READING BETWEEN THE LINES: PEOPLE, POLITICS AND THE CONDUCT OF SURVEYS IN THE SOUTHERN NORTH ISLAND, NEW ZEALAND 1840-1876

VOLUME ONE

A Thesis Submitted in Fulfillment of the Requirements for the Degree of Doctor of Philosophy in Geography.

BRADFORD RICHARD PATTERSON

Victoria University of Wellington

1984
The delineation of land parcels is an essential first step in any area undergoing colonisation. Embodying the organisational ideals of the colonising society, the resulting complexes of divisional lines endure in the landscape as monuments to past decisions, continuing to function as frameworks for geographical activity long after the rationale for initial design has been forgotten. The procedure of initial inscription, however, is neither random nor simple. An argument is advanced that the procedure may be advantageously viewed as the product of an ongoing process of 'spatial goal redefinition', itself an example of adaptive learning in colonial situations. It is further argued that, in the course of redefinition, the cadastral layouts embraced may be as greatly influenced by factors external to the actual conduct of surveys - for instance, the embraced economic strategy for the area being colonised, the political climate, or even the idiosyncrasies of supervising bureaucrats - as by purely technological considerations. This being the case, the intricate patterns of cadastral inscriptions discernible in any particular landscape may be considered a crude mirror of the settlement history of that landscape, and of the hopes and aspirations of those who settled it. To test the validity of these postulations, the survey and settlement experiences of one nineteenth century European colonisation site, the southern North Island districts of New Zealand, are subjected to close scrutiny.
ACKNOWLEDGEMENTS

No work of this nature is completed without the accumulation of many debts, almost invariably a store beyond the capacity of the writer to repay.

Without the encouragement and sustained support of many friends and colleagues, it is doubtful that this study would ever have been completed. My particular thanks to Ian Wards, formerly Chief Historian (Department of Internal Affairs), who acted as motivator, gentle critic and adviser over many years; to Michael Hoare, who did battle with a succession of drafts in rough form, and who offered counsel and support during the difficult months of authorship; and to Ron Keam, Auckland University, whose encouragement at a time when completion of the manuscript seemed unlikely helped more than he could know. Equally, my thanks to Graham Bagnell, doyen of students of early Wellington Province, whose constant interest was a stimulus, and whose generous willingness to share his knowledge provided an object lesson of what scholarship is about. My collaborator in other projects, Mary Watson, provided constructive criticism of the initial versions of Chapters 3 – 6, thereby helping refine my ideas on the political economy of nineteenth century Wellington. Richard Hill, historian of the New Zealand Police, also offered useful comments on these chapters. To those many other friends, unnamed, who in various ways endeavoured to ease the burden, my gratitude is also extended.

At the outset, the encouragement of Ray Hargreaves, Otago University, set me on the path outlined in subsequent pages. Perhaps fortunately, at that time neither he nor the writer envisaged that there would be so many twists and turns, nor that the journey would be so prolonged. Appreciation must also be expressed to my former colleague on the staff of National Archives, Paul Zilch, whose scepticism with respect to many accepted New Zealand historical canons helped turn my thinking in new directions.

Thanks are also due to several members of the staff of the Geography Department, Victoria University of Wellington, past and present. My appointed supervisor, Ralph Wheeler, provided a sympathetic ear over the years the project was in gestation and, when the manuscript began to emerge, devoted many hours to careful
reading and criticism. The infelicities of style that remain cannot be held to be his responsibility. My thanks also to Ray Watters, who offered comment on portions of the manuscript; to Mike Crozier, who as Chairman of the Department eased administrative problems, and to Bob Eyles and John Kirby, who, by their insistence that the endeavour was worthwhile, helped bolster the writer's sagging morale on several occasions.

In depth New Zealand historical studies would be impossible without the ready co-operation and advice of those frequently unsung heroes and heroines of research: the archivists and librarians, custodians of the materials upon which such works are necessarily based. It has been my good fortune to invariably encounter interest and co-operation, not to mention hospitality, at institutions where research has been undertaken. As so many have played a part over so many years, it would be invidious to single out individuals, but all concerned may be assured of my gratitude. For more than three years the National Archives became my second home, and a completely congenial one, while the General Assembly Library and the Alexander Turnbull Library also became my domicile for extended periods. Of the institutions outside Wellington visited, the following must be specifically acknowledged: the Hocken Library, Dunedin; the Wanganui Regional Museum; and the Canterbury Museum. Special thanks must also be extended to the staff of those institutions where my only contact was by correspondence: the Public Records Office, London; the Office of the Hydrographer to the Navy, Taunton; the Ordnance Survey, Southampton; and the Mitchell Library, Sydney.

Notwithstanding the foregoing caveat, a special debt to Phil Barton, Map Librarian at the Alexander Turnbull Library, must be acknowledged. In bringing material to my attention, and in making enquiries on my behalf, he has offered assistance well above the normal call of duty.

I owe much, also, to my employer of recent years, the Department of Lands and Survey. When the project was first launched, the then Surveyor-General, Ian Stirling, offered both interest and assistance. Over several years, and again more recently, staff in Wellington District Office helped me find my way through the maze of early plan records. When subsequently I entered into a contract with the Department to prepare its official history, I received every encouragement to complete the work already in progress. That
senior officers of the Department should regard the present micro-
study of Wellington as contributory to the commissioned history, as
well as worthwhile in itself, speaks volumes, I think, for the
research environment offered by that agency. In particular, I must
acknowledge the understanding of the Deputy Director-General, George
McMillan, who released me temporarily from contractual obligations
when it became imperative that my time be fully devoted to completion
of the present manuscript.

In the course of the transformation of raw research findings
into finished manuscript, any writer heavily depends upon the
assistance of others. In this case, friendship and familial bonds
have been tested to the full. My debt to the Hoare family extends
also to Margaret Hoare, who over a twelve month period has converted
my frequently rough and heavily amended drafts into neat typescript.
My sister-in-law, Sarah Rendle, devoted many winter hours to the
difficult task of photographing manuscript plans and the preparation
of other illustrative material. The results are sufficient testimony
to her skill.

The Alexander Turnbull Library and the Victoria University of
Wellington Photographic Unit have also prepared plates on my behalf.
In addition, reproductions of some 20 record plans have been produced
by the Department of Lands and Survey. Nearly half of the maps and
diagrams specially drawn for the study were produced by Sian McLean.
An especial expression of gratitude must be conveyed to Russell
Turner, Department of Lands and Survey, who, when Ms McLean was
unable to complete the cartographic illustrations, stepped into the
breach and brought the drafting to a conclusion.

Finally, but by no means least, several very personal debts
must be acknowledged. To my parents, my thanks for nearly four
decades unbroken faith and support. Without their encouragement
over those years this work would never have been commenced. If,
during the past two years, they have sometimes doubted they had a
son, it is hoped that the finished product might in small measure
atone for filial negligence. It is also customary, at this point,
to pay tribute to the contribution of one's spouse. In my case,
the gratitude must be far deeper than any written acknowledgement
could convey. For too long, Kathryn has shielded the writer's
tender ego, acted as research assistant, sounding board, critic,
grammarian and unpaid typist of successive drafts. She, at a time when pressures in her own career have not been inconsiderable, has been unstinting. She has shared the tribulations and frustrations, but also the excitements of the exercise, with me from the outset. In a moral sense, this work is as much hers as mine. My last debt is to Barney, who helped by simply being there.
A. NOTE ON MEASUREMENTS

Throughout this study 'Imperial' measurements, i.e. those contemporaneously employed in the Colony of New Zealand, have been retained. This course has been judged preferable to a whole, or partial, conversion to 'Metric' measurements, the latter being possibly confusing, in some instances misleading.
CONTENTS OF VOLUME ONE

Abstract
Acknowledgements
A Note on Measurements
Table of Contents
List of Figures
List of Survey Plans

INTRODUCTION

An Approach to the Analysis of Colonial Cadastres
The Present Investigation
Organisation of Content

CHAPTER ONE - BOUNDARIES, SHAPES AND SIZES:
EVOLUTION OF THE SOUTHERN NORTH ISLAND CADASTRE TO 1879

1.1 The Dimensions of Survey Activity: Dissecting the 1876 southern North Island Cadastre
1.2 Scheming Pioneer Townscapes
1.3 From Agricultural Estates to Small Bush Farms: The Delineation of Intensive Farming Landscapes
1.4 From Free Range to Fenced Fields: The Evolution of Pastoral Landscapes
## FIGURES IN VOLUME ONE

