in recreational settings are truly random so the margin of error figures should be regarded as indicative.

FIGURE 3: GENDER (N= 402)



There was a relatively even split in survey responses between male (49%) and female (51%) visitors (Figure 3).

FIGURE 4: COUNTRY OF RESIDENCE (N= 402)

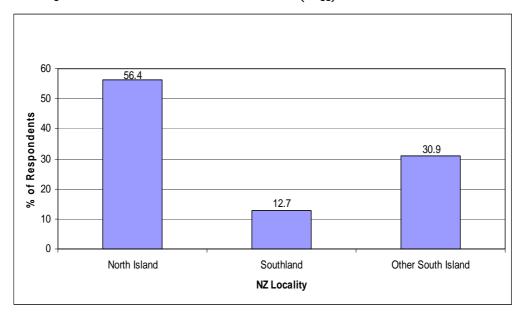


Respondents were asked to state where they normally lived (Figure 4) and, if they lived in New Zealand, they were asked which region they resided in (Figure 5).

The five most common responses for country of residence were as follows;

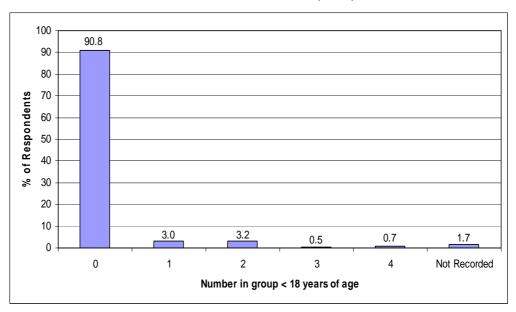
- 1/2. United Kingdom and Germany (16% each)
- 3. New Zealand (14% of respondents)
- 4. USA (10% of respondents)
- 5. Australia (9% of respondents)

FIGURE 5: ORIGIN OF NEW ZEALAND RESPONDENTS (N= 55)



Of the 55 New Zealanders, 31 were from the North Island (56%) and 17 were from regions of the South Island other than Southland (31%). Only 7 respondents (13% or 2% of all survey respondents) were from the local Southland area, all living in Te Anau. A large number of New Zealand respondents lived in Auckland (31%).

FIGURE 6: RESPONDENTS TRAVELLING WITH CHILDREN (N=402)



Visitors were also asked to report how many of their group were aged less than 18 years of age (Figure 6). Ninety one percent of respondents did not have a member aged less then 18 in their group, however, seven percent were travelling with children.

4.2 Group characteristics

100 89.1 90 80 70 % of Respondents 60 50 40 30 20 10.4 10 Commercial/ Guided Independent Other Not Recorded Group **Group Type**

FIGURE 7: "WHO ARE YOU VISITING KEY SUMMIT WITH TODAY?" (N= 402)

The majority of respondents who visited Key Summit were independent travellers (89%) while only 10% were part of a commercial or guided group (Figure 7).

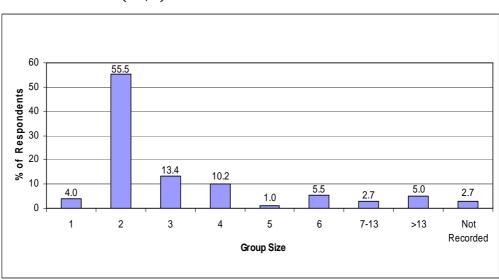


FIGURE 8: GROUP SIZE (N= 402)

The most commonly reported group size was two (56%). Five percent of respondents reported being in a group of more then thirteen people (Figure 8).

4.3 Previous visits

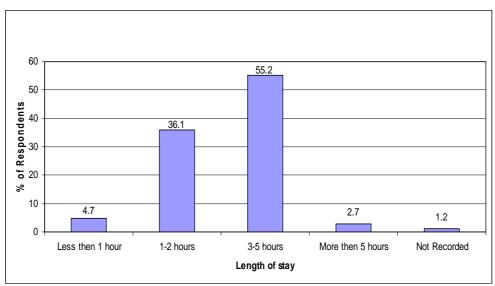
Ninety two percent of respondents were on their first visit to Key Summit (Table 1). Of those who had visited Key Summit previously (8%), most had only visited once before. One respondent recorded that they had previously visited Key Summit over 300 times.

TABLE 1: NUMBER OF PREVIOUS VISITS TO KEY SUMMIT (N=402)

Number of previous visits	0	1	2	3	4	5 or more	Not Recorded
Number of respondents	371	15	7	0	2	7	0

4.4 Length of stay

FIGURE 9: LENGTH OF VISIT TO KEY SUMMIT (N=402)



The most commonly reported length of stay for visitors to Key Summit was 3-5 hours (55%). Thirty six percent of respondents visited between 1 and 2 hours while 3% spent more then 5 hours onsite (Figure 9).

4.5 Use of Howden Hut

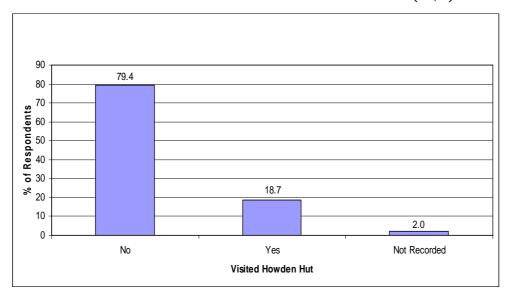


FIGURE 10: "DID YOU VISIT HOWDEN HUT DURING YOUR WALK TODAY?" (N=402)

Nineteen percent of respondents stated that they had visited Howden Hut while 79% did not visit the hut (Figure 10).

4.6 Visitor experience

Respondents were asked to indicate on a seven point scale how much they agreed or disagreed with nine statements about their experience on the Key Summit Track. A score of 1-3 meant that they disagreed with the statement and had not experienced that aspect, a score of 4 was neutral and a score of 5-7 meant that they agreed with the statement.

The degree to which respondents were able to enjoy the nine pre-defined experiences on the Key Summit Track was high. Over 90% of respondents agreed with statements that they felt safe walking the track, were able to experience nature and scenery and were able to relax and reduce stress. Between 80 and 90% agreed that the track had suited their level of experience and fitness and that they were able to experience natural peace and quiet. On the other hand, 13% of respondents disagreed that they were able to see and hear local birdlife and 12% felt that they were unable to learn about the area's landscape and geology and its plants and animals (Figure 11). The highest mean was for the statement "I felt safe walking the track", with 6.7 out of 7. The lowest scoring statements were "I was able to learn about the area's plants and animals" and "I was able to learn about the landscape and geology of the area, both having mean scores of 5.3 out of 7 (Table 2).

FIGURE 11: PERCEPTION OF TRACK VALUES (N=402)

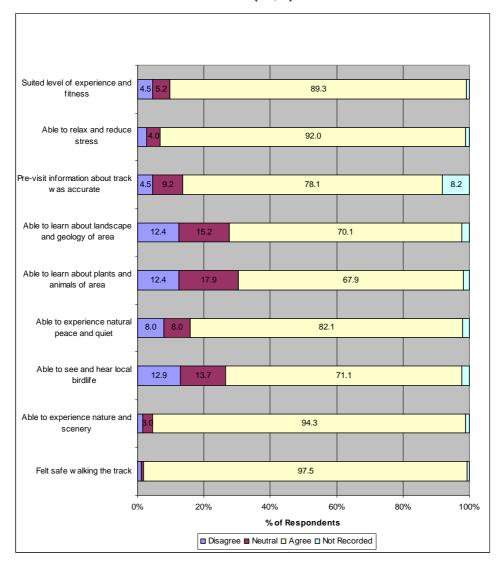


TABLE 2: MEAN SCORES FOR TRACK VALUES (N=402)

How much do you <u>agree or disagree</u> that?	Mean Score
I felt safe walking the track	6.7
I was able to enjoy nature and scenery	6.6
I was able to enjoy seeing and hearing the local birdlife	5.4
I was able to experience natural peace and quiet	5.8
I was able to learn about the area's plants and animals	5.3
I was able to learn about the landscape and geology of the area	5.3
Information I read / heard before my visit was accurate	5.9
I was able to relax and reduce stress	6.2
The track suited my level of experience and fitness	6.3

4.7 Satisfaction with facilities

Respondents were also asked to indicate on a seven point scale what they thought of the facilities on the track. Response categories ranged from 1 - 3 (Poor), 4 (Neutral) or 5 - 7 (Excellent).

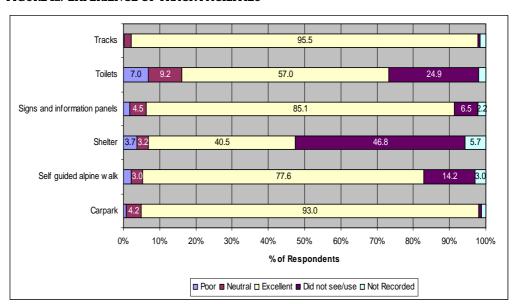


FIGURE 12: EXPERIENCE OF TRACK FACILITIES

TABLE 3: MEAN SCORES FOR TRACK FACILITIES

Facility:	Mean Score:
Car park (n = 394)	6.3
Self guided alpine walk (n = 333)	6.3
Shelter (n = 191)	5.8
Signs and information panels (n = 367)	6.2
Toilets (n = 294)	5.6
Tracks (n = 393)	6.5

Ninety six percent of respondents rated the tracks positively, whilst 93%% did so for the car park. Only 41% of respondents rated the shelter positively however a large number of respondents (47%) indicated that they did not use this facility. Similarly the relatively low level of satisfaction with toilets (57%) was due in part to the fact that a quarter of respondents did not see or use the toilet facilities (Figure 12). Mean satisfaction scores for the facilities on the Key Summit Track ranged from 5.6 to 6.5 out of 7 (Table 3).

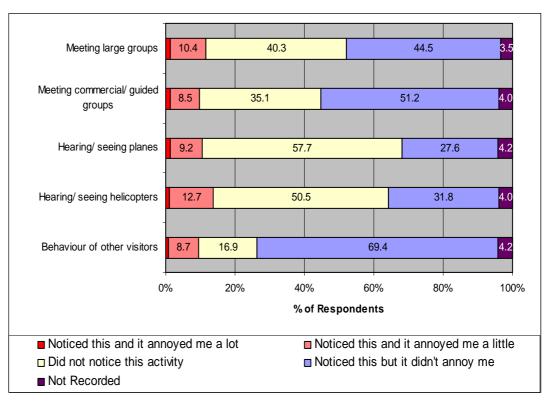
4.8 Effect of other visitors

Visitors were asked to indicate on a four-point scale the degree to which the activities or behaviour of others affected their visit. Five scenarios were tested;

- Behaviour of other visitors,
- Hearing or seeing helicopters,
- Hearing or seeing planes,
- Meeting commercial/ guided groups,
- Meeting large groups.

For each activity visitors could state that they did not notice, noticed but were not annoyed, noticed and were annoyed a little, or noticed and were annoyed a lot. Figure 13 compares the results from the five scenarios.

FIGURE 13: EFFECT OF OTHER VISITORS



The most significant source of annoyance among the five scenarios tested was helicopters. Fourteen percent of respondents were annoyed to some degree by hearing or seeing helicopters during their visit. However, the level of annoyance with both helicopters and planes (10%) was well below the 25% annoyance threshold set by the Fiordland National Park Management Plan (DOC 2007). Moderate levels of annoyance were also recorded for large groups (12%) and for commercial / guided groups (10%). Only 9% of respondents were annoyed by the behaviour of other visitors.

4.9 Crowding

Visitors were asked two questions relating to crowding; a) "did you feel crowded at all during your visit today?" on the track and b) "did you feel crowded at all during your visit today?" at Key Summit.

