THE VISITOR EXPERIENCE AT FRANZ JOSEF GLACIER
WESTLAND TAI POUTINI NATIONAL PARK
NEW ZEALAND

RESULTS FROM THE 2013 VISITOR SURVEY

PREPARED FOR
DEPARTMENT OF CONSERVATION, WEST COAST TAI POUTINI CONSERVANCY

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MAY 29 2013
Acknowledgments

We wish to thank the many individuals who contributed their time by completing questionnaires, and the Department of Conservation (DOC) West Coast Conservancy staff who provided timely logistical assistance and advice. We are especially grateful to Ian Wightwick, DOC Technical Advisor (Recreation), for his support throughout the project, and to Michael Harbrow, Senior Advisor (Visitor), DOC Science and Technical Group, Wellington, for his comments on the survey design.


Key words: Satisfaction, crowding, visitor experience, Franz Josef Glacier, Fox Glacier

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Photograph 1 (Cover) Visitors at Franz Josef Glacier on wet day (Jude Wilson)
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Executive summary

In order to monitor the quality of the visitor experience at Franz Josef Glacier Valley, Espiner Consulting (Ltd) was commissioned by the Department of Conservation (DOC) West Coast Tai Poutini Conservancy to develop and implement a questionnaire survey in the Franz Josef Glacier Valley during the summer of 2012/13. A two-phase implementation strategy was adopted, over which time a total of 525 surveys were completed.

Key findings

1. Broadly reflecting the 2009 survey, visitors to the Franz Josef Glacier Valley were predominantly international in origin (85%), with the UK, other Europe and Australia the largest generating regions. Among New Zealand visitors, most visitors came from Auckland, Wellington and Canterbury. First-time visitors to Franz Josef remain the majority (78%).

2. Visitors spent an average of 119 minutes (2 hours) in the valley. Feasible comparisons with 2009 data suggest that this represents a modest increase in visit duration, although there is some variation in the 2013 data due to the track closure over New Year which prevented public access to the track beyond the Forest Walk.

3. While ‘the Glacier’ was commonly reported among the ‘most liked’ aspects of visits, respondents gave prominence to ‘overall scenic amenity’ and ‘the natural environment’. This suggests that, although the Glacier may be the region’s key attractant, the glacier valley experience extends well beyond the glacier itself. The quality of the tracks, clear sign-posting, free parking and the lack of development in the valley were also noted as positive elements of the experience.

4. Most evident among visitors’ dislikes of the experience (cited in 44% of responses) were comments related to inability to get close to the glacier, its appearance (visibility and perceived dirtiness) and perceptions of crowding. Approximately 20 per cent of responses specified ‘weather’ as a disappointment, and 8.9 per cent mentioned aircraft (including 8 respondents whose disappointment derived from their inability to take a flight because of unsuitable weather conditions).

5. Using a single (‘overall’) measure, 87.6 per cent of visitors to Franz Josef Glacier Valley reported being ‘satisfied’ or ‘very satisfied’ with their experience. This represents a small decrease since the 2009 study (92%). When specific dimensions of experience are analysed, visitor satisfaction appears very high: car park (96%); signs and information panels (95%); Glacier Track (91%); and other tracks (93%). Only the toilet facilities (84%) fell below the 85 per cent indicator threshold.
6. Using a single scale to measure crowding, half (51%) of respondents reported feeling crowded at some stage of their visit. Closer analysis shows that crowding was more likely to be experienced when the valley track was closed (as it was for two days in Phase 1 of the survey implementation), abbreviating the walk considerably. Common points of crowding appeared to be part-way along the Glacier Valley Walk (45%), the Glacier terminal face (35%), the car park (23%) and the Forest Walk (18%). It is important to emphasise that there is considerable variation in these crowding perceptions depending on the survey phase (see Question 11 for detail). This question was last asked in 2007, at which time 47 per cent of respondents felt some level of crowding during their visit.

7. Measures of other social aspects of the Franz Josef Valley Walk indicate that most visitors felt safe walking on the tracks (97%), and were able to enjoy nature and scenery (97%) and natural peace and quiet (79%). Respondents were less likely to agree that the walk offered an opportunity to learn about the area’s landscape and geology (62%) or plants and animals (48%). To the extent that these are management objectives, such elements may require additional attention.

8. In terms of the length of the current walk, three-quarters (76%) of respondents disagreed that a shorter access route would have been preferable, and 80 per cent indicated that they would have been happy to walk further to see the Glacier. Among the visitors surveyed, there appears to be limited support for additional mechanised access, with only 16 per cent of respondents agreeing that they would have liked a service to drive them from the car park to a safe viewpoint close to the Glacier. Similarly, most respondents (75%) indicated that the sight or sound of vehicles taking people closer to the Glacier via the valley floor would be unacceptable, and two-thirds (68%) did not believe that helicopter flights should be increased to allow more people to access the Glacier.
Introduction

Background
This survey has been designed to measure the quality of the visitor experience at Franz Josef Glacier Valley. More specifically, it measures visitors’ satisfaction with their visit overall and their satisfaction with the services and facilities in the valley along with their perceptions of crowding. In addition, opinions around a broad range of experience characteristics (and potential changes to these) are explored. Visitor data collected includes past visitation, visit group characteristics and demographic data.

While the survey content is based on previous visitor surveys (undertaken in 2006, 2007 and 2009) it has been substantially changed this year to reflect recent changes to the accessibility of the Franz Josef Glacier for guided groups, and to explore the levels of visitor interest in, and potential impacts on the visitors experience, of further proposed changes. Because of these changes to the survey content, limited comparison to results of previous surveys is possible. The 2013 survey was in three sections:

Section 1: About your visit

Section 2: What are your impressions of this place?

Section 3: About you

Method

Survey periods & survey sites
The 2013 survey took place over two periods: 27th December 2012 - 4th January 2013; 17th February - 26th February 2013. Survey Period 1 was significantly disrupted by the weather (with a severe storm on 2nd January bringing widespread flooding, including the closure of the Franz Josef valley track for several days, and the closure of SH6 when a bridge was washed away at Harirhari); Survey Period 2 coincided with an extended period of fine weather with no rain days. There were, however, a number of days with cloud.

