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The St James Walkway Study

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THE ST JAMES WALKWAY STUDY

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1. INTRODUCTION

1.1 This Paper

Prior to the opening of the St James Walkway in 1981, David Simmons of the Department of Parks, Recreation and Tourism at Lincoln College, proposed a five year research programme to the New Zealand Walkways Commission. This proposal took advantage of the 1981 opening to initiate a longitudinal study which could identify any subsequent changes in use or use impacts on the Walkway. The general aims of this research were to:

- (i) Describe the user population of the Walkway and any changes to it over the study period;
- (ii) Describe the role played by the Walkway in the recreation life histories of users; and
- (iii) Identify any physical impacts from use that occurred following the opening of the new track.

This paper presents a compilation, summary and assessment of data gathered from the research programme.

1.2 The Walkways Concept

The St James Walkway was established as part of the New Zealand Walkway System. The ultimate aim of the Walkway System was to establish a network of walking tracks that ultimately traverse New Zealand, and which also expand the range of walking opportunities available to all New Zealanders. To this end, development of the Walkway system has been based upon a three-level classification of walking opportunities. These levels are:

- (i) Walk - well formed and suitable for the average family;
- (ii) Track - well defined walking track suitable for people of good average physical fitness; and
- (iii) Route - a lightly marked track for use only by well equipped and experienced trampers.

1.3 The St James Walkway

Prior to the opening of the St James Walkway (1981), the emphasis of Walkway development was on the provision of short 'walks' near urban areas. The St James was both the first of the multiple-day walkways, and the first located in a back-country sub-alpine area. Although it is a 'track' in the walkways classification, it is, in the words of Phillip Temple

(1984:3):

"... one of the safest tracks to be found in New Zealand's remote back country, free from river crossings, well marked and well provided with huts".

Even prior to the Walkway's construction the area was known for its relatively easy and safe terrain, which provided a good introductory area for the more inexperienced tramp (e.g. Alexander *et. al.* 1979). Use of the area was however much lower than at present.

Since Ada Pass hut is used on most trips through the area, numbers visiting it provide an estimate of overall use. From Alexander *et. al.* (1979) it can be shown that for the years 1973-76, the average annual occupancy at Ada Pass hut was fewer than 230 users. Ten years on, an estimate of Walkway usage cited in Young (1985), indicated approximately 1700 users completed the trip.

1.4 Location, Facilities and Setting

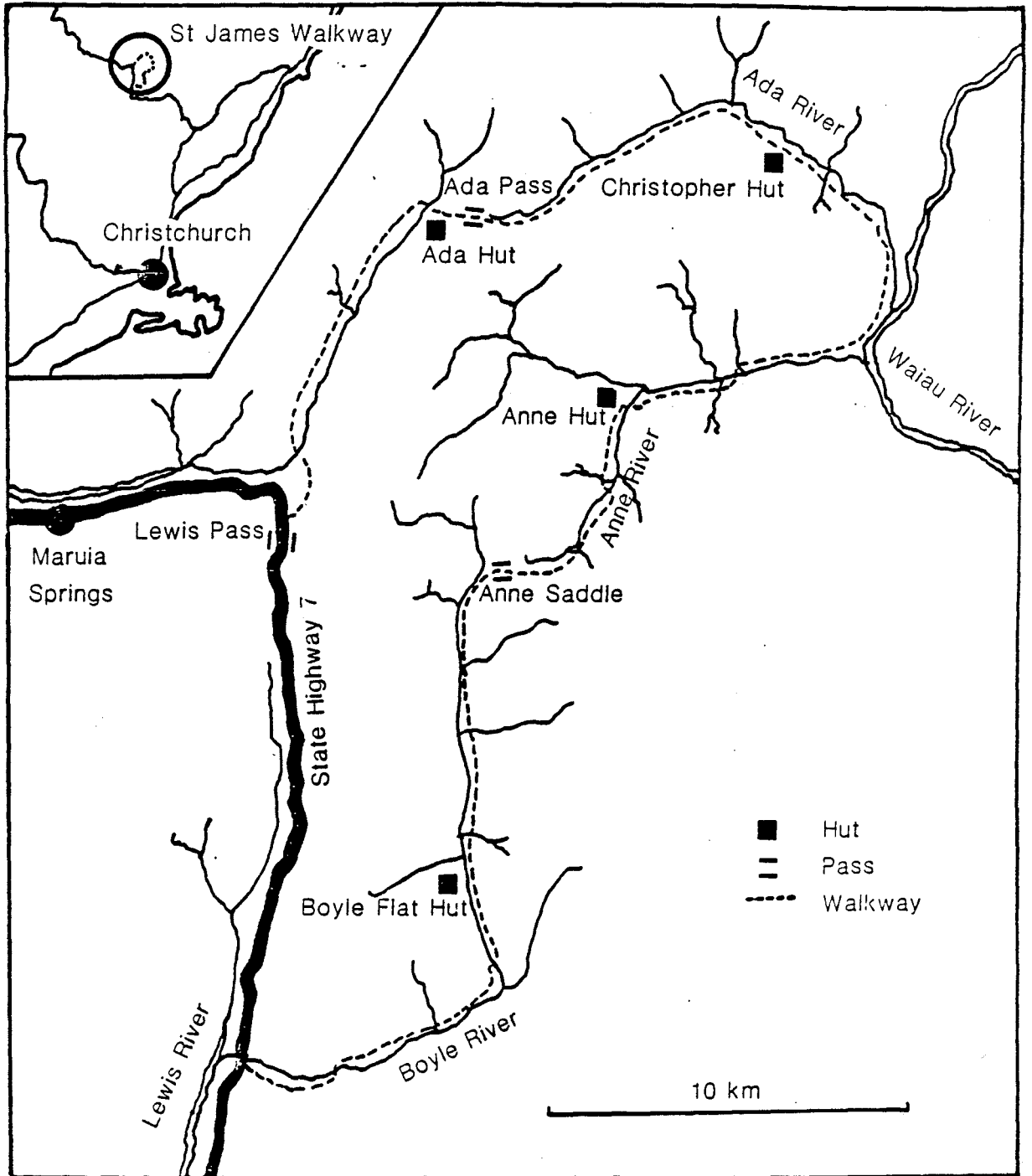
Located near Lewis Pass on State Highway 7 (refer Figure 1, p.3), the Walkway is approximately a four hour drive from Christchurch. The 66km track is considered a five day walk for an average family, with four¹ main huts spaced at appropriate distances:

- (i) Lewis Pass carpark to Ada Pass Hut (5hrs - 10 km)
- (ii) Ada Pass Hut to Christopher Hut (4.5hrs - 10.5km)
- (iii) Christopher Hut to Anne Hut (5hrs - 15km)
- (iv) Anne Hut to Boyle Flats Hut (7hrs - 15km)
- (v) Boyle Flats Hut to Boyle carpark (4hrs - 14.5km)

The design capacity for these main huts is 20 occupants, with stoves, fuel (wood and/or coal) and basic cooking equipment also provided. Other huts are present which pre-date the Walkway, but are either small or private property. The Walkway runs through parts of the Lewis Pass National Reserve, Lake Sumner Forest Park, Glenhope Station, and St James Station. It passes through a variety of terrain and vegetation from alpine tussock grasslands to Beech Forest (mixed) and pastoral grasslands where cattle, sheep and horses often graze. The climate of the Walkway reflects its proximity to the main divide. Weather may change rapidly and create adverse conditions, especially in winter when snow is not uncommon. Stewart (1985) describes a west to east precipitation gradient from 4000mm per year (at Ada Hut) to 2300mm (at Boyle Flats road end).

1. A fifth hut has been added since fieldwork was completed (in Cannibal Gorge).

Figure 1: St James Walkway Location



2. METHODOLOGY

Using funds provided by the N.Z. Walkways Commission and the then land management agencies (N.Z. Forest Service and Dept of Lands and Survey), a number of students were employed as researchers and hut and track wardens during the course of the research programme. These students undertook data collection in three broad areas: annual user surveys; physical impacts of use; and a follow-up user survey. Figure 2 (overleaf) shows how this work was integrated into the overall research programme.

2.1 Annual User Surveys

Beginning with Comrie (1982), five summer¹ surveys were undertaken as the main thrust of the research programme. Because of increasing use levels during the Easter holiday period, additional surveys were undertaken in the years 1983-85. Each survey involved application of two distinct survey questionnaires. These were designed to complement each other and avoid unnecessary replication of responses.

- (i) The 'group' questionnaire gathered information on the party as a whole, its composition and nature, and the organisation of the trip (refer Appendix One). This questionnaire required completion by only one member of each party (e.g. trip leader).
- (ii) The 'individual' questionnaire gathered information on individual user's experience of walkways/back-country areas, their recreation activities and motivations, personal (demographic) information, and their satisfactions related to facilities and developments (refer Appendix Two). All party members were asked to complete this questionnaire.

Administration of these questionnaires varied from year to year due to changing employment situations, track maintenance and development requirements and to refinements of the methodology. While all questionnaires were distributed in the field by hand, methodological differences arose in systems for their completion and return. Because the 'group' questionnaire did not require specific knowledge of the Walkway itself, it could be completed effectively at any stage of the group's trip. However, given the more specific information required from the 'individual' questionnaire, it was preferable that it be completed as close to the trip's end as possible. Two strategies were used to achieve this. Comrie, Hutchings and Brejaart used postal return of questionnaires, which could thus be completed subsequent to trip completion. Tetteroo and Hu distributed and collected questionnaires at Boyle Flats Hut. This hut was where most Walkway users spent the last night on their trip.

1. Sampling was standardised to peak use periods - viz. 26th December - 26th January

Figure 2: Structure of Research Programme

Years	USER SURVEYS (Group and Individual)	IMPACT STUDIES
1982	Comrie - Summer 1981/82	Nelson - Summer 1981/82
1983	Tetteroo - Summer 1982/83 - Easter 1983	Tetteroo - Summer 1982/83
1984	Hutchings* - Summer 1983/84	Hutchings* - Summer 1983/84
1985	Hu - Summer 1984/85 - Easter 1985	Stewart - soil science study - detail of soil structure changes
1986	Brejaart* - Summer 1985/86	
1987	FOLLOW-UP SURVEY, Dodson	

1989 FINAL SUMMARY REPORT
(this paper)

*Data collected but results unpublished

Figure 3 (p.8) illustrates the changing pattern of participation over time. This shows a participation pattern dominated by Summer use, and a secondary Easter use period. Numbers of Walkers present in both these periods increased for the first three years, but then began to decline.

Even though this apparent change is inferred from only limited data, it is supported by the informal observations of the researchers. The researcher for the 1984/85 Summer season (Hu 1985) noted that the decline in January peak-use was made up by increased November, December and February use. This suggested the attenuation of main summer use levels over a less intense but longer peak-use period.

The response to the individual and group surveys, similarly reflects the overall participation levels for the successive years. Numbers from Tetteroo (S2) are an exception since 77 questionnaires were collected outside the normal Dec/Jan sampling period, while engaged in physical impact research. Featured here is the peaking of use levels during the third Summer of the study (S3) and the second Easter (E2), following which numbers on the Walkway declined.

Table 2.3.1: Reponse to the 'Individual' Survey²

Sampling Season	Summer 1 (S1)	Summer 2 (S2)	Summer 3 (S3)	Summer 4 (S4)	Summer 5 (S5)
Year (Dec/Jan)	1981/82	1982/83	1983/84	1984/85	1985/86
Researcher	Comrie	Tetteroo	Hutchings	Hu	Brejaart
Sampling Site(s)	All huts	Boyle hut	Anne hut	Boyle hut	Anne hut
Returning method	Postal	In field	Postal	In field	Postal
No. distributed	205	391	495	309	230
No. returned n =	117	371	357	283	166
Response rate	62%	95%	65%	92%	73%

Easter seasons	-	Easter 1 (E1)	Easter 2 (E2)	Easter 3 (E3)	-
No. returned n =	-	79	241	46	-

Group returns shown in Table 2.3.2 (p.9) were all close to 100 percent due to the questionnaires being distributed and collected in the field by researchers. Return figures for Easter 1983 (E1) were not available in the source material for this report.

2. The symbols for summer and easter use eg. S1 = Summer 1, E2 = Easter 2 are used throughout the study

This table was derived from figures collated by Hutchings (1984). They represent estimates based on user counts during research, hut book records and observations by researchers and management staff.

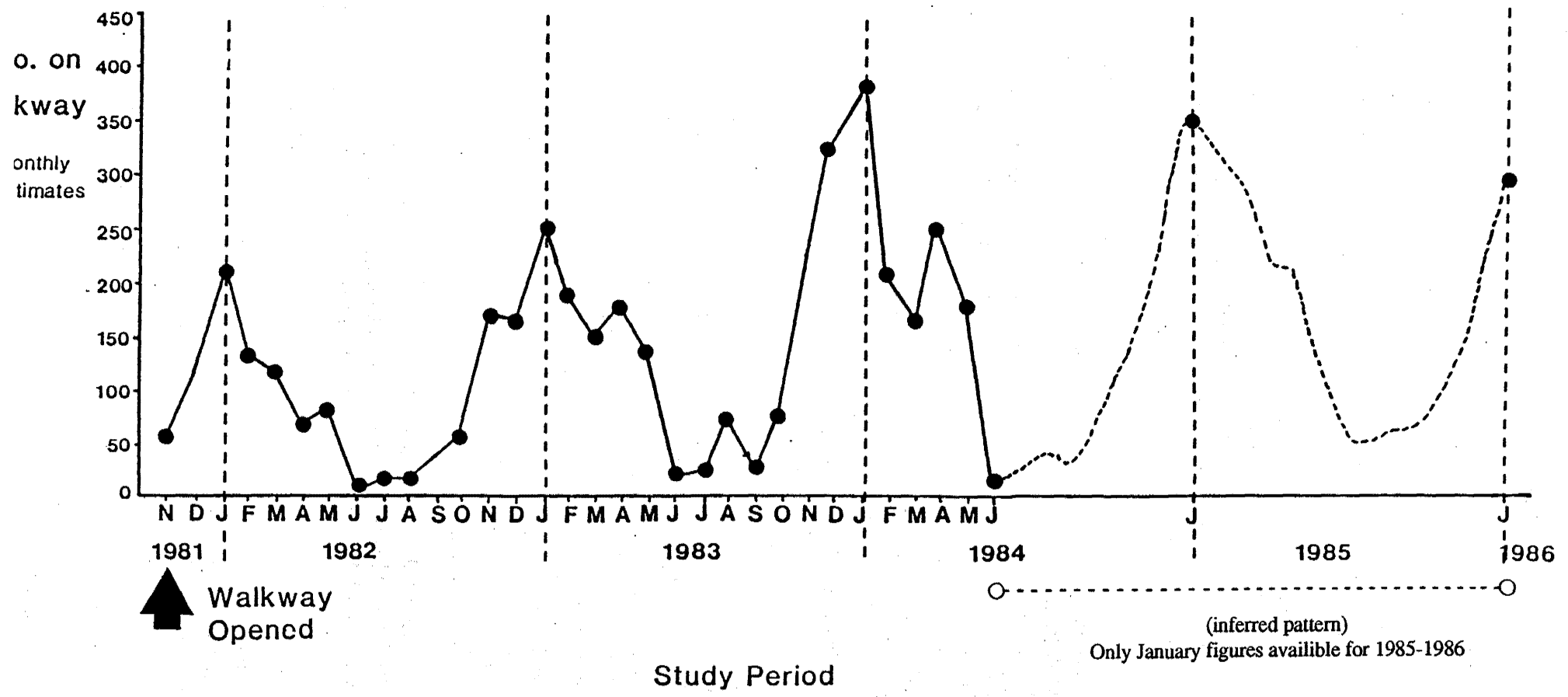


Figure 3: St James Walkway Seasonal Use Patterns

Table 2.3.2: Response to the 'Group' Survey

Sampling Season	Summer 1 (S1)	Summer 2 (S2)	Summer 3 (S3)	Summer 4 (S4)	Summer 5 (S5)
Year	1981/82	1982/83	1983/84	1984/85	1985/86
Returning method	In field	In field	In field	In field	In field
No. returned n =	50	147	76	104	61
Easter seasons	-	Easter 1 (E1)	Easter 2 (E2)	Easter 3 (E3)	-
No. returned n =	-	-	32	10	-

2.2 Follow-Up Survey

During the user surveys, names and addresses of respondents willing to participate in a follow-up study were collected. The Follow-up research was directed at the role played by the 'St James Experience' in the subsequent recreation behaviour of respondents. The Follow-up questionnaire included questions relating the recreation experience gained both prior, and subsequent, to use of the St James, perceptions of the Walkway and its influence on subsequent activities, and the personal characteristics of respondents (refer Appendix Three).