<table>
<thead>
<tr>
<th>FIGURE</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>I1</td>
<td>The Evolution of a Colonial Cadastre</td>
<td>4</td>
</tr>
<tr>
<td>I2</td>
<td>Cadastre Formation as an On-going Process of Spatial Goal Redefinition</td>
<td>11</td>
</tr>
<tr>
<td>I3</td>
<td>The Study Area</td>
<td>13</td>
</tr>
<tr>
<td>1.1</td>
<td>Recorded Per Annum Plan Output of Official Survey Agencies Active in the southern North Island 1840-1876</td>
<td>22</td>
</tr>
<tr>
<td>1.2</td>
<td>Distribution of Survey Plans Located by District Depicted</td>
<td>23</td>
</tr>
<tr>
<td>1.3</td>
<td>Distribution of Survey Plans Located by Purpose for which Executed</td>
<td>25</td>
</tr>
<tr>
<td>Survey Plan</td>
<td>Description</td>
<td>Page</td>
</tr>
<tr>
<td>-------------</td>
<td>-------------</td>
<td>------</td>
</tr>
<tr>
<td>1</td>
<td>Plan of Proposed Town of Britannia</td>
<td>30</td>
</tr>
<tr>
<td>2</td>
<td>Plan of the Town of Wellington, Port Nicholson 1840</td>
<td>31</td>
</tr>
<tr>
<td>3</td>
<td>Plan of the City of Wellington 1872</td>
<td>34</td>
</tr>
<tr>
<td>4</td>
<td>Plan of Wades Town 1842</td>
<td>34</td>
</tr>
<tr>
<td>5</td>
<td>Plan of City...in the District of Wanganui 1842</td>
<td>36</td>
</tr>
<tr>
<td>6</td>
<td>Rough Plan of the Town of Petre 1852</td>
<td>37</td>
</tr>
<tr>
<td>7</td>
<td>Plan of the Town of Wanganui 1875</td>
<td>38</td>
</tr>
<tr>
<td>8</td>
<td>Plan of Port Napier 1855</td>
<td>41</td>
</tr>
<tr>
<td>9</td>
<td>Greytown and Masterton 1855</td>
<td>44</td>
</tr>
<tr>
<td>10</td>
<td>Plan of Township of Featherston 1858</td>
<td>45</td>
</tr>
<tr>
<td>11</td>
<td>Township of Alfredton 1871</td>
<td>46</td>
</tr>
<tr>
<td>12</td>
<td>Township of Foxton 1866</td>
<td>48</td>
</tr>
<tr>
<td>13</td>
<td>Plan of Town and Suburban Sections, Palmerston North 1875</td>
<td>49</td>
</tr>
<tr>
<td>14</td>
<td>Township of Sanson 1872</td>
<td>50</td>
</tr>
<tr>
<td>15</td>
<td>Plan of Township of Feilding 1874</td>
<td>51</td>
</tr>
<tr>
<td>16</td>
<td>Plan of Marton 1876</td>
<td>55</td>
</tr>
<tr>
<td>17</td>
<td>Waioa Township, Okotuku District 1868</td>
<td>57</td>
</tr>
<tr>
<td>18</td>
<td>Plan of Native Village at Wainui 1849</td>
<td>60</td>
</tr>
<tr>
<td>19</td>
<td>Sketch of the Country Districts in the Vicinity of Port Nicholson 1843</td>
<td>65</td>
</tr>
<tr>
<td>20</td>
<td>A Map of the District of Wanganui 1843</td>
<td>66</td>
</tr>
<tr>
<td>21</td>
<td>Plan of Country Sections in the Districts of Mangawatu and Horowenua 1843</td>
<td>66</td>
</tr>
<tr>
<td>22</td>
<td>Plan of Working Settler Sections in the Wainuiomata Valley 1844</td>
<td>67</td>
</tr>
<tr>
<td>23</td>
<td>Plan Showing Country Sections at Rangitikei 1850</td>
<td>68</td>
</tr>
<tr>
<td>24</td>
<td>Plan of Greytown Suburban Sections 1856</td>
<td>70</td>
</tr>
<tr>
<td>25</td>
<td>Plan of Suburban Sections, Masterton 1855</td>
<td>71</td>
</tr>
<tr>
<td>Survey Plan</td>
<td>Description</td>
<td>Page</td>
</tr>
<tr>
<td>-------------</td>
<td>------------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>46</td>
<td>Location of Wairarapa illegal Leaseholds at 1850</td>
<td>99</td>
</tr>
<tr>
<td>47</td>
<td>Sketch Map of Pastoral Occupations in the Wairarapa 1849</td>
<td>102</td>
</tr>
<tr>
<td>48</td>
<td>Lower Wairarapa Occupations, Showing Homestead Purchases 1854</td>
<td>106</td>
</tr>
<tr>
<td>49</td>
<td>Sketch Map of the Runs in the Wairarapa and East Coast Districts 1855</td>
<td>108</td>
</tr>
<tr>
<td>50</td>
<td>Sketch Map of the Runs in the Rangitikei District 1855</td>
<td>108</td>
</tr>
<tr>
<td>51</td>
<td>J.C. Crawford's Watta Peninsula Pastoral Property</td>
<td>110</td>
</tr>
<tr>
<td>52</td>
<td>Map of the Eastern Part of the Rangitikei District, showing the Blocks Chosen by ... Large Holders of Compensation Land 1850</td>
<td>111</td>
</tr>
<tr>
<td>53</td>
<td>Plan showing Smaller Pastoral Holdings on the Taratahi Plain 1857</td>
<td>112</td>
</tr>
<tr>
<td>54</td>
<td>Plan showing Smaller Pastoral Holdings on the Moroa Plain</td>
<td>112</td>
</tr>
<tr>
<td>55</td>
<td>Application for Grazing Land Submitted by F.J. Burton 1856</td>
<td>117</td>
</tr>
<tr>
<td>56</td>
<td>Application for Grazing Land Submitted by J. Wilton 1857</td>
<td>117</td>
</tr>
<tr>
<td>57</td>
<td>East Coast District, Whareama River, Sections on Edwin Meredith's Run 1860</td>
<td>122</td>
</tr>
<tr>
<td>58</td>
<td>East Coast District, Camerons' Run, Pahoa 1866</td>
<td>122</td>
</tr>
<tr>
<td>59</td>
<td>Plan of Five Shilling Land in the Districts of Rangitikei and Turakina 1866</td>
<td>123</td>
</tr>
<tr>
<td>60</td>
<td>The Building of D. Riddiford's Te Awaite Station, East Coast</td>
<td>127</td>
</tr>
<tr>
<td>61</td>
<td>Plan of the Para Karetu Block 1874</td>
<td>132</td>
</tr>
</tbody>
</table>
INTRODUCTION

To the casual eye, the southern North Island landscape vista is deceptively simple. With the exception of the bisecting forested mountain spine, rugged uplands towards the centre of the island, and other isolated pockets of difficult country, the overwhelming impression is one of order. The Wairarapa and Manawatu lowlands, for example, exhibit a neat, near-chequerboard appearance: farm properties and sections of regular geometric form; lattices of long straight road lines; regularly spaced towns and lesser urban nodes. While this design fades on the southern North Island hill-lands, even in the steeper country there is apparent order, if of a different type. With roads and property boundaries there oriented to the natural contours, the chequerboard is replaced by a rudimentary 'cobblestone' pattern. The observable mosaic, however, is much more complex and cryptic than it at first appears. By and large, what is seen is a created or man-made landscape, one far different from that pertaining a century and a half ago. Moreover, the apparently explicit patterns are assemblages incorporating many relict features; what has been termed in another context "... an accumulation of practical experience". Amongst the most significant of the residual marks of previous and present human occupation are the lines laid down by the surveyors. Though many of the lines were inscribed more than a century ago, the proof of their importance as enduring components of the landscape may be dramatically demonstrated by recourse to satellite photographs. At heights where other occupancy features may be poorly represented, or even completely lost, the broad survey outlines still stand out starkly.

European colonisation of the southern North Island districts was an integral part of one of the greatest relocations of people in history. In the course of the nineteenth century more than 20 million immigrants left their 'Old World' homes and, together with their learned and inherited attitudes, skills and preferences, but above all with the desire to create new lives, departed to found settlements in sparsely populated temperate waste lands across the seas. New Zealand shared fully in this colonising experience, and from early 1840 successive waves of colonists arrived on the shores of both islands. The first site chosen for an experiment in systematic colony planting was Port Nicholson, at the south-western
tip of the southern North Island. At that point the lands south of the 39th parallel were little known, a few rough hydrographic charts being the only cartographic representations. With the exception of crude impressions of the central mountain spine, the interior was a blank. Even written descriptions of country beyond the coastline were few. In less than four decades, the unknown was made known, the wild, near empty landscape was recast, and a European population of nearly 50,000 was successfully settled. Vital to effecting this transformation was the conduct of surveys.

AN APPROACH TO THE ANALYSIS OF COLONIAL CADASTRES

The concept of 'landscape' means different things to different people. Commonly, however, a distinction is drawn between 'primitive landscapes', made up of features such as landforms and plant cover, with no human intrusion, and 'cultural landscapes', defined as "... the concrete and characteristic products of the complicated interplay between given human communities ... and particular sets of human conditions". In cultural landscapes, therefore, man is an overwhelming modifying presence. Amongst the most pervasive marks made by man in any defined area are the complexes of land divisional lines, collectively known as the cadastre. In any area undergoing colonisation or spatial reorganisation the essential first step is the establishment of rights of land ownership, followed swiftly by the delineation of parcels of a shape and size consistent with these rights, the required lines being determined by some form of survey. Irrespective of future modifications or superimpositions, the first attempts to give spatial form to land occupancy rights tend to be enduring. At the same time, however, the residual survey imprints on landscapes may vary greatly in their arrangement, chronologically and areally. Despite the obvious questions posed by cadastral patterns, however, analysis of these landscape settlement records has rarely passed an elementary stage. Until comparatively recently emphasis has been placed on the readily visible: on recording the frequency of distributions rather than on the development of explanatory theory; on relict form rather than on context; on present day impact more than the process of evolution.

In the analysis of cadastral inscriptions a fundamental distinction must be drawn between those where formal survey order was retrospectively imposed on landscapes already long settled, with land
occupancy patterns established by custom; and those where survey lines were conceived as an essential preliminary framework for, or an accompaniment to, intensive settlement by a newly introduced body of colonists. In the former case the role of the land surveyor was largely one of recording, in some situations clarifying, what already existed. In the latter, in colonial settings, it was far more.

Nowhere are the theoretical propositions underpinning the planning of new settlements more evident than in the survey and disposal of land, the resulting cadastre being both "... the conscious embodiment of and vehicle for the implementation of the ideals of the new society". Within set terms of reference, the colonial surveyor's prime responsibility was the imposition of spatial order on apparently blank landscape drawing boards. Once settlement sites were decided upon, it was his critical task to lay them out according to the dominant values systems of the settling bodies. The role of settlement modeller was never an easy one. While mandated to actually inscribe the lines for settlement development and expansion, it would, nevertheless, be erroneous to assume that the colonial surveyor functioned in a kind of operational vacuum. Always, the surveyor was subject to a range of constraints and pressures; some given and constant, others intermittent. Establishing the contexts in which the surveyor worked, therefore, is critical to understanding the form of the cadastres fashioned.

Examination of the existing literature on colonial cadastre formation suggests that few previous studies have focussed specifically on the pre-inscription influences determining field survey decisions. The exceptions, in particular those pioneer works assessing the significance of different survey systems in North America and in the Australian colonies, have generally been in agreement that survey lines may profitably be viewed as landscape monuments of political decisions. The notion is by no means novel, and, in the broadest sense, is undisputed. Indeed, consideration of the political antecedents of the southern North Island cadastre is central to the present study. It is, nevertheless, contended, however, that only a truncated view of the background forces moulding survey decision-making and execution is possible if the operation of the political structures prevailing in the unit under survey be analysed in isolation, divorced from the context of the colonial political economy. Bodies politic, while conspicuous as sources of authority, are themselves essentially the product of wider interactions, and, if
the ramifications of political decisions are to be grasped fully, the economic foundations for the decisions must also be probed. Similarly, the political economy in toto is largely an outgrowth of an even more basic interaction: that between an introduced body of colonists, with preconceived ideals and strategies, and the natural environment encountered at the colonisation site. All of these moulding factors must be evaluated if the full political background to survey decision-making is to be understood. Moreover, between the formal political endorsement of policy decisions and their translation into landscape marks there is considerable scope for modification or amendment, whether within the bureaucracy or the professional survey corps. The further interaction of individuals and institutions may therefore exert powerful revisionary influences. To help explain, and generally to understand, the complex inter-related sequences involved in colonial cadastre formation, a simple 'idealised' model has been devised.10 (Fig.I:1)

A grasp of three concepts is essential if the functioning of the model is to be understood: 'settlement ideals', 'developmental strategies', and 'spatial goals'. Almost all groups setting out to forge new beginnings in new lands do so with preconceived ideas about how the settlements to be established should, in the broadest sense, be organised. These range from the most exalted of conceptions to the most mundane, but commonly incorporate beliefs about the preferred social structure, the most suitable economic base, and the required politico-administrative arrangements, if the optimum settlement socio-economic design is to be secured. It is from these 'settlement ideals' that 'developmental strategies', the means of accomplishment if the ideals are to be realised, are derived. At this point there is a shift from abstract theorising to more concrete planning; to a concentration on how the ideals might be achieved, rather than on the ideals themselves. Whereas the concept of an agricultural society might, for instance, be early postulated, it is in the course of strategy development that such details as crop mix, labour requirements and eventual markets are decided. The 'spatial goals' of colonising groups, that is the geometric forms in which it is considered that the projected settlements should appear on the ground, stem directly from the 'developmental strategies' embraced, but at the same time are attempts to give geographical expression to the 'settlement ideals' held. The procedures by which 'spatial goals', once established, are
Fig 11: THE EVOLUTION OF A COLONIAL CADA斯特

COLONISING CONTINGENTS

PHASE 1: FORMULATION OF SPATIAL GOALS

PROMOTION OF OFFICIAL FAVOURED STRATEGIES

ARRIVAL OF SETTLERS

BASE LANDSCAPE

PHASE 2: POLITICAL TRANSLATION OF GOALS

EXERCISE OF POWER BY ELITE

DEVELOPMENT OF SOCIO-ECONOMIC GROUPS

LOCAL LAND DISPOSAL & SURVEY POLICIES

PHASE 3: BUREAUCRATIC REVISION OF GOALS

POLITICAL INFLUENCE

POPLAR DEMAND

FUNCTIONING OF BUREAUCRATIC FILTER

COUNTERVAILING SURVEILLANCE

PHASE 4: TECHNICAL REFINEMENT OF GOALS

PROFESSIONAL LEADERSHIP

ORGANISATION OF SURVEY AGENCIES

TECHNOCAL FILTER

REFINED SURVEY POLICY

BUREAUCRATIC PROFESSIONAL INTERFACE

INSCRIPTION OF SURVEY LINES

CADA斯特AL LANDSCAPE
translated into landscape forms, constitute the cutting edge at which actual cadastral engraving commences, for it is at this point that the precise layouts of farm boundaries, paddocks, fences, roads, villages and townships are determined.