The survey was run parallel to an Aircraft Monitoring Survey (conducted at both Franz Josef and Fox Glacier Valleys) and the same survey site - beside the small footbridge just beyond the end of the Forest Viewpoint - was used for both surveys in the Franz Josef Valley (see Appendix 1). During the first five days of Survey Period 1 access was open to a viewpoint 500 metres from the terminal face of the glacier. The storm that followed shut down the valley beyond the Forest Viewpoint (1500 metres from the terminal face) and for the final two days the survey site was moved to the footbridge on the bush track just short of where it forks to the Sentinel Rock track. The original survey site (i.e., on the riverbed just beyond the Forest Viewpoint) was used during Survey Period 2; access to the terminal face was to the viewpoint 500 metres from the terminal face. The return walk time from the car park to the terminal face was approximately 1.5 hours; the return walk from the car park to Forest Viewpoint was approximately 30 minutes.
Three surveyors were employed for each survey period, two of whom were present throughout both survey periods. The surveyors were responsible for the distribution of both surveys and the number present at the Franz Josef Glacier Valley survey site at any one time varied depending on the weather and the level of aircraft activity (the Aircraft Monitoring survey was only undertaken on days when there was aircraft activity, whereas the Visitor Survey was possible on any dry day). The location of the surveyors was also determined by the quota of surveys sought (the quota for the Visitor Survey was 400) with the surveyors sometimes swopping between surveys in response to changing conditions. Surveying took place at varying times between 10am and 5pm and care was also taken to ensure that the Visitor Survey was spread over both fine and more marginal weather days. Altogether, there were four days on which only the Visitor Survey was undertaken and ten days when surveyors distributed both surveys. Full details of survey dates, surveying distribution and weather conditions are shown in Appendix 2.

**Sampling**

In order to ensure that survey respondents had spent sufficient time in the valley to form an impression of the place, only those visitors returning from the Franz Josef Glacier valley walk were approached and asked if they would participate in the survey. Hence, the survey sample does not include any visitors who remained in the car park, nor (for the most part) any visitors who might have returned to the car park before reaching the end of the Forest Walk. The sample is also limited to those visitors aged 15 years and over. On occasion all the people in the group approached were given a survey, but usually the number of people in each visit group asked to complete the survey varied based on logistic considerations (e.g., how many surveys the surveyors already had out) and on which surveys were
underway (e.g., if both this survey and the Aircraft Monitoring surveys were running and a couple was approached they were each given a different survey).

The surveyors introduced themselves by name, explained that they were doing visitor surveys for the Department of Conservation, and asked the person/people they had approached if they had a few minutes to complete a survey. All surveyors wore Department of Conservation name badges. Respondents were given a survey form, clipboard and pen and asked to self-complete the survey form. The surveyors were on hand to assist if necessary. The four page survey took most respondents around 10 minutes to complete (a copy of the survey can be found in Appendix 3).
Sample size & margin of error
Altogether, a total of 525 surveys were completed: 211 surveys (40%) in Survey Period 1 and 314 (60%) in Survey Period 2.

An error margin, at the 95% confidence interval, of ±4.0% is estimated for the visitor survey (n=525). As the sample design was more complex than a simple random sample (on which this error is calculated), this is an estimate only.

Across all survey days, a total of 60 visitors who were approached declined to be surveyed. Given the convenience sampling method employed this does not indicate a response rate. A record of these refusals was kept with surveyors recording details of the person’s age, gender, country of residence and reason for refusal (Table 1). ‘Other’ reasons for refusal included needing the toilet, feeling ill, having small children to supervise and not having glasses with them.

Table 1 Details of visitor refusals (N=60)

<table>
<thead>
<tr>
<th>Descriptor</th>
<th>Details</th>
<th>Percentage (N=60)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>15-29 years</td>
<td>30.0</td>
</tr>
<tr>
<td></td>
<td>30-49 years</td>
<td>28.3</td>
</tr>
<tr>
<td></td>
<td>50-69 years</td>
<td>35.0</td>
</tr>
<tr>
<td></td>
<td>70+ years</td>
<td>5.0</td>
</tr>
<tr>
<td>Gender</td>
<td>Male</td>
<td>70.0</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>30.0</td>
</tr>
<tr>
<td>Country of residence</td>
<td>New Zealand</td>
<td>6.7</td>
</tr>
<tr>
<td></td>
<td>Overseas</td>
<td>93.3</td>
</tr>
<tr>
<td>Reason</td>
<td>No time</td>
<td>23.3</td>
</tr>
<tr>
<td></td>
<td>Not interested</td>
<td>28.3</td>
</tr>
<tr>
<td></td>
<td>Language difficulties</td>
<td>38.3</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>10.0</td>
</tr>
</tbody>
</table>

Analysis & reporting of results
Survey data were entered into an Excel spread sheet during each survey period. These data were later transported into SPSS for analysis. For each question, data were analysed for frequencies, mean scores (for scale items), and - where relevant - by survey period. The data was analysed by survey period because of the notable differences in weather conditions and the associated changes in accessibility of the various walking tracks.

The design and implementation of the survey instrument was consistent with the Department of Conservation’s Social Monitoring Standard Operating Procedure (SOP) and, where feasible, results are reported against the standards set out in that document. As noted above, because of substantial changes to the survey questions, limited comparison is possible with previous surveys. Data describing the sample characteristics are compared across survey years.

Because not all surveys were complete, and because of the differences in sample size in each survey period, all results are presented as percentages (N=number completing that question in all results reported).
Results

The following section first presents the results from the demographic data (Section 3: About you), followed by the visit data (Section 1: About your visit) and then the data describing the visitor experience (Section 2: What are your impressions of this place?). Within each section, individual questions are reported in the order in which they appeared in the survey. The report concludes with a discussion section (Concluding comments) in which key results (collected from individual questions) are analysed more generally in order to describe the visitor experience at the Franz Josef Glacier Valley.

About You

Q15 In which part of the world do you normally live?

The 2013 survey respondents lived in 35 different countries. As Figure 1 shows, the largest single group were from the UK (N=96), followed by Australia (N=87) and then New Zealand (N=77). Although New Zealanders represented only 14.7 per cent of the sample overall, they represented a much higher proportion in Survey Period 1 (21.8%) compared to Survey Period 2 (9.9%). Visitors from Germany and Other Europe combined represented almost one third of all visitors in the sample (N=169); the most common countries of residence in ‘Other Europe’ were France (N=20), the Netherlands (N=17) and Sweden (N=10). Asian visitors were poorly represented in the sample (N=13): four of these were from China, three each from India and Hong Kong and one each from Singapore, Japan and Taiwan. Altogether, 14 of the visitors from the Americas were from Canada, four from Brazil and the others from other South American countries. A full list of respondents’ countries of residence is shown in Appendix 4.

