

Claudia Kling

Mountain Bike Use on Shared Tracks

User Survey and Management Proposal for The Queen
Charlotte Track in New Zealand

Diploma Thesis

Bibliographic information published by the German National Library:

The German National Library lists this publication in the National Bibliography; detailed bibliographic data are available on the Internet at <http://dnb.dnb.de> .

This book is copyright material and must not be copied, reproduced, transferred, distributed, leased, licensed or publicly performed or used in any way except as specifically permitted in writing by the publishers, as allowed under the terms and conditions under which it was purchased or as strictly permitted by applicable copyright law. Any unauthorized distribution or use of this text may be a direct infringement of the author s and publisher s rights and those responsible may be liable in law accordingly.

Copyright © 1999 Diplom.de
ISBN: 9783832416607

Claudia Kling

Mountain Bike Use on Shared Tracks

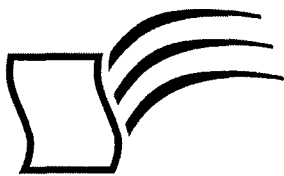
User Survey and Management Proposal for The Queen Charlotte Track in New Zealand

Claudia Kling

Mountain Bike Use on Shared Tracks

*User Survey and Management Proposal
for The Queen Charlotte Track in New Zealand*

**Diplomarbeit
an der Fachhochschule Nürtingen
Mai 1999 Abgabe**



Diplomarbeiten Agentur
Dipl. Kfm. Dipl. Hdl. Björn Bedey
Dipl. Wi.-Ing. Martin Haschke
und Guido Meyer GbR

Hermannstal 119 k
22119 Hamburg

agentur@diplom.de
www.diplom.de

ID 1660

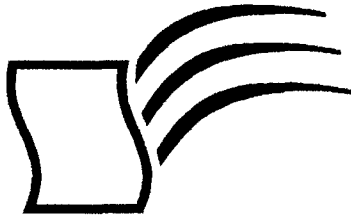
Kling, Claudia: Mountain Bike Use on Shared Tracks: User Survey and Management
Proposal for The Queen Charlotte Track in New Zealand / Claudia Kling -
Hamburg: Diplomarbeiten Agentur, 1999
Zugl.: Nürtingen, Fachhochschule, Diplom, 1999

Dieses Werk ist urheberrechtlich geschützt. Die dadurch begründeten Rechte, insbesondere die der Übersetzung, des Nachrucks, des Vortrags, der Entnahme von Abbildungen und Tabellen, der Funksendung, der Mikroverfilmung oder der Vervielfältigung auf anderen Wegen und der Speicherung in Datenverarbeitungsanlagen, bleiben, auch bei nur auszugsweiser Verwertung, vorbehalten. Eine Vervielfältigung dieses Werkes oder von Teilen dieses Werkes ist auch im Einzelfall nur in den Grenzen der gesetzlichen Bestimmungen des Urheberrechtsgesetzes der Bundesrepublik Deutschland in der jeweils geltenden Fassung zulässig. Sie ist grundsätzlich vergütungspflichtig. Zuwiderhandlungen unterliegen den Strafbestimmungen des Urheberrechtes.

Die Wiedergabe von Gebrauchsnamen, Handelsnamen, Warenbezeichnungen usw. in diesem Werk berechtigt auch ohne besondere Kennzeichnung nicht zu der Annahme, daß solche Namen im Sinne der Warenzeichen- und Markenschutz-Gesetzgebung als frei zu betrachten wären und daher von jedermann benutzt werden dürften.

Die Informationen in diesem Werk wurden mit Sorgfalt erarbeitet. Dennoch können Fehler nicht vollständig ausgeschlossen werden, und die Diplomarbeiten Agentur, die Autoren oder Übersetzer übernehmen keine juristische Verantwortung oder irgendeine Haftung für evtl. verbliebene fehlerhafte Angaben und deren Folgen.