The evolution of a hypothetical colonial cadastre, from initial organising conceptions to the point where the land divisional lines are drawn, may be seen as involving four phases:

(a) Phase 1: Formulation of Spatial Goals

The formulation of initial spatial goals commences before even the colonising contingents leave their country of origin. In almost all instances the initial socio-economic ideals from which seemingly appropriate developmental strategies are devised are appropriated from 'home', albeit sometimes with modification. Where the natural conditions to be encountered are already well known, and the planners experienced, the devised developmental strategies and spatial goals may be precise and apposite, thereafter enabling the business of colonising to proceed with little delay. Where such information is either lacking or deficient, there is constant danger that the goals embraced might inhibit the spread of settlement, rather than promote it, especially if the formulation of initial spatial goals is no more than an exercise in abstract theorising or an attempt to apply arbitrarily land divisional models previously employed at other colonisation sites.

Actual testing of the preconceived developmental strategies, and the associated spatial goals, follows hard upon the arrival of the advance settler contingents. It is within the context of what might be termed the 'base landscape, its landforms and vegetation cover, that the utility of the general developmental strategies must be evaluated, and the appropriateness of the spatial goals assessed. Though a degree of environmental shock and a period of acclimatisation are inevitable, if site and strategies are in accord there is little obstacle to laying out the lands to be occupied in the geometric forms earlier settled upon. In such cases the more prolonged evolutionary sequence being outlined is shortcircuited. If, however, precolonisation planning and the prospects offered by the chosen site are at variance,
settler perceptions of the new environment must be rationalised, the nature of the available resources appraised, and on the basis of these reappraisals, more realistic developmental strategies locally devised. Through testing and retesting the outlines of a colonial economic mechanism eventually evolve, together with a revised set of spatial goals necessary for promoting the revised strategies upon which the mechanism is founded. Even then, at least in the early colonisation years, adaptation and change pervade the colonial scene, and, while the merits of the alternative colonisation procedures are debated, it is likely that the underpinning 'settlement ideals' are also being modified.

When the new colonial economy, or an embryonic version of it, takes an effective form, interactions at the colonisation site become more pronounced. Yet, whereas man-environment interactions have initially overshadowed all, late in Phase I and in subsequent phases, man-men interactions come to the forefront. At the outset, when embarking for the new land, the approaches to colonisation had been unitary. Ideals, strategies and spatial goals had been at least nominally shared by the colonist contingents. With exposure to natural conditions at the colonisation site, however, this harmony of objectives breaks down. Groups within the contingents perceive the new land in different ways, and recognise alternative avenues for profitably exploiting the available resources. Consequently, conflicting sets of developmental strategies and spatial goals are espoused and promulgated. In this atmosphere of competition, some, understandably, are more successful than others, resulting in often sharply divided socio-economic groupings from which distinct colonial power blocs develop. The most influential of these subsequently attempt to have their revised strategies statutorily reinforced, and their preferred spatial goals endorsed, in the political sphere.

(b) Phase II Political translation of Spatial Goals

Commonly, at least in the early years of colony founding, the political structures and organisational machinery governing
official colonial decision-making are imposed from the outside, generally from the colonists' country of origin, with the colonists themselves being allocated little direct part in the exercise of power. Inevitably, conflicts develop, between the colonists and representatives of the distant colonisation promoters, and, through frustration, among the colonists themselves, for, incongruously, those with authority delegated from afar may stubbornly persist in upholding strategies already proven inexpedient. Thus the land divisional layouts set down by the colonial authorities in these early years, embodying the preconceived spatial goals, may little meet the evolving requirements of the greater colonist contingent. The result is a period of political uncertainty and unrest, with agitation for local accountability.

Responsibility for the reinforcement of favoured developmental strategies, and for the endorsement of opposite alternative spatial goals, only becomes locally reposed when politico-administrative power is transferred to the colonists. Though the initial shape of colonist political institutions, and their broad composition, may be dictated at the time of conferral, the manner in which they function is largely the outcome of developments within the evolving colonial economy. Despite high rhetoric, elective colonial politics may generally be characterised as the politics of self-interest, the right to control the exploitation of local resources in particular ways being hotly contested. Exploiters of like mind band together, commercial alliances being subsequently translated into political alliances, with colonial legislatures tending to divide in accord with the blocs so formed. Although almost invariably political power is monopolised by emergent colonial socio-economic elites, the most successful or astute of the colonist contingents, popular demand, nevertheless, cannot be completely disregarded. The art of colonial politics, therefore, becomes the art of effective resource brokerage, maintenance of power becoming dependent on the delivery of spoils, whether in large or small measure. In the course of the struggle for advantage, the 'settlement ideals' of the colonising contingent, or that part of it with decision-making power, may be modified or
drastically altered. It is in conformity with the new ideals, rather than with those initially promulgated, that interest groups submit their current developmental strategies to the colonial bodies politic for consideration and approval. If accepted, they become official policy.

The legislative determination of land disposal policy is the first step in translating approved developmental strategies into endorsed spatial goals, land constituting the prime resource to be exploited by the settler influx. It is therefore critical that the resource be apportioned out in lots of a size appropriate to the particular exploitative strategy or strategies embraced; following which the questions of where, to whom, and under what terms, must be addressed. Not until these questions are satisfactorily resolved can the second step, determination of the survey policy to best give spatial form to the previously established lands disposal objectives, be undertaken in the political sphere. It is within these interwoven policy frameworks that instructions to set out complexes of land divisional lines are issued. Policies, however, are rarely enshrined. From the outset they may be short or long term, widely applicable or confined to restricted areas, designed for general or sectional benefits. Moreover, just as the strategies upon which policies are based may alter in response to changing perceptions of opportunities, so too may lands disposal and survey policies, together constituting stated official spatial goals, be amended in response to strategy innovations.

(c) Phase III Bureaucratic Revision of Spatial Goals

Until formal lands disposal and survey policies are enunciated, and for some time after, the planning surrounding cadastre inscription tends to be in broad conceptual terms. The task of determining detailed procedures for the laying off of lands in conformity with policy is necessarily delegated to specialist hands. However, it is to the omnipresent cadre of colonial bureaucrats that the decision-makers, appointed or elected, convey their instructions in the first instance; and it is by means of this group that the policy concepts are refined and relayed, often in greatly revised form, to the
land measurers in the field. The assigned role of the bureaucracy is to facilitate and oversee the implementation of policy. Its assumed role may be far more obtrusive. The extent and impact of bureaucratic involvement in the process of spatial goal revision is in large measure dictated by the nature of the administrative apparatus afforded and the calibre of the public officials employed. While the raison d'être for colonial bureaucratic structures is in all cases similar, there is little constancy in the form or characteristics assumed. Ad hoc or rigidly organised, compact or attenuated, colonial bureaucracies may function haphazardly or within well-defined guidelines, with their functionaries either diligent disentanglers of logistical knots or, in contravention of their assigned role, enthusiastic knot tiers. In situations where ultimate politico-administrative authority is distant, the power of colonial bureaucrats may be almost absolute. In others, where such power is near at hand and effectively exercised, the bureaucracy may be restrained, even subjegated, little more than rubber-stamping political decisions. Regardless of the form of the colonial bureaucracy, however, there is clear potential for conflict at all levels, from the politico-bureaucratic interface, where political decisions are passed down, to the bureaucratic-professional interface, where precise implementative instructions are issued.

In scrutinising lands disposal and survey policies handed down, and in fixing the ways and means by which established objectives might best be accomplished, colonial bureaucrats must operate within constraints, the majority politically imposed. What may be achieved, for example, is often dependent on the scale of resources voted, though detailed allocation of these resources between competing state agencies may be a bureaucratic responsibility. It is incumbent upon the bureaucracy to establish priorities within policy, to initiate policy implementation, and to supervise execution. Yet, while the will of the ruling political bloc must be paramount in the bureaucracy's considerations, it must also be conscious of the countervailing surveillance of the wider settler community. How effectively these sometimes contrary
pressures have been reconciled is reflected in the official instructions prepared for the guidance of the colonial survey corps.

(d) Phase IV Technical Refinement of Spatial Goals

Refinement of politically established and bureaucratically revised spatial goals may continue informally even after survey instructions have been relayed to the inscribers, and the actual process of landscape inscription has commenced. Though professional survey corps are theoretically subordinate to the dictates of the bureaucracy, there is ample scope, indeed frequently a necessity, for further independent modifications of both designs and procedures in the field. Whatever the officially preferred land divisional layouts, the detail of the cadastre can only be determined in the context of the conditions encountered, the survey technology available, and the financial and human resources made available to effect accomplishment.

At the point of inscription, there is a reversion to the man-environment interaction from which many of the colonially revised spatial goals have themselves sprung. The ability of the surveyors to translate specified goals into regular landscape lines rapidly is, in the first instance, determined by the availability or otherwise of a technical survey system appropriate to the encountered conditions. This frequently leads to a trial and error approach, with many systems being tested and many discarded. Even where the preconceived settlement ideals and developmental strategies of the embarking colonising contingents are broadly consistent with the potentialities of the selected site, there may be problems in giving exact expression to the preconceived spatial goals embraced, the survey procedures by which land occupancy rights are to be delineated being also arbitrarily imported. The ensuing experimentation may be time-consuming, and the results not necessarily all that the settlement promoters desire, but without it accurate colonial land division is impossible.

The importance of the provision of sufficient resources if survey corps are to function effectively has been noted already. Equally important, however, is the disposition of
those resources once transferred to the survey agencies. How effectively survey system experimentation is conducted, and subsequently how effectively the divisional lines are inscribed, may greatly depend on the calibre of the professional leadership afforded the survey corps, and on the internal organisation of the charged agencies. The background of those charged with ultimate responsibility for cadastre inscription, the controlling survey officers, their training, authority, and their prior experience, may be critical for successful policy implementation. So also may be their ability to reconcile political, bureaucratic and settler demands upon their expertise. At the same time, the efficiency of the organisation of the workforce under their control may determine the sharpness of particular survey agencies as inscribing tools.