![Figure 1 Country of residence of survey sample 2013 (N=524)](image)
The comparison of country of residence between 2009 and 2013 shows an increase in the percentage of visitors from USA, Germany and Other Europe and a decrease in visitors from the UK, the Netherlands and Canada (Figure 2). These findings are consistent with changes in international visitors to New Zealand as a result of the global recession. The percentage of visitors surveyed from New Zealand, Australia, Switzerland and Asia was the same.

![Figure 2 Country of residence of survey sample 2009 (N=385) & 2013 (N=524)](image)

Q16 In which part of New Zealand do you normally live?

In 2013 those respondents who lived in New Zealand were also asked in which region they lived. As might be expected, the majority of New Zealand visitors were from Auckland (N=26, 33.8%), Wellington (N=18, 23.4%) and Canterbury (N=15, 19.5%). There was some variation in the distribution of New Zealand visitors by survey period (Figure 3).
Q17 What is your gender?

In the 2013 sample, gender distribution among respondents was very evenly split with 49.6 per cent males (N=260) and 50.4 per cent females (N=264). Similar gender distribution was reported in 2009. In 2013 there were slightly more males (50.7%) in Survey Period 1 and slightly more females (51.1%) in Survey Period 2.

Q18 Which age group are you in?

The sample can be divided almost equally between those aged over and under 35 years, a feature more or less consistent across both survey periods. As Figure 4 shows, Survey Period 2 had a bi-modal age distribution with a greater concentration of both younger and older visitors. In comparison, the sample in Survey Period 1 was heavily skewed towards younger visitors (particularly those aged 25-34 years).
Figure 5 shows that the 2013 sample was younger than that surveyed in 2009. In 2013, for example, 52 per cent of respondents were aged 20-39 years (compared to only 40% in 2009) and 43 per cent were aged over 40 years (55% in 2009).
About your visit

Q1 Have you visited the Franz Josef Glacier Valley before today?

In 2013, first-time visitors accounted for 78.7 per cent of the sample, a figure highly consistent with the 2009 report (79%). As Figure 6 shows, a greater percentage of first-time visitors were surveyed during Survey Period 2. This is most likely related to the higher percentage of New Zealand visitors encountered in Survey Period 1.

![Previous visitation to Franz Josef](chart)

Figure 6 Previous visitation to Franz Josef Glacier Valley by survey period (N=525)

Q2 On your visit today, how much time will you spend in the Franz Josef Glacier Valley?

Altogether, three quarters of the sample (75.5%) spent two hours or less in the Franz Josef Glacier Valley (7.4% of those spent less than one hour). While a similar percentage of the 2009 sample reported staying two hours or less (69%), a much larger proportion of those visitors stayed less than one hour (22%). Beyond this it is difficult to compare the 2013 length of visit data with that collected in 2009: the 2009 survey included people who reported staying overnight and for several days in the wider Franz Josef area, rather than time spent up the valley. In 2013, the range of time spent was between 15 minutes and 10 hours with a mean visit time of two hours.

Overall, visitors surveyed in Survey Period 1 had shorter visits. This difference can be explained by the conditions encountered: of the five survey days in Survey Period 1 only one was characterised by perfect visit conditions; two days had marginal weather conditions; and the other two were days when the Glacier Valley Track was closed beyond the Forest Viewpoint. Figure 7 shows the most common visit times by survey period.
Q3 Which parts of the Franz Josef Glacier Valley have you visited today?

The closure of the Glacier Valley Track (and Robert’s Point Track) after the storm on 2nd January is also reflected in the parts of the Franz Josef Glacier valley visited (Figure 8).
In Survey Period 1, 54 per cent of respondents reported walking only as far as the Forest Viewpoint (where the barrier was located for two days of the survey period). This restriction on the glacier walk also increased visitation on the Walkway/Cycle path from the village and to the Sentinel Rock Lookout. During Survey Period 2, when the Glacier Valley walk was fully accessible, 92 per cent of visitors walked the full length of the track.

Overall, 68.8 per cent (N=361) of respondents walked the full length of the Glacier Valley walk, 28.8 per cent (N=151) visited Sentinel Rock Lookout and 13.5 per cent (N=71) used the Walkway/Cycleway from the village.

It is difficult to compare these results with the 2009 survey as different location options were included in the question and a different survey site was used. In 2009, 39 per cent of visitors surveyed had visited both the Sentinel Rock Lookout and ‘the Barrier before the riverbed’, while 36 per cent reported visiting ‘the rope barrier half way up the river bed’. A photograph included in the 2009 report indicates that the survey site was at the footbridge close to the car park; this survey site was only used for the two days when the valley was closed in 2013 (see Appendix 1 for Map showing visit and survey locations; Appendix 2 for sampling details).

Q4 Who are you visiting with?

Almost all respondents (N=508, 96.9%) were visiting as private parties (friends, family, self), another result highly consistent with the 2009 sample (94% private). Of the other groups reported: in Survey Period 1, four were commercial or guided and one non-commercial club or organisation; in Survey Period 2, three were commercial or guided, two were with a non-commercial club or organisation, four education groups and two were ‘others’ (doing research).

Q5 How many people are in your group?

Overall, almost two-thirds (N=312, 65.9%) of the sample were visiting with one other person, with just under a quarter (N=123, 23.4%) visiting in three or four person groups. A greater proportion of three and four person groups surveyed in the Survey Period 1 (29.9% compared to 23.4% in Survey Period 2) most probably reflects the higher percentage of New Zealand visitors who were more likely to be travelling in family groups.
Q6 How many people in your group are aged under 18 years?

Only 6.5 per cent (N=34) of the total sample were visiting with children aged under 18 years. To a large extent this reflects a limitation of the sampling method and the difficulty securing people with young children for interviews. The majority (82%) of those visiting with people in their group aged under 18 years were surveyed in Survey Period 1 (N=28, 13.2%) - again, this probably reflects the higher proportion of New Zealand families surveyed during this survey period (during the school holidays). The proportion of Australian visitors was also higher in Survey Period 1 (20.4% compared to 14.1% in Survey Period 2) which may also have been families travelling with children during school holidays.

What are your impressions of this place

Q7 What have you liked most about your visit to the Franz Josef Glacier Valley?

Altogether, 487 respondents recorded 698 things they liked ‘the most’ about their visit to the Franz Josef Glacier Valley. These responses were coded according to the following five categories (Figure 9):

1. Natural environment - included any responses which noted specific features of the natural world (e.g., waterfalls, rocks, bush, and so on) but the glaciers were not specifically noted
2. Glacier related - any comments in which the glaciers were specifically mentioned
3. Facilities and activities - comments that referred explicitly to activities in the area including tracks (other than the glacier one) and facilities (information, toilets, and so on)
4. Overall scenic amenity - broader more generic comments made about the experience (e.g., views, scenery, landscapes, and so on)
5. Other - any comments that did not fit the above categories

A full list of responses included in each category can be found in Appendix 5.
The majority of responses (83%) were fairly evenly split between the natural environment (26%), the glaciers (28%) and overall scenic amenity (29%).

