

Copyright is owned by the Author of the thesis. Permission is given for a copy to be downloaded by an individual for the purpose of research and private study only. The thesis may not be reproduced elsewhere without the permission of the Author.

CYCLONE HOUSING IN UPOLO AND MANIHIKI

**A Thesis Submitted in Partial Fulfilment of the Requirements for the
Degree of Master of Philosophy in Development Studies at
Massey University**

**By Anna Louise Skinner
2001**

Dedication

To my parents, Ivan and Pat Skinner, for all the love and support they have given me.

To my sons, Ben and Ron Christiansen, for their incredible skills at entertaining themselves; that is, their tolerance and patience.

To my fiancé, Ross Edney, for all his support and tolerance and assistance.

Acknowledgements

I wish to acknowledge and express my gratitude for the tremendous assistance I have received from my supervisor, Dr Donovan Storey. He was able to take my interests and fashion a thesis topic that has been interesting and immensely illuminating. And he has managed (to a large degree!) to steer me away from historical cul-de-sacs I would have been quite happy to get lost in, and keep me on the right course.

I also wish to acknowledge the financial assistance I received from New Zealand Foreign Affairs, which enabled this research project to be undertaken.

And I wish also to express my gratitude to my parents for stepping in when the research finance had not happened quite in time for the special deal on the plane tickets. And for the lovely send off from Wellington. And thank you also to my sister Kathy for being part of that send-off.

I also wish to express my deepest gratitude to the Karaponga family of Tukao, Manihiki, in particular, Sam and Nga, for taking me into their home and including me in their lives and making me feel so welcome. Thank you especially for the lovely food and the lessons in Tivaevae making, and the snorkling. Special thanks to Mehau for giving up her bedroom to me and providing information on gender tasks and pearl farming schedules. And thanks also to Georgina for her empathetic insights on experiencing Manihiki for the first time. And thanks also of course to Vicki Rattal, Sam's sister in Rarotonga, my point of contact, for introducing me to Sam and Nga, and for such a pleasant dinner at her and her husband's place.

Thanks to the people of Manihiki who interrupted their busy lives to help me out in my research. Thank you for your tolerance and assistance, and your insights.

Thank you to the head of the Disaster Management Office of the Cook Islands, Anthony Brown, for your time and for allowing me to take prints from your negatives of the aftermath of Cyclone Martin.

I also owe a particular debt of gratitude to the Building Office Manager of Samoa, Lauvi Parataiso A'atui, who spent so much time with me, explaining the building regulatory system in place in Samoa.

I wish to express my appreciation to the people of Samoa whom I encountered on my research for their unstinting assistance.

Thank you to my partner, Ross, for running the household so ably while I was in the Islands, and for all your sterling efforts at getting the thesis printed.

I also wish to thank my sister, Julian Skinner, for looking after my younger son for a while when I was in the Islands.

Thank you to my friend Peter Christiansen for also putting a week in on the childcare regime while I was away.

Thank you to my sister Trisha Witham, and my brother Chris Skinner for taking an interest.

A special thanks to my dear friend Adriana Cotogni for being at Wellington airport to welcome me home, and for putting up with all my grumbling about how things were going during the rest of the year!

Finally, a large thank you to my sons, Ben and Ron for putting up with a lack of access to the computer in the last run up to completion date.

The Table of Contents

List of Illustrations	Page vi
Introduction	Page 1
Aid	Page 17
Assisted Housing	Page 39
Pre-Colonial Influences	Page 64
New Zealand and Samoa and the Cook Islands	Page 77
Post-Colonial	Page 105
Samoa	Page 132
Manihiki	Page 162
Conclusions	Page 208
Recommendations	Page 215
Bibliography	Page 219
Appendices	Page 234
A. MFAT and the Manihiki Project	Page 235
B. Gender Differentiation of Tasks	Page 237
C. Manihiki Children's Opinions	Page 240
D. Pearl Farming Schedule	Page 242
E. Allocation of Shelters	Page 243
F. Illustration Credits	Page 246