They were asked to indicate a level of crowding on a 9 point scale ranging from "not at all" to "extremely" crowded (Shelby et al. 1989). Scores of 3 or more indicated some level of crowding while scores of 2 or less indicated no crowding.

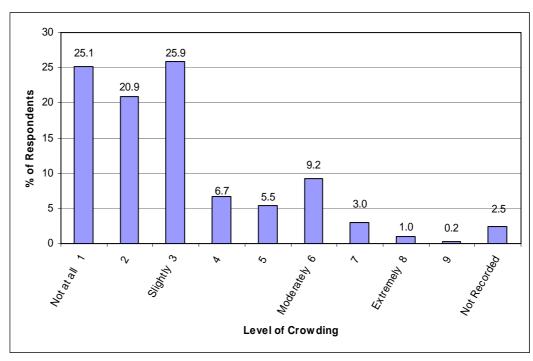
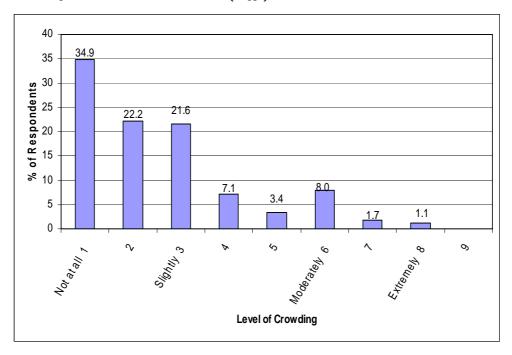


FIGURE 14: CROWDING ON THE TRACK (N= 402)

The results showed that 46% of visitors were not crowded on the track while 51% of respondents felt some degree of crowding. Thirteen percent of respondents were moderately to extremely crowded (a score of \geq 6), while 2% of respondents did not record a response (Figure 14).

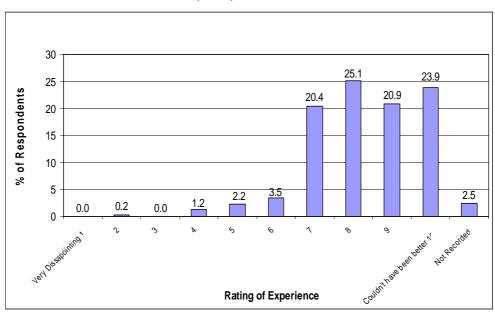
For the Summit itself, 43% of respondents who indicated that they had visited (n = 352) felt some degree of crowding, while 57% did not feel crowded. Eleven percent indicated that they were moderately to extremely crowded (Figure 15). Forty one respondents indicated that they did not visit the Summit and 9 gave no response. Both groups were excluded from the analysis for this question.

FIGURE 15: CROWDING AT KEY SUMMIT (N=352)



4.10 Overall satisfaction with experience

FIGURE 16: TRIP RATING OUT OF 10 (N=402)



To gauge the level of satisfaction with the Key Summit Track, respondents were asked to rate their experience of their visit on a one to ten scale (Figure 16). Ninety-six respondents or 24% rated their experience as 10/10 – "couldn't have been better" and the vast majority of respondents (90%) rated their experience at 7 or higher. Only 1 person rated their experience as 3 or less. The mean score was 8.3.

Visitors were then asked an open-ended question regarding what would have improved their experience if it was not 10/10 (Figure 17).

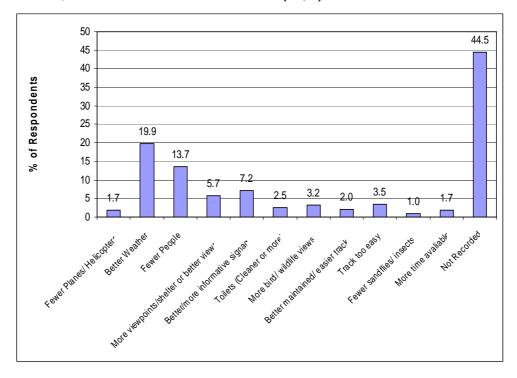


FIGURE 17: WHAT WOULD HAVE MADE TRIP A 10 (N=402)2

The largest issue which would have improved visitors experiences was better weather, (20% of respondents) however, a large number of people acknowledged that this was out of DOC's control. Some examples of these comments include;

"More blue sky and sun, could have been warmer temperatures, more viewpoints on the track"

"Blue skies for better views"

14% of respondents felt that there were too many people and / or that fewer people would have made their experience better.

A number of respondents (7%) also stated that more information or signage should be available. In particular, 8 comments related to the fact that there were no leaflets available for the self guided alpine walk at Key Summit. These leaflets are left in a pick up/drop off box at the start of the loop walk, and it is likely that visitors are neglecting to return the leaflets at the end of their visit. Some of the comments on signage included;

"I would have liked more information about the plants and trees"

² Percentages add up to more than 100% as respondents could comment on more than one issue.

"Slightly more detailed information panels"

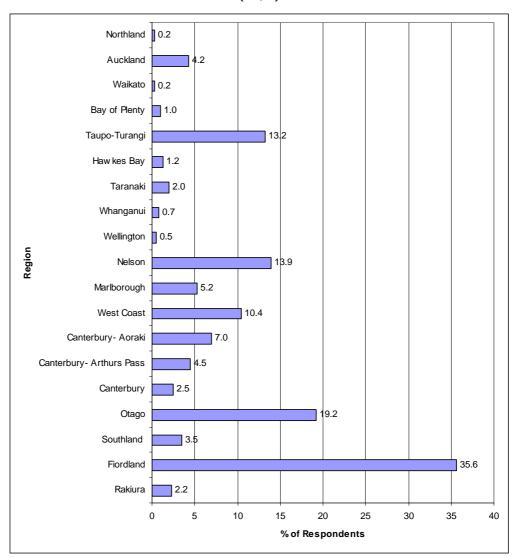
"Signs to advise hikers of elevation-maybe a graph"

Forty five percent of respondents did not provide a comment. This was split evenly between those who had already rated the track ten out of ten and those who chose not to answer the question. Full comments are attached as Appendix 2.

4.11 Previously visited DOC sites

The final question in the survey asked respondents to list any Department of Conservation tracks, parks or reserves that they had visited during their trip. These responses were broken down by regions as shown in Figure 18.

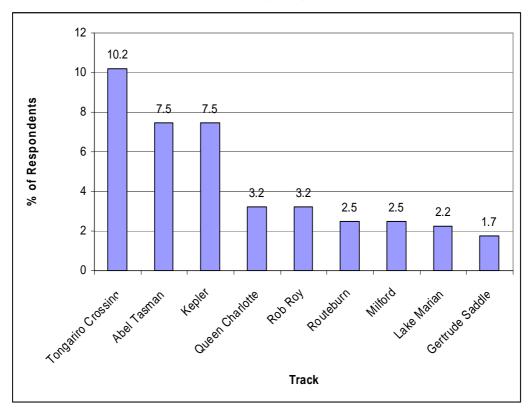
FIGURE 18: REGIONS VISITED DURING TRIP (N=402)



Not surprisingly, 36% of respondents named tracks or locations in Fiordland and the next most commonly visited region was Otago (in particular the Wakatipu area) with 19% of respondents. The least commonly visited regions were the Waikato and Northland, with only 1 visitor indicating that they had visited each of these regions. Despite the proximity to Fiordland, only 4% of respondents indicated that they had visited tracks, parks or reserves in the adjacent Southland region.

Several respondents also listed specific tracks which they had walked. Figure 19 outlines the most common responses.

FIGURE 19: DOC TRACKS VISITED DURING TRIP (N=402)



As expected most responses related to other tracks in Fiordland National Park such as the Kepler Track (8%). However, the top two responses were the Tongariro Crossing (10%) and the Abel Tasman (8%).

The results are discussed further in the following section.

5. Discussion

In this section of the report the results are discussed in three different contexts. First, the results are compared with those from the 2007 survey (Visser & Harbrow 2007) to assess the level of change over time. Where appropriate, statistical tests have been carried out on the two datasets to determine whether differences are statistically significant and therefore likely to be 'real', or whether they are indistinguishable from normal sampling error.

Second, the results are compared to those from other day and short walks in Otago and Southland. This allows the experience on the Key Summit to be benchmarked against other similar opportunities. It also helps build a picture of the typical users of day and short walks in the region and shows where users of the Key Summit Track either fit or do not fit this profile. In this report data from Key Summit has been compared with the Rob Roy Track (Squires 2008), Nugget Point (Hall 2007), Curio Bay, Waipapa Point (Harbrow, Roughan & Chesterfield, 2007), Ulva Island (DOC/ Tourism Resource Consultants 2006), the Lake Gunn Nature Walk (van Neuren 2010), the Routeburn Track (Tourism Resource Consultants 2007, Harbrow & Visser 2010), the Kepler Track (Harbrow 2010), the Milford Sound Foreshore and the Lake Marian Falls Track (M. Harbrow unpublished data). Where data from local day and short walks is insufficient data from Gertrude Valley (M. Harbrow unpublished data), the Franz Josef Valley Walk (Tourism Resource Consultants 2009a, b) and the Hooker Valley (Smith 2007) have been used.³

Third, the management significance of results has been considered. The Department does not have formal standards for visitor experience however in this report, a threshold of 10% dissatisfaction or negative response has been considered a "moderate effect", while a threshold of 25% has been adopted as a trigger for recommending further management action. The 25% threshold is in line with the recommendations of Corbett et al. (2006) for visitor conflict and the Fiordland National Park Management Plan also specifies a 25% management threshold for annoyance caused by aircraft (DOC, 2007: 230). For crowding the 50% threshold recommended by Shelby et al. (1989) and also adopted by Corbett et al. (2006) has been used. This was also the approach taken in the 2007 survey at Key Summit. Because some facilities (e.g. toilets, shelters) are not necessarily used by all respondents, mean scores rather than percentages have been used to assess the significance of results and to compare results from different tracks. Percentages are used to highlight any significant areas of dissatisfaction however.

Overall the survey is believed to have captured a representative sample of visitors at Key Summit although non-response error may have had a minor influence on the results. This can occur when non-respondents have different characteristics or opinions to those who have chosen to respond to the survey. An example of this is provided by the small number of visitors who did not speak English well enough to complete a survey, although a number of these visitors were able to complete forms with the assistance of their guides. A high response rate (in this case 61.8%) reduces the risk of non response

³ There is some variation in they way that data has been analysed in these surveys. In some cases percentages are calculated from all survey respondents while in others they are only calculated from those who answered a particular question. This makes comparisons between surveys difficult. To allow for valid comparisons to be made, the original datasets for each survey were obtained and where appropriate results were re-calculated as a percentage of all respondents.

error. The margin of error for this report at 4.9% was low and provides further confidence in the results.

The remainder of the discussion is broken up into sub-sections following the format of the earlier results section.

5.1 Demographics

Walkers to Key Summit who responded to this survey were predominately aged under 40. Fifty seven percent of respondents were within the 16 - 39 age group. This is reflective of the previous study in 2007 where 54% of respondents were within this age bracket. Likewise, in most other surveys of day and short walks in Southland Conservancy, the majority of respondents have been aged under 40. Surveys carried out at three locations in Otago Conservancy (the Rob Roy Track, Nugget Point and the eastern side of the Routeburn Track) have found a slightly older demographic as have surveys on the Kepler Track and Ulva Island in Southland (Figure 20).