The main role of the personal data was as a check on the representativeness of the Follow-up sample. Such a check was necessary since this sample was drawn from the total user survey population on a voluntary basis, and thus the possibility of bias existed.

From the 801 names and addresses of willing users, a random sample of 300 was selected. Each individual was mailed a questionnaire (including a stamped return-address envelope), with reminders being sent two weeks after initial posting. Overall, 216 questionnaires were returned. This represented a 72 percent response rate, which is considered very high for a postal survey.

2.3 Impact Studies

Descriptive studies monitoring for changes in track condition were undertaken for three years (e.g. Nelson, 1982; Tetteroo, 1983; Hutchings, 1984)³ In addition the physical impacts of use on different soils was assessed (Stewart, 1985)

3. Refer to Nelson (1982) and Tetteroo (1983) for method/technique detail.

2.3.1 Monitoring Programme

For three summer seasons following the Walkway's opening in 1981, systematic measurements were made to assess the impact of use on the new track. Nelson (1982) evaluated a number of impact monitoring techniques, selected those suitable for the study's objectives and the field conditions present, and established the base-line data for future comparisons. Tetteroo (1983) and Hutchings (1984) largely replicated the methodology of Nelson, although minor changes were made. The original methodology of Nelson included a mixture of objective measurements, and subjective assessment techniques. These were:

- a) Full Transects
 - these were used to monitor changes on sections of established track.
 - sites were selected and marked for future re-measurement (site descriptions, permanent marker pegs).
 - measurement/assessment techniques were point analysis, track profile measurement, vertical and oblique photography.
- b) Partial Transects
 - these were used to monitor changes in open and grassland areas where tracks were developing between markers.
 - sites were selected and marked for future re-measurement (site descriptions, permanent marker pegs).
 - measurement/assessment techniques were point analysis and oblique photography (less detail than for full transects due to the track surface and route being less well defined).
- c) Hut Transects
 - these were partial transects extended from hut corners to monitor around-hut impacts.
- d) Photopoints
 - these were established where conditions warranted recording, but where physical, time and resource constraints made transects undesirable.
 - these also provided comparison of monitoring effectiveness between objective measurements and the more subjective assessment techniques.
- e) Track Rating
 - this subjective assessment technique was used for the areas between the permanent transects and photopoints.

- the track was divided into sections and rating 'scores' were made at pre-determined time intervals while walking each section.
- f) Observation
- unobtrusive observation of users' behaviour was carried out where impacts occurred on the track, and at high use sites (e.g. huts, campsites, common rest stops).

Over the whole Walkway, sixteen full transects, twenty two partial transects, thirteen hut transects and eight photopoints were established by Nelson (1982). Tetteroo and Hutchings made minor refinements and changes to this methodology as field experience and other circumstances required (e.g. development of new areas of impact, loss of sampling points due to track damage/maintenance/change, improved measurement techniques).

2.3.2 Soil Impact Study

Stewart (1985) undertook an extensive soil science study which concentrated upon the physical effects of trampling on soils. The Walkway was divided into six regions based upon soil type, and within each region, four sites were selected. These sites included two 'ridge' and two 'gully' sites. Depending on the predominant landforms in each soil region, the four sites were further subdivided into either 'backslope' and 'toeslope' positions, or 'terrace' and 'valley floor' positions. The subjective selection of these sites occurred if:

- (i) they exhibited trampling damage typical of the soil region;
- (ii) their profile morphologies were characteristic of the soil region and the site topography;
- (iii) their site topography was typical of their topographical classification.

At each of the 24 sites selected, measurements and assessments were made of:

- (i) Topography - landform, slope angle, elevation, aspect, drainage, parent material, vegetation, site constructions (e.g. bridges, boardwalks) and surface stone coverage.
- (ii) Soils - profile description/classification/drainage, bulk density, soil strength, infiltration rate, and the depth of the track surface horizon.

At each site, four soil sample replicates were taken. These samples were analysed for soil bulk density/porosity, consistence, aggregate stability, pH, nutrient status (P, Ca, Mg, U), and organic carbon content.

3. USER SURVEY RESULTS

Results from the five summer and three Easter user surveys are presented here (incorporating both 'group' and 'individual' results). Any major changes apparent over the study period ('trends') are discussed as they arise. In Section 3.1, demographic results from the Follow-up survey are also presented to assess the validity of the Follow-up study sample. The remainder of Follow-up study results are presented in Chapter Four.

Tables presented in this Chapter may not always provide complete sets of data, but explanation is given when possible. Data percentages only are presented, with numbers of respondents not included on tables to save space and simplify content. Unless otherwise stated, these totals are the same as those given in the response tables of Chapter Two (refer Tables 2.3.1 and 2.3.2). The remainder of this chapter is sub-divided under the headings:

- 3.1 Users of the St James Walkway
- 3.2 Experience of St James Walkway Users
- 3.3 Pattern of Use on the St James Walkway
- 3.4 Perceptions of Walkers

3.1 Users of the St James Walkway

This Section gives a demographic profile of St James Walkway users, the types of groups they walk with, and the changes in users (if any) that have occurred over the study period. Tables presented here show any apparent trends in participant characteristics, differences between Summer and Easter users, and comparisons with the Follow-up sample.

3.1.1 Age

Table 3.1.1: Age of Walkway Users

Age	S1	S2	S3	S4	S5	Summer Av	E1	E2	E3	Easter Av	Follow Up
<15	5	17	19	2	1	9	5	14	11	10	3
15-19	20	16	16	19	9	16	17	39	50	35	14
20-24	12	13	9	10	9	10	20	16	22	20	20
25-29	15	10	8	16	13	13	12	15	4	10	5
30-39	16	19	18	25	22	20	14	7	4	8	20
40-49	13	15	22	17	32	20	14	4	7	8	22
50-59	16	8	4	8	10	9	10	0	2	4	10
>60	1	2	3	2	3	2	8	4	0	4	5
NR	2	0	1	1	1	1	0	0	0	0	1

Two trends in user age on the Walkway¹ were apparent. The first, for Summer users, suggested that increasing numbers in the 40-49 years age group were using the Walkway over the study period. The second, for Easter users, suggested that increasing numbers in the 15-19 years age group were using the Walkway.

Summer and Easter users differed considerably by age, with Summer users including greater proportions of older people, and Easter users being particularly highly represented amongst those less than 29 years of age.

When compared with trampers from Arthurs Pass National Park (Simmons 1980) the Walkers demonstrated a much broader age profile. While 48 percent of Walkers were aged less than 29 years, amongst Arthurs Pass summer trampers the corresponding figure was 56 percent. Generally the Walker sample tended to include more older people.

Respondents to the Follow-up survey differed little from Summer Walkway users, apart from a higher proportion of those aged 20-24 (maybe reflecting the influence of Easter users in the Follow-up sample). It should be remembered here that up to six years may have elapsed between the original sampling of users and their subsequent re-sampling in the Follow-up survey. Hence many Easter users would have moved from the 15-19 to 20-24 years age group.

3.1.2 Sex

Table 3.1.2: Sex of Walkway Users

Sex	S1	S2	S3	S4	S5	Summer Av	E1	E2	E3	Easter Av	Follow Up
Male	56	59	55	58	54	56	62	58	59	60	56
Female	43	41	43	41	43	43	38	40	41	40	44
NR	1	0	2	1	3	1	0	2	0	0	0

Overall, few differences existed between different years of the study or between Summer, Easter and Follow-up samples.

Although female Walkway users are under-represented relative to the general population, examination of other backcountry trumper samples gives a lower percentage of female involvement (eg Arthurs Pass 22%, Greenstone/Caples 34% (Cessford 1987)).

1. 'Walkway' or 'Walkers' refers to the St James walkway and its users specifically

3.1.3 Marital Status

Table 3.1.3: Marital Status of Walkway Users

Status	S1	S2	S3	S4	S5	Summer Av	E1	E2	E3	Easter Av	Follow Up
Single	52	55	51	51	59	53	49	58	59	55	30
Married	46	40	40	40	31	40	47	40	41	42	54
Other	2	5	7	8	8	6	4	2	0	2	10
NR	0	0	2	1	1	1	0	0	0	0	6

Overall, few differences existed between different years of the study or between Summer and Easter samples (Table 3.1.3). Again the data indicates a difference between Walkers and other backcountry trampers (eg 54% Walkers single vs 67% (Arthurs Pass) and 62% (Greenstone/Caples)).

However, respondents in the Follow-up sample indicated a greater proportion were married. Presumably this reflects changes in Walker lifecycle stages in the time elapsed between the original and follow-up samples. This was also apparent from the Home Situations of respondents.

3.1.4 Home Situation

Table 3.1.4: Home Situation of Walkway Users

Home Situation	S1	S2	S3	S4	S5	Summer Av	E1	E2	E3	Easter Av	Follow Up
Live Alone	8	7	7	7	11	8	10	10	7	9	6
All adult(Flat)	15	13	11	17	13	14	21	15	26	21	7
Live with parents	22	33	34	25	13	25	21	23	39	28	17
Couple-no children	13	8	6	13	6	9	19	14	4	12	12
Adult with children:											
-pre-school	5	2	3	3	2	3	1	3	2	2	6
-primary	9	13	17	6	17	12	17	11	4	10	10
-working/student	7	7	18	19	16	13	8	14	15	12	17
-children left home	7	1	4	5	8	6	0	9	0	3	13
Other	0	0	0	0	0	0	0	0	0	0	4
NR	0	0	0	0	0	0	0	2	0	0	8

Although no clear trends are apparent, there did appear to be an overall increase in Adults with working/student children in Summer. In keeping with their younger profile, Easter Walkers were characterised as young adults by the greater numbers who lived at home or 'flatted' with other adults.

Respondents to the Follow-Up survey differed from both Summer and Easter walkers by including more adults whose children had left home, and fewer living with parents or in all adult households. The differences again suggest changes in respondent's lifecycle stage since original sampling.

3.1.5 Education Levels

Table 3.1.5: Education Levels of Walkway Users

Educational Level	S1	S2	S3	S4	S5	Summer Av	E1	E2	E3	Easter Av	Follow Up
Primary	4	7	9	0	0	4	3	7	0	3	3
Some Secondary	15	20	26	13	15	18	10	18	9	12	12
School Cert	11	10	11	9	6	9	12	6	15	11	9
UE/6th Form Cert	7	9	7	12	6	8	12	5	17	11	8
7th Form	2	4	4	3	1	3	7	1	9	6	4
Trade Qual	7	11	7	10	13	10	13	14	13	13	11
Tertiary/Prof	9	14	14	15	12	13	20	15	7	14	12
Degrée	42	25	21	38	43	34	26	32	30	29	34
NR	3	0	1	0	4	2	6	3	0	3	6

Overall there were few differences in Walkers' highest level of education between sampling years, or between Summer, Easter and Follow-up samples.

Walkway users were also asked whether they were currently receiving education, and if so, at what level? Generally up to 30 percent of users in any one year were still receiving education, which in most cases was evenly distributed between secondary and tertiary levels. Surprisingly no distinction between Summer and Easter Walkway users was evident.

3.1.6 Occupation Classes

Table 3.1.6: Occupation Classes of Walkway Users

Occupation Class	S1	S2	S3	S4	S5	Summer Av	E1	E2	E3	Easter Av	Follow Up
Professional/Tech	36	26	32	37	47	36	0	39	28	33	27
Admin/Managment	4	8	1	6	1	4	0	3	4	4	6
Clerical	3	5	3	8	5	6	0	10	4	7	6
Sales	2	2	4	3	4	6	0	3	0	1	4
Service	11	4	1	6	9	6	0	1	0	0	4
Ag/Forestry	4	3	6	3	4	4	0	2	9	6	3
Prod/Lab/Transport	5	7	5	6	4	6	0	8	4	6	7
Non Classified	33	38	37	27	12	29	0	31	48	39	36
NR	1	4	8	2	10	5	0	5	2	3	6

No trends were apparent over the study period, but Easter was distinguished by a higher proportion of those in 'Non-classified' occupations (e.g. students, housewives). But because there was no indication from education level results that a higher proportion of Easter users were currently receiving education, it is unclear whether this difference was due to greater student participation.

3.1.7 St James Walkway User Profile: Summary

Overall, users of the St James Walkway represented a distinct group of outdoor recreation participants. How these users were distinguished sometimes varied depending on whether they were Summer or Easter users. Summer Walkway users tended to be older, were more likely to have children, were less likely to be living in 'all-adult' (e.g. flatting) home situations, and were less likely to be in the 'non-classified' occupation class. It is possible to contend from this combination of results that Easter included greater participation by students. However, education level and current education involvement results provide no support for this.

Relative to users of other backcountry areas, Walkers were distinguished in a number of ways. Summer Walkers tended to be older, included more female participants, fewer people with 'young' home situations (e.g. living with parents/ all-adult households/ couples without children), and had similarly high proportions of users with university degrees/diplomas and from the 'Professional/Technical' occupation class. Easter Walkers also demonstrated some of these features, although tended to be more similar to other Easter users of Lake Sumner Forest Park (Simmons and Devlin 1980) in age, home situation and occupation class.

Throughout this section, demographic profile results of the Follow-Up sample have been included. These results have shown that apart from differences due to the time elapsed since initial sampling (e.g. a more 'aged' sample), the Follow-up survey sample is representative of the original user survey.

3.2 Experience of St James Walkway Users

This Section discusses the recreation experience characteristics of St James Walkway users and their motivations for undertaking their Walkway trip. This is done in an attempt to identify who respondents are in the recreation participation spectrum.

3.2.1 Previous Experience

For the majority of respondents, the Walkway trip was not their first walking experience (Table 3.2.1). This was more so for Easter than for Summer walkers. This suggests that any introductory role the Walkway may play is greater for Summer than for Easter use.

Table 3.2.1: Proportion of Respondents on their First Overnight Tramping Trip

First Trip?	S1	S2	S3	S4	S5	Summer Av	E1	E2	E3	Easter Av
Yes	14	19	23	13	12	16	9	3	11	8
No	86	81	76	87	88	84	91	97	89	92

The highest proportion of 'novice' Walkers occurred during the peak-use S3 (1983/84 season). This was not, however, the case for the peak-use at Easter E2 (1984 Easter).