Dipl. Kfm. Dipl. Hdl. Björn Bedey, Dipl. Wi.-Ing. Martin Haschke & Guido Meyer GbR
Diplomarbeiten Agentur, <http://www.diplom.de>, Hamburg
Printed in Germany



Diplomarbeiten Agentur

Wissensquellen gewinnbringend nutzen

Qualität, Praxisrelevanz und Aktualität zeichnen unsere Studien aus. Wir bieten Ihnen im Auftrag unserer Autorinnen und Autoren Wirtschaftsstudien und wissenschaftliche Abschlussarbeiten – Dissertationen, Diplomarbeiten, Masterarbeiten, Staatsexamensarbeiten und Studienarbeiten zum Kauf. Sie wurden an deutschen Universitäten, Fachhochschulen, Akademien oder vergleichbaren Institutionen der Europäischen Union geschrieben. Der Notendurchschnitt liegt bei 1,5.

Wettbewerbsvorteile verschaffen – Vergleichen Sie den Preis unserer Studien mit den Honoraren externer Berater. Um dieses Wissen selbst zusammenzutragen, müssten Sie viel Zeit und Geld aufbringen.

<http://www.diplom.de> bietet Ihnen unser vollständiges Lieferprogramm mit mehreren tausend Studien im Internet. Neben dem Online-Katalog und der Online-Suchmaschine für Ihre Recherche steht Ihnen auch eine Online-Bestellfunktion zur Verfügung. Inhaltliche Zusammenfassungen und Inhaltsverzeichnisse zu jeder Studie sind im Internet einsehbar.

Individueller Service – Gerne senden wir Ihnen auch unseren Papierkatalog zu. Bitte fordern Sie Ihr individuelles Exemplar bei uns an. Für Fragen, Anregungen und individuelle Anfragen stehen wir Ihnen gerne zur Verfügung. Wir freuen uns auf eine gute Zusammenarbeit

Ihr Team der Diplomarbeiten Agentur

Dipl. Kfm. Dipl. Hdl. Björn Bedey –
Dipl. Wi.-Ing. Martin Haschke —
und Guido Meyer GbR —

Hermannstal 119 k —
22119 Hamburg —

Fon: 040 / 655 99 20 —
Fax: 040 / 655 99 222 —

agentur@diplom.de —
www.diplom.de —

ACKNOWLEDGEMENTS

This thesis would not have been possible without the help and support of a lot of people.

My thanks to:

In New Zealand

Department of Conservation staff Picton: Roy Grose, Willie Abel, Lyn, Marie and Pauline (for advise and the patience with all my copying and mailings), Ian, Shane, Wayne and Dave for the lifts, Ruth Schäfer for the visitor information, and Bill, Peter and Mike for the entertainment.

Gordon Cessford, DOC Wellington, for advise and assistance in designing the questionnaires.

Brendon Clough, DOC Nelson, for the provision of the topic and material.

Sally Rhodes and the Cougar Line staff for all the lifts, Rob and Carolyn Burn from the Villa Backpacker, Noeline Sincock, and David Watson and the Marlborough Sounds Adventure Company.

Claire and Peter Gaze, thanks for everything!

In Germany

Christian T. for the Notebook

My proof-readers Antje, Gregor, and Dajana

And another big thank you to Roland, you know why!