Three quarters of the ‘Overall scenic amenity’ comments referred to the ‘scenery’ and the ‘views’; others commented on the ‘spectacular’ and ‘dramatic’ environment and the ‘beauty’ of the area.

Over half of the ‘Glacier related’ responses were unspecified, i.e., people simply wrote ‘the glaciers’ or the ‘views of the glaciers’. More specific glacier related comments included liking the easy accessibility of the glacier, enjoying the walk up to see the glacier and the fact that access was free. Hearing the ice crack, seeing the blue ice, the sounds and scale of the glacier was also enjoyed, as was seeing a glacier for the first time.

The ‘Natural environment’ comments covered a wide variety of natural features. Apart from the people who simply wrote ‘nature’, the natural feature most often mentioned was waterfalls (by 62 respondents). Other aspects of the natural environment frequently noted were: weather related (enjoying the sunshine, being grateful that it was not raining); flora (bush, rainforest); rocks, stones or geological features; and fresh air.

The most often reported ‘Facility and activity’ comments referred to enjoying walking on the tracks (although the glacier track was not specifically mentioned) and appreciating the quality of the tracks and clear signposting. The lack of development in the valley was also liked, along with the easy and free parking available and the overall cleanliness and care taken to manage the area.

‘Other’ comments were primarily generic, with respondents noting that they liked ‘everything’, ‘the whole experience’, and the ‘friendly people’. Several respondents liked the fact that the Franz Josef village was not over developed.
When examined by survey period, there was some variation in the focus of the ‘most liked’ features reported (i.e., the proportion of comments assigned to each category) (Figure 10). Also, within each category, the specific comments varied (reflecting the nature of the visit experience and the conditions encountered). The closure of the glacier valley track in the first survey period, for example, generated more generic ‘natural environment’ comments and fewer ‘glacier related’ ones.

Figure 10 Differences in ‘most liked’ responses by category & survey period (N=698)

Q8 What have you liked least about your visit to the Franz Josef Glacier Valley?

Altogether, 401 respondents recorded 427 things they ‘liked the least’ about their visit. These responses were coded according to the following five categories (Figure 11):

1. Aircraft - any mention of aircraft made
2. Glacier experience - any comments in which the glaciers were specifically noted
3. Nothing - coded if respondents had specifically recorded a comment about disliking ‘nothing’ (e.g., ‘none, N/A, all good)
4. Westland NP experience - broader comments referring to the overall experience with no specific reference to the glaciers
5. Natural environment - comments referring to the natural environment (e.g., the weather, insects)

A full list of responses included in each category can be found in Appendix 5.
Altogether, almost half (44%) of respondents’ ‘least liked’ comments included a specific reference to their glacier experiences. Not being able to get close enough to the glacier and crowding were the most common issues. Quite a few comments related to the quality of the glacier view including: the colour of the ice; the presence of rocks on the glacier; the dirtiness of the ice; the fact that the ice was retreating; the lack of visible ice; that it was not as good as on a previous visit; that it didn’t look as good as in photographs they had seen; and that it did not compare well to other glaciers they had visited. A number of respondents commented on the number of other visitors crossing the safety barriers; others thought the health and safety precautions were too restrictive.

‘Natural environment’ dislikes mostly related to the weather with rain and cloud mentioned most often.

Those reporting ‘Aircraft’ as a ‘least liked’ aspect of their visit primarily commented on the annoyance of constant helicopters and their noise, although 8 of the aircraft comments related to disappointment with the cancellation of planned helicopter activities due to unsuitable weather conditions.

Similar to the ‘most liked’ comments, when examined by survey period, there was some variation in the focus of ‘least liked’ features reported (i.e., the proportion of comments assigned to each category) (Figure 12). Also, within each category, the specific comments varied (reflecting the nature of the visit experience and the conditions encountered). While not being able to get close to the glacier was the most common complaint in the first survey period, this was noted in respect of the glacier valley being closed because of flooding, whereas in the second survey period it was noted more generically (and more often). Likewise, the large number of ‘natural environment’ comments in the first survey period also related to the poor weather, the rain and the subsequent flooding. The majority of weather comments made in the second survey period were related to cloudy conditions (compromising views and restricting helicopter activities). More aircraft comments in the second survey period reflect the higher number of days with aircraft activity.
Q9 Overall, how satisfied are you with your visit to the Franz Josef Glacier Valley today?

Overall satisfaction was measured on a 7-point scale where 1= ‘very dissatisfied’ and 7= ‘very satisfied’. The mean satisfaction score in 2013 was 5.77, compared with 6.14 in 2009. When the scale scores are collapsed (1-3 = dissatisfied; 5-7 = satisfied), it is possible to conclude that 87.6 per cent of respondents were satisfied with their visits. This represents a decrease from 2009, when 92 per cent of visitors said they were satisfied.

These data ought to be examined in conjunction with the responses to perceived crowding, and the most and least liked aspects of the visit. It is also important to emphasise that there is some variation in satisfaction scores according to the time of the visit, the place of residence and whether or not respondents had visited Franz Josef Glacier previously. For instance, satisfaction was slightly higher in second survey period (Figure 13) – a finding likely to be related to the closure of the Franz Josef Glacier Valley Track and the weather conditions encountered by respondents in Survey Period 1. Those visiting Franz Josef Glacier for the first time were less likely (86.1%) to report being satisfied than those who had visited previously (93%). This finding appears to contradict the wider research literature (see, for example, Manning, 2011), where satisfaction is typically highest among first time visitors to recreation sites. In the present case, it is possible that the high proportion of international visitors, coupled with expectations created through extensive tourism marketing campaigns has led to imagery that no longer matches the reality at Franz Josef Glacier.
Notwithstanding these interpretive remarks about the possible decline in visitor satisfaction at Franz Josef Glacier, it is also important to emphasise that the overall satisfaction score is still comfortably above the nominal management target of 85 per cent (DOC, 2006). Overall satisfaction scores are a useful indicator to measure over time, but may be less valuable for management than specific satisfaction attributes related to services and facilities.