Table 3.2.2 Agents of Introduction to walking/tramping

Introductory Agents	S1	S2	S3	S4	S5	Summer Av	E1	E2	E3	Easter Av
Friends	29	23	24	30	30	27	27	33	17	26
Parents	20	21	27	22	25	23	27	22	46	32
Club	10	13	15	17	17	14	19	16	22	19
Other Family	13	10	6	11	12	10	5	7	2	4
School	11	10	14	9	2	9	14	13	9	12
Self	-	9	9	6	5	6	8	6	2	5
Other	-	2	9	2	2	2	0	4	2	2
Non-Response	17	12	3	3	7	8	0	0	0	0

No trends are apparent in these results and few differences exist between Summer and Easter Walkers. A greater introductory role for 'Parents' is apparent for Easter Walkers. However, this was largely due to E3 (1985 Easter) results, which represented a relatively low response frequency (n=46). Overall, Parents and Friends were the major introductory agents, with Clubs and Schools also contributing. A common observation of researchers was that many parties represented a more experienced person taking less experienced ones on the Walkway. Few totally inexperienced parties were observed.

Table 3.2.3: First Use of the St James Walkway

First St James Trip	S1	S2	S3	S4	S5	Summer Av	E1	E2	E3	Easter Av
Yes	87	93	-	80	88	87	82	89	80	84
No	13	7	-	20	12	13	18	11	20	16

Most walkers were on their first trip to the Walkway (Table 3.2.3). No trends are apparent from these results, suggesting that most Walkers did not make return trips to the Walkway following their first trip there, at least during the study period.

Similarly no difference occurred between Summer and Easter walkers. This suggests that the previous visits undertaken had little or no effect upon the likelihood of a return trip.

Table 3.2.4: Previous Use of Other Walkways²

Other Walkways	S1	S2	S3	S4	S5	Summer Av
Yes	46	52	60	49	69	55
No	47	41	35	41	31	40
Unsure	7	7	5	10	0	5

Most walkers had used other Walkways prior to visiting the St James Walkway. Although no figures were available, it was apparent from comments in Comrie (1982), Tetteroo (1983) and Hu (1985), and in the study summary by Simmons (1986), that Walkways around Christchurch (especially on Banks Peninsula) were those most used previously. This reflected proximity to the homes of walkers, as did the mention of other urban walkways (e.g. Auckland, Wellington) (also refer Table 3.3.4: Residence of Walkers).

The common use of urban-fringe 'walks' has led many participants to associate all 'Walkways' with such track characteristics.³ This can result in walker expectations of other Walkways being misplaced. Occurrence of 'unsure' response also suggested a lack of awareness by some Walkers about whether they were on a Walkway or not.

3.2.2 Motivations, Activities and Experience of Walkers

No trends were apparent in motivations for a St James trip but during S1 (1982) high responses for 'Visit new area/scenery' and 'Access/Convenience to Christchurch' occurred (Table 3.2.5). This may be a reflection of the first season's interest in the Walkway and its attendant extensive publicity (Table 3.3.2). Both of these motivations could be expected to be important in a situation of 'new-opportunity' near a major centre such as Christchurch. A new Walkway being heavily publicised would arouse much interest and curiosity. It's proximity to Christchurch would allow much of the potential participation to be realised.

2. No Easter data was available here

3. refer Walkway classification, Section 1.2

Table 3.2.5: Motivations for doing the St James Walkway⁴
(Easter data was not available here)

Motivations	S1	S2	S3	S4	S5	Summer Av
Visit new area/Scenery	28	16	20	-	18	20
Outdoor Experiences/Activities	14	11	16	-	21	16
Exit Civilisation/Get away	8	11	16	-	12	12
Fitness/Exercise/Challenge	13	8	15	-	11	12
Social Opportunities	11	9	11	-	15	11
Access/Convenience to ChCh	17	6	4	-	3	7
For Specific Reason	5	4	10	-	4	6
Experience Nature	0	5	6	-	6	4
Other	0	4	2	-	9	4
Non-Response	4	26	0	-	1	8

(totals represent combination of the four responses allowed for)

Of the recreational activities undertaken on the Walkway itself, and elsewhere, 'Tramping' (walking) was both the most popular activity overall, and as a first choice (Tables 3.2.6 - 7). 'Sightseeing' was next most popular, generally as second choice.

Table 3.2.6: Activities Undertaken on the Walkway

Age	S1	S2	S3	S4	S5	Summer Av
Tramping	(89)35	(66)30	-	(71)32	(73)32	32
Sightseeing	(13)27	(16)31	-	(15)28	(17)28	28
Camping	(3)12	(6)13	-	(4)10	(3)10	11
Photography	9	7	-	7	7	8
Nature Study	8	7	-	6	8	7
Birdwatching	4	4	-	5	8	5
Climbing	3	3	-	2	0	2
Fishing	0	1	-	2	1	1
Other	6	6	-	6	5	6

(Combinations of the three responses allowed for, bracketed figures are first choice %s)

4. Some problems occurred with these results. The open-ended responses were interpreted differently by different researchers, and some recombination of categories was necessary for this Table. Also for S4, Hu (1985) only presented first choice responses, which were incompatible with this Table's presentation.

Overall there was little difference between activities undertaken on the Walkway and elsewhere. This suggests that the Walkway's use is part of the normal pattern of walkers' activity in any area. Thus the Walkway would not be providing any special or unique opportunities, apart from being a new area to visit, and an alternative opportunity for some to commence backcountry tramping.

Table 3.2.7: Activities Undertaken on Other Outdoor Trips

Activities	S1	S2	S3	S4	S5	Summer Av
Tramping	(57)31	(62)30	-	(66)31	(74)30	30
Sightseeing	(11)17	(13)26	-	(14)26	(11)26	24
Camping	(17)17	(13)15	-	(12)13	(6)10	14
Photography	7	6	-	8	8	7
Nature Study	6	7	-	6	8	7
Birdwatching	2	4	-	4	5	3
Climbing	5	3	-	4	1	3
Fishing	4	3	-	2	3	3
Other	11	6	-	6	7	7

(Combinations of three responses allowed for, bracketed are first choice %s)

Table 3.2.8: Walkers Experience in Activities

Experience (yrs)	* S1	S2	S3	S4	S5	Summer Av	E1	E2	E3	Easter Av
< 5	24	24	32	29	21	26	-	34	24	29
5-10	37	28	38	35	30	34	-	35	43	39
11-20	20	19	15	16	11	16	-	21	13	17
>20	19	19	16	21	30	21	-	11	20	16

Table 3.2.8 relates to the main activities undertaken by Walkers on the Walkway, not specifically to tramping (walking). However, given the high first choice percentages for tramping in Table 3.2.6 (89%), it may be safe to assume as much. These results show decreasing participation by walkers with 11-20 years experience, but increasing participation by those with more than 20 years experience. There are few differences between Summer and Easter walkers, with the latter having only slightly fewer years experience overall.

Again the results suggest an 'intermediate' role for the Walkway as inexperienced 'novices' enter the tramping spectrum and experienced older people begin to do more less arduous trips.

Also of interest is the proportion of walkers with more than 11 years experience in S3 (1983/84 season). During that season, the greatest numbers of users on the Walkway occurred (refer Table 2.3.1). This perhaps accounts for the apparent lower levels of experience that season. Results from Table 2.3.8 for the peak-use E2 (1984 Easter) also show lower experience levels.

The contention here is that as use-levels and popularity of the Walkway increased, greater proportions of walkers using the Walkway were inexperienced. Table 3.2.1 also provides some support for this contention, since during the S3 season (1984), the highest proportion of walkers on their first overnight trip occurred.

Table 3.2.9: Walker Membership of Conservation Groups
(no Easter data available)

Group Membership	S1	S2	S3	S4	S5	Summer Av
None	86	86	81	82	75	81
Forest and Bird	7	6	7	9	16	9
NFAC ⁵	3	2	3	3	1	3
Other	4	6	9	6	8	7

Table 3.2.10: Walker Membership of Recreation Groups
(No Easter data available)

Groups Membership	S1	S2	S3	S4	S5	Summer Av
None	-	53	60	61	61	59
Tramping	-	15	15	16	23	18
Sporting	-	9	4	8	5	6
Scouts/YHA	-	7	5	6	1	5
Climbing	-	3	1	4	1	2
Skiing	-	2	1	2	0	1
Other	-	2	14	4	12	8

Most walkers belong to neither conservation or recreation groups, although this is less so for the latter. Membership of the Royal Forest and Bird Society appears to represent an increasing proportion of walkers in succeeding years. Membership of tramping groups also appears more pronounced in succeeding years. Prominence of tramping groups is not unexpected given the primary role of tramping amongst activities on the walkway.

5. Native Forests Action Council

3.2.3 Summary of Walker Experience

For most walkers, the 'St James experience' was not their first overnight trip, but few had ever used the Walkway itself before. Other experience of Walkways was common, but this was usually based upon the 'urban-fringe' type of walkways, especially those around Christchurch. The St James was constructed as a more alpine and back-country alternative to such Walkways, and played an introductory role as such for many novice trampers.

Publicity for the Walkway's opening was important for walker motivations in the first year - S1 (1981/82 season). This was expressed through the high occurrence of 'visit new area/scenery' and 'access/convenience to Christchurch' motivations. The latter occurred at only low levels in subsequent years while the former, along with other generalised motivations remained prominent.

The lack of distinction between activities undertaken on the Walkway, and those undertaken elsewhere suggests that the 'new area' attraction of the Walkway was the most important of its array of unique features.

Walker experience in tramping/walking tended to be slightly lower for Easter use. The main result of interest here however was that during the peak-use S3 (1983/84 season), experience levels of walkers were at their lowest overall. This was also apparent for the peak-use E2 (1984 Easter). These results suggest that higher use level periods incorporated participation by an increased proportion of less experienced walkers.

Few walkers were members of clubs or groups, with the most prominent involvement in organised groups being the 18 percent overall who were tramping club members.

3.3 Pattern of Walkway Use

This section discusses the recreational use patterns on the St James Walkway. Included is the holiday role of the Walkway, the sources of information about it, the residence and travel modes of walkers, on-trip travel direction and facility use, and the party size, composition, and equipment characteristics. This is done to identify how the Walkway is being used. A pre-trip/on-trip distinction is used here to organise results.

3.3a Pre-trip Walkway Use Patterns

3.3.1 The holiday role of the Walkway

Table 3.3.1: Holiday role of trip to the Walkway

Role of trip	S1	S2	S3	S4	S5	Summer Av
Doing Walkway only	65	77	65	69	69	69
Only part of larger trip	35	23	35	31	31	31

For most walkers, the trip on the Walkway constituted the single focus of their holiday (Table 3.3.1). However, with an average of 31 percent undertaking it as part of a longer holiday, it is clear that in Summer¹, many use the Walkway as one component of a longer holiday. Support for this finding is further given in discussion of the current residence of respondents (Table 3.3.4), which shows that Summer Walkers tend to come to the Walkway from more distant locations.

Once on the Walkway, the overwhelming majority of groups travel from one end to the other, with few branching into other tramping areas from the Walkway.

Of those who undertook variation from this usual pattern of Walkway use, trips incorporating visits to the Spencer Range or involving access to Arthurs Pass National Park (via Harper Pass) were most commonly mentioned.

3.3.2 Information sources about the Walkway

The impact of the major publicity drive given this new development² is evident from Walkers' initial source of awareness of the Walkway, and their subsequent trip-planning information sources (Tables 3.3.2 - 3.3.3).

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1. No Easter data were available. However given the Easter holiday duration (4-5 days) and the matching average Walkway trip-time (4-5 days refer Table 3.3.12) most Easter trips would be to the Walkway only.
 2. The Walkway had been officially opened only a few months prior to the 1981/82 Summer season when this research programme commenced.

Table 3.3.2: How Walkers first heard of the Walkway

How Heard	S1	S2	S3	S4	S5	Summer Av	E1	E2	E3	Easter Av
News Media	48	17	11	10	8	19	-	15	4	8
Word of Mouth	28	42	35	52	46	41	-	39	50	44
Family	4	21	26	17	16	17	-	14	11	12
Pamphlets	4	10	11	10	11	9	-	16	22	17
WW Book (A.A.)	0	0	0	3	4	1	-	0	0	0
WW Book (Temple)	0	4	7	5	7	5	-	7	4	5
Signs (roadside)	4	2	2	0	1	2	-	4	7	5
Other	12	4	8	4	5	7	-	4	2	3

In S1 (1981/82 season), the media was clearly the main means by which people first heard of the Walkway. The advent of specific publications referring to the Walkway (Walkways Books) also represented change in the ways in which walkers first heard of the Walkway.

Word-of-mouth, which is usually the main source of such information was initially only a secondary source. However, in later years it rose to its traditionally prominent role as the the impact of imitial media coverage decreased. A high proportion of Walkers (especially Summer Walkers) first heard of the Walkway from 'Family'. While this can be considered a form of 'word-of-mouth', it is indicative of a high degree of family involvement and interest in Walkway Use (also refer Table 3.3.10).

Table 3.3.3: First source of information for Trips³

First Source	S1	S2	S3	S4	S5	Summer Av	E1	E2	E3	Easter Av
News media	48	3	0	3	0	11	8	0	0	3
Word of Mouth	28	9	15	16	5	15	12	9	20	14
Govt Depts	11	50	31	33	25	30	32	34	10	25
Family	4	0	0	0	0	1	0	0	0	0
Pamphlets	4	15	11	8	21	12	12	19	10	10
WW Book (AA)	0	11	0	9	16	7	20	16	0	12
WW Book (Temple)	0	0	0	12	16	6	0	0	10	3
Signs (roadside)	4	0	0	0	0	1	0	0	0	0
Other	1	10	26	20	19	20	19	16	50	28

3. From Group Questionnaire results. These results will be subsequently indicated by '(group)' as shown.

3.3.3 Walker residence

Table 3.3.4 Current Residence of Walkers

Residence	S1	S2	S3	S4	S5	Summer Av	E1	E2	E3	Easter Av	Follow Up
Christchurch	46	59	45	47	26	45	0	52	70	61	45
Other Cant'y	13	5	16	12	5	10	0	10	13	12	17
West Coast	1	5	2	0	2	2	0	0	11	5	3
Other S.I.	6	10	15	4	11	9	0	20	2	11	22
N.I. Cities	27	13	17	25	35	23	0	15	4	10	13
Other N.I.	2	4	1	8	10	5	0	3	0	1	0
Overseas	3	4	4	5	10	5	0	0	0	0	0

No trends are apparent in Walkers' residence, but there does appear to be a strong distance decay between residence and Walkway use.

Although Christchurch is the main home location in both Summer and Easter cases, it is far more predominant for Easter Walkers. The short duration of the Easter holiday and the close proximity of Christchurch combine for this result. By contrast, Christchurch is less dominant in Summer, and 'North Island Cities' in particular are over-represented relative to their Easter levels. 'Other North Island' and 'Overseas' are under-represented, particularly at Easter. This again suggests that Summer use of the Walkway is often incorporated into larger holiday plans.

The Follow-up results differ from both Summer and Easter patterns, with the biggest source of residence change being in 'Other South Island'. These results suggest there is considerable mobility in the residence of the population.

3.3.4 Travel modes to the Walkway

Table 3.3.5: Group travel to the Walkway

Means	S1	S2	S3	S4	S5	Summer Av	E1	E2	E3	Easter Av
Private Car	50	61	50	62	59	57	88	56	70	71
Bus	33	31	38	30	26	32	8	38	30	25
Hitchhike	2	3	4	5	3	3	4	0	0	1
Motorcycle	2	1	1	0	5	2	0	0	0	0
Walk (overland)	2	3	1	3	2	2	0	0	0	0
Other	11	0	6	0	5	4	0	6	0	2

Private cars were the main means used to get to the Walkway, with buses being the secondary means. These patterns were consistent throughout the study period, but there were differences between Summer and Easter.

In Summer, reliance on cars is much less than for Easter. Buses are more commonly used in Summer, as are hitchhiking, motorcycles, walking and other means. This is again indicative of a different holiday pattern in Summer, and a different focus for the Walkway in such.