In the foregoing discussion there has been an attempt to convey the complexity of colonial cadastre formation; to emphasise that the setting off of survey lines in any area undergoing colonisation is no random or simple process. While for convenience some of the key influences moulding the evolving form of such cadastres have been grouped and compartmentalised into four seemingly discrete model phases, and have been further set out in a linear progression, it must be stressed that in other than hypothetical situations, the divisions and sequences are rarely so ordered. Phases of the model, or parts of them, may overlap; all four may be proceeding at one time, but at another entire phases may be omitted. Nevertheless, the long term interdependence of the phases may ensure that disruptions or obstructions in one may have serious repercussions in other phases of the evolutionary sequence. Rarely, however, is the building of a cadastral landscape accomplished through the operation of one, or even two, spatial goal formulation and translation sequences. More commonly the eventual complexes of land divisional lines discernible in any particular area are accumulated through the repeated action of successive sets of sequences. As a totality, the phenomenon may be viewed as an on-going process of 'spatial goal redefinition', and may be presented as a basic model of adaptive learning in colonial situations.11(fig.1:2)

Examined with care, the intricate patterns of cadastral inscriptions discernible in any particular landscape may be considered a mirror,
Fig 12: CADASTRE FORMATION AS ON-GOING PROCESS OF SPATIAL GOAL REDEFINITION

- Developmental Strategies
- Clarification and Revision of Settler Cadastral Requirements
- Perception of Environments
- Heightened Perception of Environments
- Unsatisfactory Results
- Satisfactory Results
- Revised Spatial Aspirations
- Accumulation of Local Experience
- Mosaic of Cadastral Forms
- Growth of Knowledge
- Curtailment
- Extension

Settlement Ideals
- Initial Spatial Goals
- Modification of Initial Spatial Goals
- Formulation of New Spatial Goals
- Testing of New Spatial Goals
- Revised Spatial Aspirations
and a surprisingly accurate one, of the settlement history of that landscape and of the hopes and aspirations of those who settled it. Yet, as with all mirrors, the depth of the image may be misleading. Simply reading the evidence clearly visible is not enough, for, to use a colloquial phrase, almost invariably, "there is more to it than meets the eye". What is seen is essentially an end product. While past spatial goals may be discerned as lasting geographical expressions, the developmental strategies underlying their inscription, and the settlement ideals which led to their fashioning, are harder to determine from the landscape marks left. If the origins of land divisional mosaics are to be fully comprehended, it is necessary, to use another colloquialism, "to read between the lines".

THE PRESENT INVESTIGATION

On 3 January 1840 the barque Cube, under charter to the New Zealand Company, nosed round the heads of the harbour of Port Nicholson. The following morning, a landing party, including the survey corps despatched from Britain, was put ashore with instructions to evaluate the harbour environs as a potential site for the Company's "first and principal settlement". Some five weeks later, after extensive scouring of the beaches, hills and vallays bordering the water, and, significantly, some little time after shiploads of immigrants had arrived, the site was pronounced suitable. The first division of land for accommodation of the settlers commenced. It is the intention of the present study to follow the activities of that first survey corps, to discern the cadastral signatures it left in the landscape, and to distinguish its official successors, together with their signatures, over the first 36 years of European settlement. Perhaps more important, it will be the task of this study to ascertain the influences which shaped the southern North Island signatures as they were. While the investigation will range over a number of major areas of geographic inquiry, it must be stressed that it cannot be regarded purely as a contribution to the study of landscape change; nor should it be considered a study in the process of colonisation; nor, indeed, is it simply a further study of emergent settlement forms. While encompassing facets of all three, it will focus closely on those matters pertaining to the evolution of the cadastre. Stress throughout will be laid on the specifics of the southern North Island case, it being clearly premature to attempt sweeping generalisations in the absence of
strictly comparable studies. Nevertheless, the findings will be proffered as a first building block for a wider ranging history of the evolution of the New Zealand cadastre. It is believed that such an approach is valid, for, as D.W. Meinig has observed: "Ultimately, all generalisations must be grounded upon what actually happened when a particular group of people colonised a particular part of the earth, in a particular manner, at a particular time". 13

While the present investigation will primarily focus on the broad trends which determined the shape of the evolving cadastre, within the bounds of the problems already outlined a further proposition will be explored. It will be suggested that inquiry into the individuals involved in the creation of the survey landscape, whether politicians, administrators, or survey professionals, is as vital as distinguishing the underlying forces of which they were the agents. 14 If design is evident in landscape, it is axiomatic that there must be designers; and those who commission them. To develop even a partial understanding of the nineteenth century New Zealand situation, men, their ideas, their institutions, even their foibles, must figure prominently in analyses.

The spatial and temporal parameters of the present investigation readily suggest themselves. The districts to be studied fall neatly within the boundaries of what was known as Wellington Province. (Fig.1:3) If that area remains on the map today as a largely anomalous territorial administrative unit, one superseded by a substructure of counties and municipalities, it must be emphasised that this was not always so. In the early colonisation decades the unit possessed real significance. First roughly delineated as the North Island section of the shortlived 'Province of New Munster', Wellington Province, as legally defined in 1853, comprised all of the North Island between Cooks Strait and the 39th parallel, with the exception of the western salient of Mount Egmont. 15 Within these defined boundaries the resident settlers came to enjoy a considerable degree of autonomy. Colonisation of the New Zealand islands was initially promoted through a series of dispersed and separately founded coastal settlements, and it was in response to this situation that many powers were delegated to local officials, and, eventually, to a locally elected legislature. These powers were fully utilised. Decision-making for the southern North Island districts became centred on the first New Zealand Company sponsored town at Port Nicholson, and it was therefore logical that
13 THE STUDY AREA:
Showing The Contemporaneously Accepted Constituent Districts
responsibility for lands administration, and consequently the conduct of surveys, should be initially entrusted to Company officials based in the town, and latterly to the executive arm of the Wellington Provincial Council. For substantially more than a quarter century the tentacles extending from this hub held the unit together strongly. Although there were occasional murmurings from the outlying areas, Ahuriri (Hawkes Bay) was the only constituent district which actually seceded. As this district, created an independent Province in 1858, practically shared Wellington Province's common settlement history for no more than eight years, it will not loom large in the present investigation.

The datum line of 1840, the year in which colonisation of the southern North Island districts commenced, needs little explanation; the choice of the year 1876 as the terminating point only slightly more. Over the 36 years studied, the physical barriers between the settlements, and the sometimes more formidable psychological barriers, were slowly but steadily broken down. The decision to abolish the provincial system of government in 1876, and to centralise many of the functions previously exercised by local administrations, was merely a reflection of a wider movement towards the nationalisation of New Zealand life. From that point, though parochial tinges lingered, decisions on such matters as land administration, and the conduct of surveys, were arrived at on a New Zealand-wide basis.

If it be necessary to classify the present investigation methodologically, then it must be deemed an exercise in historical geography. While the materials to be studied are historical by nature, the areas of interest, and the interpretations, are eminently geographical. Yet, too much must not be inferred from such a classification. The investigation will move backwards and forwards in the borderlands between history and geography, with forays into such overtly social science fields as political science, economics, and the sociology of bureaucracy. The approach adopted in any particular instance must essentially depend upon the nature of the problem being studied, and upon the nature of the source material available. The materials available for the present investigation are voluminous, but their broken and uneven nature compels the researcher to become more a detective sifting for isolated significant clues to reconstruct the case than a scientist conducting successive experiments with his elements readily at hand.
Reconstruction of the southern North Island's early settlement decades, and of the conduct of surveys in those decades, has proved an unexpectedly difficult and protracted task, the researcher being provided with few preliminary signposts. No secondary sources adequately document even the main features of the evolution of the cadastre. Similarly, the lands administration labyrinth from which survey policy stemmed, with but one notable exception, had been largely ignored by scholars. Yet, the southern North Island districts are by no means unique in this respect. While land has commonly been considered to be at the heart of the country's economic, social and political evolution, and especially so in the nineteenth century, there has been a disquieting disinclination to base studies, either specialist or general, on sound foundations. Although New Zealand historians since Reeves have made bald pronouncements on the nature and shape of land occupancy and settlement, the principals involved and the results accruing, too often the pronouncements have been founded on myths and misconceptions, and, as an inevitable result, have given rise to further myths and misconceptions. That the critical facts are known is presupposed. The erroneousness of this viewpoint is only now beginning to be demonstrated. That useful historical research is as much dependent on ideas and imagination as the gathering of facts cannot be denied; but without meticulous fact-gathering the resulting writings might often be more properly described as empty polemics. In the existing knowledge vacuum, the only comparative works of dependability have been produced by the oft-maligned regional historians, and by a small clutch of historical geographers. Most of the basic data about land settlement and the conduct of surveys rests relatively untouched in the country's archives or land offices, or in undisturbed volumes on dusty library shelves.

The present investigation has necessarily been founded on a wide range of primary materials. Several years full-time research in the archives and libraries of Wellington, and in the offices of the Lands and Survey Department, followed by part-time research over a more extended period, have been augmented by searches in other southern North Island towns and cities, and by visits to research libraries elsewhere in the North and South Islands. Lack of funds has confined overseas inquiry to extensive correspondence with institutions in Australia and Great Britain. The results, however, have been rewarding. It has been gratifying to discover, for instance, that,
though dispersed, a great deal of the most important documentary record left by the surveyors, the maps and plans they produced, survives. Manuscript representations from the period have been discovered in resting places as far apart as Dunedin, Sydney and Taunton, and these have been carefully indexed and drawn from. Nevertheless, while providing important clues as to the extent, chronological progression and form of surveys, the cartographic evidence posed as many questions as it provided answers. Recourse, therefore, had to be made to the official file records, and, where possible, to extant private papers.