The List of Illustrations

Pg. 66	Illustration 1:	‘Traditional’ cyclone house in Manihiki.
Pg. 67	Illustration 2:	The structure of the houses in Manihiki, late 19 th and early 20 th Century.
Pg. 68	Illustration 3:	Portable house in Manihiki, late 19 th and early 20 th Century.
Pg. 69	Illustration 4:	A Samoan fale tele. Exterior view.
Pg. 70	Illustration 5:	A traditional style oval fale structure.
Pg. 72	Illustration 6:	Lime building, missionary seminary, Avarua, Rarotonga.
Pg. 73	Illustration 7:	‘Before’ and ‘After’ Pictures of the effect of the English Christianity.
Pg. 84	Illustration 8:	1919 Peace Conference decides New Zealand should administer Samoa. ‘Bill’ Massey is Prime Minister of New Zealand. <i>W.Blomfield, Observer, 1919.</i>
Pg. 84	Illustration 9:	Over staffed administration intolerant of local customs. <i>Hill, Auckland Star, 1929.</i>
Pg. 89	Illustration 10:	Severe crackdown on protests by New Zealand. <i>Firth, NZ Samoan Guardian.</i>
Pg. 90	Illustration 11:	Police clashed with procession in Apia, 1929. <i>Firth, NZ Samoan Guardian.</i>
Pg. 101	Illustration 12:	Style of house funded through above scheme.
Pg. 102	Illustration 13:	Style of house funded through above scheme.
Pg. 134	Illustration 14:	The path of Cyclone Val through the South Pacific.
Pg. 134	Illustration 15:	Val over Samoa.
Pg. 145	Illustration 16:	Fales around a central green.

Pg. 145	Illustration 17:	A view of the outskirts of Apia.
Pg. 146	Illustration 18:	A round ended fale: a fale afolau.
Pg. 146	Illustration 19:	A modern fale, rectangular plan, concrete structure.
Pg. 147	Illustration 20:	A recently rebuilt fale, round ended
Pg. 147	Illustration 21:	The structure of this rebuilt fale afolau.
Pg. 148	Illustration 22:	A rural compound.
Pg. 149	Illustration 23:	A bus stop.
Pg. 150	Illustration 24:	An example of a concrete block house
Pg. 150	Illustration 25:	An example of a timber framed house with rusticated weatherboards
Pg. 151	Illustration 26:	On the left, a rectangular plan, hip roof fale, with walled rooms to the rear. On the right, a western style house with a gable end roof, with a deep porch
Pg. 160	Illustration 28:	All of Samoa appears to be under cultivation.
Pg. 162	Illustration 29:	Diagram showing post and beam connections.
Pg. 162	Illustration 30:	A room for rent in an urban compound in Apia.
Pg. 164	Illustration 31:	A fale on the beach, with western mattress
Pg. 164	Illustration 32:	View from fale on the beach
Pg. 166	Illustration 33:	Inside a timber frame, western style house, Apia
Pg. 166	Illustration 34:	Inside a timber frame, western style house,
Pg. 169	Illustration 35:	Map of the Cook Islands

Pg. 170	Illustration 36:	Aerial photo of Manihiki.
Pg. 170	Illustration 37:	Pearl farm buildings on kaa in lagoon, prior to cyclone Martin.
Pg. 172	Illustration 38:	Building Code in place for Cook Islands, timber frame details
Pg. 173	Illustration 39:	Cook Islands Building Code, blockwork details
Pg. 174	Illustration 40:	Little evidence of horizontal reinforcing in remains of block wall.
Pg. 174	Illustration 41:	Evidence of starter bars
Pg. 175	Illustration 42:	Community water shed, with water tanks
Pg. 177	Illustration 43:	Location of houses, Tauhunu, prior to Cyclone Martin.
Pg. 178	Illustration 44:	Location of surviving houses and micro-shelter sites, Tauhunu
Pg. 179	Illustration 45:	Location of houses in Tukao village, prior to Cyclone Martin
Pg. 180	Illustration 46:	Location of surviving houses and shelter sites, Tukao
Pg. 181	Illustration 47:	Houses in Tukao, seaward, just after Cyclone Martin.
Pg. 181	Illustration 48:	Telecom site, Tauhunu.
Pg. 182	Illustration 49:	Aftermath of Cyclone Martin, Tauhunu
Pg. 188	Illustration 50:	One of the original plans considered.
Pg. 189	Illustration 51:	Another early design for the micro-shelter.
Pg. 191	Illustration 52:	The Final micro-shelter design.
Pg. 193	Illustration 53:	Shelter frame.
Pg. 194	Illustration 54:	Shelter, with enlarged windows, separate ablutions block, Telecom in rear

Pg. 195	Illustration 55:	An example of a house made by a couple after Cyclone Martin.
Pg. 195	Illustration 56:	Interior of above
Pg. 196	Illustration 57:	A completed shelter.
Pg. 196	Illustration 58:	Completed shelter, enlarged windows, stairway at one end.
Pg. 199	Illustration 59:	Land holdings in Manihiki.
Pg. 200	Illustration 60:	A traditional fale being built by a couple that missed out on a shelter.
Pg. 200	Illustration 61:	Detail of above.
Pg. 200	Illustration 62:	Notch in beam to key into lower beam.
Pg. 205	Illustration 63:	The splits in a pole.
Pg. 208	Illustration 64:	Tukao, church, shelter, children on house slab.
Pg. 208	Illustration 65:	Volleyball tournament, Tukao churchyard.

List of Illustrations

Pg. 139	Figure 1:	Table of Remittances.
Pg. 147	Figure 2:	Graph showing number of Cook Islanders living in New Zealand.