Another important transport requirement related to Walkway use is the means used to link the Walkway entry/exit points, which are quite distant from each other. This is particularly relevant for the majority of Walkers, since most have used cars to get to their Walkway starting point.

Table 3.3.6: Means used to link Walkway entry/exit points (group)

Means	S1	S2	S3	S4	S5	Summer Av	E1	E2	E3	Easter Av
Private	-	-	36	31	38	35	-	41	57	49
Bus	-	-	36	23	23	27	-	18	14	16
Hitchhike	-	-	21	32	28	27	-	35	29	32
Other	-	-	7	9	12	9	-	6	0	3

Some form of private arrangement was the most common means used to link the two ends of the Walkway. This was most common for Christchurch Walkers, many of whom would organise to be dropped off and then picked up by others. This reflects the proximity of Christchurch, and also the concern about roadside vandalism of cars in the Lewis Pass region. Such concern has led some to use the drop-off/pick-up service offered by the Maruia Springs Hotel.⁴ This involves leaving cars safe at the hotel and being dropped off at the Lewis Pass end of the Walkway.

Private arrangements are more common for Easter Walkers, reflecting the limited trip-time available, the predominance of (nearby) Christchurch residents, and the greater walkway-only emphasis of Easter Walkway use. Buses, in particular, appear less popular for Easter use, suggesting that they are not available at convenient times for this purpose.

4. Located near the Lewis Pass end of the Walkway

3.3b On-trip Walkway Use Patterns

3.3.5 Trip Direction

Table 3.3.7: Entry point to Walkway (group)

Entry Point	S1	S2	S3	S4	S5	Summer Av	E1	E2	E3	Easter Av
Lewis Pass end	87	86	75	83	80	82	-	88	100	94
Boyle Flats end	12	12	17	13	16	12	-	12	0	6
Other	1	0	5	3	2	2	-	0	0	0
NR	0	2	3	2	2	2	-	0	0	0

No changes were apparent in choice of trip direction, but a clear established preference was apparent for starting at the Lewis Pass end, especially for Easter Walkers.

Table 3.3.8: Reasons for Entry Point Preference

Reasons	S1	S2	S3	S4	S5	Summer Av	E1	E2	E3	Easter Av
Easier Direction	-	-	28	36	29	31	-	56	60	58
Brochure advice	-	-	12	15	20	16	-	3	10	6
Parking safety	-	-	15	15	9	13	-	22	20	21
Advice given	-	-	12	11	7	10	-	16	0	8
Convenience	-	-	11	6	10	6	-	4	0	2
Carparking (hotel)	-	-	0	0	9	3	-	0	0	0
No real reason	-	-	4	8	10	7	-	0	10	5
Other	-	-	15	6	10	10	-	0	0	0
NR	-	-	5	3	6	4	-	0	0	0

Since most Walkers are first-time users of the Walkway (Table 3.2.3), they have had to rely upon others to provide them with useful information. This information has been based upon two main themes. First, that the Lewis-Boyle trip direction is easier, and second, that vandalism is a real threat to parked cars. These reasons are both more strongly emphasised for Easter use.

One beneficial consequence of this voluntary one-way trip direction preference, is that inter-party contacts are minimised on the track itself. This would give individual parties the impression of fewer people in the area than actually so. Hence the numbers of people walking the track could be much greater with minimal increase in encounters on the track.

However any increase in numbers would intensify hut congestion, which as shown later (Table 3.4.17) is the focus of the Walkways' crowding perceptions. This particular disadvantage of a one-way flow of Walkers was clear during the peak use E2 (1984) Easter). Over 250 Walkers were on the Walkway, and because their start/finish times were largely the same (due to the Easter holiday duration), they tended to move through the study area together. This led to severe hut crowding, with over 100 walkers being observed around Anne hut for example (Hutchings pers com).

3.3.6 Party size and Composition

Table 3.3.9 Party Size (group)

Number in party	S1	S2	S3	S4	S5	Summer Av	E1	E2	E3	Easter Av
1	13	10	13	10	15	12	0	0	0	0
2	37	37	30	41	32	36	44	46	10	33
3	26	15	15	16	25	19	16	8	10	12
4	13	14	16	19	12	16	20	13	0	11
5-6	7	15	7	8	8	9	8	25	60	31
7+	4	9	4	3	2	5	12	8	20	13

Summer party sizes remained consistent throughout the study period, with almost 90 percent of parties consisting of four Walkers or less. For Easter the corresponding figure was almost 60 percent. Overall, Easter parties tended to be larger than those in Summer, with 31 percent of parties for example consisting of between five and six Walkers. The different holiday duration of Easter appears to encourage larger organised groups rather than the more varied Summer users.

Table 3.3.10: Party Composition (group)

Composition	S1	S2	S3	S4	S5	Summer Av	E1	E2	E3	Easter Av
Family	30	43	37	32	55	39	44	28	20	31
Friends	34	20	26	39	14	27	32	25	40	32
Family/Friends	17	20	16	14	10	16	16	31	20	22
Individuals	13	12	16	11	14	13	0	9	10	6
Club	5	4	4	6	3	7	8	3	10	7
School	0	0	0	0	0	0	3	3	0	2

Family groups and individual walkers are more common in Summer, while in Easter, parties made up of friends, family and friends and school groups are more common. These differences are small, but reflect differences in the two types of holiday use of the Walkway.

Table 3.3.11: Composition of Family Groups on the Walkway (group)

Family Composition	S1	S2	S3	S4	S5	Summer Av
Husband + Wife	54	31	26	30	29	34
1 Parent-children(<8)	14	0	3	2	7	5
2 Parents-children(<8)	7	16	3	12	7	9
1 Parent-children(8-15)	0	0	13	0	2	3
2 Parents-children(8-15)	11	3	0	0	2	3
1 Parent-children(>15)	7	21	36	10	17	18
2 Parents-children(>15)	4	19	10	16	20	16
Relatives	0	0	8	0	7	3
Other	3	10	3	30 ⁵	7	11

It is clear that 'Husband + Wife' was the main family group overall. Parents with children aged over 15 were also common. Involvement by parents with children was greatest in S3 (1983/84 season). This season was the one in which the numbers of Walkway users was greatest during the Summer period. The factors encouraging high use in this Season appear also to have encouraged parent/child involvement.

3.3.7 Trip Duration

Table 3.3.12: Number of Days on Walkway (group)

Number of days	S1	S2	S3	S4	S5	Summer Av	E1	E2	E3	Easter Av
2	4	5	0	7	2	4	4	0	0	1
3	11	8	13	9	10	10	16	16	0	11
4	37	24	24	26	18	26	40	31	40	37
5	41	46	53	51	59	50	36	41	49	42
6	0	0	5	6	3	3	4	9	0	4
>6	0	0	5	6	3	3	4	9	0	4
NR	7	17	4	2	2	6	0	3	10	4

Table 3.3.11 indicates that Summer parties are tending to undertake fewer 4 day, and more 5 day trips over the Walkway. Overall, Easter use involves more 4 day trips, reflecting the limited duration of this holiday period.

5. Hu (1985) noted many large parties containing families of different ages, these he classified as 'other'. This subjective interpretation may not have been made by other researchers.

The majority of trips involved spending one night at each of the four main huts - Ada, Christopher, Anne and Boyle Flats huts. Parties that skipped any of these huts usually bypassed Christopher Hut (Comrie 1982). The last night was usually spent at Boyle Flats Hut since the Boyle Flat carpark was the common exit point from the Walkway. While some skipped huts, approximately 10 percent of parties took a day off for a rest or to do day trips during the Summer seasons.

Table 3.3.13: Location of days-off on trip (group)

Location of days off	S1	S2	S3	S4	S5	Summer Av
Ada Hut	4	-	4	2	3	3
Christopher Hut	0	-	1	2	3	2
Anne Hut	0	-	7	1	0	2
Boyle Hut	6	-	3	2	3	3
Other	0	12	0	1	0	0
None taken	90	88	85	92	91	90

Results here do not highlight any one area as being a popular location for day-trips or rest days. Twelve percent of parties did take a day off during S2 (1982/83 Summer), but locations were not specified, hence the high figure for 'other'. What is shown is the overall consistency of party numbers taking days off over the study period.

3.3.8 Use of Campsites

Use of campsites by parties was recorded in three of the five study seasons (Table 3.3.14). Comrie (1982) found that 12 parties (24% of the group sample overall) camped out at some time on the Walkway. Hu (1985) found 27 parties (26% overall), and Brejaart found 19 parties (31% overall). Table 3.3.14 shows in which Walkway sections campsites were used.⁶ The first section of the Walkway through the Cannibal gorge, and around Ada Hut were the most common camping locations (Table 3.3.14). Hu (1985) considered this resulted from walkers not having enough time to reach Ada hut, due either to a late start from the Lewis Pass entry point, or to slow progress through this, the most difficult section.

Apart from this first section, most campsites were located around huts. Reasons for this become apparent in Tables 3.3.15 - 3.3.16, where parties with tents were asked whether they would use formal campsites if these were provided (e.g. including fireplace, pit toilet), and, in an open-ended question, why they would use these.

6. The data refers to the number of camps made on the Walkway, with some parties making more than one, hence the number of camps may exceed the number of parties.

Table 3.3.14: Locations of Campsite use (group)

Sections of Walkway used for camping	S1	S4	S5	Summer Av.
No. of camps made=	(20)	(41)	(37)	
Lewis Pass - Ada Hut	30	17	17	21
Around Ada Hut	15	24	30	23
Ada Hut - Christopher Hut	5	2	4	4
Around Christopher Hut	5	12	22	13
Christopher Hut - Anne Hut	0	2	9	4
Around Anne Hut	15	12	13	13
Anne Hut - Boyle Hut	15	10	0	8
Around Boyle Hut	10	19	0	9
Boyle Hut - Boyle Carpark	5	0	4	3

Table 3.3.15: Use of (hypothetical) Formal Campsites (group)

Use of Sites	S1	S2	S3	S4	S5	Summer Av
(n=)	(37)	(91)	(54)	(79)	(50)	
Yes	65	58	57	62	59	60
No	17	18	15	19	22	18
Unsure	17	23	28	20	19	21

Table 3.3.16: Reasons for Tent use near Huts (group)⁷

Reasons	S3	S4	S5	Summer Av
If huts full	40	66	53	53
Prefer to camp	38	17	8	21
If sites between huts	10	4	0	5
In emergencies	8	0	0	3
In fine weather	0	0	6	2
If hut occupants undesirable	0	0	2	0
Other	2	3	8	4
Prefer to use huts	0	0	16	5
Tents too heavy	4	8	0	4
Prefer to choose own sites	0	0	7	2

7. Because non-response to this open-ended question was not available for this table, the overall response totals can not be given.

3.3.9 Equipment Carried by Parties

Results showing the equipment carried by parties (and its use) give insights about the experience of parties (or party members), their degree of trip preparation, and the independence they have from facilities provided. Table 3.3.17 shows the proportion of the Walker sample that carried equipment, and in brackets, the proportion of the sample that used equipment.

Table 3.3.17: Equipment Possession and Use on the Walkway (group)

Equipment		S1	S2	S3	S4	S5	Summer Av
Tent	-carried	73	62	71	76	82	73
	-used	(38)	(22)	(27)	(26)	(38)	(30)
Stove	-carried	91	91	88	88	88	89
	-used	(91)	-	(83)	(79)	(83)	(84)
F.Aid Kit	-carried	81	90	88	82	83	83
	-used	(56)	-	(58)	(47)	(59)	(55)
Map	-carried	80	80	79	77	77	78
	-used	(71)	-	(68)	(63)	(72)	(68)
Brochure	-carried	63	63	80	77	83	73
	-used	(58)	-	(71)	(63)	(77)	(67)
Compass	-carried	-	-	47	47	45	46
	-used	-	-	(11)	(11)	(9)	(10)

The only trend apparent in equipment possession was an increase in parties carrying brochures. Overall, stoves were the item of equipment most often carried (e.g. 89% of parties), and most often used (e.g. 84% of parties). A high proportion of parties carried tents, but a much lower proportion actually used them. Overall, parties seem to be well prepared and equipped to be independent of hut sleeping and cooking facilities if necessary.

3.3.10 Summary of Walkway Use Patterns

The role played by the Walkway in the holiday patterns of users is mainly as the sole location of holidays. However for about 30 percent of users, it is part of a larger trip. It is likely that the limited duration of the Easter holiday coupled with the 4-5 day normal trip length (refer Table 3.3.12), would make the Walkway an ideal single location for Easter trips. Knowledge of the Walkway came mainly from word of mouth. In the first year (S1-1981/82 season), the

extensive publicity of the Walkway's opening led to 'media' being the main information source. This declined quickly in successive years. Word-of-mouth increased over the same period. Other information sources began to appear later in the study period (e.g. the specific Walkways books). When walkers actively sought information for their trip planning, 'Government Departments' became most important.

Most walkers came from Christchurch and from North Island cities. For Easter periods, Christchurch increased in importance while North Island cities and overseas residence decreased. The Walkway thus receives largely local use, especially during the short duration Easter holiday. In Summer, it is likely that people with more distant residence incorporate the Walkway into larger South Island trips. Private cars were the main means of access to the Walkway, although more so in Easter when alternative means are limited by time constraints (e.g. buses, hitchhiking). However, to link the two Walkway ends, a variety of means is utilised. Private arrangements involving others not on the trip are common, as is hitchhiking.

On the trip itself, party size varies for Summer and Easter use. Party size in Summer ranges from one to more than seven, with parties commonly containing 2-4 people. Parties of 2 were most common. For Easter, parties tended to be either 2 people, or 5-6 people. Parties of more than five were much more common.

Most began their trip at the Lewis Pass end of the Walkway and took 4-5 days to complete it. Advice from word-of-mouth and brochures was important in encouraging walkers to start at the Lewis Pass end. This advice reports that the Lewis to Boyle trip direction is easier, and that car safety is greater at the Boyle Flats carpark. Such reasons were particularly emphasised for Easter use.

Walkers tended to spend one night at each of the four main huts on their trip. About 10 percent overall spent an extra day at a hut as a rest-day or for a day-trip. Over 20 percent of parties camped out in tents on the Walkway. Most did so in the Walkway section from the Lewis Pass road-end through Cannibal Gorge to Ada Hut. This largely reflected track distance and difficulty, which meant many parties were forced to camp out before reaching Ada Hut.⁸ Apart from this first section of the Walkway, camping generally occurred around huts, often when huts were not full. However, for most walkers, camping was an option to be used only if huts were full. The proportion of parties with tents who preferred to use them declined over the study period, and at most represented only 20 percent of tent carriers. Most parties were well-equipped, having tents, stoves, first-aid kits and track information material. Possession of such equipment meant most parties could be independent of huts and facilities if required. Almost all parties with stoves used them.

8. A new hut has been built on this section for these reasons

3.4 Perceptions of Walkers

This section is subdivided into three sub-sections dealing respectively with Walker perceptions of huts, tracks and other users. Table results are based upon degree of walker agreement with a series of statements (refer Appendix 2: Individual Questionnaire). Open-ended questions were also asked to obtain more specific problem-statements, and the main points resulting are noted where appropriate.

3.4.1 Perceptions of Huts

Table 3.4.1 Distances Between Huts

Distances	S1	S2	S3	S4	S5	Summer Av
Too far	8	9	7	4	1	6
Just right	74	81	83	90	91	84
Too close	8	5	4	4	3	5
NR	10	5	6	3	4	5

The proportion of walkers who considered inter-hut distances were 'just right' was initially high, and increased over the study period. The proportion considering distances were 'too far' decreased from an initial relatively low level. This suggests that in successive seasons, walkers expectations of the trip were becoming more accurate. It is unclear whether this resulted from wider and better information being available in successive years, or that more walkers better suited to this type of Walkway began using it.