Mean satisfaction scores for services and facilities ranged from 6.4 (car park) to 5.81 (toilets), with satisfaction scores of 6.29 for signs and information panels, 6.12 for the glacier track and 6.14 for other tracks (Figure 14). While this question was also asked in 2009 different categories of facilities were included.
In both 2009 and 2013, many respondents indicated that they had not used the toilet facilities and this is reflected in the number of respondents reporting a satisfaction score for toilets (e.g., only 48.4 per cent of the sample in 2013 and 41 per cent in 2009). In 2013, only 42.3 per cent of respondents gave a satisfaction score for ‘other tracks’.

Individually, all the facilities scored above the ≥85 per cent satisfaction score with the exception of toilets (84.1%). This was a fall since 2009 when the overall satisfaction score for toilets was 89 per cent. There were several negative comments relating to the toilet facilities given in response to Question 8 (‘what have you liked the least about your visit?’); these included ‘lack of soap’ and ‘lack of toilet paper’, and ‘no toilet at glacier walk’ (close to glacier).

Crowding was measured on a 9-point scale, the most widely used tool for assessing this social impact (Manning, 2001). Although the crowding scale is a relatively simple measure of perceived crowding, it is useful in identifying whether or not crowding is interfering with recreationists’ experiences, and ultimately where and when this occurs (Shelby, Vaske & Heberlein, 1989).

In the current study, 50.6 per cent of all respondents reported experiencing some degree of crowding (‘crowding’ was measured by the number of respondents scoring a 3 or higher on the crowding scale) (Figure 15). This question was last asked in 2007, at which time 47 percent of respondents reported some level of crowding during their visit.
A higher proportion of respondents reported experiencing crowding during Survey Period 2 (56.9%) compared to Survey Period 1 (41%), although crowding was highest (71%) for those respondents visiting on the two days in Survey Period 1 when the valley track was closed.

All respondents selecting a score of 3 or higher on the crowding scale were also asked to indicate the locations at which they felt the most crowded. Figure 16 shows the most crowded locations reported by survey period. These reflect the conditions encountered and the tracks that were open during each survey period. In Survey Period 1, the two most crowded locations reported were the Forest Walk to the riverbed (34.5% of respondents) and part way along the Glacier Valley walk (21.4% of respondents). In Survey Period 2, 56.1 per cent of respondents reported crowding part way along the Glacier Valley walk and 37.4 per cent reported crowding at the Glacier viewpoint (rope barrier).

The widespread and consistent use of the 9-point crowding scale internationally has allowed the development of crowding ‘standards’ (Corbett et al., 2007). For instance, Shelby et al. (1989) used 50 per cent of visitors feeling crowded as a threshold for management action, and 65 per cent as the carrying capacity.
Figure 16 Parts of Franz Josef Glacier Valley where crowding experienced by survey period (N=524) (*Multiple answers possible)

Photograph 5 Busy day on Franz Josef Valley walk (Jude Wilson)
Using a 7-point Likert-type scale (where 1 = ‘strongly disagree’ and 7 = ‘strongly agree’), Question 12 sought respondents’ opinions about a range of statements describing the visitor experience and potential changes to this. For ease of comprehension, the agreement statement findings are presented contiguously (Table 2). This is followed by a short interpretation of these results.

**Table 2 Likert-scale scores for visitor experience statements (graphs showing % of respondents)**

<table>
<thead>
<tr>
<th>Statement</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>I felt safe walking the tracks (N=520)</td>
<td>0.2</td>
<td>0.2</td>
<td>0.6</td>
<td>1.7</td>
<td>4.4</td>
<td>17.9</td>
<td>75</td>
</tr>
<tr>
<td>Mean = 6.64</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>I was able to enjoy nature &amp; scenery (N=521)</td>
<td>0.2</td>
<td>0.2</td>
<td>0.8</td>
<td>1.9</td>
<td>6.7</td>
<td>24.2</td>
<td>66</td>
</tr>
<tr>
<td>Mean = 6.51</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>I was able to enjoy natural peace &amp; quiet (N=520)</td>
<td>1.9</td>
<td>3.8</td>
<td>6.3</td>
<td>8.8</td>
<td>21</td>
<td>22.3</td>
<td>35.8</td>
</tr>
<tr>
<td>Mean= 5.53</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
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<tr>
<td>Statement</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<td>7</td>
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<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>I was able to learn about the areas plants &amp; animals (N=505)</td>
<td></td>
<td></td>
<td></td>
<td>4.4</td>
<td>9.5</td>
<td>16.2</td>
<td>22</td>
</tr>
<tr>
<td>Mean = 4.43</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I was able to learn about the area's landscape &amp; geology (N=505)</td>
<td>2.8</td>
<td>5.1</td>
<td>12.7</td>
<td>17.6</td>
<td>24.4</td>
<td>19.4</td>
<td>18</td>
</tr>
<tr>
<td>I would have preferred a shorter walk to the glacier (N=502)</td>
<td>50.2</td>
<td>16.5</td>
<td>9.4</td>
<td>8.6</td>
<td>4.0</td>
<td>16.6</td>
<td>7.4</td>
</tr>
<tr>
<td>I would have been happy to walk further to see the Glacier (N=513)</td>
<td>4.5</td>
<td>2.3</td>
<td>3.3</td>
<td>9.9</td>
<td>16.6</td>
<td>53.4</td>
<td>Mean = 5.82</td>
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<tr>
<td>Statement</td>
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<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
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<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>I would have liked a service to have been available to drive me from the car park to a safe viewpoint close to the Glacier (N=517)</td>
<td>66.5</td>
<td>12.6</td>
<td>4.8</td>
<td>4.8</td>
<td>3.3</td>
<td>2.5</td>
<td>5.4</td>
</tr>
<tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I would not mind seeing or hearing vehicles taking people closer to the Glacier via the valley floor (N=521)</td>
<td>54.3</td>
<td>13.4</td>
<td>7.1</td>
<td>7.1</td>
<td>4.4</td>
<td>5</td>
<td>8.6</td>
</tr>
<tr>
<td>Mean = 2.43</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I think the number of helicopter flights should be increased to allow more people to access the Glacier (N=490)</td>
<td>41</td>
<td>15.1</td>
<td>12.2</td>
<td>20.6</td>
<td>4.1</td>
<td>2.9</td>
<td>4.1</td>
</tr>
<tr>
<td>Mean = 2.57</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Access to the Glacier should remain as it is now (N=512)</td>
<td>5.1</td>
<td>3.9</td>
<td>5.1</td>
<td>19.1</td>
<td>10.7</td>
<td>17.4</td>
<td>38.7</td>
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<tr>
<td>Mean = 5.33</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
There is very strong agreement among respondents that the walking tracks in the Franz Josef Valley feel safe (M=6.64) and nature and scenery were able to be enjoyed (M=6.51). There is strong, but slightly less agreement that the valley affords opportunity to experience natural quiet (M=5.53). Views appear divided on whether ‘learning about plants and animals’ was possible (M=4.43), with approximately one third (30.1%) disagreeing with this statement.