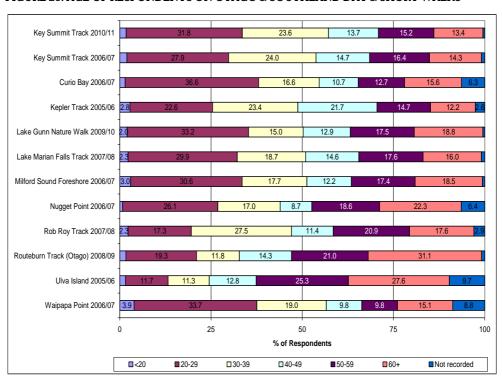


FIGURE 20: AGE OF RESPONDENTS ON OTAGO & SOUTHLAND DAY & SHORT WALKS

Compared to most other day and short walks in the region, Key Summit had a lower percentage of respondents who were aged over 60 years of age. Fourteen percent were in this age bracket in the 2011 survey while other surveys ranged from 12% for the Kepler Track through to over 30% for the Routeburn Track. There was no significant change in the percentage of older respondents at Key Summit compared to the 2007 survey. In terms of length and gradient the Key Summit Track is one of the more difficult day walks among those listed in Figure 20, and the lower percentage of older respondents probably reflects this.

Results for the gender of respondents at Key Summit were also very similar to the 2007 study, with a close to even gender distribution. In 2011, 51% of respondents were female and 49% of the visitors were male, while in 2007 females made up 47% of respondents, males made up 49% and 5% of respondents did not record an answer. This difference was not statistically significant (Figure 21).

Responses to this question on other day and short walk opportunities in Otago and Southland have varied. Females outnumbered males by between 5 and 13 percentage points in surveys at three sites in the Catlins in 2006/07. Females also made up the majority of respondents on the Lake Gunn Nature Walk and on the eastern side of the Routeburn Track. Other surveys have found relatively even distributions of male and female respondents. There are some likely causes for this. Walks with a higher percentage of female visitors have tended to have a higher proportion of respondents who were guided. Furthermore, "nature" has tended to feature strongly in the marketing or branding of sites that are dominated by female visitors. The walks at Lake Gunn and the Routeburn Track are branded as nature walks while the marketing of sites in the Catlins strongly emphasises the area's wildlife. This has not always been the case however. Ulva Island (which is an open sanctuary known for its birdlife) had high numbers of guided visitors (21% of respondents) but a more even gender distribution (48% male, 46% female).

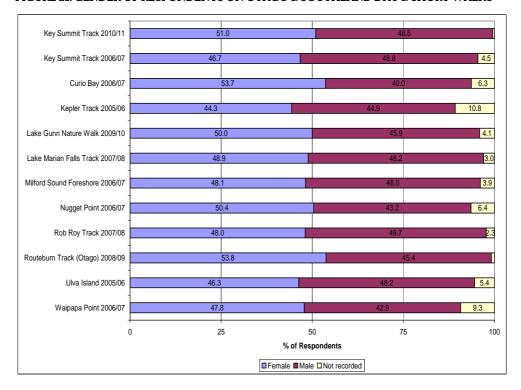


FIGURE 21: GENDER OF RESPONDENTS ON OTAGO & SOUTHLAND DAY & SHORT WALKS

In 2011, the two most common countries of origin for respondents on the Key Summit Track were the United Kingdom and Germany, each with 16% of respondents (Figure 22). The United Kingdom was also the most common country of residence in 2007 with 18% while Germany and the United States, each contributed 15% of respondents. The changes observed between the two surveys were not statistically significant and can't therefore be differentiated from the normal level of variation between random samples. The smaller

share of respondents from the United States in 2011 could be due to the global economic crisis and a less favourable exchange rate however other countries such as the UK, that could be expected to show a similar scale of response, have not done so.

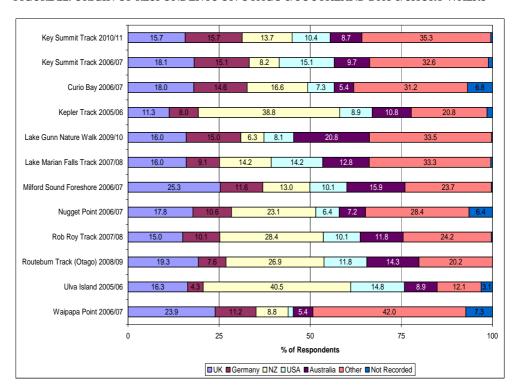


FIGURE 22: ORIGIN OF RESPONDENTS ON OTAGO & SOUTHLAND DAY & SHORT WALKS

The results of the current survey follow a pattern seen on other day and short walks in the region. Visitors from five countries the UK, Germany, New Zealand, the United States and Australia have consistently made up more than 50% of respondents at these locations. In some surveys there have also been a number of respondents from The Netherlands, Israel and France. The level of use of day and short walks by New Zealanders is extremely variable. Some sites such as the Kepler Track (39%) and Ulva Island (41%) have recorded significant levels of use by New Zealanders while more than 85% of respondents at each of the four sites surveyed along the Milford road have been from overseas.

An interesting aspect of the country of residence data is the relative lack of visitors from Asian markets. China, Japan and South Korea are New Zealand's 4th, 5th and 7th largest sources of visitor arrivals respectively and visitors from Asia collectively made up 18% of visitor arrivals in the year to June 2011 (Tourism Strategy Group 2011). Despite this, Asian visitors are barely represented in these surveys. In the current survey, for example, respondents from East Asia made up 5% of respondents. Even at Milford Sound / Piopiotahi, a destination that has traditionally been popular with Asian tour groups and where questionnaires were translated into Japanese, Mandarin and Korean, only 12% of boat cruise passengers surveyed in 2010 were from Asian countries (Booth 2010). In some cases the low percentage of Asian respondents may be due to language difficulties and lower response rates from commercial or guided groups. In many cases however, Asian visitors are simply not present in significant numbers.

The percentage of New Zealand respondents at Key Summit nearly doubled compared to the 2007 study increasing from 8% to 14%. The reasons for this are not clear. It could relate to a decrease in the number of international visitors travelling to New Zealand and / or New Zealanders could be choosing to holiday within their own country rather than overseas. Most of this increase was made up of visitors from the North Island who increased from 42% to 56% of the New Zealand respondents. Only 2% of survey respondents were Southland residents. In Figure 23 Otago residents have been included also to allow comparison with other tracks in the region.

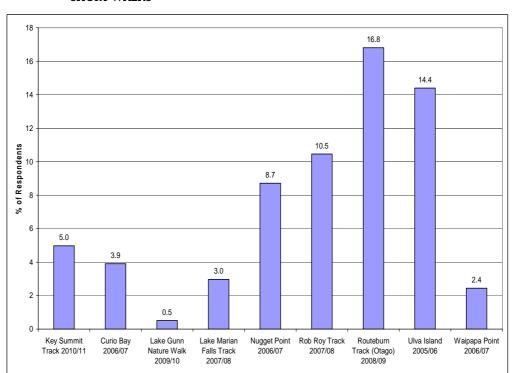


FIGURE 23: PERCENTAGE OF VISITORS FROM OTAGO / SOUTHLAND REGION ON DAY & SHORT WALKS

5.2 Group characteristics

The most common group type to undertake a day walk at Key Summit was independent walkers. Eighty-nine percent of respondents walking the Key Summit Track were independent walkers, while 10% of respondents were in a commercial/ guided group. In 2007 nearly double the percentage of commercial/ guided walkers (19%) was recorded, while 79% reported being independent walkers. This difference was statistically significant. The reason for such a large reduction in guided walkers at Key Summit could be due to the cut in concession allocation at Key Summit since 2007, as discussed in section 2.2.1, combined with substantial decreases in tourism numbers from most markets due to economic conditions.

The percentage of guided day walkers on other tracks in the region has varied greatly. No guided day walkers were recorded on the Kepler Track (despite a number of

4

 $^{^{4}}$ χ^{2} (1, n = 864) = 11.702, p<.01

operators holding concessions for the track at that time) while guided walkers made up more than a quarter of respondents at Curio Bay, the Lake Gunn Nature Walk and the eastern side of the Routeburn Track (Figure 24).

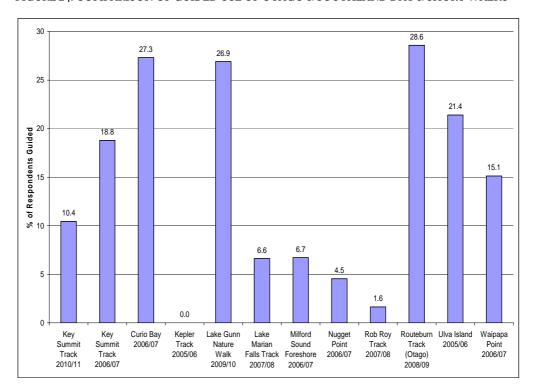


FIGURE 24: COMPARISON OF GUIDED USE OF OTAGO & SOUTHLAND DAY & SHORT WALKS

Reported group sizes for visitors to Key Summit ranged from one to eighteen, however the most commonly reported group size was two (56%). This was similar to the 2007 study where 48% of respondents reported visiting Key Summit in a group of two, again the most common group size. Most other surveys of similar opportunities in the region have also found a high number of respondents travelling in pairs. The average reported group size in 2007 was 4.03, compared with 3.49 in 2011. This decrease was a statistically significant⁵ and is likely to reflect the reduced guiding activity discussed above.

Interestingly, 4% of respondents (20 people) reported being in a commercial group of more then thirteen people. Concessionaires are limited to a maximum group size of 13 (including the guide) at Key Summit, so this could represent a degree of illegal activity. Alternatively it may be due to a commercial operator choosing to stay with their vehicle while the clients walked the track, an activity which is commercial yet unguided and which does not necessarily require a concession. Alternatively respondents may have simply miscounted the number of individuals in their group. The surveyor did observe examples of commercial, unguided activity from day walkers in groups of more then 13. Furthermore there were instances where large groups of up to 24 day walkers completing the track were noted. Where groups are divided into smaller groups with reasonable separation this has been deemed to comply with the Fiordland National Park Management Plan.

Decrease from 4.03 (±0.175, n = 435) to 3.49 (±0.170, n = 391) (t(823.436.) = -2.21, p < .05)

Groups with children were relatively uncommon on the Key Summit Track. Ninety one percent of respondents reported having no members of their group less then 18 years of age, whilst 8% reported that they did. The number of walkers aged less then 18 was not recorded in the 2007 survey. Only two other surveys of day walkers in the region have asked whether respondents were travelling with children. On the Lake Gunn Nature Walk in 2009/10, 9% of respondents reported travelling with children under the age of 18 while the percentage on the Otago side of the Routeburn Track in 2009 was much higher at 13%.

5.3 Previous visits

Eight percent of respondents in 2011 had made a previous visit to Key Summit compared to 4% in 2007. The apparent increase in repeat use is likely to be related to the higher percentage of New Zealand visitors in this study period. The level of repeat visitation for other day and short walks in the region has ranged from 3% at the Lake Marian Falls Track and Lake Gunn Nature Walk to 19% on the Routeburn Track (Figure 25). Unsurprisingly there was a positive linear correlation (R^2 = 0.74) between the level of repeat visitation and the percentage of respondents who were from Otago and Southland. The overall attractiveness or "wow factor" of the site is likely to be an additional factor influencing repeat visitation but this is difficult to quantify.

Low levels of repeat visitation can indicate a degree of dissatisfaction with the experience at a particular site however Key Summit is dominated by overseas visitors who may only visit New Zealand once.