Most trips started from the Lewis Pass end of the Walkway, and the first section through to Ada hut involved traversing Cannibal Gorge. This section was generally considered long and difficult and was the section where most tent camping took place. Given these characteristics, it is surprising that the number of Walkers considering distances 'too far' was not higher.

Table 3.4.2 Hut size

Size	S1	S2	S3	S4	S5	Summer Av
Too small	20	21	24	11	10	15
Just right	71	75	69	87	86	78
Too large	1	2	1	1	1	1
NR	8	2	5	2	3	4

A response of 'Just right' was the major one given overall in Table 3.4.2. Its lowest support came however, in S3 (1983/84) season), which was the Summer the greatest number of walkers occurred.

That Summer was also the one where the perception of huts as being 'too small' received its greatest support, after which it decreased in subsequent years. Overall satisfaction with the status-quo for hut size, as represented by the 'just right' response, may reflect changing Summer use patterns as observed during the study period. This involved change from a short intense peak-period during December/January, toward a more attenuated Summer season that involved greater November and February use.

Negative comment about hut size most often related to Ada hut, which was cited often as having inadequate size, space, lighting and toilets. Congestion problems at peak periods were further indicated by Ada hut's prominence as a tent camping location (refer Table 3.3.14).

Table 3.4.3. Hut Space

Hut space	S1	S2	S3	S4	S5	Summer Av
Adequate	76	79	73	87	91	81
Inadequate	15	18	21	11	8	15
NR	9	3	6	2	1	4

Perception of 'adequate' space in huts increased over the study period overall, but received its lowest support during S3 (1983/84 season). 'Inadequate' space received its highest support in that season. These results closely match those for hut size above.

Table 3.4.4 Bunk Type Preference

Bunk type	S1	S2	S3	S4	S5	Summer Av
Platform	61	62	62	64	67	63
Separate	17	20	24	24	24	22
No Preference	0	0	6	0	0	1
NR	22	18	8	12	8	14

Platform bunks were the most preferred, and this increased slightly over the study period. Separate bunks became also more preferred over the study period, while the 'No Preference' and non-response proportions decreased. No deviation occurred during the busy S3 (1983/84 season), suggesting that neither bunk type was considered by walkers to be more advantageous in congested huts.

Table 3.4.5 Hut Facilities

Facilities	S1	S2	S3	S4	S5	Summer Av
More	18	21	30	16	20	21
Same	71	74	63	79	74	72
Less	2	3	1	1	1	2
NR	9	2	7	5	5	6

No longitudinal trends were apparent for hut facility preferences, with the status-quo 'same' response predominating throughout (Table 3.4.5). Greatest preference for 'more' facilities occurred during S3 (1983/84 season). Ada hut again featured in the comments made about facilities over the study period. General improvements suggested for huts included increased bench space, seating, ventilation, taps, fly screens and extended verandahs. And Table 3.4.6 showed that the clear majority of walkers considered hut construction good.

Table 3.4.6 Hut Construction Perceptions

Construction	S1	S2	S3	S4	S5	Summer Av
Poor	3	3	2	1	1	2
Good	94	90	92	97	98	94
NR	3	7	6	2	1	4

Most walkers perceived no problems of physical impact around huts (Table 3.4.7). No trends occurred in these results and no differences were apparent between Summer and Easter use. This suggests huts are located on good sites which have been 'hardened' sufficiently to prevent any major impacts developing.

Table 3.4.7 Physical Impacts Around Huts¹

Impacts	S1	S2	S3	S4	S5	Summer Av	E1	E2	E3	Easter Av
Problem	-	14	10	18	10	13	10	11	15	12
No Problem	-	81	81	78	86	81	81	80	85	82
NR	-	5	9	4	4	6	9	9	0	6

3.4.2 Perceptions of Tracks

The Walkway had been subject to new developments prior to its official opening, and an

1. No S1 data is given here (and in some later tables) due to change in question format during S2 (Tetteroo 1983).

ongoing maintenance program continued throughout the study period. This maintenance tended to concentrate restorative effort upon the areas where impacts were most likely to occur.

Table 3.4.8 Track Construction (forested areas)

Construction	S1	S2	S3	S4	S5	Summer Av
Satisfactory	84	87	84	96	93	89
Unsatisfactory	7	8	11	2	3	6
NR	5	9	6	2	4	5

Despite the fact that many walkers were not aware that the St James Walkway was classified a 'track' rather than a 'walkway' (refer Section 1.2), most considered track construction satisfactory. This perception increased over the study period.

Most perceptions of track construction as unsatisfactory occurred during S3 (1983/84 season), the summer season of highest use during the study period. This may reflect a greater physical use impact on tracks with the higher user numbers, or, a larger proportion of walkers for whom track conditions were not up to expectations. However, overall it is clear that the existing 'status-quo' conditions were perceived as being satisfactory, and that such perception increased over the study period.

Table 3.4.9 Boardwalks

Boardwalks	S1	S2	S3	S4	S5	Summer Av
Adequate	65	64	58	75	73	67
Inadequate	27	32	34	22	23	27
NR	8	4	9	3	4	6

Most walkers perceived the provision of boardwalks on the Walkway to be adequate and this perception increased over the study period. However, this proportion was not overwhelming, with almost 30 percent (on average) of walkers perceiving boardwalks as inadequate.

This may reflect a desire for more boardwalking due to wet/muddy track condition, or a desire for less boardwalking due to conflicts with 'wilderness' perceptions. Given that the Walkway's construction was incomplete when opened; it is in a high rainfall setting; and the common acceptance of boardwalking as being necessary to minimize physical impacts in some settings; the former explanation is more likely.

Again, the highest perception of boardwalking as being inadequate occurred in the peak use S3 (1983/84 season). Possible explanations for this have already been introduced with regard to track construction.

Table 3.4.10 Bridges

Bridges	S1	S2	S3	S4	S5	Summer Av
Adequate	87	89	89	93	96	91
Inadequate	4	5	3	2	1	3
NR	9	6	8	5	3	6

Provision of bridges was perceived as adequate by most walkers, and this increased over the study period. Here S3 (1983/84 season) was not distinguished by relatively high dissatisfaction as commonly occurred for other perceptions. This suggests that if S3 (1983/84 season) did result in use problems due to higher walker numbers, such problems did not include use of bridges.

Table 3.4.11 Track Construction (open areas)

Construction	S1	S2	S3	S4	S5	Summer Av
Satisfactory	76	75	80	84	89	81
Unsatisfactory	15	19	13	15	8	14
NR	9	6	7	1	3	5

Most walkers considered track construction in open areas satisfactory, and this increased over the study period. However, the proportions considering track condition in open areas unsatisfactory were higher than those for tracks in forested areas (Table 3.4.3). This difference arose largely due to the differing degrees of track definition in the two settings. While concerns about forested track construction largely related to features such as gradient, benching and drainage, concerns about open-area tracks related most often to track marking. Another question was put to walkers on this subject after the first study season (S1 1981/82 season).

Table 3.4.12 Track Marking in Open Areas

Marking	S1	S2	S3	S4	S5	Summer Av	E1	E2	E3	Easter Av
Satisfactory	-	73	75	81	80	79	-	78	85	81
Unsatisfactory	-	23	19	18	15	19	-	17	13	15
NR	-	4	6	2	5	4	-	5	2	4

Perception of track marking in open areas as being unsatisfactory was high, considering the usual 'status-quo' satisfactory response for other perceptions. This was consistent for both Summer and Easter use. Dissatisfaction with marking decreased a little over the study period, due mainly to management action to improve marking.

Walkers were asked what preference they had for different marker types in open areas. Responses varied little over the study period, with Summer average figures being for fence-post-type markers (78%), cairns (16%) and non-response was 6 percent. Easter results varied little from these.

Table 3.4.13 Wear on Tracks

Wear	S1	S2	S3	S4	S5	Summer Av	E1	E2	E3	Easter Av
Excessive	-	12	13	3	3	8	13	10	4	9
Average	-	71	66	66	69	68	42	67	70	60
Minimal	-	13	15	28	27	21	18	18	26	21
NR	-	4	6	2	1	3	27	6	0	11

Most users had the neutral perception of 'average' wear on tracks. Of those remaining the 'minimal' response predominated. This response increased over the study period, while that for 'excessive' wear decreased. These results were consistent for both Summer and Easter use. And although S3 (1983/84 season) featured for negative perceptions of many Walkway features, such was not the case here.

3.4.3 Perceptions of Other Users

Walkers were asked whether they considered the number of others encountered while walking lessened their Walkway experience; whether (and where) they experienced crowding; and whether they considered user numbers should be limited.

Table 3.4.14 Negative Effects of Encounters

Negative?	S1	S2	S3	S4	S5	Summer Av	E1	E2	E3	Easter Av
Yes	-	12	7	2	3	6	15	12	11	13
No	-	82	78	92	90	86	49	72	80	67
Unsure	-	4	7	5	4	5	4	8	9	7
NR	-	2	7	1	3	3	32	7	0	13

Only a small proportion of walkers felt encounters with others lessened their Walkway experience, and this feeling decreased over the study period. The lowest proportion of those

who felt encounters did not lessen their experience was during S3 (1983/84 season), but the balance of this was in 'unsure' or non-response rather than representing the highest dissatisfaction with encounters.

Summer and Easter results differed, with the latter Walkers having a more negative perception of encounters. This is not surprising given the greater use densities present during Easter periods.

Table 3.4.15 Crowding Perceptions

Crowding	S1	S2	S3	S4	S5	Summer Av	E1	E2	E3	Easter Av
Yes	-	49	62	16	31	39	35	68	87	63
No	-	40	28	81	58	52	18	21	13	17
NR	-	11	11	3	11	9	47	11	0	20

Perceptions of crowding varied considerably during the study period. Overall, crowding perceptions were higher for Easter use, suggesting this short peak period involves high intensity use. The only trend apparent was that of increasing crowding perceptions for successive Easter periods. During Summer, greatest crowding perception occurred during the busy S3 (1983/84 season). Least crowding perception occurred during S4 (1984/85 season). It is possible that negative feedback, publicity and word-of-mouth from S3 users contributed to the low use, or altered crowding perceptions, during S4. Hence the lowest crowding perceptions in the season subsequent to the highest.

Table 3.4.16 Locations of Crowding Perceptions

Locations	S1	S2	S3	S4	S5	Summer Av	E1	E2	E3	Easter Av
(n =)	-	181	219	45	51		28	175	40	
Ada hut	-	32	49	55	53	47	0	35	82	39
Christopher hut	-	8	4	0	11	6	0	4	0	1
Anne hut	-	17	9	7	0	8	3	6	0	3
Boyle Flats hut	-	8	9	38	0	14	3	6	18	9
At 2 huts	-	24	18	0	25	17	36	20	0	19
At all huts	-	10	9	0	11	7	57	28	0	28

Results here varied considerably, but some clear patterns emerged overall. The focus for crowding perceptions was Ada hut. The other huts all attracted similar levels, although during S4 (1984/85 season), Boyle Flats hut was notably highly indicated. This hut was often used for short overnight trips into the area (Tetteroo pers com), and combined with the main through-flow, could provide a localised focus for crowding perceptions.

Many walkers also perceived crowding at more than one hut on the Walkway. This was particularly true for Easter use. Again the results suggest that while the Easter period is shorter than that of Summer, the peak use is more intense.

Table 3.4.17 Preference for Use Limitation

Preference	S1	S2	S3	S4	S5	Summer Av
Limit use	45	46	37	48	51	45
Don't Limit Use	41	44	51	45	40	44
NR	14	10	12	7	7	11

While many Walkers may not enjoy crowding, Table 3.4.17 indicates that this does not translate into support for use limits. For example, preference for not imposing limits was highest during the busy S3 period (1983/84 season). This would appear to contradict many of the other results shown previously in which negative perceptions of huts, tracks and other users occurred during the high use-level S3 season.

3.4.4 Summary of Perceptions

Overall, walker perceptions of huts, tracks and other users highlighted a 'status-quo' preference² which emphasises that existing conditions are most appropriate. This type of preference tended to become greater over the study period for most types of perceptions.

Few walkers perceptions highlighted any responses indicative of dissatisfaction or major use problems. Those that did occur generally declined over the study period.

However, many of these negative perceptions were at their maximum during the S3 (1983/84 season) year of the study. Peak summer use during the study period occurred at this time (refer Figure 3). Apparent dissatisfaction with hut size, hut space, hut facilities, track construction (forested and open areas), boardwalks, track wear and crowding perceptions were highest at this time.

Such concerns however did not lead to preference for use limitation, which was in fact lowest for the S3 (1983/84 season) year. This may reflect the earlier findings which suggested the overall level of walker experience declined as the number of walkers present increased (refer Section 3.2.3).

2. As represented by response categories of 'just right'; 'adequate'; 'same'; 'good'; 'no problem'; 'satisfactory' and 'average'.

In the subsequent Summer season (S4, 1984/85 season), user numbers were considered by the researcher³ to be unusually low (also refer Figure 3). He considered that publicity had led to many avoiding the traditional peak Summer period in January. Given the high user numbers and negative perceptions during S3 (1983/84 season) and E2 (1984 Easter)⁴, it is likely that the messages being communicated to later users through the main 'word-of-mouth' information sources, emphasised the problems of high use at that time. This advice then seems to have contributed to avoidance of the usually peak periods on the Walkway, or avoidance of the Walkway itself.

Taken together the above data suggest a continual refinement of users' preferences as the Walkway became better known. They also demonstrate, however that little apparent relationship exists between either actual user numbers, or modifications to the physical environment, and users' perception of crowding or impact. In this respect these findings are in accordance with recent literature which concludes that carrying capacity measures alone will not provide sufficient guidelines for management of backcountry recreation areas (eg Shelby and Heberlein 1986).

3. Hu, 1985 p6.

4. Peak Easter use occurred during this period. While the lack of more Easter data prevents the same generalisations being made about E2 as about S3, similar affects can be assumed.

4. FOLLOW-UP SURVEY RESULTS

This chapter investigates the subsequent effects of this 'St James Walkway Experience' on the recreation behaviour of Walkway users. This contributes to identification of the role played by the Walkway in the recreation life history of users.

Reference to comparative demographic data in Section 3.1 shows that the follow-up survey sample is representative of the user survey samples from which it was taken. Thus the following results provide a representative picture of Walkway users' recreation participation after their 'St James Walkway Experience'. In this Chapter, these results are presented in three sections which relate to:

- Walker's experience prior to St James Walkway use.
- Features of 'The St James Walkway Experience', and;
- Walker's experience subsequent to St James Walkway use.

Where appropriate, reference is made in this Chapter to user survey results, either in text or in tables. This occurs particularly in the first two sections, which contains results closely related to some user survey topic areas.

4.1 Pre-Walkway Experience

The trip on the Walkway had been the first overnight trip undertaken by 10 percent of the follow-up sample. This figure is intermediate to Summer (16%) and Easter (8%) survey results.¹ In reporting on their years of experience in tramping (Table 4.1.1), annual user surveys demonstrated a majority of walkers had some experience (although this was not great). The follow-up survey sample was asked for years of experience of tramping, prior to their St James trip.

1. The follow-up survey sample was drawn from both of these, thus would tend to show results intermediate to them.

Table 4.1.1 Years of Tramping Experience²

Years Experience prior to Walkway Trip	%
Not regular trampler	17
Less than 5 years	29
5-10 years	32
11-20 years	13
More than 21 years	7
NR	2

Clearly most respondents felt they had been regular trampers prior to their Walkway experience. Notwithstanding this, 17 percent did not consider themselves regular trampers.