Visitors disagree (M=2.41) that ‘a shorter walk to the Glacier’ would have been preferable, with three-quarters of respondents (76.1%) disagreeing with this statement. Similarly, 80 per cent agreed that they would have been happy to walk further to see the Glacier. Furthermore, most visitors surveyed (83.9%) did not like the idea of a service taking people from the car park to a safe viewpoint close to the Glacier (M=1.95).

In terms of changes to mechanised access to Franz Josef Glacier, visitors also appear to hold clear views. Three quarters (74.8%) indicated that seeing or hearing vehicles taking people closer to the Glacier via the valley floor would negatively affect their visit (M=2.43); and more than two thirds (68.3%) disagreed that the number of helicopter flights should be increased to allow more people to access the Glacier (M=2.57). Another two thirds (66.8%) agreed that ‘access to the Glacier should remain as it is now’ (M=5.33).

Q13 If there had been a service available to drive you from the car park to a safe viewing point near to the Glacier face, would you have used it today?

The majority of respondents (84%) stated that they would not have used a vehicle service to drive them to the Glacier face had one been available (Figure 17).

Interest in using a vehicle service to the Glacier face

![Figure 17 Interest in using a vehicle service to the Glacier face (N=520)](image)

There was a slightly higher percentage answering ‘yes’ in Survey Period 1 (17.4%) than in Survey Period 2 (14.4%).
Q14 If yes, how much would you be prepared to pay for this service?

Altogether, 81 people answered yes to Q13. When asked what they would pay, the amounts ranged from $0 to $75. The most common amount people were prepared to pay was $15 (13 people). Three people reported wanting the service but were not prepared to pay anything for using it; 15 did not know what they would pay (Figure 18).

![Amount prepared to pay for a vehicle service to Glacier face](image)

Figure 18 Amount prepared to pay for a vehicle service to Glacier face (N=78)

**Concluding comments**

It is highly apparent from the variety of responses to open-ended and closed choice questions posed in this survey that visitors enjoy the walk up to the Glacier. Responses to the distance statements in Question 12 suggest that most would not prefer it to be shorter, and almost 80 per cent would be happy for the walk to be longer. Furthermore, ‘glacier related’ comments did not stand out above and beyond other categories among the ‘most liked’ features of visits, with greater prominence given to more generic elements of the valley experience (nature and all its component parts - especially waterfalls). Thus, while the opportunity to view the glacier is a major motivating force for visitors to the region, it remains one feature of a broader outdoor recreation experience that is notable because of its accessibility (both financial and physical) and is perhaps unique for that reason alone.

Among the factors that appeared to have the greatest negative impact on the visitor experience, several were weather-related. In particular, the visitor experience was compromised when the valley track was closed due to flooding which, in turn, led to increased reports of crowding. Weather events were also reflected in the ‘least liked’ comments, although visitors were typically more understanding of this (in respect of
disappointment at not being able to get closer to the glacier) than they were when conditions appeared favourable and yet they were unable to get close enough to the glacier because of the rope barriers.

While some of the reported crowding can be linked to the weather-related track closures, crowding has the potential to compromise the visitor experience in all conditions. In the present study, approximately half of all visitors reported some degree of crowding, and this is something that managers will want to monitor carefully. The international literature (see Corbett et al., 2007; Manning, 2011; Shelby, Vaske & Heberlein, 1989) indicates that a ‘high normal’ level of crowding begins at 50 per cent, and is the point at which managers might consider intervention options to avoid visitor access and displacement problems. In reference to the possibility of the current track being shortened in the future, it is important to acknowledge the fact that perceived crowding increased on the days when the Glacier Valley track was closed, and hence shorter. This may serve as a reminder that the walking track actually ‘needs’ to be long enough to enable visitors to spread out.

Despite a small decrease in overall satisfaction since the 2009 study, satisfaction remains above the level at which management is likely to consider action. As noted in the discussion around the results to Question 9, the open-ended comments reported in the ‘most liked’ and ‘least liked’ aspects of their visit suggest that satisfaction may be associated with a wide variety of interrelated factors, including the timing of their visit, the weather experienced, prior expectations of the glacier experience itself and whether or not they are first-time visitors. In Survey Period 1, for example, many of the least liked comments relating to the weather were not directly focused on the glacier experience, but rather on the weather’s negative impact on their broader visit experience.

Further, while it was noted that, for some international visitors, the reality of the Franz Josef Glacier experience did not match the promotional imagery to which they had been exposed, the open-ended responses provided in Question 8 highlighted a number of other ‘expectation shortcomings’ which may contribute to lower satisfaction levels. These included respondents who had viewed glaciers in other locations and found Franz Josef to be ‘not as good’, and disappointment (and dismay) at seeing a retreating glacier, a lack of ice and not seeing a ‘full view’ of the glacier from the accessible lookout points. Some repeat visitors noted that the glacier was less attractive than on previous visits. There also appears to be an expectation of a more accessible glacier experience, permitting much closer access to - and even onto - the glacier as independent (and non-paying) visitors; there was some resentment that full glacier access is only available as a commercial (and often expensive) activity.

While it will be important to monitor satisfaction levels regularly, managers might consider how to respond to specific elements of satisfaction raised here. For example, although respondents reported a high level of satisfaction with the signs and information panels that are currently in place, there does appear to be a desire (expressed in the open-ended ‘least liked’ responses to Question 8 and the lower mean agreement scores for statements about these in Question 12) by visitors to have more information about the landscape, the glacier retreat, flora, fauna, geology and so on.
Finally, the results of the 2013 survey suggest that any new opportunities for recreation or tourism activities in the valley should be considered in light of current visitors’ contentment with the non-mechanised ‘free’ access and the perceptions apparent (in the comments made in ‘least liked’ aspects and noted above) that the only way to physically experience the glacier itself is with a commercial company. It is also important to recognise that the results from the current survey do not permit conclusions to be drawn about the potential demand for additional services or access arrangements among any latent visitor markets, nor those visitors whose pattern of visitation falls outside the scope of the sampling frame used here.
References


Appendices

Appendix 1: Map of Glacier walking track & survey sites
## Appendix 2: Sampling details