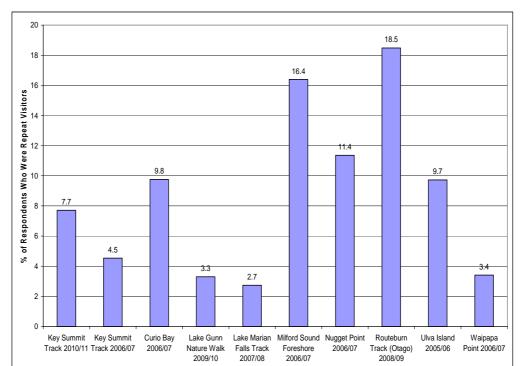


FIGURE 25: LEVEL OF REPEAT VISITATION ON OTAGO & SOUTHLAND DAY & SHORT WALKS

5.4 Length of stay

The most common duration of visit to the Key Summit Track was 3-5 hours, with 55% of respondents The next most common duration was 1-2 hours (36% of respondents visited for this duration). These results are relatively unchanged from the 2007 survey where 50% of respondents reported visiting for 3-5 hours while 35% visited for 1-2 hours. The most common length of stay of between 3-5 hours is logical as track signage indicates that the trip is 3 hours return.

5.5 Use of Howden Hut

In 2011, nineteen percent of respondents visited Howden Hut during their visit to Key Summit while 79% of visitors did not. In 2007 11% of respondents had visited Howden Hut a change which was statistically significant⁶. Even allowing for a small decrease in overall visitor numbers to Key Summit since 2006/07, the number of day walkers using Howden Hut is likely to have increased substantially.

The hut is also used as a lunch stop by guided trampers en-route to Mackenzie Lodge and by some independent trampers in addition to those who are staying the night. Despite the level of use there is no indication that there is significant crowding or dissatisfaction with the current facilities at Howden Hut among either day walkers or multi day trampers (Harbrow & Visser 2010). This is likely due to the fact that the periods of peak use for various visitor types are different. Day walkers are most likely to be present in and around the hut on fine, sunny days while trampers will be present in greatest numbers during periods of bad weather when they are seeking shelter.

If use continues to grow or if there are significant changes to existing use patterns (e.g. increased numbers of guided trampers using the hut as a lunch stop) then the Department may eventually need to upgrade its facilities or else manage use of the hut.

5.6 Visitor experience

To monitor the visitor experience and important values and to determine any areas where management of area could be improved, respondents were asked to evaluate nine statements relating to their experience of the Key Summit Track. Three of the nine statements were included in the 2007 survey providing areas for comparison. Other statements have been used in previous surveys of day and short walks in the region allowing some comparison of the quality of the experience at various sites.

Generally, the degree to which respondents agreed with statements and enjoyed positive experiences on the track was high. Feeling safe on the track was the highest ranked experience, with 98% of respondents reporting that they felt safe and a mean score of 6.7 out of 7. Only 1% of respondents felt unsafe on the track. This question was not asked in the 2007 survey. Similar results were found on the Lake Gunn Nature Walk where 97% of respondents felt safe, 2% felt unsafe and the mean score was 6.8. On the Gertrude Valley Track, which is not managed to day visitor standard, 11% of respondents indicated that they did not feel safe on the track and the average score was only 5.5 (Table 4).

6

 $^{^{6}}$ χ^{2} (1, n = 845) = 9.897, p<.01

TABLE 4: PERCEPTION OF SAFETY ON SOUTHLAND WALKS

Track	% Felt safe on the track	% Did not feel safe on the track	Mean score (out of 7)
Key Summit (2010/11)	98%	1%	6.7
Gertrude Valley (2010/11)	75%	11%	5.5
Lake Gunn Nature Walk (2009/10)	97%	2%	6.8

The vast majority of respondents were also able to enjoy nature and scenery with 94% of respondents agreeing with the statement and only 1% disagreeing. The ability to experience nature and scenery received a mean score of 6.6. This aspect of the experience has been highly rated across all previous surveys on day and short walks in Southland (Table 5). In 2007 the mean score for this aspect of the experience was 6.5 and fewer than 1% of respondents indicated that they had not been able to experience nature and scenery. Elsewhere, mean scores have ranged from 6.2 on the Milford Sound Foreshore through to 6.7 on the Lake Gunn Nature Walk. No more than 3% of respondents have indicated an inability to experience nature and scenery on walks in the region.

TABLE 5: ABILITY TO ENJOY NATURE & SCENERY ON SOUTHLAND WALKS

Track	% Able to enjoy nature & scenery	% Not able to enjoy nature & scenery	Mean score (out of 7)
Key Summit (2010/11)	94%	1%	6.6
Key Summit (2006/07)	92%	<1%	6.5
Gertrude Valley (2010/11)	96%	1%	6.6
Lake Gunn Nature Walk (2008/09)	97%	2%	6.7
Milford Sound Foreshore (2006/07)	88%	3%	6.2

There was less agreement when respondents were asked whether they had been able to see and hear local birdlife. Twelve percent of respondents indicated that they had not been able to, 14% were neutral and seventy percent agreed. The mean score was 5.4. The lower score for this aspect may indicate that the birdlife doesn't match what is being

promoted through the Department's marketing material, and this should be investigated further.

Weather at the time of visit has an influence on the perceived amount of birdlife and this may be a factor however, the area is also a hot spot for biodiversity. The Eglinton Valley (which includes Key Summit) supports many bird species including mōhua/yellow-head and kākā as well as both short and long-tailed bats/pekapeka. The importance of the Eglinton Valley for these populations has been nationally recognised, with the valley being included as an "Operation Ark" site. The Operation Ark programme should help protect a range of species in addition to those mentioned and over time this should provide an added benefit of enhancing the visitor experience in and around the Eglinton Valley. At present however, it is not clear how the experience of birdlife on the Key Summit Track compares to other day and short walks as this question has not been asked elsewhere.

TABLE 6: PERCEPTION OF NATURAL PEACE & QUIET ON SOUTHLAND WALKS

Track	% Able to enjoy natural peace & quiet	% Not able to enjoy natural peace & quiet	Mean score (out of 7)
Key Summit (2010/11)	82%	8%	5.8
Key Summit (2006/07)	78%	7%	5.7
Gertrude Valley (2010/11)	82%	7%	5.9
Lake Gunn Nature Walk (2008/09)	96%	3%	6.6
Milford Sound Foreshore (2006/07)	55%	21%	4.8
Ulva Island (2005/06)	93%	2%	6.2

Respondents' ability to experience natural peace and quiet on walks in Southland has varied (Table 6). A number of surveys have been undertaken at sites along the Milford Road which are affected to varying degrees by road traffic, aircraft and in the case of the Milford Sound Foreshore, boat activity.

At Key Summit in 2011, 82% of respondents felt that they had been able to experience natural peace and quiet while 8% did not. The mean score was 5.8. These results were little different from those in 2007.

⁷ Operation Ark was created to maintain sustainable populations of whio (blue duck), orange-fronted parakeet (kākāriki karaka), mōhua and pekapeka on the mainland South Island, to protect these species from possums, stoats and rats and to mitigate the effects of predator plagues in the South Island beech forest sites where these species occur (Elliott & Suggate 2007).

Elsewhere results from Ulva Island and the Lake Gunn Nature Walk indicate a very high degree of natural quiet at these locations with more than 90% of respondents able to enjoy natural peace and quiet. In contrast, only 55% of respondents at the Milford Foreshore were able to do so while 21% felt that they were not able to enjoy natural peace and quiet. The relatively poor results for the busy Milford Sound Foreshore area do not necessarily indicate widespread dissatisfaction although many respondents felt that natural quiet was important. The results for Lake Gunn and Ulva Island suggest that these locations offer high quality experiences that should be protected from noisy activities.

Respondents' ability to learn about the areas plants and animals was relatively low compared to the Lake Gunn Nature Walk (the only other location where this question has been used). Sixty eight percent of respondents agreed that they had been able to learn about plants and animals compared to 89% on the Lake Gunn Nature Walk. At Key Summit 12% responded negatively to this question while at Lake Gunn only 4% did so. The different responses between the two locations are somewhat puzzling as there is excellent interpretation available in the Divide Shelter and a self-guided alpine walk atop Key Summit focused on educating visitors with regards to flora and fauna.

One reason for relatively poor result for this question may be because educational leaflets for the self-guided alpine walk were often missing. This occurred because people were already using them or because they had taken leaflets away with them. A number of respondents commented on this issue for example;

"Info flyer for self guided alpine walk"

"No information leaflets available".

On more then one occasion the surveyor was given leaflets at the Divide car park by visitors who had not returned them to the container provided meaning the leaflets were effectively out of use. Another reason for the poor response at Key Summit could be that people prefer signs and interpretation panels to the self guided alpine walk. A third reason is that much of the existing interpretation is hidden in the Divide Shelter and many visitors go straight to their vehicle after completing the walk.

The statement "I was able to learn about the landscape and geology of the area" provided similar results. Twelve percent of respondents disagreed with the statement, 70% agreed and the mean score was 5.3. This question has not been used in other surveys.

TABLE 7: ACCURACY OF PRE-VISIT INFORMATION ON SOUTHLAND WALKS

Track	% agreed pre visit info was accurate	% disagreed pre visit info was accurate	Mean score (out of 7)
Key Summit (2010/11)	78%	4%	5.9
Gertrude Valley (2010/11)	66%	11%	5.5
Lake Gunn Nature Walk (2008/09)	62%	5%	5.8

The quality of pre-visit information such as brochures and information from the Fiordland National Park Visitor Centre was assessed by asking respondents to agree or disagree with the statement "The information I read / heard about the track before my visit was accurate." Seventy eight percent of respondents agreed with the statement, 4% disagreed and the mean score was 5.9 (Table 7). A larger number of respondents gave no response to this question compared to others (8% of respondents) indicating that they perhaps did not obtain pre-visit information. This question was also asked at the Lake Gunn Nature Walk where 5% of respondents disagreed and the mean score of 5.8 and also at Gertrude Valley where a higher negative response (11%) and lower mean score (5.5) was obtained.

With such a low percentage of respondents disagreeing with this statement and a high level of agreement in relation to other tracks in the region, it appears that the Department of Conservation is effectively promoting and marketing the Key Summit track.

TABLE 8: ABILITY TO RELAX & REDUCE STRESS ON SOUTHLAND WALKS

Track	% Able to relax & reduce stress	% Not able to relax & reduce stress	Mean score (out of 7)
Key Summit (2010/11)	92%	3%	6.2
Key Summit (2006/07)	75%	8%	5.6
Gertrude Valley (2010/11)	81%	8%	5.8
Lake Gunn Nature Walk (2008/09)	93%	2%	6.4
Milford Sound Foreshore (2006/07)	61%	15%	5.0

The Key Summit Track along with the Lake Gunn Nature Walk received a very positive response to the statement "I was able to relax and reduce stress." At both tracks over 90% of respondents agreed with the statement. In 2007 only 75% of respondents agreed that they were able to relax and reduce stress on the Key Summit Track. The reasons for this change are not clear. The least relaxing location surveyed has been the Milford Sound Foreshore where 61% of respondents agreed with the statement and 15% did not. This location is significantly busier than others where this question has been asked and it is also likely that many respondents were in a rush to get to their scheduled boat cruise. Overall however, results indicate that respondents believe walks in Fiordland are good outlets for relaxing and reducing stress (Table 8).

TABLE 9: EXTENT TO WHICH SOUTHLAND WALKS MATCHED EXPERIENCE & FITNESS

Track	% Suited level of experience & fitness	% Did not suit level of experience & fitness	Mean score (out of 7)
Key Summit (2010/11)	89%	5%	6.3
Gertrude Valley (2010/11)	88%	2%	6.3
Lake Gunn Nature Walk (2008/09)	87%	5%	6.3

The final question in this section assessed whether the track matched respondents' perceived level of experience and fitness. Respondents generally agreed that it did with 89% agreeing with the statement and only 5% disagreeing. There was little difference between the results at Key Summit and those from two other tracks where this question has been used (Table 9).