Respondents were also asked to specify where they had done tramping trips in the year prior to their 'St James Experience', and how long these trips were. Most trips occurred in National Parks (47%) and Forest Parks (20%). Only 4 percent of trips occurred on Walkways whereas 28% were in 'other' locations (Table 4.1.2).

Table 4.1.2 Locations of Previous Trips (combination of three responses)

Locations of Previous Trips	%
Arthurs Pass National Park	17
Northwest Nelson/Richmond Forest Parks	13
Fiordland National Park	9
Abel Tasman National Park	8
Nelson Lakes National Park	5
Craigieburn/Hanmer/Lake Sumner Forest Parks	5
Mt Cook/Mt Aspiring National Parks	4
Tongariro National Park	4
Canterbury Walkways	4
Tararua/Rimutaka/Haurangi Forest Parks	2
Other (outside National and Forest Parks/Walkways)	28

Use of other locations is characterised by a wide variety of places visited. Arthurs Pass was highly visited, as would be expected given its proximity to Christchurch. However, other Forest Parks and Walkways closer to Christchurch received less use. Only the relatively distant Forest Parks of the Nelson region were highly used. These results suggest emphasis

2. Total response frequency throughout this Chapter is n=216, unless otherwise stated (refer Section 2.2)

on use of National Parks for tramping trips.

Table 4.1.3 Duration of Previous Trips (combination of three responses)

Duration	%
Day trips	12
2-3 days	42
4-7 days	33
8-14 days	7
Over 15 days	1
Other	4

Trips of 2-3 days were most common, while longer trips were not often more than seven days duration. Thirty-three percent did trips of similar duration to trips on the Walkway. It would seem that the 4-5 day opportunity offered by the Walkway represents a trip length commonly undertaken elsewhere. The Walkway represents a tramping opportunity at the top of range of trips usually undertaken by respondents.

This section shows that prior to visiting the St James Walkway, most walkers already had experience of tramping, and had visited many other areas (mainly National Parks) for trips of relatively short duration.

These results, along with user survey experience results (refer Section 3.2) suggest that the uniqueness of opportunities provided by the Walkway were based largely upon their 'new area' nature, and the possibility of a longer trip than otherwise available.

4.2 The 'St James Experience'

This section briefly summarises walkers post-trip perception of the Walkway. Reference to Section 3.4 gives their perceptions of the Walkway during (or immediately after) their trip there.

4.2.1 Perceived difficulty of the Walkway (relative to previous trips)

Difficulty of Walkway	%
Very difficult	0
Difficult	5
Moderate	49
Easy	34
Very Easy	10
NR	2

Clearly the Walkway was not considered difficult relative to previous trips elsewhere. Neither however was it considered very easy. This may reflect the effect of the trip's length, and the unexpected difficulty many walkers encountered, especially in the Cannibal Gorge section. Such departure from walker expectations has become termed the 'Walkways dilemma'. This represents the common misinterpretation of Walkways by potential users as all being of a similar 'urban walkway' standard.

Clearly the alpine backcountry setting of the St James Walkway would not meet such expectations. The St James Walkway was in fact classified a 'track'. It would appear that the St James Walkway was considered more difficult than the more common types or urban walkways most people were familiar with, but less difficult than many other tramping trips.

Table 4.2.2 Memories of the St James Walkway (three responses %)

Memories (n =)	1st (216)	2nd (213)	3rd (202)	AV
Scenery	30	20	9	20
Good huts	8	16	13	12
Horses/Cattle	7	10	10	9
Farmland/wide-open valleys	6	5	6	6
Good tracks/easy walking	4	6	7	6
Fun with friends/meeting others	3	3	8	5
Flora/fauna	5	3	5	4
Crowded huts/tracks	5	3	3	4
Changing terrain	1	4	5	3
Exit civilisation/Get away	4	4	2	3
Adverse weather	3	2	4	3
Use of rivers	2	3	3	3
Fine weather	2	2	2	2
Other	20	16	21	19
NR	2	2	2	2

Apart from the overall predominance of the generalised memory 'scenery', the more unique features of the St James Walkway become apparent (e.g. facilities, horses, open grassland setting etc). Presumably these features would be central to any information passed to others by word-of-mouth.

Most memories were positive, with the few negative memories arising being based upon hut congestion and adverse weather. Recall of hut congestion by S3 (1983/84 season) and E2 (1984 Easter) walkers probably played an important role in the lower numbers of walkers in the subsequent S4 (1984/85 season) year.

Overall, as common to most studies of recreation experiences, most participants had positive recall of their trips. High satisfaction as expressed through the common 'status-quo' preferences in Section 3.4 support this contention.

4.3 Post-Walkway Experience

The effect of the 'St James Experience' on the recreation life histories of walkers is demonstrated through their subsequent activity and location of participation, the role walkers subsequently played in involving others in similar experiences, and their perceptions of the Walkway's influence on their recreation behaviour.

4.3.1 Subsequent Activities/Locations

Overall, 91 percent of the follow-up sample participated in tramping after their 'St James Experience'. Table 4.3.1 shows that the more active an individuals' involvement in tramping, the more they were likely to continue participation. The fewer years respondents had been regular trampers, the more likely they were not to continue participation.

Table 4.3.1 Subsequent Participation in Tramping vs Years of Regular Tramping

Participation	Not Regular	Years a Regular Trumper			
		<5	5-10	11-20	21+
Yes	86	86	94	100	100
No	15	14	6	-	-

Thus active participants remained highly active, while less active participants were more likely to let participation lapse. Those participants who continued with activities mostly did so within a year of their Walkway trip.

Overall over 50 percent of those continuing participation in the activity did so within six months of their Walkway trip (refer Table 4.3.2). These were the more active, regular participants.

Of those continuing to do tramping (n=196), 68 percent did so on other Walkways. Of the remaining 32 percent who had not used Walkways, 15 percent were in fact unsure whether the trips they had done had been on walkways. This suggests some lack of knowledge of the Walkways network and concept. It was also found that the more years a participant had been a regular trumper, the more likely it was that subsequent activity included

Table 4.3.2 Time After Walkway Use Until Next Tramping Trip

Time Elapsed	%
Less than 1 year	67
1-2 years	20
2-3 years	4
No further activity	8

other Walkways. This suggests that Walkway's are not only used by novice or occasional participants, but are also part of the recreation patterns of more experienced active participants.

Table 4.3.3 Regional locations of Walkways used
(combination of 3 responses)

Region	%
Canterbury	46
Nelson/Marlborough	25
Wellington	7
North Auckland	6
South Auckland	4
Gisborne/Hawkes Bay	4
Otago/Southland	3
Westland	2
Taranaki	2

This pattern largely reflects the residential distribution of Walkers (refer Section 3.3.3). The Walkways used emphasises this urban orientation. Those most used³ were in the Christchurch region and included (in order of importance): Godley Head Walkway; Mt Herbert Walkway and the Crater Rim Walkway. These represent the 'urban-type' Walkways to which the St James is an alpine/back-country alternative.

Of those doing subsequent activities (n=196), 85 percent did so in locations other than Walkways. The locations used subsequent to the Walkway trip differed little from those used prior to it (refer Table 4.1.2). National Parks were again predominant, with Forest Parks second. Trip lengths also showed little change. This suggests that the recreation patterns of participants did not change as a result of Walkway use. Thus the Walkway would appear to represent just another opportunity within their usual recreation patterns.

3. Frequencies for each were low, only a few as listed stood out.

However, some development of recreation life history was apparent from the perceived difficulty of trips subsequent to the Walkway. Respondents were asked the difficulty of trips relative to their Walkway trip.

Table 4.3.4 Difficulty of Subsequent Trips (n=196)

Difficulty	%
More difficult (harder)	31
Similar	15
Less difficult (easier)	10
Varied difficulty (a mixture)	34
NR	8

Over 30 percent of respondents considered their subsequent trips harder than the Walkway trip. Yet in Table 4.2.1, only 5 percent had considered previous trips difficult. This suggests that following their Walkway trip, many progressed to more difficult trips (although locations and durations were similar). Further support for such a contention comes from the subjective interpretation⁴ of trip difficulties before and after the Walkway trip. The research for the follow-up survey (Dodson 1987) estimated that 'easy' trips had declined by up to 18 percent, while 'moderate' and 'difficult' trips had increased 10 percent. Further indication of greater interest and participation was evident also from an 11 percent increase estimated for 'day-trips'.

The actual activities undertaken on these subsequent trips differed little from those undertaken previously in other areas and on the Walkway itself (refer Tables 3.2.6 and 3.2.7). However, as indicated above, the difficulty of these activities tended to increase. And when respondents were asked to indicate their years of experience in their main activities, the response pattern was as expected. That is, there were fewer with less than 5 years experience and more in the higher experience categories due to the time elapsed since the original user survey sampling.

4.3.2 Subsequent Leadership roles of Walkers

Of those who continued participation (n=196), 83 percent had introduced others to activities following their Walkway trip. Most had introduced no more than 10 people, suggesting that such introduction occurred through small social groups (e.g. friends, family). This reflects the 'friends/family' dominated patterns by which most walkers had in their turn been originally introduced (refer Table 3.2.2). Those who introduced more than 10 people most likely operated through larger social groups within their activity (e.g. clubs/schools/youth groups).

4. Based upon the interpretation described in Hu (1985, p.26). For example 'moderate difficulty' - Heaphy and Routeburn tracks; 'high difficulty' - Copland Pass

Table 4.3.5 Numbers Introduced to Activities

Number	%
None	17
Less than 5	36
5-10	26
11-20	7
More than 21	8
Unsure	6

The subsequent leadership role of walkers also expressed itself through the 18 percent (n=39) who made subsequent trips back to the St James Walkway.

Table 4.3.6 Subsequent Trips to the Walkway

Number of Trips Back	%
None	82
Once	13
Twice	3
Three Times	2
NR	2

Because these 39 return-walkers had previous experience of the Walkway, they represented the 'experienced' members of return parties. This additional introductory role can be seen from the reasons they gave for returning.

Table 4.3.7 Reasons for Returning to the Walkway

Reasons	%
To take others on it (family/friends)	24
Helping with school/youth groups	14
Did a day trip on it	14
Incorporated it in a larger trip	12
Wanted to visit at a different time	10
Good facilities/easy access available	8
Other	18

Reasons centering around the introduction of others account for 38 percent of reasons given for return trips (Table 4.3.7). Most other reasons involved coming back to do a different type of trip on the Walkway. Only 8 percent returned because of some specific feature of the Walkway, although the reason given here was likely to be implicit in the others given. 'Other' included people who stated reasons such as fishing, birdwatching and to repeat an enjoyable experience.

From these results the Walkway's role as an area of introduction becomes apparent. However, this reason accounts for only a small number of walkers on the Walkway at any one time.

4.3.3 Years Experience vs Perception of Influence on Tramping Development

Years Experience	Was influenced (Yes)	Was not influenced (No)
Not regular trampler	91	9
Less than 5 years	61	39
5-10 years	68	32
11-20 years	41	59
More than 21 years	40	60

This shows that the Walkway had by far its greatest influence upon those respondents not regular trampers. In addition, most of those with less than 10 years experience felt the Walkway had influenced their subsequent activities. As shown in Table 4.1.1, those with less than 10 years experience comprised the bulk of Walkway users. Thus it follows that for most walkers, the Walkway exerted some influence on their later activities.

Table 4.3.9 Types of Influence Perceived (n=140)

Types of Influence	%
Increased desire for more tramping*	33
Provided an introduction to tramping	20
Maintained enjoyment of the activity	6
Increased desire to repeat experience (somewhere)*	5
Increased desire to exit from civilisation/get away*	4
Increased tramping experience	4
Desire to avoid repeating experience	4
Other	11
NR	8

For 46 percent of respondents, the 'St James Walkway Experience' provided a direct motivational influence to continue such activities (as indicated by the *). For a further 20 percent, it provided an introduction to tramping. Only for a few did it have any negative influence. Clearly the experience of the St James Walkway was perceived a positive, motivating one by most respondents.

An example of this motivating effect was evident from the membership of conservation and recreational groups in the follow-up survey. While the proportions of membership were the same as those in the user survey (refer Tables 3.2.9 and 3.2.10), Dodson (1987) noted that up to 30 percent of conservation/recreation group members had joined groups after their 'St James Experience'.

It is held that since the results in Table 4.3.9 were based upon an open-ended question, they provide a genuine representation of what most respondents felt their Walkway experience gave them.

4.4 Follow-up Survey Summary

The follow-up survey sample was representative of the Summer and Easter samples from which it was drawn. Thus generalisations made from follow-up survey results can be considered applicable for all Walkers sampled originally.

Most walkers had some tramping experience prior to their St James trip, commonly from 2-7 days length in National or Forest Parks. Walkways were not often used.

The Walkway itself was not considered difficult, but few considered it 'very easy' either. Most gave it a 'moderate' or 'easy' rating relative to previous trips. The 'St James Walkway Experience' was characterised in the memories of walkers most often for scenery/setting features, good facilities/tracks and presence of horses/cattle. The few negative memories recalled centred on hut congestion and adverse weather experiences.

Recreation behaviour and activities subsequent to the 'St James Experience' generally continued established recreation patterns for most walkers. Trip locations, duration and activities did not change relative to previous trips, and those walkers most active on previous trips continued to be the most active on subsequent trips. However, there were some effects from the 'St James Experience'

Most subsequent trips were perceived as being more difficult, or at least similar in difficulty to the Walkway. Most walkers who did subsequent trips at some time introduced novices to the activity on them. Introduction of others was also an important reason for return trips to the Walkway.

The influence of the Walkway was also perceived to be greater by walkers with less years of experience. For walkers who perceived an influence from the 'St James Experience', the effect was largely a positive one, motivating them to want to continue achieving such experiences. Some walkers demonstrated such increased motivation and interest by joining conservation/recreation groups subsequent to their Walkway trip.

5. REVIEW OF THE PHYSICAL IMPACT STUDIES

Assessment of physical impacts from track use was undertaken in two ways. One involved objective and subjective monitoring of track condition, and the other involved investigation of soil properties and trampling effects. The aims, limitations and key findings of each are briefly discussed in turn.

5.1 Impact Monitoring

Beginning from the Walkway opening (1981), a three year programme of descriptive track monitoring ensued. Using an objective/subjective blend of transect measurement, photo-point recording and visual observation techniques, the programme aimed to identify patterns of use-induced change of the newly constructed track.

5.1.1 The Objective Approach

Since track deepening and widening have commonly been found as the main manifestations of use-induced change in track condition (refer Cole, 1983), the objective approach taken in this study comprised precise measurement (and re-measurement) of such track profile parameters. To complement these measurements, objective photographic records for specific sites were also made.

Despite considerable difficulties in maintaining a replicable field methodology, both of the objective approaches showed that some changes to track condition did occur. Difficulties that arose included:

- loss of valid transect sites due to loss of marker pegs, cattle disturbance and alterations through track maintenance;
- difficulties in maintaining a consistent photographic record (e.g. inconsistent lighting and exposure on photographs; difficulties in the accurate re-siting of camera tripod);
- occasional omissions of data from record (e.g. appropriate data not gathered, or lost from source material records)

Overall, when changes to track condition did occur, both the measurement and photographic approaches demonstrated the characteristic widening and deepening of tracks. However,

these changes could not be considered representative of the whole Walkway track, for two main reasons:

- (i) Sites for transect measurements and photographic records had been preferentially located on sites of existing or expected impact;¹
- (ii) The degree of change that did occur varied considerably for different transect site settings.²

Thus impacts (when they occurred) were localised, depending more on the setting through which the track passed than on the amount of use it received.