CONTENTS

TABLE OF CONTENTS	I
TABLE CONTENTS.....	III
DIAGRAM CONTENTS	V
PICTURE CONTENTS	V
LIST OF ABBREVIATIONS	VI
CHAPTER ONE: INTRODUCTION.....	2
1.1 Introduction - Survey Background	3
1.2 Survey Objectives	4
1.3 The Scope Of This Paper.....	4
CHAPTER TWO: NEW ZEALAND.....	6
2.1 Facts About The Country.....	7
2.1.1 Introduction.....	7
2.1.2 Geography And Geology	7
2.1.2.1 <i>Position</i>	7
2.1.2.2 <i>Geology</i>	8
2.1.3 Climate.....	10
2.2 Flora & Fauna.....	11
2.2.1 Introduction.....	11
2.2.2 Flora.....	11
2.2.3 Fauna.....	13
2.3 History And Politics.....	14
2.3.1 History	14
2.3.2 Modern New Zealand	15
2.3.2.1 <i>Politics</i>	15
2.3.2.2 <i>Economy</i>	16
2.3.2.3 <i>Tourism</i>	17
CHAPTER THREE: THE MARLBOROUGH SOUNDS.....	18
3.1 Introduction.....	19
3.2 Geography And Geology	20
3.2.1 Position	20
3.2.2 Geology.....	20
3.3 Climate.....	21
3.4 Flora & Fauna.....	21
3.4.1 Flora.....	21
3.4.2 Fauna.....	23
3.5 History.....	24
CHAPTER FOUR: BACKGROUND INFORMATION DEPARTMENT OF CONSERVATION (DOC) AND MOUNTAIN BIKES (MTBS).....	25
4.1 Department Of Conservation (DOC).....	26
4.1.1 The Role Of DOC - History And Structure	26
4.1.2 Doc And MTBs.....	28
4.1.3 Statutes For The Management Of MTBs.....	29

4.2 An Introduction To Mountain Biking.....	31
4.2.1 History	31
4.2.2 MTB In New Zealand - A Growing Sport.....	31
4.2.3 Impacts And Conflicts	32
4.2.3.1 <i>Physical Impacts</i>	33
4.2.3.2 <i>Disturbance Of Animals</i>	38
4.2.3.3 <i>Social Impacts And Safety Hazards</i>	39
CHAPTER FIVE: THE QUEEN CHARLOTTE TRACK (QCT).....	41
5.1 Introduction.....	42
5.1.1 Position	42
5.1.2 Climate.....	42
5.1.3 Flora & Fauna	43
5.1.4 History	45
5.1.5 Classification Of The Track.....	47
5.1.6 Track Description.....	47
5.1.6.1 <i>On The Move</i>	47
5.1.6.2 <i>Features Of The QCT</i>	47
5.1.7 User Groups	49
5.1.8 Amount Of Use.....	49
5.2 MTBs On The Queen Charlotte Track.....	49
CHAPTER SIX: SURVEY METHODOLOGY AND RESULTS	51
6.1 Survey Background And Visitor Statistics.....	52
6.1.1 Survey Objectives	52
6.1.2 Survey Design.....	53
6.1.3 Survey Procedure	53
6.2 A Comparison - Survey 1994/95 And 1998.....	54
6.3 Results Of The Walkers Overnight Questionnaire.....	56
6.3.1 Introduction.....	57
6.3.2 Demographic Information.....	57
6.3.3 Trip Satisfaction.....	58
6.3.4 Walker Perception And Opinion Towards MTB Use.....	60
6.3.5 Track Movement Patterns And Use.....	63
6.3.6 Comments	64
6.3.7 Summary	64
6.4 Results Of The Ship Cove To Punga Cove Section Questionnaires.....	66
6.4.1 Introduction.....	67
6.4.2 Demographic Information And Trip Description	67
6.4.3 Trip Satisfaction.....	70
6.4.4 Opinions About MTBs Using The Track	70
6.4.5 Common Opinions About Mountain Biking	72
6.4.6 Additional Comments Made Regarding MTBs	77
6.4.7 Summary	77
6.5 Results Of The MTB Questionnaire.....	80
6.5.1 Introduction.....	81
6.5.2 Demographic Information.....	81
6.5.3 Track Movement Patterns And Use.....	83
6.5.4 Trip Satisfaction.....	85
6.5.5 Rider Opinion About The Track.....	87
6.5.6 General Opinions Towards Track Use And Walker Conflicts	88