5.7 Satisfaction with facilities

Visitors to the Key Summit Track were asked to rate their experience of the facilities provided on a 1 to 7 scale (1 being poor, 7 being excellent). Comparative information from other tracks in the region is relatively limited as this question has not always been asked in surveys, or because other question formats have been used. Results have been compared with those from elsewhere in the region and also with the Franz Josef Valley Walk, on the West Coast, and the Hooker Valley Track in Canterbury, where similar questions have been used. Respondents were also not asked about satisfaction with facilities in the 2007 survey at Key Summit so it is not possible to assess changes in satisfaction with facilities over time.

Results from the 2011 Key Summit survey show that visitors were, by and large, happy with the facilities provided. In particular, visitors were highly satisfied with the track, with 96% of respondents rating the track positively and a mean score of 6.5. Fewer then 1% of respondents were dissatisfied. This is consistent with findings on other tracks in the region (Table 10). High satisfaction with tracks is important as the standard of tracks has been shown to be a major factor influencing overall satisfaction with visits to public conservation land in New Zealand (Rundle 2007).

Visitors were less happy with the toilet facilities provided at the Divide car park and atop Key Summit. Fifty seven percent of respondents were satisfied with the toilet facilities and 7% were dissatisfied. The mean score was 5.6. These results need to be viewed in context however as more than a quarter of respondents either did not respond to this question or indicated that they had not seen or used the toilet facilities. Respondents' satisfaction with toilet facilities has varied widely across the sites where this question has been asked (Table 11). This is due in part to variation in the extent to which facilities are used, the numbers of non respondents and in the standard of the facilities that are provided. Because of this the mean scores are a more useful means of comparison across sites.

TABLE 10: COMPARISON OF SATISFACTION WITH TRACKS

Track	% Satisfied with tracks	% Dissatisfied with tracks	Mean score (out of 7)
Key Summit (2010/11)	96%	<1%	6.5
Franz Josef Valley independent visitors (2005/06)	96%	<1%	6.4
Franz Josef Valley guided visitors (2005/06)	74%	3%	5.7
Hooker Valley (2006/07)	92%	2%	6.4
Routeburn (2008/09)	92%	<1%	6.4
Ulva Island (2005/06)	93%	<1%	6.7

TABLE 11: COMPARISON OF SATISFACTION WITH TOILETS

Track	% Satisfied with toilets	% Dissatisfied with toilets	Mean score (out of 7)
Key Summit (2010/11)	57%	7%	5.6
Franz Josef Valley independent visitors (2005/06)	22%	1%	6.1
Franz Josef Valley guided visitors (2005/06)	37%	5%	5.1
Hooker Valley (2006/07)	38%	5%	5.6
Routeburn (2008/09)	78%	5%	5.9
Ulva Island (2005/06)	30%	9%	5.3

Respondents were highly satisfied with the signs and information panels provided on the Key Summit Track with 85% satisfied and only 2% dissatisfied. The mean score was 6.2. This result is interesting as it contradicts the results and many statements by visitors on whether they were able to learn about the plants and animals or geology of the area. This may be because visitors gave responses to this question that related to both directional signage and interpretation signage. The lower level of satisfaction with signage on the Otago side of the Routeburn Track is likely to be due to some confusing directional signage at the time of the survey that has subsequently been addressed. Responses at Ulva Island, Franz Josef Valley and Hooker Valley related specifically to signs and displays about nature and local history (Table 12).

TABLE 12: COMPARISON OF SATISFACTION WITH SIGNS & INFORMATION PANELS

Track	% Satisfied with signs & information panels	% Dissatisfied with signs & information panels	Mean score (out of 7)
Key Summit (2010/11)	85%	2%	6.2
Franz Josef Valley independent visitors (2005/06)	90%	2%	5.9
Franz Josef Valley guided visitors (2005/06)	51%	6%	5.1
Kepler (2005/06)	73%	2%	5.9
Routeburn (2008/09)	71%	7%	5.6
Ulva Island (2005/06)	67%	5%	5.6

Like the toilets, satisfaction levels for the shelters varied widely as a significant number of respondents did not use these facilities. Almost half of all respondents (188) indicated that they did not see or use the Divide Shelter. The mean satisfaction score for the Divide Shelter (5.8) was slightly lower than the score for the Routeburn Shelter (6.1) and the Shelter at Ulva Island wharf 6.2). The 41% of respondents who were satisfied with the Divide Shelter was well below the 66% found at the other end of the Routeburn Track (Table 13). As the shelter on the Glenorchy side of the Routeburn Track is new, in a sunny location and with highly accessible interpretation, a higher level of satisfaction would be expected. Action is already being taken to improve facilities at the Divide with an upgrade due to commence towards the end of 2011.

TABLE 13: COMPARISON OF SATISFACTION WITH SHELTERS

Track	% Satisfied with the shelter	% Dissatisfied with the shelter	Mean score (out of 7)
Key Summit (2010/11)	41%	4%	5.8
Hooker Valley (2006/07)	55%	3%	5.8
Routeburn (2008/09)	66%	2%	6.1
Ulva Island (2005/06)	38%	<1%	6.2

The question relating to the self guided alpine walk was a one off question that has not been used elsewhere however, seventy eight percent of respondents indicated that they were satisfied with it. Satisfaction with car parks has only been assessed at one other day or short walk. Satisfaction was very high at Key Summit at 93% and this was identical to the result for independent visitors at Franz Josef Valley (Table 14).

TABLE 14: COMPARISON OF SATISFACTION WITH CAR PARKS

Track	% Satisfied with the car park	% Dissatisfied with the car park	Mean score (out of 7)
Key Summit (2010/11)	93%	1%	6.3
Franz Josef Valley independent visitors (2005/06)	93%	1%	6.3
Franz Josef Valley guided visitors (2005/06)	54%	3%	5.5

5.8 Effect of other visitors

The effect of a variety of activities on the visitor experience was monitored in this survey. Like the 2007 survey, hearing and seeing helicopters was the most likely activity to annoy respondents, with 14% of respondents indicating that they were annoyed to some degree by helicopter activity. In 2007 15% of respondents were annoyed by helicopter activity. This represents a moderate level of annoyance but is low compared to other surveys undertaken around the region (Table 15). A survey of day walkers on the Routeburn Track in Otago found that 23% of visitors were annoyed by helicopters although this was thought to be linked to increased aircraft activity due to construction

activity on the track. On the Milford Sound Foreshore 28% of respondents were found to be annoyed by helicopters while higher levels of annoyance have been found on a number of backcountry tracks in the region including Gertrude Valley.

TABLE 15: ANNOYANCE WITH OTHER ACTIVITIES ON DAY & SHORT WALKS

Track	% Annoyed by helicopters	% Annoyed by planes	% Annoyed by other visitors	% Annoyed by commercial / guided groups	% Annoyed by large groups
Key Summit (2010/11)	14%	10%	9%	10%	12%
Key Summit (2006/07)	15%	14%	5%	9%	12%
Curio Bay (2006/07)	-	-	-	5%	4%
Lake Gunn Nature Walk (2009/10)	1%	1%	4%	4%	3%
Lake Marian Falls (2007/08)	4%	4%	1%	3%	5%
Milford Sound Foreshore (2006/07)	28%	27%	14%	25%	33%
Rob Roy (2006/07)	-	-	4%	5%	11%
Routeburn (2008/09)	23%	10%	-	-	-
Waipapa Point (2006/07)	-	-	-	6%	5%

Fixed wing aircraft annoyed 10% of respondents at Key Summit in 2011 although the majority of respondents (58%) did not notice the activity of planes overhead. In 2007 14% of respondents were annoyed by this activity. This decrease could be due to a reduced number of overflights since 2007. Activity at Milford Aerodrome has been trending downwards, with 9767 landings in 2001 compared with 7021 in 2010 (Airways 2010) and most of that decrease has been fixed wing rather than rotary aircraft. It may also be due to changes in pilot behaviour, flight paths and technology over this period. Aircraft noise is a long standing issue in Fiordland National Park and the Department is looking to work with operators to reduce the effects of aircraft on other park users.

Large groups and commercial / guided groups also caused a moderate amount of annoyance with 11% and 12% of respondents respectively stating that they were annoyed.

Similar results were attained in the 2007 survey with 12% of respondents annoyed with meeting large groups and 9% annoyed by meeting commercial / guided groups. The level of annoyance at Key Summit is higher than at many other sites in the region. At Curio Bay, the Lake Gunn Nature Walk and the Lake Marian Falls Track, no more than 5% of respondents were annoyed by these activities. However 11% of respondents on the Rob Roy Track were found to have been annoyed by the presence of large groups and much higher levels of annoyance were recorded for both commercial activity and large groups at the Milford Sound Foreshore. The level of annoyance at Key Summit is cause for some concern, and the Department of Conservation has sought to manage this through the concessions process.

Nine percent of respondents were annoyed with the behaviour of other visitors. This represents a relatively low level of annoyance but it is notable that it has almost doubled since the last survey period (a statistically significant increase⁸). This could indicate that the behaviour of visitors to Key Summit Track is becoming worse, or that visitors are generally less tolerant towards others then those surveyed in 2007. In any case, these results are inextricably linked with the number of people using the track and consequently issues of crowding, discussed below. With the exception of the Milford Sound Foreshore (14%) no other site has recorded more than 5% annoyance with the behaviour of other visitors.

Overall the results from various surveys undertaken on day and short walks in the region show that significant impacts from other activities are not widespread. Significant impacts have been recorded at the Milford Sound Foreshore where a third of respondents were annoyed by meeting large groups and quarter were annoyed by meeting commercial or guided groups and by aircraft. It is worth noting however, that a recent survey of boat passengers at Milford Sound / Piopiotahi (Booth 2010), about a third of whom had arrived by bus, did not show anywhere near the same level of annoyance as the Milford Sound Foreshore survey which was predominantly made up of FITs.

5.9 Crowding

Crowding is becoming an issue on the Key Summit Track. In this survey 52% of respondents recorded some degree of crowding (score of >2), however only 13% reported that they felt moderately to extremely crowded. There has been a statistically significant increase 9 since 2007 but more importantly crowding now exceeds the 50% threshold for management action (Shelby et al. 1989, Corbett et al. 2006). In the 2007 survey, only 41% of respondents felt some degree of crowding on the track. This increase, and the fact that visitor numbers on the track are expected to increase means management action should be considered.

Crowding on the Key Summit Track is also high compared to most other surveyed tracks in the region and where crowding has seldom exceeded 25% (Figure 26). Similar levels of crowding to the Key Summit Track have only been found at the Milford Sound Foreshore (53%) and on the Rob Roy Track (47%).

8

 $^{{}^{8}\}chi^{2}$ (2, n = 826) = 15.658, p<.001 ${}^{9}\chi^{2}$ (1, n = 826) = 7.431, p<.01

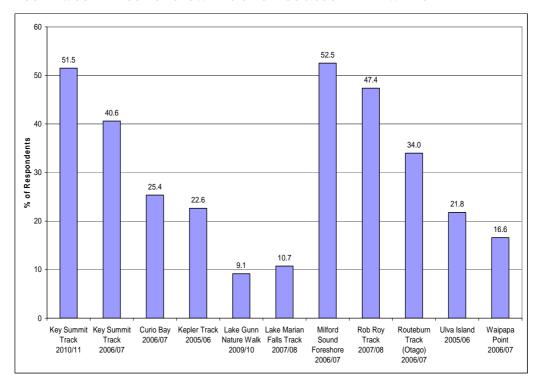


FIGURE 26: COMPARISON OF CROWDING ON OTAGO & SOUTHLAND WALKS

Crowding at Key Summit itself was not observed to be an issue, with only 38% of visitors recording some degree of crowding at the summit, well below the 50% threshold, however the increase was again statistically significant¹⁰. In 2007, only 28% of respondents felt some degree of crowding at the Summit.