Full transect measurements and photopoint records indicated that the Ada Pass to Christopher Hut section of the Walkway was most subject to physical impact. Tetteroo (1983) considered this due to it being a high rainfall beech forest zone which was generally flat and poorly drained.

Partial transect measurements used for 'open grassland' sections (esp Christopher to Boyle Huts), and photopoint records, showed little difference between successive years of measurement. However, the ongoing placement of route markers in these open areas did lead to more clearly defined 'desired lines' of routes between markers. Tetteroo (1983) considered relative lack of physical impact in these areas due to them being well drained and dry.

Hut transect measurements and photopoint records showed little occurrence of physical impact around huts. Huts tended to be a focal-point for maintenance action on the Walkway, thus often precluding development of use impacts.

Overall, with reference to transect measurements and photopoint records, undesired³ physical impacts on the track were, as a whole, considered low.

-
1. One major consequence of this was that study sites were sometimes lost due to maintenance work by management staff.
 2. The Walkway was subdivided into sections on the basis of setting characteristics (refer Nelson 1982 p 7-8)
 3. Impacts are a natural consequence of use, their degree determines their desirability for users and managers

The impacts that did occur were greatest during the first summer season of use (1981/82 Summer season). This was considered by researchers to be a 'settling' period during which the newly constructed track consolidated (Stankey 1978). After this period, little further change was evident.

5.1.2 The Subjective Approach

This included a systematic track-condition rating programme for different sections of the Walkway, observation of track condition and user behaviour, and subjective interpretation of the photographic record. Use of this approach allowed identification of the reasons track profile measurements showed change, assessment of how representative such changes were of the whole track, and which management actions should take place to prevent further undesired changes.

The changes in track profiles from resulted from a number of use-induced impacts. At any place on the Walkway, such changes could have been due to any one or a combination of:

- loss of upper organic soil and litter horizons;
- compaction of underlying mineral soil horizons;
- exposure of tree roots and rocks;
- loss of existing and adjacent vegetation cover;
- development of wet/boggy areas due to poor drainage;
- 'multiple tracking' of Walkers around wet/boggy areas or obstructions;
- development of erosion channels and surfaces due to increased runoff; and
- the additional (and sometimes greater) impact of cattle on any of the above.

Subjective recognition of these impacts allowed the general state of track condition to be assessed over wider areas. Subjective conclusions from both the track rating and observation exercises concluded that undesired impacts to track condition were uncommon overall, localised in extent when they occurred, and generally of low magnitude. Settings with high rainfall, low drainage and a highly organic soil regime were identified as being

most susceptible. It was considered that care in the route chosen for tracks was central to minimising use-induced impact. Where such susceptible settings could not be avoided, or impacts were occurring, careful track construction with particular emphasis upon control of drainage was considered most important.

5.1.3 Impact Monitoring Summary

In its initial stages, this approach was dominated by an emphasis upon gathering objective data to show use-induced change (if any occurred). The extensive objective techniques used were based on sites of likely impact, and generally found some change did occur (usually track deepening or widening). However the degree of change that was considered excessive or undesirable was not great, or of great extent. Sites of high rainfall, low drainage and 'organic' soils were most affected. And such change was greatest during the initial 'settling' period, following track opening.

After the third year of this approach it was decided that in light of the low rate and extent of undesired change, the time and resources required to objectively monitor it, and the diagnostic effectiveness of subjective track assessment, the monitoring programme should be discontinued.

5.2 Trampling and Soil Properties

An objective testing of many of the conclusions reached from the preceding monitoring programme, was based upon comparative measurement of soil properties on and off track surfaces (Stewart 1985).

5.2.1 Summary of Findings

Overall, the initial effects of trampling on a new track may appear bad (e.g. loss of topsoil and vegetation). However, this change often leads to more stable soil conditions as the more compact underlying soils resist further damage. For example, 'recent soils' formed on river gravels may lose surface soil with trampling, but subsequently provide ideal gravel walkways. The exceptions to this are where soils are poorly drained or become watercourses. Clearly local drainage conditions are important, since most damage to soils occurs when they are wet. Here the different properties of organic soils (e.g. peat), and mineral soils (e.g. sand /silt /clay) become important.

(i) Organic Soils

- these are most susceptible to direct trampling damage.
- they usually occur in poorly drained areas and have low soil strengths when wet.

- high water content prevents these being compacted.
- soil strengths decline with trampling and deep boggy areas develop as this weakness penetrates deeper into the soil profile.
- 'multiple tracking' around such areas is a common response by Walkers.

(ii) Mineral Soils

- these are most susceptible to indirect erosion damage.
- they tend to be compacted by trampling.
- this increases soil strength but decreases the water infiltration capacity, leading to increased surface runoff and puddling.
- severe damage through erosion can occur if tracks become channels and watercourses.
- this occurs most readily on steep slopes, and where the track runs up a slope rather than across it.

5.2.2 Summary of Recommendations

Conclusions reached by Stewart (1985), regarding the track location and construction relative to soil conditions indicate that:

- organic soils are unsuitable for tracks and should be avoided.
- boardwalking or infilling with rocks should occur where tracks must cross organic soils and wet areas.
- construction of tracks on mineral soils and slopes should avoid creating watercourses.
- drainage ditches can minimise runoff and erosion damage.
- tracks should be sited on 'recent soils' formed on river gravels where possible.
- confining Walkers to the track prevents further soil loss, compaction and damage.

Overall, Stewart (1985) considered that little further soil compaction of mineral soils would occur on the Walkway, although without management action, damage to organic soils would continue to occur at susceptible sites.

5.3 Summary of Physical Impact Studies

The monitoring approach represented an attempt to record objectively the development of use-induced impacts on the track. Most change that did occur appeared associated with an initial 'settling' and consolidation period after track opening. Given the short period during which the changes did occur, and its low levels (in most places), initial emphasis upon the objective measurement approach appears unnecessary (in retrospect). Subjective assessment of changes provided an adequate account of what changes were occurring, where and why.

It is apparent that the usefulness of site-specific objective measurement approaches is greatest when particular conditions are being considered. They may be required, for example, to monitor some indicator of limits to acceptable change in track condition, or to assess ecological damage should a track's route take it through some particularly important area (e.g. a localised occurrence of rare flora/fauna species). As a general monitoring tool however, such an approach does not justify the time and resources required to run it.

The soil study approach identified those features of soils which reflect their suitability for track construction. Certain soil conditions and types emerged as being unsuitable for track construction. The message to managers here was that a trade-off is required between initial establishment costs for a track, and the subsequent maintenance costs required. Avoidance of unsuitable soils and terrains will reduce later maintenance needs.

Both approaches showed that use results in some change to a track. Whether these changes become undesirable and require correction will depend upon the route taken by the track, and the preventative measures taken when problem areas can not be avoided. Overall, impacts from track use were low, and were generally confined to a small area.

6. Summary and Conclusions

Results from this study enable a number of general conclusions to be made about the Walkway and its users. For convenience, these are summarised below under the appropriate headings.

6.1 Walkway Users

As a group, Walkway users tended to demonstrate more 'mature' lifecycle characteristics than Trampers surveyed at other regional 'backcountry' opportunities. This was evident primarily from their 'older' age profile, their being more likely to have children, and associated characteristics such as their being more likely to have children. Such 'mature' characteristics tended to be more pronounced for the Summer Walkway users. Greater participation by female Walkers was also a feature of this Walkway.

The previous experience of Walkers commonly included trips on local urban and peri-urban Walkways. Most had also done overnight trips, although 16 percent indicated the St James was their first overnight tramping trip. Few however had made previous visits to the St James. When they did visit the Walkway, their activities there differed little from those undertaken elsewhere. Their motivations for visiting were largely based upon the Walkway's convenience to Christchurch, and its availability as a 'new area' opportunity.

Based upon the presence of a 'mature' group of Walkers, and its' introductory role for many, the conclusion is that the St James Walkway is an important 'intermediate step' in the spectrum of outdoor recreation opportunities, particularly for the Canterbury region.

6.2 Walkway Use

For most Walkers, use of the Walkway is the sole objective of their holiday trip. However, for up to 30 percent of Summer users, it is only part of a longer trip. The longer duration of Summer holidays allows a greater flexibility of time than would be available in the limited Easter break. This is reflected by the greater use of private cars and the higher proportions of Walkers from Christchurch during Easter.

Media publicity was an important information source when the Walkway opened, but word-of-mouth became increasingly important in later years. It was instrumental in the rapid establishment of a preferred Lewis to Boyle trip plan.

Easier travel and greater car security were the main reasons given for the preferred trip plan. Most Walkers spend 4-5 nights on the Walkway, mainly staying in huts. Very few travelled off the main route. Some tenting occurred but usually only if huts were full. Most tenting took place on the Cannibal Gorge section of the Walkway, but a new hut there has reduced the necessity to camp.

6.3 Walker Perceptions

Most Walkers preferred that the huts, tracks and level of use be maintained at their current levels. Few Walkers had negative perceptions of the setting, it's management, or of the other people they encountered on their trip.

Negative perceptions which did occur were at their highest levels during the 1983/84 Summer (S3) season, and the 1984 Easter (E2) season. Researcher observations and use-level records¹ showed that these seasons had the highest use-levels over the study period. Specific perceptions of crowding were highest at these times, as were the negative perceptions of hut size, hut space, track construction, track wear and boardwalking. Taken together, these data strongly suggest that many Walkers considered over-use had occurred.

While few Walkers indicated they would favour imposition of use limits as a solution, low use levels in the following seasons suggested Walkers were expressing their dissatisfactions to other potential visitors.

6.4 Effect of the 'St James Experience'

Walker recollections of the Walkway emphasised scenery/setting features, the good tracks and facilities and the presence of horses and cattle. Negative memories were few, but amongst them were featured hut congestion and weather.

Most Walkers rated the Walkway as being 'moderate' or 'easy' compared with their previous experience. Recreation behaviour following the Walkway trip showed little change for Walkers, with subsequent trips were rated as being 'similar' or 'more difficult' from that experienced on the Walkway.

Greater benefits from the Walkway trip were perceived by Walkers with less experience. Some were motivated to repeat the experience, some to join "interest" groups and others to introduce yet other friends/acquaintances to the Walk.

1. Shown diagrammatically in Figure 3, Chapter 2.

6.5 Physical Impacts

The monitoring programme identified changes in track profiles and appearance largely related to a 'settling' phase following track construction. Where soils were wet, highly organic and poorly drained, considerable damage was apparent. Otherwise, most track surfaces appeared to consolidate with continued use and ongoing management attention.

During initial development of a track, track siting and design are a paramount consideration in avoiding sites of potentially high impact. A clear trade-off also exists between the amount of preparatory work undertaken and ongoing maintenance once impacts become apparent.

6.6 Conclusions

The St James Walkway provides an important link in the regional spectrum of Walking opportunities. It provides:

- another location for multi-day backcountry walks;
- a backcountry setting conducive to use by less able Walkers; and
- an opportunity for novice Walkers to experience the activity and increase their competence.

The regional importance of the Walkway's role is enhanced further by the good road access to the area, and its close proximity to Christchurch. The opportunities provided on the Walkway are thus readily accessible to a large population base.

The Walkway is subject to two distinct use periods. Summer is characterised by a higher overall use level spread over a longer period. Trip plans and transport are more flexible, and the users tend to be more diverse in socio-demographic features. Easter has a short intense use-period that allows little flexibility and includes more active and local (Christchurch) users.

These two use-periods present differing problems for management. Crowding perceptions may become a future problem should use levels exceed the manager's desired hut capacity. Increased use of tents is likely in this situation.

Objective physical impact monitoring techniques should only be used for specific situations rather than overall impact assessments. Subjective techniques are adequate for more general purposes.

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Field research, data collection and analysis was carried out by undergraduate students under the supervision of David G. Simmons. These students were:¹

- Joy Comrie , 1982
- Dean Nelson , 1982
- Rudi Tetteroo , 1983
- Raewyn Hutchings , 1984
- Tomyu Hu , 1985
- Dean Stewart , 1985
- Ria Brejaart , 1986
- Helen Dodson , 1987

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1. All were Parks and Recreation diploma students, apart from Stewart (B.Ag.Sci. (Hons.)).

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ST JAMES WALKWAY

GROUP QUESTIONNAIRE (one per group)

This small checklist is to be answered by your group's representative or leader. It seeks information about your party and the organisation of your trip.

As this section questions the group's activities and use of the Walkway, it is best answered at the end of your walk. Please make sure that you also have an individual questionnaire.

As a final favour, may we ask that the group's representative collect the member's individual questionnaires and return all material in the envelope provided.

Many thanks for your co-operation.

APPENDIX ONE

GROUP QUESTIONNAIRE

(Example)

Rudy Tetteroo

David Simmons

Rudy Tetteroo and David Simmons
Parks and Recreation
LINCOLN COLLEGE

--	--	--	--	--	--

4. a) Were you able to get adequate information about the St James Walkway?

Yes No

b) If yes, from where were you able to get the information?

c) If no, please comment on the type of information you would find helpful.

5. Is the St James Walkway your major destination for this trip?

Yes No

(part of longer holiday)

6. Where was your point of entry onto the St James Walkway? (Refer map.)

1. What is the nature of your party?

Individual

Family

Family and Friends

Friends

School

Club

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

2. a) Answer only if there is a family group within your party. What is the composition of that group?

Husband and wife only

Two parents and children under 8 years

One parent and children under 8 years

Two parents and children 8-15 years

One parent and children 8-15 years

Two parents and children over 15 years

Other (please specify) -----

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

b) If two or more family groups make up your party, please state its composition.

<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------

3. What is the group's composition and size (including yourself)?

Number of males

Number of females

<u>Number of males</u>	<u>Number of females</u>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

10. If you travelled to the Walkway by private transport how have you arranged transport between the start and finish of the track (ie: between Lewis Pass and the Boyle Settlement)?

11. a) Did you go on any day trips off the Walkway?

Yes No

b) If yes, please outline.

12. a) Did you have any "rest days" during your trip?

Yes No

b) If yes, how many days? -----

c) Where were they spent? -----

13. How many days were you on this walk? -----

14a. Did your party carry a tent?

Yes No

14b. If yes, did you use your tent? -----

Yes Mark with an X on the map (centrefold), those campsites used.
No did not use

FOR OFFICE USE

24

7. How did you travel to your point of entry onto the St James Walkway?

- Private car
- Motorcycle
- Bus
- Pushbike
- Hitch hike
- Walk

Other (please specify) -----

8. Where did you leave the Walkway? (Refer map.)

9. On this trip away from home, are you only tramping the St James Walkway?

Yes No

If no, and the St James Walkway is part of a longer trip, could you please elaborate on the details of that trip:

FOR OFFICE USE

25

15. If "campsites" (ie: with fireplaces and pit toilets only) were provided near huts, would you use them?

Yes No Not sure

37

Please support your answer with comments:

16. Please tick the appropriate boxes if your party carried/used:

	Carried	Used
A stove	<input type="checkbox"/>	<input type="checkbox"/>
A complete first-aid kit	<input type="checkbox"/>	<input type="checkbox"/>
Maps of the area	<input type="checkbox"/>	<input type="checkbox"/>
Walkway brochure	<input type="checkbox"/>	<input type="checkbox"/>
Compass	<input type="checkbox"/>	<input type="checkbox"/>

u

If there are any further comments you wish to make regarding your visit to the St James Walkway, please use this remaining space.

Please return this with your individual questionnaire

MANY THANKS FOR YOUR HELP.

ST JAMES WALKWAY

(INDIVIDUAL QUESTIONNAIRE)

The St James is the first overnight Walkway opened in New Zealand. This questionnaire is to provide information for the management of this area and to assist in the further development of a Walkway system.

For this reason you are urged to complete and return the questionnaire so that the views of all users are recorded. You are assured that you can remain anonymous and all replies are strictly confidential to the researchers. A summary of analysed results only will be published.