6.5.7 Comments	91
6.5.8 Summary	92
Chapter Seven: Conclusions And Recommendations	94
7.1 Introduction.....	95
7.1.1 Management Examples From Other Areas.....	95
7.1.2 Perceived Needs Of Mountain Bikers.....	96
7.1.3 Social Conflicts In General.....	97
7.2 Summary Of The Results From The QCT Survey	97
7.2.1 Some General Conclusions	97
7.2.2 Demographic Summary	98
7.2.3 Summary Of Track Movement Patterns And Use	99
7.2.4 Summary Of Walker Perceptions And Opinions Towards MTB Use.....	99
7.2.5 Summary Of MTB Rider Preferences.....	100
7.2.6 Dissatisfaction With Facilities And Track Structures.....	100
7.3 Recommendations For The QCT Management.....	101
7.3.1 Track Management Improvements	101
7.3.2 Control Of Visitor Numbers	103
7.3.2.1 <i>Monitoring Of Visitor Numbers</i>	103
7.4 Recommendations For MTB Management	104
7.4.1 Social Impacts.....	104
7.4.1.1 <i>Management Examples To Avoid Conflicts</i>	106
7.4.2 Physical Impacts	107
7.4.2.1 <i>Track Maintenance Examples</i>	108
7.4.3 DOC And MTBs.....	112
7.4.4 The Use Of Information.....	113
7.5 Concluding Remark.....	114
 REFERENCES.....	 115

APPENDICES

- Appendix 1: Total Questionnaire Numbers
- Appendix 2: Walkers Overnight Questionnaire and Comments
- Appendix 3: Ship Cove to Punga Cove Part I Questionnaire and Comments
- Appendix 4: Ship Cove to Punga Cove Part II Questionnaire and Comments
- Appendix 5: Mountain Biker Questionnaire and Comments
- Appendix 6: Codes of Conduct (MTB, Environmental Care Code, NEMBA)
- Appendix 7: The New England Mountain Bike Patrol, Single Track Warrior MTBike Patrol

TABLE CONTENTS

Table 1: Visitor numbers over the past years	52
Table 2: Share of New Zealanders/Overseas Visitors	54
Table 3: Visitor numbers New Zealand.....	54
Table 4: Visitor numbers Overseas Visitors	54
Table 5: Age Groups New Zealanders/Overseas Visitors	55
Table 6: Walkers seen bikers.....	55
Table 7: Walking Enjoyment affected by bikers	55

Table 8: Walkers overnight age groups	57
Table 9: Gender	58
Table 10: Nationalities.....	58
Table 11: New Zealand provinces.....	58
Table 12: Visited the track before	58
Table 13: Trip satisfaction.....	58
Table 14: Dissatisfaction with facilities and services provided.....	59
Table 15: See any MTBs	60
Table 16: Numbers of MTBs seen.....	60
Table 17: Walking enjoyment affected by MTBs	60
Table 18: Riding a MTB.....	61
Table 19: Know about MTBs on track	62
Table 20: If known about MTBs	62
Table 21: Interested in riding the track.....	62
Table 22: Group size	63
Table 23: Children in group	63
Table 24: Group type.....	63
Table 25: Starting point.....	63
Table 26: Nights on track	64
Table 27: Lodges used.....	64
Table 28: Campsites used.....	64
Table 29: Age groups	67
Table 30: Gender	68
Table 31: Nationalities.....	68
Table 32: New Zealand regions.....	68
Table 33: Visited track before	68
Table 34: Group size	69
Table 35: Children in group	69
Table 36: Doing whole track on this visit.....	69
Table 37: Ride a MTB.....	69
Table 38: Trip satisfaction.....	70
Table 39: Dissatisfaction caused by MTBs	70
Table 40: Know about MTBs on track	70
Table 41: If known about	70
Table 42: See any MTBs	71
Table 43: Numbers of MTBs seen.....	71
Table 44: Enjoyment affected by MTBs	71
Table 45: Similar levels of impacts	72
Table 46: Bikers go too fast when passing walkers.....	73
Table 47: Bikers are louder and noisier.....	73
Table 48: Walkers are more interested in the environment.....	73
Table 49: Bikers approach too quietly.....	73
Table 50: Bikers go too fast around corners.....	74
Table 51: Few irresponsible bikers cause problems	74
Table 52: Shared tracks don't work.....	74
Table 53: Danger from bikes is over-estimated.....	74
Table 54: Conflicts are over-estimated.....	75
Table 55: Conflict reduced by habit	75
Table 56: Reduced conflict with better behaviour.....	75
Table 57: Biking banned on the QCT.....	75
Table 58: Bikers and walkers are different kinds of people	76
Table 59: Bikers and walkers were different kinds of people	76
Table 60: Walker expectations	77
Table 61: MTB riders age groups.....	81
Table 62: Riders gender share	81
Table 63: Riders nationality	82
Table 64: New Zealand regions.....	82
Table 65: Visited the track before	82
Table 66: How many times visited	82
Table 67: Visiting activity	83