Despite the fact that New Zealand has suffered, and continues to suffer, many disastrous inroads into its national memory, the archives still contain many critical keys to understanding. Any illusions, however, that the necessary evidence might be found in easily located discrete groupings were soon dispelled. In the course of research the files of some 23 New Zealand Government department or agencies were examined, the files themselves occupying nearly 200 linear metres. On most occasions page-by-page searches of the files were unavoidable. These originally restricted circulation papers were supplemented by the published official record. The British colonists' view of settlement has been gleaned from the Great Britain Parliamentary Papers, from the extensive collection of Public Records Office documents held on microfilm by the National Archives, and from files of contemporary publications in the General Assembly Library. For the events of the first decade of settlement, frequent reference has been made to the bulky records of that enigmatic colonising agency, the New Zealand Company. For later decades, the extensive records of the Wellington provincial administration have proved invaluable. These sources, however, provided only official and semi-official views. What of the popular view? The diaries and private correspondence of individual settlers and surveyors have provided both colour and insights, but the coverage is far from uniform. While valuable data has been drawn from this source, the most comprehensive general accounts of the survey system in operation have come from contemporary colonial books and journals, and from the often biased, but always informative, newspapers. The sifting entailed in establishing the common viewpoint has also, of necessity, been highly labour intensive. More than 200 bound volumes of newspapers, for example, were mined. For but one small segment of the British colonial constellation, the southern North Island districts were much written about, even if many of the writings have been long lost from
That the presented research results bulk large is acknowledged; but in mitigation it is submitted that the depth of treatment accorded a number of the forces shaping survey policy and execution is a necessary palliative for a problem which has constantly hemmed conduct of the investigation: the almost complete absence of specialist monographs detailing the economic, political and social development of the southern North Island districts. Where a considerable body of previous research exists the contextual background may be briefly sketched, attention being drawn to more extensive treatments elsewhere; where such works are non-existent, the researcher is faced with a difficult choice. Either the central research results may be presented backed only by unsubstantiated assertions, or he is compelled to reconstruct the contexts on his own account. In the present instance, the latter course has been chosen. Though the following study in no way purports to be an authoritative account of the colonial natural and social environments, a specialist analysis of the pre 1876 economy, or a treatise on colonial politics per se, aspects of all of these matters are subjected to scrutiny. In all cases, however, the survey ramifications of the situations and events outlined provide the vital connective link. It is hoped that these facets of the study will stimulate further questions. There is an urgent need for scholars in all historically oriented disciplines to bring their skills to bear on the early southern North Island settlement years, and, indeed, on the early settlement years in other parts of the colony. Only then will some of the yawning gaps evident in New Zealand historiography be at least partially filled.

ORGANISATION OF CONTENT

Before any explanation of the origins of the southern North Island cadastre, or of the individual cadastral signatures which made it up, can be attempted, it is first necessary to consider the skeletal evidence left in the landscape by 1876. Thus the arrangements of survey lines existing at that date, the end products of the evolutionary sequences in which spatial goals were formulated, endorsed, and inscribed, will be closely examined in Chapter One.

In Chapters Two to Four, the testing of preconceived developmental strategies, and the formulation of alternative developmental strategies,
will be outlined. A reconstruction of the southern North Island conditions encountered in 1840 will be set out in Chapter Two, together with an assessment of the impact of those conditions on the settler psyche. This was the first screen through which the newly arrived colonists had to pass. In Chapter Three the successive developmental strategies floated will be dissected and the structure of the slowly built southern North Island economy discussed. Regardless of the strategies embraced, however, land was always considered to be the prime local production factor. Analysis of land supply, and the machinery by which land was made available, will therefore be central to Chapter Four.

The character of colonial politics and the form of the political institutions provided the southern North Island settlers will be examined in Chapters Five and Six. In Chapter Five the nature of land politics in the Crown Colony era, during which ultimate decision-making was reposed in the British Government and its colonial delegates, will be studied. The consequences of transferring decision-making power to local hands will be examined in Chapter Six.

Outlines of the broad survey policies politically devised, together with some relevant characteristics of the southern North Island bureaucracy, the channel by which policy decisions arrived at in the political sphere were transmitted to the survey corps, will be attempted in Chapter Seven. This is intended as little more than a prefatory note, for the bureaucracy in action will be studied in depth in subsequent chapters.

The interactions of bureaucrats and professionals, against the environmental, economic and political backdrops earlier provided, will be examined in Chapters Eight to Fourteen. The ramifications of the interactions will be assessed with reference to each of the major official or quasi-official survey agencies active in the study area, and an attempt will be made to relate behaviour in the post-spatial goal endorsement phases to the broad survey activity and cadastre building trends discerned in Chapter One. In each case, the nature of the external administrative hierarchy overseeing the agency's inscription activities, the professional leadership guiding it, and the effectiveness of the internal organisation of the agency, will be scrutinised.
Finally, in an appendix, the impact of the various technical systems of survey embraced by the major survey agencies will be evaluated. Within the broad frameworks set out, the clarity of spatial goal inscription was much dependent on the suitability of the survey system employed. Yet, with other shaping influences having been singled out for special attention in this study, it has been considered appropriate to present the technological background as a postscript.

In a short concluding essay the pre 1876 southern North Island cadastre building experience will be measured against the hypothetical model advanced, and the relevance of studying cadastre origins will be addressed.
CHAPTER ONE

BOUNDARIES, SHAPES AND SIZES: EVOLUTION OF THE SOUTHERN NORTH ISLAND CADASTRE TO 1876

In the southern North Island, as at most other nineteenth century European colonisation sites, the spatial goals of the introduced settler body were never constant. By 1876, less than four full decades after settlement commenced, almost half of the 7,000,000 acre land surface encompassed by the Province of Wellington had been surveyed in some manner; but any suggestion that the scattered parts of the cadastre laboriously engraved in those years exhibited any conformity in style would be erroneous. Instead, the survey landscape was an intriguing, frequently bewildering, collage of divisional lines and land parcels of widely differing size and shape. This proliferation of forms was the visible result of what has been termed the on-going process of 'spatial goal redefinition'. The first conceptions as to how the new lands might be optimally laid out had been imported with the settler advance guard, along with predetermined strategies for the social and economic development of the settlements established, and a but hazy vision of the environment and other practical difficulties to be encountered. It was only with first hand experience of conditions at the colonisation site that there came a realisation that the land divisional models imported might not be wholly suitable. While *ad hoc* modification of these models constituted the first phase of the process of redefinition, within a few years of the arrival of the first settler body accumulation of local experience, coupled with necessary revision of the initial socio-economic strategies, had stimulated new settler demands. Thereafter, the formulation of new spatial goals became a necessity. A period of trial and error was ushered in, with the community's attention first sharply focussing, then blurring, then focussing once more, on successive sets of alternative spatial goals. Each of these cadastral experiments, whether successful or unsuccessful, left its mark in the landscape.

1.1 THE DIMENSIONS OF SURVEY ACTIVITY: DISSECTING THE 1876 SOUTHERN NORTH ISLAND CADASTRE

No comprehensive cadastral maps covering the whole of the
southern North Island at 1876, nor even more limited depictions of particular constituent districts, have been traced; and it must be doubtful that such an ambitious mapping enterprise was ever attempted. The survey landscape discernible by that year may nevertheless be likened to a mosaic in the literal sense, those portions of the surface completed having been meticulously assembled from a mass of small survey tiles, each individually fashioned before being fixed into place. In comprehensive studies of cadastre formation elsewhere, a variety of methods, including the field mapping of relicts and the employment of aerial photographs, have been utilised to reconstruct early cadastral forms. For the purposes of the present investigation, however, an even more appropriate approach exists: detailed examination and comparison of the extant plans produced by the surveyors of the time. Each plan constitutes an important statement. Each bears testimony as to how the lines, many still clearly discernible, came to be there. Early survey plans thus provide the clearest record of settler cadastral intentions.

As the starting point for the present study, a select cartobibliography of survey plans produced in the southern North Island between 1840 and 1876, predominantly in manuscript form, was completed. While nearly 1200 individual plans were located and listed, together with the additional listing of minor variations, it must be stressed that even this bulk of material can in no way be considered a summation of cartographic effort in the selected districts in the course of the period studied. What proportion has already been irrevocably lost is impossible to estimate, tantalising notations on contemporary documents, in many cases, providing the only clues that some plans ever existed. Similarly, it is probable that other plan lodes remain to be discovered. Significant estrays from the official plan records, for example, have been discovered in several overseas collections, while within New Zealand unique manuscript plans have been scattered through the plan records systems of a range of central and local government organs, the holdings of research institutions in both islands, and even in private collections. The search, furthermore, has been mainly restricted to the location of plans prepared by, or for, recognised official survey agencies. Though the private surveyor had a not inconsiderable part to play in polishing the evolving cadastral mosaic, it is contended that such
operations were generally confined to the superimposition of additional detail on survey landscape designs preimposed by the successive official survey corps. They, therefore, fall outside the scope of the present study. These cautions aside, however, it is believed that the quantity of plans identified is sufficiently large and representative to permit meaningful generalisations with respect to the conduct of surveys in the southern North Island prior to 1876. Equally, it is believed that the plans located exhibit sufficient variety in their content to enable discernment of the developing mix of parcel boundaries, shapes and sizes engraved on this particular part of the nineteenth century New Zealand landscape.

Just as the cadastral pattern engraved was irregular, so was the process of engravure. If the combined recorded plan output per annum of the agencies involved be accepted as a rudimentary index of survey activity in the identified districts between 1840 and 1876, it becomes apparent that the conduct of surveys was never a smooth operation. Until the mid 1860s, setting down of the necessary cadastral framework for settlement proceeded in a series of minor pulses, sustained survey effort being predominantly confined to the last decade studied.(Fig.1.1) While plan production averaged 32 representations per annum over the 36 years, in only one year prior to 1864 was this average exceeded. With shiploads of new immigrants clamouring for the delivery of properties purchased, the first minor surge, understandably, occurred between 1841 and 1844. For the remainder of the 1840s, however, survey activity dropped drastically, becoming almost non-existent between 1846 and 1848. A further minor surge forward in the early and mid 1850s was followed swiftly by a matching downturn in the latter years of that decade, the overall decline in total survey activity being terminated only by an atypical upsurge in one year, 1860. Thereafter, through the early 1860s, there was a reversion to the survey activity trends of the mid 1850s. The first concerted attempts to prosecute cadastral surveys vigorously and consistently date from the five years to 1860. In each of these years the annual output of survey plans produced exceeded the per annum average for the period. A downturn in 1869/1870, major in comparison with what had gone on immediately before, but moderate compared to the lows of the 1840s and 1850s, was the precursor to the most productive surge of activity experienced till that time. More than 40% of all the plans located were produced between 1871 and
Fig 1.1 Recorded Per Annum Plan Output of Official Survey Agencies Active in the Southern North Island: 1840 - 1876

AGENCIES
- NZ Company Survey Office
- Crown Colony Survey Corps
- Wellington Survey Office
- Wellington Provincial Survey Dept.
- General Govt. Agencies
There seems little doubt that this was the 'high noon' of survey activity in the period studied.

Responsibility for the conduct of official or quasi-official surveys over the review period appears to have been shared between five separate agencies. (Fig.1.1) The most productive was the Survey Department of the Wellington Provincial Government, which was the source of 59.6% of the traced plans. Not only active for the longest term, between 1856 and 1869 it was the sole significant cadastral survey agency operating in the southern North Island. Even after 1869, when challenged by the combined survey arms of the Colonial or General Government, its plan production continued to outdistance that of its chief competitor by 2:1. Surveys by the General Government, or more properly those carried out by the several independent agencies functioning under its umbrella, came a distant second, accounting for only 14.5% of the plans located, the majority being constructed in the early and mid 1870s. Ranking third was the first survey agency for the area, the New Zealand Company Survey Office, in the strictest terms not an official agency but deriving legitimacy from an early delegation of powers by the British Government. Although a Company presence was maintained for a decade, as a survey agency it was fully active only in the early 1840s, most of its 10.5% share of the plans located being executed in those years. It was superseded by the Auckland-based Crown Colony administration. Although it was not fully operative in the area until the early 1850s, 9.7% of the plans located were prepared by this first truly governmental survey corps, the preponderance of them between 1851 and 1853. The fifth agency, the Wellington Survey Office, forerunner of the Provincial Survey Department, was active for but three years, between 1854 and 1856. Although its plan output amounted to no more than 5.5% of all plans traced, during its short life this agency exercised a monopoly over survey activity in the study area.