(Example)

INDIVIDUAL QUESTIONNAIRE

APPENDIX TWO

Procedure

1. As you may wish to discuss some of the questions or require assistance, most of the questionnaire can be completed straight away.
2. The final section (page 8) asks your reflection on the whole Walkway and is best left until you complete your walk.
3. When the questionnaire is complete, please give it to your representative, or leader, for free postal return. (Your group representative has a further small section on your group's structure and the organisation of your trip.)

Many thanks for your co-operation.
We trust you enjoyed your walk.

Rudy Tetteroo *David Simmons*

Rudy Tetteroo and David Simmons
Parks and Recreation
LINCOLN COLLEGE

--	--	--	--	--	--

5. If no, in which area did you last take an overnight tramping trip?

Please state trip location -----

Please state duration (nights) -----

6. How many months ago was that trip?

----- months

7. In column A below, list what you consider to be your three most important activities/interests (number them 1, 2, and 3) on the St James Walkway. Repeat this question for past visits to other areas (column B).

	(A) St James	(B) In the Past
Camping		
Tramping		
Climbing		
Fishing		
Birdwatching		
Other nature study		
Sightseeing		
Photography		
Other		
Please specify		

13

14

 13

Section 1.

This first section briefly traces your personal history of use of walkway/back country areas.

1. Is this your first trip through the St James Walkway?

Yes No

15

2. Have you used other walkways which are part of the New Zealand Walkway system in the past year (ie: only those that are marked with this symbol):



Yes No Not sure

3. If yes, can you please name them:

-
-
-
-

4. Is the St James Walkway your first overnight tramping trip?

Yes No

16

10. b) If possible, can you list, in order, your four main reasons (motivations) for coming here?

- 1. -----
- 2. -----
- 3. -----
- 4. -----

1f

The following two questions concern the main activity you ranked '1' in the previous question (ie: column b)

8. How many years have you been involved in this main activity?

----- years.

2f

--	--

9. Who first introduced you to, or taught you this activity?

Parents

Other family

Friends

School

Club

Other (please specify) -----

--	--

10. a) How did you first hear of the St James Walkway?

Family

Other word of mouth

Walkway pamphlets

News media

Other written material

Local signs

Exploring

Other (please specify) -----

2f

--

14. b) Please tick the appropriate box if you are still at an educational institution:

- Primary School
- Secondary School
- Tertiary Institution

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

15. What is your occupation?
(Please be specific, eg: Polytech student, self-employed builder.)

16. Do you belong to any organisations that are primarily concerned with conservation or outdoor recreation? (Please circle and/or list.)

- | | |
|---------------------|---------------------------|
| <u>Conservation</u> | <u>Outdoor Recreation</u> |
| No | No |
| Yes (please list) | Yes (please list) |

17. During your school years, did you live mainly in:

- A city or large town
- A small town
- A rural area

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

18. Please tick the following box if you were brought up overseas:

Section 2.

This section is to gather simple data about the people who use this walkway. Because some of this information may seem to invade your privacy, we assure you that you can remain anonymous.

11. What is your age:

- | | | | |
|--------------|--------------------------|-------|--------------------------|
| Less than 15 | <input type="checkbox"/> | 30-39 | <input type="checkbox"/> |
| 15-19 | <input type="checkbox"/> | 41-49 | <input type="checkbox"/> |
| 20-24 | <input type="checkbox"/> | 51-59 | <input type="checkbox"/> |
| 25-29 | <input type="checkbox"/> | 60+ | <input type="checkbox"/> |

12. What is your sex?

- Male Female

13. What is your marital status?

- Single Other Married

14. a) What is the highest level of education you have achieved?

- Primary School
- Secondary school
- School Certificate
- U.E./Sixth Form Certificate
- 7th Form
- Trade Qualifications
- Tertiary Professional (eg: nursing, teaching)
- Degree or part degree

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

Section 3.

TO BE COMPLETED AT THE END OF YOUR WALK.

This section asks your reflections on the Walkway. It deals with ideas on management and seeks comments concerning facilities and equipment provided.

By completing this section you will be able to offer direction to the future management of this and similar areas.

FACILITIES

Please correct the following statements to reflect your views and offer short comments to support your view.

21. Huts are too far apart / too close together.
Please comment: -----

Huts are too small / just right / too large.
Please comment: -----

Huts are poorly / well constructed.
Please comment: -----

The ratio of living to sleeping space in huts is adequate / inadequate.
Please comment: -----

I prefer separate bunks / open sleeping platforms.
Please comment: -----

FOR OFFICE USE

19. Where do you currently live?
(Please be specific, eg: Christchurch City, Murchison rural.)

New Zealand: -----

Overseas tourist: State, Country:

20. Which of the following best describes your home situation? (If you have children at home, please tick the box which corresponds to the age of the youngest child.)

- Live alone
- All adult(s) household (eg: flat)
- Living with parents
- Couple, no children
- Adult(s) and pre-school children
- Adult(s) and primary school children
- Adult(s) and working/student children
- Adult(s) and children no longer at home
- Other (please specify) -----

47

FOR OFFICE USE

43

46

USER EXPERIENCE

Did you experience over-crowding at any of the huts?

Where: -----

Why: -----

Did the number of people you saw or met while walking lessen your walkway experience?

No Unsure Yes

Please comment: -----

Overall, forest tracks show excessive / average / minimal wear.

Please comment: -----

Do you see wear around the huts as being / not being a problem.

Please comment: -----

Open tracks were satisfactorily / unsatisfactorily marked.

Please comment: -----

79

75

I would like to see more / same / less facilities in huts.

Please comment and list facilities:

TRACKS, BOARDWALKS, AND BRIDGES

Numbers should / should not be limited if wear on tracks becomes excessive.

Please comment: -----

Tracks construction (ie: gradient, benching, etc) in forest areas is satisfactory / unsatisfactory.

Please comment: -----

Tracks in "open areas" are satisfactory / unsatisfactory.

Please comment: -----

The current amount of constructed "boardwalks" is adequate / inadequate.

Please comment: -----

The current bridges are adequate / inadequate for the type of user.

Please comment: -----

57

67

13.

Please feel free to make any further comments on your use of this Walkway or other "back country" areas.

12

22. Which would you prefer to see as markers in open country:

Cairns

Tanalised fencepost/
waratah and coloured
disc

bc

FURTHER RESEARCH

As walkway policy is directed at encouraging people to use our natural areas, it is important that we study how Walkway users make use of other back country areas. This would simply involve an annual mail questionnaire for the next three or four years asking your use of areas similar to the St James.

If you are prepared to let your name go forward for such a study, please fill in the panel below.

Name: -----

Address: -----

Phone: -----

Thank you for your co-operation.

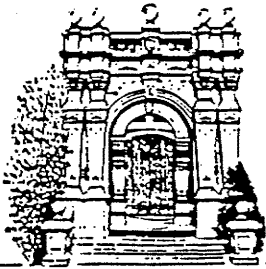
Please hand your questionnaire to your group representative to return by free post. Alternatively you may send it free yourself to:

Free post No. 36
Recreation Surveys
PO Box 94
Lincoln College
CAMBRIDGE

APPENDIX THREE

FOLLOW-UP QUESTIONNAIRE

Lincoln College



Lincoln College
Canterbury
New Zealand

UNIVERSITY COLLEGE OF AGRICULTURE

Telephone: Christchurch 253 5

11 September 1986

Dear St James Walker,

A five-year research programme of the St James Walkway is due to be completed this year. It is the only major longitudinal study of recreational use carried out in New Zealand and consequently we are now in a unique position to take a further, and major step towards completion.

When you returned your St James Walkway questionnaire you left your name and address for a potential follow-up. The enclosed questionnaire does this by asking questions about your outdoor recreation activities since that time. Of necessity some of the questions are similar to those asked of you the first time. Your answers, however, are very important as we have no way of relating this response to your previous one.

We would like to especially point out to you that you are part of a randomly selected sample of 300 St James Walkers over the years 1981-85 and that the reliability of our results is very dependent on your reply.

We trust that your tramping and other outdoor activities continue to bring you satisfaction and enjoyment. Any additional comments you might wish to add as a reflection on your outdoor experiences will be of great interest, and we warmly invite you to participate.

Thank you for your co-operation.

Yours sincerely,

Pat Devlin

Helen Dodson

Please return by
26.9.86

Dr P.J. Devlin
Ms H.A. Dodson
Park, Recreation and Tourism Studies
Lincoln College,
Canterbury,
NEW ZEALAND.

SECTION 1

This first section briefly traces your personal history of use of walkway/backcountry areas and the role, if any, of your St James Walkway experience. Room to comment is added after many questions in case you have additional information you wish to pass on to the researchers.

1. When was your trip through the St James Walkway on which you completed the Walkway questionnaire

Please tick the year and the month(s)

<u>YEAR</u>		<u>MONTH(S)</u>	
1981	<input type="checkbox"/> 1	JANUARY	<input type="checkbox"/>
1982	<input type="checkbox"/> 2	FEBRUARY	<input type="checkbox"/> 2
1983	<input type="checkbox"/> 3	APRIL	<input type="checkbox"/> 3
1984	<input type="checkbox"/> 4	NOVEMBER	<input type="checkbox"/> 4
1985	<input type="checkbox"/> 5	DECEMBER	<input type="checkbox"/> 5
		Other	<input type="checkbox"/> 6

COMMENT

No code

2. Have you returned to the St James Walkway since then?

YES	<input type="checkbox"/> 1	<input type="checkbox"/>
NO	<input type="checkbox"/> 2	If NO, go directly to Q. 5.

3. If yes, please state;

HOW OFTEN

1 = Once
2 = Twice
3 = Three times

WHEN

As Question One
+ 1986 = 6

YR	Mth

4. For what reason(s) did you return to the St James Walkway?
(Please be as specific as possible)

See Other sheet

<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

5. What are your 3 most vivid memories of the St James Walkway?

- 1) _____
- 2) _____ See Other
- 3) _____ Sheet.

NO STRICT ORDER

The following questions refer to your tramping/walking/camping/climbing activities BEFORE walking the St James Walkway.

6. Was the St James Walkway your first overnight tramping/camping trip?

- YES 1 (go to Q.8)
- NO 2 (go to Q.7)

7. If NO, where did you tramp/camp in the YEAR before walking the St James Walkway?

<u>LOCATION</u>	<u>LENGTH OF TIME IN DAYS</u>	<u>location</u>	<u>length</u>	<u>Diffic.</u>
See attached sheet	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. For how many years prior to the above were you a regular trumper?

- NUMBER OF YEARS
- See attached sheet*

The following questions refer to your tramping/walking/camping/climbing activities SINCE completing the St James Questionnaire.

9. Have you participated in any tramping/walking/camping/climbing activities since walking the St James Walkway?

- YES 1 (go to Q.10)
- NO 2 (go to Q.19)

10. If yes, how soon after walking the St James Walkway was your next activity?

NUMBER OF YEARS

--	--

NUMBER OF MONTHS

11. Since walking the St James Walkway have you used other walkways which are part of the N.Z. Walkway System (i.e. only those that are marked with this symbol)?

YES

0

1



NO

2

--

NOT SURE

3

12. If yes, can you please name the walkways, when you used them, and the length of time you spent on each walkway.

WALKWAY	YEAR USED	LENGTH OF TIME	w/w yr Days.
	IT	IN DAYS	
See attached sheet			

13. Have you continued tramping/walking/camping/climbing in other areas (i.e. NOT part of the N.Z. Walkway System)?

YES

1

NO

2

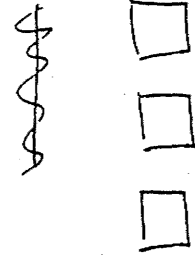
--

14. If yes, can you please name the locations, when you used them and the length of time spent on each trip.

LOCATION	YEAR USED	LENGTH OF TIME	location yrs Difficulty
	IT	IN DAYS	
See attached sheet			

15. In the columns below, list what you consider to have been your three most important activities/interests on these trips (1= most important).

Camping	1
Tramping	2
Climbing	3
Fishing	4
Bird Watching	5
Other Nature Study	6
Sightseeing	7
Photography	8
Other	



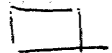
Please specify 9.

The following two questions concern the activity you ranked first in the previous question.

16. How many years have you been involved in this activity?

NUMBER OF YEARS

See attached sheet



17. Who first introduced you to, or taught you this activity?

PARENTS	0
OTHER FAMILY	1
FRIENDS	2
SCHOOL	3
CLUB	4
OTHER (Please specify)	5

OTHER (Please specify) 6.



18. (a) How many other people do you consider you have introduced to tramping/walking/camping/climbing (as a first time experience) over the past five years?

NUMBER OF PEOPLE

See attached sheet



18. (b) Of the above, how many continue to tramp/walk/camp/climb either with you or without you?

NUMBER OF PEOPLE

See attached sheet

The next few questions of this section relate to the degree of difficulty of the St James Walkway and whether you think it has influenced your further activities.

19. How difficult did you find the St James Walkway at the time you used it?

VERY DIFFICULT

0
1

DIFFICULT

2

MODERATE

3

EASY

4

VERY EASY

5

20. If you have continued tramping/walking/camping/climbing activities since walking the St James Walkway, how difficult did you find these compared to the St James Walkway?

MORE DIFFICULT

0
1

SIMILAR TO IT

2

EASIER

3

VARIED

4

NOT APPLICABLE

5

21. Do you think your St James Walkway experience had any influence on your further activities?

YES

1

NO

2

Please say how allowed for 2 reasons

See attached sheet

22. This is a general question on your outdoor activities, not necessarily related to the St James Walkway. Your response will be of considerable interest to our research.

What major changes have taken place in your outdoor recreation activities over the past five years?

To what do you attribute these changes?

Please comment.

23.

Age Groups

What is your age?

Less than 15

1

15-19

2

20-24

3

25-29

4

30-39

5

40-49

6

50-59

7

60+

8

--

24. What is your sex?

Male

1

Female

2

--

25. What is your marital status?

Single

1

Married

2

Other

3

--

26. a) What is the highest level of education you have achieved?

Primary School

1

Secondary School

2

School Certificate

3

U.E./Sixth Form Certificate

4

7th Form

5

Trade Qualifications

6

Tertiary Professional
(eg: nursing, teaching)

7

Degree or Part Degree

8

--

--

26. b) Please tick the appropriate box if you are still at an educational institution:

Primary School

0

Secondary School

1

Tertiary Institution

2

3

--

27. What is your occupation?
 (Please be specific, eg: Polytech student, self-employed builder).

See attached sheet

28. Do you belong to any organisations that are primarily concerned with conservation or outdoor recreation?
 (Please circle and/or list).

Cons ^N	Organization	Yr. Joined
O.R.		

Conservation

Outdoor Recreation

No

No

Yes (please list)

Year joined

Yes (please list)

Year Joined

See attached sheet

29. During your school years, did you live mainly in:

A city or large town

 1

A small town

 2

A rural area

 3

Mixture
 so can't determine. 4

30. Please tick the following box if you were brought up overseas:

 1

0 = N.Z.

31. Where do you currently live?

(Please be specific, eg: Christchurch City, Murchison rural).

Area

3. mib. 927.

--	--

New Zealand: _____

Overseas tourist: State, Country: _____

32. Which of the following best describes your home situation?
(If you have children at home, please tick the box which corresponds to the age of the youngest child).

Live alone

All adult(s) household (eg: flat)

Living with parents

Couple, no children

Adult(s) and pre-school children

Adult(s) and primary school children

Adult(s) and working/student children

Adult(s) and children no longer at home

Other (please specify) _____

1
2
3
4
5
6
7
8

9



99