Addressing crowding at Key Summit is difficult. Efforts have already been made to reduce the number of allocated concessions but only 10% of respondents in this survey were found to be members of commercial groups. Further measures would need to target independent visitors in order to be effective however, by law these visitors have free and unrestricted to the National Park. One approach could be to promote use of the track at specific times of the day (such as early morning or evening) to avoid the peak flow periods of 1 - 3 pm. A better flow of visitors and traffic (including busses) around the car park and shelter may also reduce the perception of crowding. More promotion of less crowded walks in the region, such as the Kepler Track and Lake Gunn Nature Walk may help divert some use away from Key Summit and reduce the perception of crowding also.

5.10 Overall satisfaction with experience

Satisfaction with the overall experience offered on the Key Summit Track was very high. On average respondents rated their trip 8.3 out of 10 and only one respondent recorded a score lower then 4. Ninety percent of respondents gave scores higher then 7 for this question. Satisfaction was not assessed in the same way in the 2007 survey instead respondents were asked whether they would recommend the walk to others. Satisfaction was also very high in 2007 with 96% of respondents indicating that they would recommend the Key Summit Track to other people.

 $^{^{10}}$ χ^{2} (1, n = 763) = 9.985, p<.001)

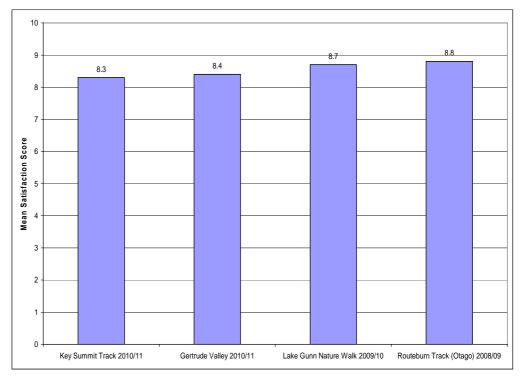


FIGURE 27: SATISFACTION LEVELS ON OTAGO & SOUTHLAND WALKS

The question used in 2011 has only been asked in a handful of other walks in the region but satisfaction scores have consistently been high (Figure 27). When day visitors were asked the same question on the Routeburn Track in 2009 a mean satisfaction score of 8.8 was recorded. Respondents on the Gertrude Valley Track and Lake Gunn Nature Walk gave mean scores of 8.4 was recorded and 8.7 respectively.

Respondents who had not rated their experience at Key Summit ten out of ten were asked to indicate what would have made their experience at 10. Better weather was the most common issue raised (20%) while the next most common responses were fewer people (14%) and better information or signage (7%). The latter are themes that have been highlighted in other questions. A desire for fewer aircraft was only stated by 2% of respondents, close to the percentage who stated they were "annoyed a lot" by planes or helicopters in the earlier questions (1%). Overall this suggests that management of perceived crowding and the quality of interpretation should be higher priorities than management of aircraft at this location.

5.11 Previously visited DOC sites

The final question in the survey asked respondents to list any other Department of Conservation tracks, parks and reserves that they had visited during their current trip. This information was collected to gain an idea of the sort of tracks that Key Summit would be compared with when respondents were answering the survey. The responses reflected both popular tracks in the Fiordland and Otago regions and tracks that are clearly national draw cards - the Tongariro Crossing and Abel Tasman Tracks were the two most common responses while the Queen Charlotte Track was the 4th most common response.

Responses were also used to determine which regions respondents had visited during their trip. The Taupo - Turangi, Nelson, West Coast and Otago regions had all been visited by more than 10% of respondents. Interestingly only 4% of respondents mentioned visiting public conservation land in Auckland despite the fact that Auckland is the major gateway to New Zealand and contains a number of the most popular destinations in the country (Table 16). This may simply be because respondents were more likely to recall places they had visited most recently. It may also be because a number of these destinations attract primarily local visitors or a different type of visitor to Key Summit.

TABLE 16: TEN MOST POPULAR DEPARTMENT OF CONSERVATION MANAGED SITES

Destination	Estimated annual visitor numbers
Long Bay Marine Reserve	807,500
(Auckland)	
Huka Falls	605,000
(Taupo – Turangi)	
Knights Point Viewpoint	520,000
(West Coast)	
Milford Sound / Piopiotahi & Milford Road (Fiordland)	501,000
Aoraki / Mt Cook Village Walks	370,000
(Canterbury – Aoraki)	
North Head	350,000
(Auckland)	
Franz Josef Valley Walk	330,300
(West Coast)	
Dolomite Point / Punakaiki	329,000
(West Coast)	
Pelorus Bridge	300,000
(Marlborough)	
Leigh Marine Reserve	270,000
(Auckland)	

The adjacent Southland region was mentioned by only 4% of respondents. This is surprisingly low but may in part represent the predominant direction of travel around the South Island with many visitors visiting Fiordland before going to Southland.

Recommendations for future monitoring and management of the Key Summit Track are provided in the next section.

6. Recommendations

The following points are recommended for continued and improved management of the Key Summit Track:

- Almost 90% of respondents at Key Summit in 2011 were independent visitors, therefore
 measures to address crowding that focus solely on commercial visitors are unlikely to be
 effective. To influence the behaviour of independent visitors it is recommended that the
 Department
 - a. Promote use of the track in the early morning or late afternoon to spread use out across the day and avoid the peak use time (1-3 pm),
 - b. Promote other day walks were there is excess capacity such as the Kepler Track and Lake Gunn Nature Walk.
 - c. Improve the flow of visitors and traffic (including busses) around the carpark to reduce the perception of crowding.
- Until the impacts from crowding are within acceptable limits no further concessions for guided day walking should be issued, beyond those allowed for in the Fiordland National Park Management Plan.
- 3. Regular compliance monitoring should be undertaken at the Divide car park to ensure group sizes and other concession conditions are adhered to.
- 4. To increase the visibility of interpretation at the Divide it is recommended that this be located outside the shelter.
- 5. Hut Wardens undertaking track work or walking between Howden Hut and the Divide should check the box at Key Summit to ensure that self guided walk brochures are available.
- 6. The Key Summit Track should continue to be monitored with regards to;
 - a. Levels of crowding on the track
 - b. Effects of aircraft
 - c. Effects of commercial and large groups
 - d. Use of Lake Howden Hut
 - e. Satisfaction with interpretation
- 7. The survey should be replicated in the 2015/16 summer season.

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8. Appendices

Appendix 1: Key Summit Day Walker Survey 2011

This surv					nanage the Key Si I. All responses ar	ummit Track. Your h
	First pl	lease tell	us a little about	yourself ar	nd your group	
1. Age:	16-19	٥	2. Gender	Male	٥	
	20-29			Female		
	30-39	٥				
	40-49	0	3. Where do	you normal	y live?	
	50-59	_		. 1.7		
	60-69 70+	0	4. If you live	<u>in NZ</u> , pleas	se tell us where	
5 . a)	Independe	ent	iting the Key Sun	Club / or	vith today? (Please ganisation educational group	tick one box)
		iai r guideu	CONTRACTOR OF THE PROPERTY OF	3010017	educational group	
	How n		ole are in this grou			_

Now we'd like you to tell us about your experiences on the track

8.	How long was	your visit to th	e Key Summit	Track today?	(Tick one box)
----	--------------	------------------	--------------	--------------	----------------

Less	1-2 hours	3-5	More 🗅
than 1		hours	than 5
hour			hours

9. Did you visit Howden Hut during your walk today?

Yes □ No □

... - ...

10.	Thinking about your visit to the Key Summit Track today, how much do you agree or disagree that?	Strongly disagree						Strongly agree
	I felt safe walking the track	1	2	3	4	5	6	7
	I was able to enjoy nature and scenery	1	2	3	4	5	6	7
	I was able to enjoy seeing and hearing the local birdlife	1	2	3	4	5	6	7
	I was able to experience natural peace and quiet	1	2	3	4	5	6	7
	I was able to learn about the area's plants and animals	1	2	3	4	5	6	7
	I was able to learn about the landscape and geology of the area	1	2	3	4	5	6	7
	The information I read / heard about the track before my visit was accurate	1	2	3	4	5	6	7
	I was able to relax and reduce stress	1	2	3	4	5	6	7
	The track suited my level of experience and fitness	1	2	3	4	5	6	7

11. What did you think about the services and facilities provided on the Key Summit Track? (circle one number on each line).

	Very poor						Excellent	Did not use/ see
Car park	1	2	3	4	5	6	7	0
Self guided alpine walk	1	2	3	4	5	6	7	٥
Shelter	1	2	3	4	5	6	7	0
Signs and information panels	1	2	3	4	5	6	7	0
Toilets	1	2	3	4	5	6	7	0
Tracks	1	2	3	4	5	6	7	0

12. How did the activities of other visitors affect your visit?

	Did not notice this activity	Noticed this but it didn't annoy me	Noticed this and it annoyed me a little	Noticed this and it annoyed me a lot
Behaviour of other visitors				
Hearing or seeing helicopters				
Hearing or seeing planes.				
Meeting commercial/ guided groups				
Meeting large groups				

13. Did you feel crowded at all during your visit today? (circle one number)

a) On the track

1	2	3	4	5	6	7	8	9	
Not at	all	Slight	у		Moderatel	y	Extre	mely	
crowde	ed	Crowd	ed		Crowded		Crow	ded	

b) At Key Summit

1	2	3	4	5	6	7	8	9
Not at	all	Slight	ly		Moderatel	y	Extre	mely
crowd	ed	Crowd	led		Crowded		Crow	ded

Or

I did not visit Key Summit 🚨

	Very disappointing	2	3	4	5	6	7	8	9	Couldn't have been better 10
b)	If you did not	rate you	ur trip as	10 out o	f 10, wh	at would	have ma	ade it a 1	0?	
15.	Have you visi	ted an	y other	Depart	ment o	f Conse	ervation	tracks,	, parks	and reserve
	during this trip	? (please	e list them b	elow)						

I nank you for your time!

If you have any feedback about this survey please contact Michael Harbrow, Southland Conservancy, Department of Conservation, PO Box 743, Invercargill. Ph. 03-211-2400. Email: mharbrow@doc.govt.nz

Appendix 2: Q 14.b) "What would have made the trip ten out of ten?"

1. More signs on the track, 2. Map of the track

2 toilets, had to wait (only 5 minutes), one of them did not lock

A better sight of the lake (move the branches a bit)

A bit less crowded perhaps at the Key Summit

A few less people, more silence, but overall very nice walk

A higher summit

A sign about halfway to the crossing of the Routeburn and Key Summit to estimate how fast one is going (faster/ slower then given time). There were no brochures at Key Summit Nature walk (supply more)

Better description of the views on the track. We stopped at the lookout for Marian Lake as we did not know that we should have walked further for more great views of the lakes.

Better fitness

Better quality of a track towards McKellar Saddle, pass through the swamps is really terrible

Better signs at the top of the track (look-out) regarding the continuation of the journey. We did
not know if the track carries on or we have to return the same way

Better view at the top

Better weather (8)

Better weather, fewer people

Better weather, not that steep

Better weather, the track itself is beautiful and well kept

Better weather, views. Track was great.