Classification of the located plans according to the particular district in which the subjects depicted were situated provides some impression of the localities in which survey activity was most heavily concentrated, and also permits an at least partial reconstruction of the sequence in which surveys were conducted beyond Port Nicholson. (Fig.1.2) Between 1840 and 1876, the Wairarapa and East Coast districts together constituted the most surveyed portion of the
Fig 1.2 Distribution of Survey Plans Located by District Depicted.

THE STUDY PERIOD

<table>
<thead>
<tr>
<th>District</th>
<th>% of Plans Located</th>
</tr>
</thead>
<tbody>
<tr>
<td>WELLINGTON</td>
<td>20.5</td>
</tr>
<tr>
<td>WANGANUI</td>
<td>14.9</td>
</tr>
<tr>
<td>MANAWATU</td>
<td>20.9</td>
</tr>
<tr>
<td>WAIRARAPA/EC</td>
<td>24.2</td>
</tr>
<tr>
<td>RANGITIKEI</td>
<td>11.1</td>
</tr>
<tr>
<td>AHURIRI</td>
<td>1.8</td>
</tr>
<tr>
<td>INTER-DISTRICT</td>
<td>6.6</td>
</tr>
</tbody>
</table>

1840-1849

<table>
<thead>
<tr>
<th>District</th>
<th>% of Plans Located</th>
</tr>
</thead>
<tbody>
<tr>
<td>WELLINGTON</td>
<td>54.0</td>
</tr>
<tr>
<td>WANGANUI</td>
<td>17.3</td>
</tr>
<tr>
<td>MANAWATU</td>
<td>11.3</td>
</tr>
<tr>
<td>WAIRARAPA/EC</td>
<td>1.3</td>
</tr>
<tr>
<td>RANGITIKEI</td>
<td>1.3</td>
</tr>
<tr>
<td>AHURIRI</td>
<td>14.8</td>
</tr>
<tr>
<td>INTER-DISTRICT</td>
<td>2.0</td>
</tr>
</tbody>
</table>

1850-1859

<table>
<thead>
<tr>
<th>District</th>
<th>% of Plans Located</th>
</tr>
</thead>
<tbody>
<tr>
<td>WELLINGTON</td>
<td>26.6</td>
</tr>
<tr>
<td>WANGANUI</td>
<td>15.6</td>
</tr>
<tr>
<td>MANAWATU</td>
<td>1.0</td>
</tr>
<tr>
<td>WAIRARAPA/EC</td>
<td>15.1</td>
</tr>
<tr>
<td>RANGITIKEI</td>
<td>2.0</td>
</tr>
<tr>
<td>AHURIRI</td>
<td>10.6</td>
</tr>
<tr>
<td>INTER-DISTRICT</td>
<td>4.0</td>
</tr>
</tbody>
</table>

1860-1869

<table>
<thead>
<tr>
<th>District</th>
<th>% of Plans Located</th>
</tr>
</thead>
<tbody>
<tr>
<td>WELLINGTON</td>
<td>14.3</td>
</tr>
<tr>
<td>WANGANUI</td>
<td>14.0</td>
</tr>
<tr>
<td>MANAWATU</td>
<td>15.2</td>
</tr>
<tr>
<td>WAIRARAPA/EC</td>
<td>11.4</td>
</tr>
<tr>
<td>RANGITIKEI</td>
<td>1.2</td>
</tr>
<tr>
<td>INTER-DISTRICT</td>
<td>4.0</td>
</tr>
</tbody>
</table>

1870-1876

<table>
<thead>
<tr>
<th>District</th>
<th>% of Plans Located</th>
</tr>
</thead>
<tbody>
<tr>
<td>WELLINGTON</td>
<td>12.1</td>
</tr>
<tr>
<td>WANGANUI</td>
<td>14.5</td>
</tr>
<tr>
<td>MANAWATU</td>
<td>15.3</td>
</tr>
<tr>
<td>WAIRARAPA/EC</td>
<td>12.3</td>
</tr>
<tr>
<td>RANGITIKEI</td>
<td>9.7</td>
</tr>
<tr>
<td>INTER-DISTRICT</td>
<td>11.4</td>
</tr>
</tbody>
</table>
area (24.2% of total plans), followed closely by the Manawatu district (20.9% of total plans) and the Wellington, or Port Nicholson, district (20.5% of total plans). Furthermore, if plan production of districts be broken down according to the decades in which the plans were produced, the concentration of survey activity in particular districts can be seen to have matched the ebb and flow of total plan production. (Fig. 1.2)

In the 1840s, with the surveys conducted largely by the New Zealand Company, the prosecution of cadastral surveys was mostly in the Wellington district, the Wanganui district and to a lesser extent the Manawatu district. Of the three, the Wellington district (54% of plans produced in the decade) was unquestionably of foremost importance. These three districts apart, all other districts accounted for less than 3% of the plans produced. The 1850s and 1860s saw a fundamental alteration in the play of the survey activity spotlight. Over those two decades, surveys in the Wairarapa and East Coast districts shifted to centre stage. Together with surveys carried out at Ahuriri prior to 1858, the recorded plan output for the three eastern districts alone accounted for 42.3% of the total output for this period. There were also other changes. While in all districts, Manawatu apart, recorded survey activity increased in real terms over these years, in at least one instance, Rangitikei, there was also an upswing in percentage importance. At all stages the Wanganui district maintained its relative importance as a site for surveys, while in the latter years of the 1860s there were signs of a revival of interest in the Manawatu. In the early 1870s the survey activity spotlight switched once more, this time to the Manawatu district. Between 1870 and 1876 surveys in this western coastal district escalated, its share of the total recorded plan output climbing to 35.9% of the total. Combined, the Manawatu, Wanganui and Rangitikei districts accounted for 62.7% of survey activity measured by plan production in the 1870s. In contrast, survey activity was dropping away in the Wairarapa and East Coast districts. In the Wellington district, the decadal average changed little in absolute figures from the 1860s to the 1870s, but as a ratio of total plan output, that activity diminished proportionately.

Apart from the located plans categorised as above, there existed from the outset a group of plans which, by virtue of their straddling several districts or even the whole of the southern North
Island, did not easily lend themselves to a district areal classification. Making up but 6.6% of all plans produced between 1840 and 1876, construction of this class of plan was heavily concentrated in the 1840s and 1870s.

Classification of the located plans by the cadastral forms represented presents many difficulties. If an optimal classification scheme were to be employed, the resulting divisions would be so numerous as to confuse rather than clarify. Consequently a six part categorisation has been devised to permit an overview, viz.,

(a) Town Plans: Incorporating the designs for towns, townships and villages of whatever size.

(b) Intensive Farming Cadastral Forms: Including all layouts schemed and set down to facilitate farming on traditional European principles

(c) Pastoral Cadastral Forms: Including all those spatial arrangements formulated to accommodate stock-rearing on extensive lines

(d) Route Plans: Including all plans of transportation lines or networks, actual or envisaged

(e) Survey Control Diagrams: Plans specifically constructed to assist in the more accurate relative placement of standard cadastral forms

(f) Miscellaneous: Including all other survey plans not covered by the preceding categories

By applying this categorisation, it may be demonstrated that the two most commonly encountered forms of survey activity between 1840 and 1876 were the engraving of intensive farming cadastral forms on the landscape (29.4% of the total recorded plan output) and the setting out of pastoral farming properties (27.7%). (fig.1.3). These figures, however, tend to obscure the fact that, while intensive farming cadastral forms were generally confined to the southern North Island's gentler terrain, the incidence of pastoral cadastral forms was more widely spread and consequently a many more times greater acreage was laid out in this manner. Similarly, while town plans made up only 10.1% of the total plan output for the 36 years, the designs so laid down, being the sites for the greatest population concentrations, were of an importance beyond their statistical incidence. Plans of routeways accounted for a further 10.1% of the total plan production,
Fig 1.3 Distribution of Survey Plans Located by Purpose for which Executed.

THE STUDY PERIOD

<table>
<thead>
<tr>
<th>Plan Type</th>
<th>1850-1859</th>
<th>1860-1869</th>
<th>1870-1876</th>
</tr>
</thead>
<tbody>
<tr>
<td>Town Plans</td>
<td>10.1</td>
<td>11.1</td>
<td>11.9</td>
</tr>
<tr>
<td>Int. Fmg. Plans</td>
<td>29.4</td>
<td>25.6</td>
<td>29.8</td>
</tr>
<tr>
<td>Pastoral Plans</td>
<td>27.7</td>
<td>36.7</td>
<td>18.5</td>
</tr>
<tr>
<td>Route Plans</td>
<td>10.1</td>
<td>3.6</td>
<td>9.7</td>
</tr>
<tr>
<td>Survey Control</td>
<td>8.2</td>
<td>11.0</td>
<td>10.1</td>
</tr>
<tr>
<td>Misc</td>
<td>14.5</td>
<td>16.1</td>
<td>11.4</td>
</tr>
</tbody>
</table>

% of Plans in Defined Categories
while the catholic assemblage of exploration surveys, plans of land purchases from the Maoris, plans of administrative areas and the like, all coming under the heading 'Miscellaneous', totalled 18.5%. Not surprisingly, being an extremely specialised plan form, survey control diagrams accounted for only 8.2% of total plan production over the full study period.

Once more, analysis of the traced plans by decades indicates that there were changes in emphasis in the particular broad cadastral forms promoted over time. (Fig.1.3). In the 1840s the inscription of intensive farming cadastral forms took pride of place (47.8% of total plans produced in the decade). This decade, moreover, witnessed town building at a peak (13.3% of total plans); while the disproportionately large number of 'Miscellaneous' plans produced at this time (34.7% of total) was reflective of earnest endeavours to come to terms cartographically with an as yet little known land. Though the inscription of intensive farming cadastral forms remained an important part of rural survey activity in the 1850s (25.6% of total), the delineation of pastoral holdings (36.7% of total) forged ahead. With almost all attention turned to creation of the rural cadastre, engagement in other forms of survey activity, comparatively, was restricted. Pastoral surveys reached an all time high in the 1860s, cadastral plans of individual farms, and clusters and parts of farms, making up 46.2% of all the recorded representations for those years. At the same time, surveys of intensive farming holdings continued to drop away, this category's 23.1% share of the recorded plan total for the decade being inflated by a sudden resurgence in the late 1860s. The laying out of new towns and townships all but ceased. Between 1870 and 1876, however, the trends discernible in the previous decade, especially in the early and mid 1860s, were reversed. The setting out of pastoral properties fell away (20% of all plans produced in the six years), the delineation of intensive farming holdings regained impetus (29.8%), while the survey of towns was approached with renewed enthusiasm (11.9%). Contemporaneously, the setting down of routeways, apparently a relatively minor form of survey activity in earlier years, attained a new significance (18.55%). These were clear signs that the survey of the southern North Island was nearing maturity.