Table 68: Years riding a MTB.....	83
Table 69: Level of experience	83
Table 70: Group size	83
Table 71: Group type.....	83
Table 72: Transport used.....	84
Table 73: Starting point.....	84
Table 74: Finishing point.....	84
Table 75: Sections biked	84
Table 76: Day trip.....	85
Table 77: Number of nights stayed on the track.....	85
Table 78: Lodges used.....	85
Table 79: Campsites used.....	85
Table 80: Trip satisfaction.....	85
Table 81: Satisfaction with the facilities and services provided.....	86
Table 82: Best parts of the track	87
Table 83: Worst parts of the track	87
Table 84: Level of riding ability on the track sections	88
Table 85: Different riding from usual.....	88
Table 86: Restriction satisfactory	89
Table 87: Change in attitudes.....	90

DIAGRAM CONTENTS

Diagram 1: Walkers Overnight age groups	57
Diagram 2: Walkers Overnight walking enjoyment affected by MTBs	60
Diagram 3: Walkers overnight: Do you sometimes ride a MTB	62
Diagram 4: Ship Cove/Punga Cove age groups	67
Diagram 5: Walking enjoyment affected by MTBs.....	72
Diagram 6: Biking should be banned on the QCT	76
Diagram 7: MTB age groups.....	81

PICTURE CONTENTS

Pict. 1: Bay of Islands (KLING).....	2
Pict. 2: Map of New Zealand (NEW ZEALAND TOURISM BOARD)	6
Pict. 3: Mt Ngauruhoe, Tongariro National Park (KLING).....	8
Pict. 4: Mud Pools, Waiotapu (KLING).....	8
Pict. 5: Champagne Pools, Waiotapu (KLING)	8
Pict. 6: Milford Sound, Fiordland National Park (KLING).....	9
Pict. 7: Franz Josef Glacier, West Coast (KLING).....	9
Pict. 8: Mason Bay, Stewart Island (KLING).....	9
Pict. 9: Kauri (<i>Agathis australis</i>) (KLING).....	12
Pict. 10: Ponga (<i>Cyathea dealbata</i>) (KLING).....	12
Pict. 11: Fern in Punakaiki rock (KLING)	12
Pict. 12: Yellow-Eyed Penguin (<i>Megadyptes antipodes</i>) (KLING)	13
Pict. 13: Brown Kiwi (<i>Apteryx australis</i>) (KLING)	13
Pict. 14: Kea (<i>Nestor notabilis</i>) (KLING)	14
Pict. 15: Takahe (<i>Porphyrio mantelli hochstetteri</i>) (KLING)	14
Pict. 16: Marae in Waitangi (KLING).....	14
Pict. 17: University Dunedin (KLING)	14
Pict. 18 & 19: Auckland (KLING)	17
Pict. 20 & 21: NZ sheep (KLING)	17
Pict. 22: Marlborough Sounds Map (NEW ZEALAND TOURISM BOARD).....	18
Pict. 23: Marlborough Sounds Impressions (KLING).....	18
Pict. 24 & 25: Marlborough Sounds Impressions (KLING).....	19
Pict. 26 & 27: NZ ferns (KLING)	22
Pict. 28: Weka (<i>Gallirallus australis</i>) (KLING).....	23