<table>
<thead>
<tr>
<th>Date</th>
<th>Survey days when ONLY Visitor Survey</th>
<th>Survey days when BOTH Aircraft &amp; Visitor Surveys</th>
<th>Survey site</th>
<th>Weather conditions</th>
<th>Aircraft activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>27-Dec</td>
<td></td>
<td>35</td>
<td>Original</td>
<td>Fine</td>
<td>High</td>
</tr>
<tr>
<td>28-Dec</td>
<td></td>
<td>-</td>
<td>-</td>
<td>Fine</td>
<td>High</td>
</tr>
<tr>
<td>29-Dec</td>
<td></td>
<td>-</td>
<td>-</td>
<td>Rain</td>
<td>-</td>
</tr>
<tr>
<td>30-Dec</td>
<td></td>
<td>30</td>
<td>Original</td>
<td>Intermittent rain</td>
<td>-</td>
</tr>
<tr>
<td>31-Dec</td>
<td></td>
<td>17</td>
<td>Original</td>
<td>Intermittent rain</td>
<td>Minimal</td>
</tr>
<tr>
<td>1-Jan</td>
<td></td>
<td>-</td>
<td>-</td>
<td>Rain</td>
<td>-</td>
</tr>
<tr>
<td>2-Jan</td>
<td></td>
<td>-</td>
<td>-</td>
<td>Rain</td>
<td>-</td>
</tr>
<tr>
<td>3-Jan</td>
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<td>70</td>
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<tr>
<td>4-Jan</td>
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<td>59</td>
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<td>17-Feb</td>
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<td>-</td>
<td>-</td>
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<td>83</td>
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<td>15</td>
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<td>Fine</td>
<td>High</td>
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<td>Original</td>
<td>Fine</td>
<td>High</td>
</tr>
<tr>
<td>22-Feb</td>
<td></td>
<td>53</td>
<td>Original</td>
<td>Fine</td>
<td>High</td>
</tr>
<tr>
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<td>Original</td>
<td>Fine (cloudy)</td>
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</tr>
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<td>High</td>
</tr>
<tr>
<td>25-Feb</td>
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<td>9</td>
<td>Original</td>
<td>Fine</td>
<td>High</td>
</tr>
<tr>
<td>26-Feb</td>
<td></td>
<td>25</td>
<td>-</td>
<td>Original</td>
<td>Fine</td>
</tr>
</tbody>
</table>

Total surveys (N=525)

47 = surveyed during poor weather

222 = surveyed during fine, but cloudy conditions (fewer aircraft)

256 = surveyed during fine weather (with high aircraft activity)
Appendix 3: Survey

**Franz Josef Glacier Survey 2013**

This survey will help the Department of Conservation manage the Franz Josef Glacier Valley. Your assistance in completing this form is greatly appreciated. All responses are anonymous.

**Section 1: About your visit**

| Q1 | Have you visited the Franz Josef Glacier Valley before today? | ☐ Yes | ☐ No |
| Q2 | On your visit today, how much time have you spent in the Franz Josef Glacier Valley? | ____ Hours | ____ Minutes |
| Q3 | Which parts of the Franz Josef Glacier Valley have you used today? [Please tick (☑) all activities that apply] |
| Q4 | Who are you visiting the Franz Josef Valley with? [Please tick (☑) ONE that best describes your group] |
| Q5 | How many people are in your group? Include yourself and any guides in the total number |
| Q6 | How many people in your group are aged under 18 years? |

☐ Don't know
Section 2: What are your impressions of this place?

Q7 What have you liked most about your visit to the Franz Josef Glacier Valley?

______________________________

______________________________

Q8 What have you liked least about your visit to the Franz Josef Glacier Valley?

______________________________

______________________________

Q9 Overall, how satisfied are you with your visit to the Franz Josef Glacier Valley today? [Please circle ONE number on the line below]

Very Dissatisfied

1 2 3 4 5 6 7

Very Satisfied

Q10 How satisfied are you with the services and facilities in the Franz Josef Glacier Valley? [Please circle ONE number for each line]

<table>
<thead>
<tr>
<th>Service / Facility</th>
<th>Very Dissatisfied</th>
<th>Very Satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>Car park</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>Signs &amp; information panels</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>Toilets</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>Track to the Glacier</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>Other tracks in the valley</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>

Q11 Did you feel crowded during your visit to the Franz Josef Glacier Valley? [Please circle ONE number on the scale below]

1 Not at all                        2 Slightly                      3 Moderately                    4 Extremely                     5 Did not see / use

If you selected number 3 or higher in Q11, please indicate where you felt crowded? [Please tick (■) ALL that apply]

1 ■ Walkway / Cycle path
2 ■ Forest Walk to riverbed
3 ■ Part way along Glacier Valley walk
4 ■ Sentinel Rock Lookout
5 ■ On the Glacier (hel-hike)
6 ■ At the Glacier viewpoint (rope barrier)
7 ■ Other (specify)
Q12  The managers of this site are always looking for ways to improve the visitor experience in the Franz Josef Glacier Valley. Your opinions about the following statements will help with management planning.

Thinking about your visit today, to what extent do you agree or disagree with these statements? [Please circle ONE number for each line]

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I felt safe walking the track</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>I was able to enjoy nature &amp; scenery</td>
<td>1 2 3 4 5 6 7</td>
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<tr>
<td>I was able to enjoy natural peace &amp; quiet</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>I was able to learn about the area’s plants &amp; animals</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>I was able to learn about the area’s landscape &amp; geology</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>I would have preferred a shorter walk to see the Glacier</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>I would have been happy to walk further to see the Glacier</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>I would have liked a service to have been available to drive me from the car park to a safe viewpoint close to the Glacier</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>I would not mind seeing or hearing vehicles taking people closer to the Glacier via the valley floor</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>I think the number of helicopter flights should be increased to allow more people to access the Glacier</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>Access to the Glacier should not be changed</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>

Q13  If there had been a service available to drive you from the car park to a safe viewing point near to the Glacier face, would you have used this today?  
☐ Yes  [Go to Q14]  ☐ No  [Go to Q15]

Q14  If yes, how much would you be prepared to pay for this service?  
💰NZD  
☐ Don’t know
### Section 3: About You

**Q15** In which part of the world do you normally live?  
[please tick one box only]

- ☐ New Zealand  
- ☐ Australia  
- ☐ United Kingdom  
- ☐ United States  
- ☐ Germany  
- ☐ Other [please specify] __________________________

If you live in New Zealand, go to Q16.  
If you live in another country, go to Q17.