By quantitative analysis of the located and identified survey plans, it has been possible to distinguish the major upturns and
downswings in the conduct of surveys in the southern North Island between 1840 and 1876; to determine the relative importance of the 'official' survey agencies charged with creation of the colonial cadastre over that period; to establish the districts in which survey activity was most heavily concentrated, together with the broad sequence in which the districts were surveyed; and, finally, to define in the most general terms the purposes for which surveys were carried out. Yet, being essentially skeletal in nature, such data provides little insight into the most tangible result of the survey activity outlined: the particular arrangement of divisional lines, and of parcel shapes and sizes, within the study area as a whole, and within its constituent districts. To enable a better understanding of the evolving spatial frameworks provided for settlement, and ultimately to develop an appreciation of the complexity of the 1876 southern North Island cadastre, it is proposed to examine examples of the individual plans constructed in the order in which the layouts depicted were engraved on the landscape. For this purpose, the three most conspicuous form components of the cumulated 1876 cadastral mosaic have been selected for special scrutiny:

- the scheming of pioneer townships;
- the varying cadastral layouts employed in the promotion of intensive farming, from the planned arable estates set down in the 1840s to the 40 acre bush holdings surveyed in the 1870s;
- the fluctuating form of the irregular holdings intended for the use of that distinctively colonial animal, the extensive pastoralist.

That the other categories of survey noted have not been singled out for separate attention at this point should not suggest that their importance has been undervalued. Exploration surveys and land purchase surveys, for example, provided an essential underpinning for the future layout of acquired blocks for settlement purposes, and, insofar as is possible, they will be considered in the course of more general discussion. The survey of increasingly more extensive routeway networks to link districts and parts of districts left near indelible marks in the landscape, but detailed analysis of their formation has been deliberately eschewed. With route surveys being more commonly the concern of engineering agencies entrusted with construction, rather than the responsibility of the specialist land surveying
agencies, it is believed that that is the context in which such work should be evaluated. The construction of survey control lattices will be examined separately.

1.2 SCHEMING PIONEER TOWNSCAPES

The paramount task facing the successive corps of surveyors employed in the southern North Island districts between 1840 and 1876 was the laying off of rural properties, for it was only by utilisation of the prime local resource, land, that the viability or otherwise of the decision to colonise could be established. The overwhelming concentration on rural cadastre formation, however, should not obscure the importance contemporaneously attributed to the scheming of a hierarchy of towns, townships and smaller urban nodes as part of the colonising process. The creation of concentrated settlements was considered both an indispensable springboard for the opening of the rural districts and an essential generative accompaniment to the apportionment of rural lands. Conceived as the control centres for the oversight of exploitive strategies, and as service centres for those implementing them, the towns and townships, set in their own discrete pockets of nineteenth century space, enjoyed a symbiotic relationship with the districts and localities they served. With urban and rural interests so interdependent, it was perhaps reflective of rural development trends that town building was a halting affair, at times being prosecuted with vigour, especially in the early 1840s and after 1865, and at others, particularly in the late 1850s and early 1860s, being all but terminated. By the mid 1870s, however, a scatter of nucleated settlements of more than 200 persons had been firmly rooted, the largest with a population exceeding 10,000, but with only one other town incorporating more than 1000 residents. Below this threshold a collection of lesser townships stood out, while at a lower level still the village became the most common representation of urban form. Generally strictly utilitarian, the layouts of the towns, townships and villages demonstrated both the limited purposes for which they had been set down and the changing views of the colonial town planners. Whereas, initially, there was a strong inclination to utilise designs already proven in other colonial settings, within a few years these were replaced by others more appropriate to local conditions. Thereafter, experimentation in urban design became an on-going feature. Nevertheless, not
all of the settlements that emerged were meticulously planned or even presurveyed. A number were little more than spontaneous accretions, the constituent parcels of which had later to be reconciled. Whatever their origins, the towns and townships created, even the largest, were a far cry from similar population concentrations in the settlers' home countries. The rural influence was omnipresent, dwellings and commercial buildings being intermixed with tilled sections and small grazing paddocks.

THE DEVELOPMENTAL HUB: CREATING THE SOUTHERN NORTH ISLAND'S MAIN TOWN

The immediate formation of a large town at the first settlement site chosen, one fit to serve eventually as the capital for a new colony, was always high on the New Zealand Company colonising agenda. Such a town, it was believed, would provide a local base for the joint stock organisation's land dealing ventures, a haven for migrants while the touted country estates were laid out, and, in subsequent years, an administrative centre in which further developmental strategies could be formulated. It would also serve as the entry point and distribution centre for imported goods and resources, and the shipment point for the surplus produce of the soon to be established country estates. It was further argued that the provision of economically priced town sections, in addition to the projected form of allotments, might act as a magnet for those still pondering the advisability of participation in the Company's venture. The speculative potential of urban real estate had been amply demonstrated in earlier colonies, while it was accepted that not all potential migrants aspired to become farmers. The laying out of the main town was the first assignment with which the Company surveyors were charged, and throughout 1840 the entire survey force despatched from Britain laboured to bring the idea to reality, a town layout being completed, and sections distributed, early in the following year. A short urban boom followed, and by 1845 those resident in the first town numbered more than 1600, nearly half of the total European population of the southern North Island districts. Though over subsequent decades the town population steadily increased, it was never again to have such a large proportion of the total population. Yet, while in common with the other urban settlements later established, the fortunes of the town of Wellington ebbed and flowed, its role as the southern North Island developmental hub was at no stage relinquished.
Initial advantage, together with prime location, ensured its continued supremacy.

Though a written brief for the first town had been provided prior to the surveyors' departure from Britain, the embodied instructions were grandiose; almost to the point of unreality. The town was to be a sweeping and symmetrical montage of rectangularly aligned streets, of regularly spaced squares and public buildings and of well-defined retail, commercial and residential sectors. Generous reserves were to be set aside, while a broad belt of open land was to be left for public use between the town itself and contiguous farm allotments. In all, in setting out the town, "the future (was to be) provided for rather than the present, ... and the beautiful appearance of the city secured". To reinforce this vision, an elaborate 'master plan' of the town, drawn up by a Newgate draftsman under commission from the Directors, was provided. (S.P.1) Though its compiler had been given little information beyond that the likely site would be in the lower reaches of a valley with a large river crossing its plain, his scheme faithfully incorporated all of the Directors' expressed wishes. While the existence of this master plan has been long known, it has commonly been regarded as no more than a curiosity, perhaps a publicity piece, certainly not a true "blueprint". The weight of contemporary evidence suggests otherwise. Though it is improbable that the Directors envisaged that the surveyors would be rigidly bound by its dimensions, it is equally likely that they were expected to replicate at least its spirit. Indeed, the only departure from the repeated statement of lofty ideals was an insistence that no less than 1100 one acre town sections would be laid off within the town's boundaries, for that was the number already marketed.

The provided plan must have been at least at the back of the mind of the Company's Surveyor-General when he began working out the boulevards of what was to be patriotically known as 'Britannia' in January 1840. Almost immediately, however, problems were encountered. Laying down such a neat grid on lands intersected by rivers and streams, studded with swamps and clothed with heavy timber and underwood, proved unexpectedly difficult. Work was already well behind schedule when, three months after commencement of the surveys, inundation of the chosen site brought all to a halt. In April 1840, with only a partial outline of the first town complete, it was abandoned, an
DESIGN: Following S. Cobham

PRESENT LOCATION: National Archives of N.Z.
(Misc Lands and Survey plans)

That the plan reproduced is a subsequent copy is evident from the title alteration. While no trace of the original can be found, inspection of other copies suggests that, in most respects, it is identical.
alternative site at Lambton Harbour, in the south-east corner of Port Nicholson, being substituted.¹⁵ There, it was proclaimed, Britannia would emerge in all its glory. By late 1840 even the partial outline of the 'grand design' on the Petone foreshore had disappeared, only a motley scatter of ruined huts remaining as evidence of the intention of higher things.¹⁶

The decision to switch the town survey to Lambton Harbour brought new problems. Beach strips, small flats and a preponderance of hill slopes replaced the relatively uniform valley floor favoured. With the second Britannia, soon to be renamed Wellington, being schemed and laid down in little more than eight months, the very speed of accomplishment militated against full expression of the Directors' stated goals.¹⁷ The design in the words of a later scholarly critic, "... disregarded completely the accepted elements of town planning".¹⁸ It had "... the air of a land agent's sketch about it, rather than that of an embryo city".¹⁹ In fact, a sale plan was what it was. With the clamour from irritated purchasers growing in intensity, the town was crammed on to the limited lands available, and, despite misgivings on the part of the survey head, many of the previously accepted design features had to be dispensed with. (S.P. 2) It was the first major concession to pragmatism, and clear evidence that the expeditious fulfillment of contracts to supply land was considered to be of overriding importance. Given the commercial character of the Company's colonising venture, the situation could hardly have been otherwise. Yet, while the full 1100 one acre 'residential sections' were depicted on the official plan of Wellington, with most being subsequently offered for selection, the location of an appreciable number on bogs, steep faces, and other unfavourable situations, rendered them next to valueless.²⁰ In most other respects, the design presented bore little resemblance to the Directors' 'master plan'. Strict grid layout had proved impossible; the design embellishments which had earlier added interest had been discarded; there was no attempt to differentiate retail and commercial zones, these being left to emerge haphazardly; few reserves for civic or cultural activities had been provided; and while a town belt had been retained, it was but a token, comprising the bushed tops of the hills encircling the town. It was the opinion of a local journalist, admittedly a Company supporter, that "... the site had been made the most it was capable of, and that the advantages were as generally distributed as possible",²¹ but there was no
SURVEY PLAN 2: PLAN OF THE TOWN OF WELLINGTON, PORT NICHOLSON...

DATE: 1840

DESIGN: W.M. Smith

PRESENT LOCATION: Alexander Turnbull Library

A signed manuscript version is held in the Wellington District Office, Department of Lands and Survey.
escaping the fact that the ideal had been strangled at birth.

Criticism of the site and layout of the town of Wellington was not long delayed. New Zealand's first Governor, after visiting the southern North Island in 1841, declared the town to have been "sacrificed to erroneous principles". His Surveyor-General, also Auckland-based, considered the sanctioned layout 'an absurdity', opining that "a magnificent site ... (had been) ... completely destroyed". The residents, however, were soon to find that deficiencies in the plan of the first town extended beyond questions of aesthetics, or even principle. The haste with which the survey lines had been set down had taken its toll on accuracy. Errors were detected even before the first sections were selected, and, following distribution, the discovery of others occurred thick and fast. By mid 1842, a Company survey party was constantly engaged in making minor amendments, and, in the course of 1843 all town sections were checked, staked out and replotted. By the latter year's end, the Company felt able to pronounce that "every acre might ... be considered securely determined and fixed". Its optimism was misplaced. The state of the town surveys had become an open scandal by 1850 and, when the Company withdrew from its New Zealand operations, the Governor of the colony ordered a full 'skeleton' resurvey of the town. The only effective result was further confusion. Eight years later the then Chief Surveyor to the Wellington Provincial Government was complaining that serious discrepancies were still coming to light, and reported that the disproportionate amount of time devoted by his staff to patching exercises, especially when other survey assignments pressed, was "... an annoyance very trying to the tempers of all concerned." The same sentiments were being expressed by his successor ten years on, but it was not till 1874 that a full and meticulous resurvey of the town was finally sanctioned and the glaring errors present for three decades put behind.