Pict. 29: Tui (<i>Prosthemadera novaeseelandiae</i>) (KLING).....	23
Pict. 30: MTB rider (BREINLINGER)	25
Pict. 31: South Island Saddleback (<i>Philesturnus carunculatus carunculatus</i>) (KLING).....	27
Pict. 32: Freshwater Hut, Stewart Island (KLING)	27
Pict. 33 & 34: Impacts of Wheels (KLING).....	37
Pict. 35: Cartoon (DAV).....	39
Pict. 36: Queen Charlotte Track Map (source: MARLBOROUGH SOUNDS ADVENTURE COMPANY)	41
Pict. 38 & 39: Queen Charlotte Track Impressions (KLING).....	43
Pict. 40, 41 & 42: QCT soil, Fern, Weka (KLING)	45
Pict. 43: Cook monument, Ship Cove (BREINLINGER)	46
Pict. 44: Tractor in Endeavour Inlet (KLING)	46
Pict. 45 & 46: The Cougar Line and QCT Impression (KLING).....	48
Pict. 47: DOC Sign on the Queen Charlotte Track (KLING).....	50
Pict. 48: Sign on the Heaphy Track at Kohaihai Shelter (KLING)	50
Pict. 49: Survey (BREINLINGER)	51
Pict. 50: Camp Bay campsite (KLING).....	56
Pict. 51 & 52: MTB Cartoons (DAV & GIESHOIDT)	66
Pict. 53 & 54: MTB at Big Bay (KLING).....	80
Pict. 55: Cartoon (GIESHOIDT).....	94
Pict. 56 & 57: DOC Signs (KLING)	106
Pict. 58: Impacts of Wheels (KLING).....	111

LIST OF ABBREVIATIONS

CAN	Canada
CHCH	Christchurch
DAV	Deutscher Alpenverein e.V.
DOC	Department of Conservation
GER	Germany
GNP	Gross National Product
IMBA	International Mountain Bicycling Association
MMP	Mixed Member Proportional
MBAA	Mountain Bicycling Association Australia
NEMBA	New England Mountain Bike Association
NL	Netherlands
MTB	Mountain Bike
MTBs	Mountain Bikes
NZ	New Zealand
NZCA	New Zealand Conservation Authority
OV	Overseas Visitor
OZ	Australia
QCT	Queen Charlotte Track
UK	United Kingdom
USA	United States of America

CHAPTER ONE

INTRODUCTION

AOTEAROA

Toitu he kainga, whatungarongaro he tanagata
The land is the mother of the people



1.1 Introduction - Survey Background

In the past years a lot of 'new kinds of sport' were discovered as a form of outdoor recreation. Today the traditional walker has to share the tracks with a lot of other user groups. At present shared tracks often lead to conflicts between the 'old' and the 'new' user groups. One of the 'new' groups is the Mountain Bike (MTB) group.

Mountain biking seems to be the new wave sport of the nineties, but it all started in the early to mid 1970's with a few enthusiasts in the US. It became established internationally in the early 1980's. Mountain bikes began to appear in New Zealand from the mid 1980's, and since then are growing in popularity among all ages and genders.

The popularity of the MTB is now changing the recreational patterns of the traditional outdoor user groups. A discernible number of people who have traditionally been walkers / trampers have now often changed their outdoor recreation use from walking to biking. This new type of track use seems to create conflicts in a social and physical way, and it appears that there are some problems between walkers/trampers and mountain bikers.

Mountain biking experiences a growth in popularity, encouraged through:

- Advances in technology;
- the attractive qualities of a mountain bike compared to other bicycles;
- its appeal to a wide range of people;
- and perception of cycling in general as a health promoting, 'environmentally friendly', alternate mode of transport and means of recreation.

It is from this perspective that a survey on the Queen Charlotte Track (QCT) in the Marlborough Sounds has been undertaken to try and determine what the realistic management options are so that consistency in policy formulation may be obtained. Public view points are still very divided on this issue. The objective of this survey is to gauge the public opinions and to then make recommendations for future management strategies.