**Q16** In which part of New Zealand do you normally live?  
(please tick one box only)

- ☐ Southland  
- ☐ Otago  
- ☐ Canterbury  
- ☐ Wellington  
- ☐ Manawatu  
- ☐ Manawatu - Wanganui  
- ☐ Auckland  
- ☐ Northland  
- ☐ Taranaki  
- ☐ Hawkes Bay  
- ☐ Nelson  
- ☐ Gisborne  
- ☐ Bay of Plenty  
- ☐ I don't normally live in New Zealand

**Q17** Are you:  
- ☐ Male  
- ☐ Female

**Q18** What is your age in years?  

- ☐ 15 - 19  
- ☐ 20 - 24  
- ☐ 25 - 29  
- ☐ 30 - 34  
- ☐ 35 - 39  
- ☐ 40 - 44  
- ☐ 45 - 49  
- ☐ 50 - 54  
- ☐ 55 - 59  
- ☐ 60 - 64  
- ☐ 65 - 69  
- ☐ 70 - 74  
- ☐ 75 - 79  
- ☐ 80 yrs +

---

**Thank you very much for your time**

Please return this form to a staff member

We hope you enjoy the rest of your stay!
### Appendix 4: Full list of respondents’ country of residence

<table>
<thead>
<tr>
<th>Country of residence</th>
<th>Number of respondents (N=524)</th>
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<tbody>
<tr>
<td><strong>Australasia &amp; Oceania</strong></td>
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<tr>
<td>New Zealand</td>
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<tr>
<td>Australia</td>
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<tr>
<td>New Caledonia</td>
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<td><strong>Europe</strong></td>
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<td>Czech Republic</td>
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<tr>
<td>Austria</td>
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</tr>
<tr>
<td>Denmark</td>
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<td>Belgium</td>
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</tr>
<tr>
<td>Finland</td>
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<tr>
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<td>Slovenia</td>
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<td>Poland</td>
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<td>Brazil</td>
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<td>Argentina</td>
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<td>Columbia</td>
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<td>Taiwan</td>
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<td><strong>Middle East &amp; Africa</strong></td>
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<td>South Africa</td>
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<tr>
<td>Tunisia</td>
<td>1</td>
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</table>
Appendix 5: Coding for ‘most liked’ aspects of visit

1. Natural environment

Nature, ancient fern forest, clean air, fresh air, streams, bush, weather, moss, river, rainforest, geological features, rocks, water, peacefulness, waterfalls, greenness, animals and birds, ferns, flora, water, environment, clean, mountains, big cliffs, lake, birdsong, quietness, no rain

2. Glacier related

General glacier walks, being close to glaciers, seeing at close range, Fox Glacier, Franz Josef Glacier, free access, views of Fox, views of Franz, FJ Valley walk, FJ ice cave, easy access, free walking, not too many people, hearing ice cracking, wow effect of seeing glacier, learning about glacier history, clearly marked warning signs

3. Facilities & activities

Challenging walking tracks, tracks in general, Roberts Point track, Lake Matheson, Chalet Lookout, well built & maintained tracks, good infrastructure, the range of tracks, exploring rocks, river crossings, option of easy walks, general facilities, walks well-mapped, car parks, free parking, helicopter flight, walk on glacier, looking for gold with pan and shovel, safety signage, info boards, safe, can get up close to nature, well maintained, the town, hot pools, history guide on signs, ice climbing, information of glacier history at i-site, the area is not overdeveloped, Gillespie’s Beach, Peters Pool, Copeland Track, walking on ice without a tour, safe tracks, forest walkway, natural DOC campgrounds

4. Overall scenic amenity

Beautiful, sunset, wilderness, open space, unspoilt New Zealand, neatness, landscape, mountains, scenery, viewing spots, views, view from Chalet lookout, highway views, humbling feeling, pollution free, scenic road, sightseeing, photogenic, emptiness

5. Other

Lack of crowds, everything, different to home, empty roads, being with family, contrast to up north, village doesn’t have big hotels, overall fantasticness, friendly people with smiles, talking with DOC worker, exercise, friendly locals, nothing much
Appendix 6: Coding for ‘least liked’ aspects of visit

1. Aircraft
Helicopters, helicopter noise, aircraft, planes, wanted to do heli-hike, wanted to do scenic flight, heli-hike cancelled, heli-hike queue, no window seat in helicopter, price of heli-hike, heli-hike booked out, endless helicopter noise

2. Glacier experience
Other tourists, commercial-ness, limited access, glacier, too small, too dirty, long walk to FJ, not able to get close enough to FJ, gross toilets, repetitious safety signs, uneven surface, no rubbish bins, narrow tracks, no hidden places, no pub at FJG, fact that it is receding, ineffective signs and barriers at glacier face, crowds, no toilet at Chalet lookout, Roberts Point is an out and back track, lack of interpretation on Roberts Point walk, misleading walk times, took too much time, Fox guided tour, lack of flora interpretation, speed bumps made of rock, lack of escalators, pathways not overly authentic, leaf blowers, restricted access (track closure) due to flood waters, roads, guided trips crowd paths, lack of good marking for FX view road turnoff, many people ignoring safety barrier, FJ glacier not like in photos, FJ glacier seems better in advertising, Roberts Point track closed, no soap in the toilets, no options for glacier trek for experienced people, no drinking water facilities, lack of toilet at end glacier walk, lack of shade, no internet in glacier valley, dislike concept of people being on a delicate glacier, unsealed car park, climb at end of Fox Valley track, attitude of guides to independent people walking on ice, no picnic tables at carpark

3. Nothing
Nothing, all good, N/A, no, none (only coded if something actually written to this effect on form - i.e. not if left blank)

4. Westland NP experience
Not enough walk tour options, lack of camping facilities, high prices, Top 10 HP FJ, high price of accommodation in FJ, lack of ATMs, people driving in the middle of the road, fuel prices, toilets at DOC campground, Lake Matheson, the driving, difficult and long drive, distance, traffic, food, price of attractions not advertised until very late, telephones down, road closed, couldn’t do many activities due to storm, being stuck at Franz, bridge smashed, lack of campervan overnight parking, FJ DOC campground too far out of town, attitude of tourists, tourism, Jackson’s Bay, only short walks, incorrect spelling on sign in Franz (sanctuary spelt wrong), no radio, the Scenic Hotel, 1080 drops, unhelpful man in FJ i-site, weather forecast/information, want more DOC campgrounds, behaviour of other tourists, no interpretative sign naming peaks at Lake Matheson, tours in general, RMA, surveys, more signs generally, rubbish, motel room

5. Natural environment
Sandflies, slippery stones at Roberts Point, stream crossing, bugs, sun too hot, rocks, no sun, flooding, blackbirds, a kea eating boot