Better weather. Track was great and views were awesome.

Better weather. Windy at summit. Non-controllable therefore 10/10

Blue skies for better views (2)

Brochures in the nature walk (there was none)

But only because it was cloudy, not much you can do about it!

Can't say, wasn't as spectacular but that's not something you can change- still beautiful though

Can't think but just rarely tick the best!

Choosing a better time

Cleaner toilet

Clear skies (3)

Clear skies, but that is a bit out of your control

Clear weather, Cloud/rain/wind on track

Clear weather, missed the views

Cloudy and raining near the summit meant limited viewing

Didn't go the whole track, can't give an accurate answer

Except for the sun on the west

Fewer clouds blocking mountains. No rain coming out

Fewer people (17)

Fewer people (lots of people on way up), less insects (bees swarming)

Fewer people and less clouds (2)

Fewer people at the Summit, views in all directions

Fewer people at viewpoint to Lake Marian- but this is selfish because why should I have it to myself?

Fewer people! Fewer planes!

Fewer people, better shelter at Key Summit

Fewer people, better weather

Fewer people, but I understand that it is a popular track so there's nothing I can do about it. I'm just used to less people where I'm from

Fewer people, fewer helicopters, less rain

Fewer people, longer track

Fewer people, more challenging tracks, more variations

Fewer people, more sunshine

Fewer people, no helicopter, orchids (2)

Fewer people, no noise of cars

Fewer people, slightly bad weather

Fewer people/visitors

Getting more glimpses of local wildlife

Greater info on sites and geology

Greenstone Tramp was swamped east of Howden Hut.

Having no one else on the track

Hide the toilet a little, turn the strong wind off, less boardwalk if possible

I can't climb very easily

I don't know (the weather)

I think the lake was great. It looks like bigger on the photos

I walked to the waterfall so was in the bush the whole time which was beautiful. Just didn't tick 10/10 because would have liked a viewing point, but can't complain because I didn't walk far enough.

I was told this was a challenging summit by DOC. I brought a full pack and it was not at all challenging. The scenery was gorgeous but interrupted by the overwhelming crowds.

If I would have gone all the way to Lake Marian

I would have liked more information about the plants and trees

If I had managed to get to the top!

Indication of fitness level required may be useful to some

Info flyer for self guided alpine walk (2)

Information in Spanish

Is 9 not good enough? Would have given 10 if there were less questions

It was great!

It was highly recommended by Australian friends. IT DID NOT DISAPPOINT

I've seen other better scenery, but it was still very nice

Less crowded

Less crowded, but as we were part of the crowd this is not reasonable of me

Less guided walks, better weather

Less insects/bees

Less mist below (Could not see view from track and high sleety wind up at top). Nothing DOC can help!

Less people and leaflets available for alpine walk

Less people- but probably not possible

Less people, if I could see fiords and sea

Less rain, better visibility

Less rain.

Less walking up hill

Less wind. More sunshine. More birds. Note: The DOC brochure we purchased failed to mention the nature trail atop Key Summit.

Longer track

Lots of noise from nearby road, the rest was fantastic

Me being fitter

More birdlife, the variety of life on the track should be more visible and prolific. Can the businesses which make money here not contribute to the environments health?

More blue sky and sun, could have been warmer temperatures, more viewpoints on track

More challenging tracks

More Challenging!?

More distance markers

More indication or storyboards about plants, birdlife, geology of the area, more landscape views (but it was fine)

More information about plants, birds and geology on signs/plants

More information on the track

More information about plants and birdlife

More information on flora

More information on local flora and fauna on the track like at the summit

More look out points along the way

More scenic views

More sheltered/resting places

More sun, fewer people, fewer groups, views were good but I've seen better

More sun, fewer sandflies

More sunshine (2)

More time available. Otherwise perfect

More time to go further

More toilets at entrance please

More viewing points along the track (beginning)

More viewpoints

More views on ascent

More views/ spectacular views

More wildlife

Much better fitness

My health condition

Nil cloud, I know this is beyond DOC control

No aeroplanes

No clouds at top!

No energy to climb up to summit

No groups endlessly talking at the top

No information leaflets available.

No loo at the top

No other people-but impossible as we are in a group of 16!

Not as challenging as most hikes we take... but very nice and relaxing

Not enough time to go further

Not seeing anyone else, but I realise that's unreasonable on a popular track

Nothing you can do-want fewer sandflies at lake! And more sun at top for photos

Perfectly clear, sunny day

Perhaps a small shelter or the occasional seat would suit some people. An indication of difficulty level as on some tracks would help some (probably 'medium' to my idea).

Picnic area at top, a seat to sit and enjoy the views

Quite good, just more people then ideal

Relocate the Lake Marian viewpoint as the Lake was hidden behind some overgrown trees. Peg 8 for the guided walk was not really visible

Saw one Kea far off, and one robin. I'm sure the bush should be more alive with bird calls

Seeing more bird life and being fitter

Seeing more birds

Seeing more wildlife

Signs indicating distance to summit along the way

Signs to advise hikers of elevation-maybe a graph. Also a beer stand somewhere along the track!

Slightly fewer people at the Summit

Slightly longer track to the top

Slightly more detailed information panels

Some edging/boundary on the Alpine walkway would make it clearer to people that they

shouldn't leave the track- e.g. lining it with stones to make a more obvious pathway

Spent 8 hrs on the tops and no sign of any animals, would have liked to see a few deer or chamois after walking 20kms

Spent longer in area to appreciate it. Further distance

Steeper, worse weather

Sun (where the hell is it in New Zealand?)

Sun, loneliness

Sunny! And having brochures for nature walk

Sunshine (4)

Sunshine and clear skies!

Sunshine and fewer people on the track

Thank you

The sun! (3)

The view, weather

The weather could have been a little better but we still avoided the rain.

The weather was a bit too cold and the view was poor. The track could be a bit longer.

The weather wasn't too good, more information about current weather,

I needed more time than expected

The weather!

There were just two large groups that made it less than perfect, but they were polite and niceno problems

To have a guide to use at the Summit Nature Walk. The walk itself was spectacular. Thank you.

Toilet at base needed some attending

Toilet at top made it seem less like wilderness! More birds to see- but you can't really affect that!

Toilets didn't have locks and were not that clean

Too little time to go further

Toilet Paper/ Clean toilet!

Track signs gave duration but not levels of fitness required. The track was a little too easy for us. Would be good if tracks were rated by fitness level needed.

Track too easy

Visibility impeded by changeable weather

Visitors had left rubbish (orange peel) in containers for Nature Walk notes. Notes difficult to read as you walk along narrow trails with wind blowing paper. The numbered places should have brief explanation beside them instead of having to follow the paper notes.

Mormor

Warmer weather, sunshine (2)

We can't think of anything...

We could read about the animals and geology of the area before our visit as we didn't have the patience on the spot to read it all!

We had bad weather so we couldn't see anything

We thought the lake would have been bigger

Weather (6)

Weather-sorry, I know you can't change it

Weather to allow increase in visibility

Weather to improve, to allow better visibility

Weather-windy

Weather! Clear visibility! More birds! Though happy to see tomtit, rifleman, fantails, a flock of keruru on Key Summit. Heard Kaka, possibly bellbird. Hope predator control has high priority?

Where are the explanations in Spanish?

Would have wanted more of a challenge - would have been good to have an indication of how strenuous the track was before starting

You cannot better God's creation

Appendix 3: Q 15. "Have you visited any other Department of Conservation tracks, parks and reserves during this trip?"

1. Te Anau Control Gates - nearly up to Luxmore and return. 2. Little of the Sylvan Lake walk until track became a river in heavy rain conditions

A considerable number in both North and South Island over the last two weeks e.g. Rotorua, Tongariro Crossing, Coastal Track from Marahau, Punakaiki, Okarito, Fox Glacier, Lake Matheson, Aspiring NP. All outstandingly maintained and presented with very good paths

A lot of sites, all were very well maintained and the DOC campsites are great stop off points with great views, awesome THANK YOU!!

A lot- thanks to you!!

A lot!!

Abel Tasman - inland and coast, Fox Glacier, Ben Lomond Track - Queenstown (2)

Abel Tasman Coastal Track, Tongariro Crossing, some on the Milford Road, some in Franz Josef (2)

Abel Tasman Coastal Track, Queen Charlotte Track (2)

Abel Tasman Coastal Track, Tongariro Alpine Crossing (2)

Abel Tasman National Park (2)

Abel Tasman Track

Abel Tasman, Arthur's Pass, Franz Josef Glacier, Mount Aspiring NP (2)

Abel Tasman, Arthur's Pass, Mt Aspiring-Rob Roy

Abel Tasman, Farewell Spit, Tongariro, Te Mata Peak, Waiheke Island, Franz Josef (3)

Abel Tasman, Franz Josef, Golden Bay, Milford Sound, Cape Foulwind

Abel Tasman, Mt Egmont, Whanganui River, Tongariro Crossing and a few short walks

Abel Tasman, Nelson Lakes, Tongariro Crossing, Copland Track, Kepler Track

Abel Tasman, Tongariro Alpine Crossing (3)

Arthur's Pass

Arthur's Peak, Kepler Track, Tongariro

Banks Peninsula, Doubtful Sound, Otago Peninsula

Ben Lomond, Rob Roy, Routeburn day walk (2)

Bob's Cove, 12 Mile Beach, Mountt Crichton, Lake Mistletoe, Invincible Mine, Coronet Peak (2)

Bob's Cove/ 12 Mile Delta, Mount Crichton, Coronet Peak, Rees/Dart

Cascade Creek- Lake Gunn Nature Walk

Cascade Creek Nature Walk

Castle Hill, Devil's Bowl Waterfall, Many in the North Island.

Cathedral Cove

Catlins, Stewart Island

Chasm

Chasm, Milford Sound

Chinaman's Track, The Chasm, etc. (2)

Circle Track, Manapouri Lake, Welcome Flats Hut

Copland Track, Abel Tasman Track (2)

DOC campgrounds- excellent but I don't think everyone pays and some leave garbage. Many DOC tracks - usually +/- 3 hours- all excellent - favourite Whirinaki

Dock Bay, Milford Sound

Don't know

Doubtful Sound Track (2)

Doubtful Sound, Lake Manapouri, Catlins

Dusky Track

Dusky Track, Doubtful Sound

Earland Falls, Howden Hut (2)

Franz Josef 5 hr track, Lake Paringa campground, Lake Wanaka campground (Boundary Creek Scenic Reserve/ campground), Mt Iron Track, Pleasant Flat picnic area, Queen Charlotte Track

Franz Josef Glacier-Roberts Point track, Roys Peak; Wanaka, Diamond Lake

Franz Josef, Fox Glacier

Gertrude Saddle, Abel Tasman NP, Tongariro NP

Gertrude Saddle, Chasm, Humboldt Falls, Marian Lake

Gertrude Saddle, Mt Cook, Curio Bay, Lake Manapouri

Gillespie Pass, Nelson Lakes, Cascade Saddle, Mt Cook, and many more...

Good but could use more picnic tables at campsites

Gunn Lake, Homer Tunnel Lookout

Gunn Lake, Homer Tunnel, Many more to come!

Hillary, Lake Waikaremoana, Whirinaki Forest, Routeburn, Greenstone, Hump Ridge, Kepler, and I am going to do more! Lucky me! Thanks for all your work!