The Marlborough Sounds are a unique and popular holiday destination for New Zealanders and overseas visitors. Before the re-development of the Queen Charlotte Track in 1991/1992, the track experienced only low to moderate use with seasonal peaks occurring between Anakiwa and Mistletoe Bay and from Ship Cove to Resolution Bay. It was renamed the Queen Charlotte Track in 1991/1992 and underwent promotion by local bodies and has since experienced a dramatic increase in visitor numbers.

The Department of Conservation has conducted two previous user surveys on the Queen Charlotte Track, one in 1993/94 that came about due to rising visitor numbers, and one in 1994/95 to investigate more specific aspects of the issue surrounding MTB / walker conflicts.

Now the Department of Conservation was interested to identify the public opinion and visitor movement patterns of MTBs and walkers, especially about overcrowding, services/facilities, management and the use of mountain bikes on the track. This time a special interest was taken in the opinion of MTB riders and their needs, and also in the interactions between walkers and riders.

At present MTB management involves a MTB Trial period with the closure of the Ship Cove to Punga Cove section of the track between December and February, thereby reducing conflicts during peak season.

1.2 Survey Objectives

The basic aim of the Queen Charlotte Track Visitor Survey was to produce information on track user demographics; their levels of satisfaction with services/facilities; opinions and aspirations; as well as any existing conflicts between the user groups, here mainly walkers / mountain bikers, so that future management policies may be formulated.

To be more specific, the objectives were:

1. To determine demographic user patterns (for both MTBs and walkers) to provide a comparison to the existing data from the previous surveys thereby identifying demographic trends on the track.
2. To identify user movement patterns with respect to facilities and sections of the track used, also to establish levels of user satisfaction with services and facilities on the track.
3. To gauge whether users perceive MTBs to be a problem and to understand user perceptions and opinions towards MTBs on the track and in general opinions about MTB use on tracks.
4. To ascertain the level of MTB rider experience needed on the different sections of the track, and to get an opinion of the riders about track management and satisfaction.
5. To indicate possible management options and alternatives to the present situation, e.g. with services and facilities.
6. To indicate management options for social conflicts between user groups, and the future handling of MTBs on tracks.

To get all these informations different questionnaires were designed, adequate for every user group. The reason for the use of questionnaires is, that they give the option to ask the 'real' users about their opinions and satisfaction with the present situation, because they are 'out there' and use the structures. If they are not satisfied, the track management system cannot work.

1.3 The Scope of this paper

I spent the previous months in New Zealand in the Marlborough Sounds, to organize the thesis and then to collect information on the Queen Charlotte Track. I thought the User Survey to be a very important tool for the future management of shared tracks, because it gives the option to get the opinion and satisfaction of the users. Especially the growing numbers of different outdoor activities need to be managed, and also the user expectations need to be modified. Therefore the use of questionnaires is an important method in the field of track management planning.

Part I - Chapters Two and Three

The first part of the thesis provides background information about New Zealand and the Marlborough Sounds, with information about history, geography, flora & fauna and tourism.

Part II - Chapters Four and Five

The second part introduces the Department of Conservation (DOC) with an emphasis on mountain bike management on tracks administered by the Department. A rough introduction is given into the mountain bike (MTB) history internationally and in New Zealand. Physical and social impacts of MTBs are discussed as well, and then the Queen Charlotte Track (QCT) is introduced with its history and features.

Part III - Chapter Six

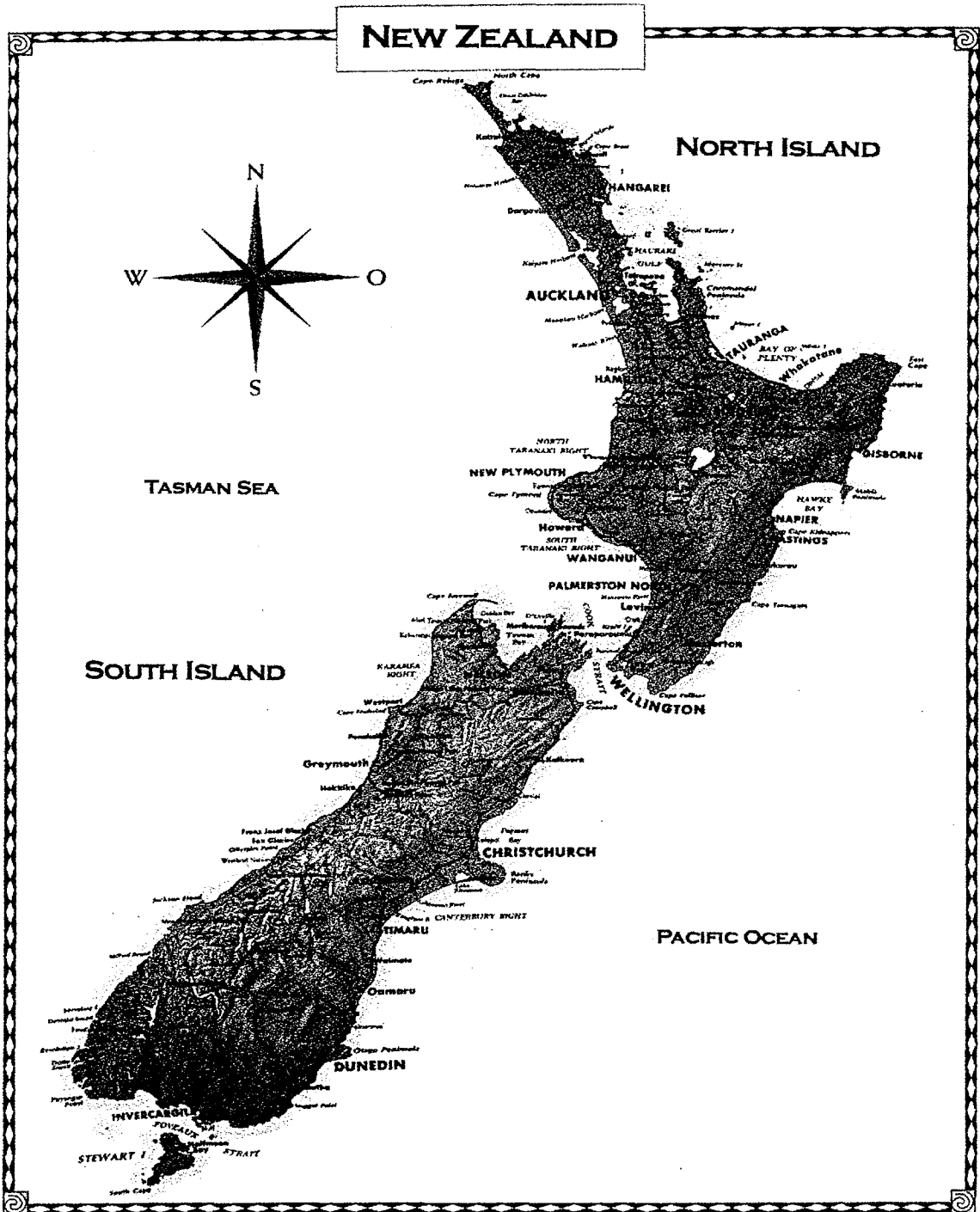
The third part includes the Survey design and also an explanation of the procedure and the reason why questionnaires were used. The results of the questionnaires are explained and summarised. Each questionnaire has its own summary, so that readers who have a special interest in one topic (e.g. 'walkers overnight') can get the information without having to read the results of the other questionnaires.

Part IV - Chapter Seven

The last part of the thesis shows examples of MTB management in other areas and initiatives of MTB Clubs / riders. It also includes an overall summary of the results from all questionnaires, so that readers who are not interested in the separate results of the questionnaires can get an overall impression of the present situation on the QCT. Conclusions and recommendations for the future management of the QCT and options for MTB use on tracks are discussed as well.

CHAPTER TWO

NEW ZEALAND



Pict. 2 Map of New Zealand (source: NEW ZEALAND TOURISM BOARD)