Hollyford Track, Chasm, Milford, Abel Tasman, Mirror Lakes, Kepler, Queen Charlotte (takes some beating)

Hooker Valley, Mount Cook National Park (2)

Howden Hut

Humboldt Falls Track, Marian Lake

Humboldt Falls, Marian Lake (2)

I don't know

In NZ we were in Christchurch, in Mt Cook before we came to Te Anau

Kenepuru Sound campsites, Yellow-eyed penguins at Curio Bay

Kepler (3)

Kepler Track Day Hike, Arrowtown Loop

Kepler Track-run from Control gates towards Brod Bay, Lake Manapouri Kayak (2)

Kepler Track, Abel Tasman, Rotorua Forest

Kepler Track, Gertrude Saddle, Homer Saddle

Kepler Track, Milford Track

Kepler, Abel Tasman, Nelson Lakes, Wilkin-Young, Mt Aspiring NP, Gertrude Saddle and many more

Kepler, Milford, Routeburn, Hollyford- all great walks. Cheers for all your great work

Kepler, Titiroa Summit, U-Pass

Kepler, Tongariro Alpine Crossing, Arthur's Pass

Knobs Flat, Mirror Lakes

Lake Gunn (3)

Lake Gunn Nature Walk

Lake Gunn Nature Walk, Milford Sound Nature Walk

Lake Gunn, Chasm, Marian Falls, Mirror Lakes, Milford Sound

Lake Gunn, Milford Sound

Lake Gunn, Milford Sound, The Chasm

Lake Gunn, The Chasm

Lake Marian, Milford Sound

Loads

Lot's

Lots and all well marked and very well maintained

Lots and lots. All down east coast of South Island and some in North Island

Lots- Mt Cook, Tekapo, Catlins and so on

Lots of DOC campgrounds and tracks both in North and South Islands- too many to list - all

Lots! Kepler, Catlins etc- all east coast of South Island

Lower Kepler, Milford Sound, Mt Cargill nature Reserve, Doubtful Sound

Manapouri Circle Track (3)

Many

Many DOC campgrounds. They are great

Many, great!

Many. We've forgotten all the names

Many: Tongariro, Tiritiri Matangi, Abel Tasman NP, Aspiring NP

Marian Lake, Arthur's Pass, Mt Cook

Marian Waterfall Lookout, Mt John Summit (Lake Tekapo), Taylors Mistake Summit Loop (2)

Mavora Lakes, Visitor Centre and Bird Shelter Te Anau

McKellar Saddle

Milford

Milford Sound (2)

Milford Sound by cruise

Milford Sound, The Chasm

Milford Track day, Rob Roy day, Hooker Valley (6)

Milford Track, Hump Ridge Track

Mirror Lake Walk, Milford Shore, Cascade Creek

Mirror Lakes

Mirror Lakes, Cascade Creek, lots on Stewart Island and everywhere

Mirror Lakes, Lake Gunn Nature Walk, The Chasm, East Homer Nature Walk, Piopiotahi Milford Foreshore walk and lookout (2)

Mirror Lakes, Plan to visit Lake Marian

Mirror lakes. Milford Sound, Miriam Lakes Falls, Chasm, Gunn Lake

Mostly day walks, over both islands

Mount Aspiring National Park

Mount Cook

Mount Cook National Park, Mount Aspiring National Park

Mount Cook, Catlins

Mount Cook, Gertrude Saddle

Mt Aspiring track-Bonar Glacier and French Ridge Hut

Mt Aspiring Tracks - 3 day trek on Bonar Glacier and adjoining tracks

Mt Aspiring, Invincible Mine, Turangi, Abel Tasman

Mt Aspiring, Too many to list

Mt Cook NP

Muller Hut Mount Cook, Lake Gunn (2)

No (34)

Not sure (2)

Not yet (4)

Okarito Trig, Tongariro Crossing, Arthur's Pass (Temple Basin), others whose names I'm forgetting

On a day trip from Te Anau (2)

Others on Milford Road; Mistletoe Lake, Mirror Lake, Marian Track (upper part closed due to slip), would have gone to Lake Gunn but picked up hitch-hikers. Shine Falls (from Boundary Stream direction), Abel Tasman Coastal Track, Queenstown Hill Walkway, Auckland One Tree Hill, Okarito Nature Reserve (with ranger Kiwi 'hunt'), Franz Josef Glacier and Tunnel walk, Punakaiki Rocks, Arrowtown-Sawpit Gulley and Millennium Walk. Am constantly impressed by the quality and maintenance of tracks. (2)

Plenty! Having a 1 month trip around NZ so pretty much all of them!

Queen Charlotte Track

Queen Charlotte Track

Queen Charlotte Track, Kepler Track

Queen Charlotte Track, Te Anau- Brod Bay Track

Queen Charlotte, Abel Tasman, Luxmore Summit, Ben Lomond

Queen Charlotte, Abel Tasman, Packhorse Track, Mt Richardson and bypass track

Rainbow Reach

Rakiura Track

Rangitoto Island

Rangitoto Island, Arthur's Pass Tracks

Rees-Dart Track

Rees-Dart Valley, Routeburn day walk, Mirror Lakes, Mt Crichton/ Sam Summers Hut, Bob's Cove/12 Mile Delta, Invincible Mine, Coronet Peak

Rob Roy Glacier Walk, Lake Marian (closed) (3)

Rob Roy, Franz Josef

Routeburn Track day walk from Glenorchy

Roy's Peak, Smoothwater Bay Track, Bridle Track (Haast Track)

Roy's Peak, Te Kinga, Cobb Valley

Sandfly Bay, Shag Point, Mistletoe Lake, Mirror Lakes (2)

Several

Several DOC campsites between Auckland and Manapouri

Several in Okarito and Franz Josef area, Rob Roy Glacier walk, Munroe Beach

Some in Catlins, Mount Cook, Oamaru

Staying at DOC campsites around New Zealand (2)

Stewart Island

Stewart Island, Catlins

Still to do- Mirror Lakes, Lake Marian Track, Milford Sound, Lower Hollyford

Taranaki/ Mount Egmont, Franz Josef/ Fox Glacier

Taranaki/ Mount Egmont, Franz Josef/ Fox Glacier

Te Anau- Kepler Track, Queenstown- Arrowtown

Te Anau, Curio Bay and other sites in Catlins, Albatross colony on Otago Peninsula and various lookouts along the way. Generally standard of care and state of facilities and info is high if one is an English speaker.

Te Anau, Kepler Tack, Arrowtown

The Chasm

The Chasm, Mirror Lakes, Humboldt Falls, Lake Gunn x 2 $\,$

The two tracks in Milford Sound- Viewpoint and Shore track, Lake Gunn, The Falls at Marian Corner

Tiritiri Matangi, Tongariro Crossing, Queen Charlotte Track, Abel Tasman, Paparoa NP (Pancake Rocks), Fox Glacier (Westland NP), Aspiring NP (Siberia), Milford Sound (5)

Today: Piopiotahi Milford Foreshore Walk, The Chasm, East Homer Nature Walk, Lake Mistletoe (2)

Tongariro Alpine Crossing

Tongariro Alpine Crossing, Wilkins Pools and Dawson Falls, Kapiti Island, Abel Tasman NP, Punakaiki/Pancake Rocks, Arthur's Pass NP, Lake Matheson, Matukituki Valley, Milford Sound + Doubtful Sound, Ben Lomond Track (Queenstown), Mt Cook NP (2)

Tongariro crossing and adjacent, Abel Tasman, others whose names I cannot remember

Tongariro Crossing and several shorter walks

Tongariro Crossing, Abel Tasman

Tongariro Crossing, Abel Tasman, and others-can't remember names!

Tongariro Crossing, Fox Glacier, Franz Josef Glacier

Tongariro Crossing, Mirror Lakes (2)

Tongariro Crossing, Otago Peninsula

Tongariro Crossing, Queen Charlotte (2)

Tongariro Crossing, Queen Charlotte Track, Avalanche Peak Track and Bealy Spur Track (Arthur's Pass), Kepler Track, Gertrude Saddle

Tongariro Crossing, Rob Roy Glacier, Lake Matheson, Franz Josef Glacier

Tongariro National Park, Nelson Lakes National Park, Taranaki National Park

Tongariro National Parks etc (all but Abel Tasman National Park)

Tongariro North Island, Abel Tasman

Tongariro Northern Circuit, Abel Tasman

Tongariro NP, Abel Tasman NP, Mount Cook NP

Tongariro, Abel Tasman, Kepler Track

Tongariro, Abel Tasman, Kepler, Fiordland

Tongariro, Franz Josef, Fox, Queen Charlotte Track, Punakaiki Walk, Kepler Track, Arthur's Pass (Avalanche Track and Bealy Track), Gertrude Saddle Walk

Tongariro, Hillary Track, Routeburn

Tongariro, Hillary Track, Routeburn, a few smaller tracks

Too many to list

Too many to remember on a 19-day trip, different place each day. However very impressed with DOC facilities particularly in quite remote places

Tour of NZ. Have visited many parks and reserves

Ulva Island, Rakiura NP, The Chasm, The Nuggets, Ackers Point

Very many, we love them!

We have visited lots in the North and South Island and stayed in many DOC campsites which are a great idea and good value

Whanganui, Tongariro, Abel Tasman, Mt Egmont

Yes (4)

Yes- Avalanche Peak, Sealy Tarns, Lindis Pass

Yes-but too numerous to list-all over New Zealand

Yes- Doubtful Sound- Kayaking, Lake Manapouri boat trip, Rakiura and Ulva Island, Catlins, Trotters Gorge

Yes-From Glenorchy- one day walk on Routeburn Track to first hut.

Yes- in Kerikeri area. Today did Deadmans track and Pass Creek track. Really appreciated orange track markers, but found both these tracks VERY overgrown. Routeburn linking the two very good.

Yes-Kepler Track

Yes-Lake Marian, Tasman Glacier to Caroline Hut, Muller Hut, Mt Cook viewpoint

Yes-Rob Roy, Franz Josef, Tongariro

Yes-Tongariro Alpine Crossing, Pancake Rocks, Rotorua

Yes! Love Eyre Mountains

Yes! Rainbow Reach (Te Anau), Mt Cook

Yes, but I don't remember the names

Yes, in New Zealand I have

Yes, Lake Marian

Yes, Nelson Lakes

Yes, not sure of names

Yes, Rakiura track on Stewart Island

Yes, Roberts Point Track- Franz Josef, Queen Charlotte Track, Pleasant Flat Picnic area, Mt Iron track, Lake Wanaka campground, Lake Paringa campground. P.S Please get some hot showers at the campgrounds, even if they are coin operated.

Yes, Tongaririo NP (Ketatahi hot springs track), Okarito Trig, Arthur's Pass

Yes, too many to list. Awesome nature, great service and facilities! It would be even better if; 1. There are at least some waste and recycling collection points around the Park. I noticed just 1 bin behind Te Anau DOC office "advertised" in the WC! Mt Cook NP is much better in this respect. 2. The booking system for the so called "great walks" is hopelessly bureaucratic and totally useless. Free access to all areas and walks is essential- if huts are full people can camp at designated places without harming nature or others. 3. There are no camping places close to Milford Sound despite so many perfect areas close to the road. All spots are concentrated in the "lower" section and there are so many great spots to visit in the "upper" end. 4. Except for Gertrude Saddle there are no other tracks to any summits or high altitude areas (sorry I couldn't book any of the "great" walks). Making more tracks (just marking) to peaks and summits would enrich the park experience and attract more visitors. 5. Track (route) marking (except for the "great" walks and popular tracks is poor (same applies in Mt Cook NP. It is so easy to get a can of paint and park a summer route in a day or two. It would be much safer for all of us, but it may endanger the business of the professional guides... Who is more important? Examples= Gertrude Saddle, Sefton Bivvy (Mt Cook NP). Not knowing the route can get you in some dangerous situations. Thank you.