Rectification of errors apart, minor modifications of the Wellington town cadastre commenced within months of the first distribution of allotments. The initial failure to provide sufficient reserves for public purposes, for instance, was partially remedied upon orders from the Governor. In 1842, a number of sections were appropriated and resurveyed by a surveyor despatched from Auckland, while the same official set out navigational and defence reserves outside the town boundaries.
loosely defined mixed commercial and retail area sprouted along the
town's beach front, while administrative offices clustered at Pipitea
or Thorndon. The most immediate visual change discernible on the
ground, however, derived from the private subdivision of existing
town sections, indeed the nominal town section size of one acre had
been determined with that in mind. Reliable plans of the early
subdivisions have been difficult to trace, but some notion of their
extent over the first three decades of settlement may be gained by
recourse to the extant Lands and Deeds records. Subdivision of
Wellington town sections was at a high level between 1841 and 1845,
stimulated by demand from those not fortunate enough to share in the
original distribution and those desiring more suitable commercial
sites in the new town. This first subdivisional phase was heavily
concentrated on the two main flat areas within the town and adjacent
to the harbour, Te Aro and Pipitea, and did not extend to sections
on the town margins. Moreover, while some central town sections were
liced into eight or more parcels, others on the town flats, either in
the hands of absentees or of owners prepared to wait for personal
reasons, remained untouched. In the later 1840s subdivisional survey
activity perceptibly slowed, the demand having dropped away. The
minor subdivisional upsurge between 1853 and 1857, in the course of
which the majority of the vacant sections in proximity to the town
centre were recast, wound down, however, as abruptly as it had
commenced. Not till the late 1860s was momentum regained, but in
the years to 1876 the scale of reapportionment of Wellington town
lands reached new peaks. Already divided central city lands were
liced into even more intricate patterns, attention was turned to
outlying town sections, and subdivision became apparent even on the
hill slopes abutting the town belt. Thus, although by 1876 the main
lines of Wellington's streets and town blocks remained as officially
set down in 1840, albeit in corrected form, the whole had an overlay
of detail.

There were only three major categories of cadastral addition
to the original broad outline of Wellington in the decades studied.
All were on the perimeters of the main town; and each was a response
to shortages in the supply of urban land. From the outset
administrative, commercial and retail functions had clustered on the
limited number of town sections fringing the harbour, but with
competition for business sites intense, it was soon obvious that there
were insufficient to meet all requirements. It was also early recognised that there was only one way in which additional land could be provided, and that was by reclamation from the harbour the shallow shelf sloping from the low water line. As early as 1847 a timber breastwork was erected along part of Lambton Quay, with infilling behind the barrier following. In the late 1840s and early 1850s several similar co-operative ventures were floated, financed by owners of shoreside sections who intended the new land for their personal use. In 1854, however, all rights to reclaimed land were granted to the newly formed Provincial Government, and, almost in celebration, a far more ambitious plan to reclaim a tract north of the existing reclamation was launched. The sale of sections so obtained was to provide a useful supplement to the provincial exchequer late in the decade. Major reclamation did not begin until the mid 1860s, but over the ensuing ten years a large area adjacent to Thorndon flat was secured and a proposition to commence similar work in the vicinity of Te Aro was advanced. By 1876 more than 100 acres had been added by this means to the stock of public, commercial and industrial land at the centre of the town. (S.P. 3)

Less dramatic, but more pernicious, was the steady erosion of the lands set aside as 'town belt' reserve. Early Company propaganda had suggested that the hilltops would be inviolate, yet in the course of the 1840s pieces were carved off to compensate settlers unable to take up their sections elsewhere, while those with properties abutting the belt were permitted to round off previously inaccurately surveyed holdings. When petty squatters began to drift on to the town belt, clearing the bush and establishing illegal holdings, there was initially no move to stop them, and by the late 1850s most of the foremost public reserve land had been occupied. Yet, when in the early 1860s the crackdown finally came, rather than allowing the town belt to revert to parkland, the authorities surveyed a large portion into leasehold allotments and put them up for tender. By 1876, much of the town belt was indistinguishable in appearance from the contiguous farming estates.

The final addition to the Wellington urban cadastre, was the formation of 'satellite villages', perhaps the first example of suburbanisation. The most striking early example was 'Wadestown', surveyed out by private entrepreneurs on country sections to the north-west of the town in 1841. (S.P. 4) The 181 half acre
SURVEY PLAN 3: PLAN OF THE CITY OF WELLINGTON, COMPILED FROM OFFICIAL SURVEYS

DATE: 1872

DESIGN: Various

PRESENT LOCATION: Head Office, Department of Lands and Survey (Statutory Branch Collection)

Note the extent of reclamation abutting the harbour rim and subdivision of the Town Belt Reserve into holdings of varying size.
PLAN OF THE CITY OF WELLINGTON
Compiled from Official Surveys 1872

Published by S. Barrett, Printer & Bookbinder, Wellington, N.Z.

SCALE

[Scales and measurements not legible]
SURVEY PLAN 4: PLAN OF WADES TOWN, ADJOINING THE CITY OF WELLINGTON, NEW ZEALAND...

DATE: 1841

DESIGN: R. Park

PRESENT LOCATION: Alexander Turnbull Library

This plan is one of the earliest privately produced lithographs from the settlement. A manuscript version is filed with New Zealand Company land claim papers in the National Archives of N.Z.
sections set out on the Tinakori hills, aroused considerable interest amongst those unwilling, or unable, to compete for the high priced town centre slivers. Yet, despite the success of Wadestown, by the time similar subdivisions were placed on the market enthusiasm had waned. Most eventually reverted to their original form. Interest in satellite villages was not reawakened till the 1860s, when a string was set out, all to the north of Wellington. Unlike Wadestown, several of the new villages were never intended to be purely residential, it being deemed appropriate to locate distasteful industries some distance from the centre of population. 'Kaiwara-wara Township', for example, housed both fell-mongeries and a tallow rendering plant.34

ESTABLISHING SECONDARY TOWNS: PETRE AND PORT NAPIER

Only one secondary town was established in the southern North Island during the ten years in which the Company held sway, and that to serve as an extension of 'the first and principal settlement', rather than a new settlement in its own right. With it being found necessary to lay off the balance of the Port Nicholson country sections in the Wanganui district, there being insufficient land to fulfil all contracts adjacent to the main town, it was resolved that additional country sections should also be laid off, and, with the lure of sections in a new town thrown in, an attempt was made to open a secondary colonising front. It was an uncertain start, and in its early years the new town, Petre, mirrored the ad hoc nature of its origins. By 1848, six years after the first sections were offered, its civil population numbered less than 200. In subsequent decades the town did rally, and then expand, but the gap between it and the main town remained considerable. At 1876, though still less than a quarter Wellington's size in terms of population, Petre, renamed Wanganui, was a flourishing district centre, and a remarkably self-contained and parochial one.

It was not till late 1851, with the Company removed from the scene, that the planning of a further secondary town was set in motion. Port Napier, situated in the north-eastern Ahuriri district, while established for the same developmental reasons as Petre, was entirely the creation of the Colonial Government. Though differing in form from the Company towns, Port Napier experienced the same initial vicissitudes, only forging ahead subsequent to becoming the main town of the new Province of Hawkes Bay in 1856. No secondary towns were surveyed in the southern North Island between 1856 and 1876. While
several of the 'townships' surveyed by the Provincial Government were ultimately to attain that status, their flowering was to be a feature of future decades.

(i) Petre (Wanganui)

Formal approval of a proposal to lay off Petre was received from London in mid 1841. To encompass at least 500 acres, with adequate public reserves and residential sections of no more than one quarter acre, a significant departure from previous thinking, the choice of site and style of layout of the town were to be left to the man on the spot, the Company's Wellington-based Principal Agent. The site selected, several miles upstream from the mouth of the Wanganui River and on its right bank, had much to recommend it. Near flat, though studded with consolidated sand dunes, and but lightly clothed with fern, flax and toetoe, its only readily perceivable drawback was the presence of isolated swamp patches between the dunes. That the river provided shelter for shipping, and was itself a major route to the hinterland, reinforced the site's suitability. Responsibility for design of the town was allotted to the Company's Surveyor-General, and an outline of Petre had been staked on the ground and committed to paper by mid 1842. A mix of colonial modifications and the imported idealism, Petre was set out in an uncompromising gridiron pattern, though the fit was much better than had been achieved at Wellington. The conformation of the streets to topography clearly indicated that the site had been surveyed and mapped before the subdivision had been attempted. With overly optimistic expectations of future growth, however, no less than 2000 quarter acre sections were set down, of which 544 were to be made available to prior purchasers of land from the Company, a further 544 reserved for later disposal, and the remainder put up for local competition. While the reduction in section size was a sign that something had been learned from the Wellington experience, the near doubling of the number of sections available was scarcely realistic. Municipal embellishments, such as had been suggested in the 'blueprint' of the first Britannia, were more evident in the layout of Petre than at Wellington. There were echoes of the home country in the ten acre Durham Square and in the sweep of Albert Crescent. Market places were strategically reserved at several points in the town to provide the foci for retail activities, while a commercial centre lay
SURVEY PLAN 5: PLAN OF THE CITY OF [PETRE] IN THE DISTRICT OF WANGANUI

DATE: 1842

DESIGN: J Thomas, F Sheppard

PRESENT LOCATION: National Archives of N.Z.
(Public Works Department Collection)

A tracing on glazed linen.
adjacent to the river. In contrast to Wellington, also, no sections were run right to the water's edge, riverside quay reserves being substituted instead. Though no formal town belt was surveyed off, two large parks, Queen's Park and Cocks Gardens, were provided.

In common with Wellington, the layout of Petre was subjected to much early criticism. In the opinion of Port Nicholson's Police Magistrate, forwarding a plan of the Company's second town to the Governor, the whole scheme was "too elaborate, too grand" for what could never be more than appendage to the organisation's major southern North Island colonisation effort. Even amongst the settlers themselves there was dubiety, the editor of Wellington's Gazette reflecting that, whereas a compact town had been promised, what had been provided was a sprawl of sections long destined to remain empty. Events in the early and mid 1840s tended to lend credence to the doubts. From the outset sales of sections were disappointing, and only a limited number of those who purchased actually made their homes there. When the Maoris stubbornly refused to yield possession of the land, Petre became more a military cantonment than a civil settlement. By mid 1848 when the question of the ownership of the Wanganui block had been finally resolved and hostilities had ceased, most of the survey lines meticulously inscribed six years earlier had been either obscured or completely obliterated. Equally tellingly, very few lots were still occupied by original purchasers. The need for redefinition of section boundaries provided an opportunity to redress earlier planning 'mistakes', for even the Company now accepted the verdict of the critics. In addition to undertaking resurvey of sections in the central town blocks, drastic surgery was ordered on the original town plan, Petre being considerably more than halved in size. By late 1849 the town had been officially reduced to fewer than 400 residential sections, it being announced that all other sections formerly designated 'town lands' would be consolidated and sold as suburban allotments. Those with claims to land dealt with in this way could either exchange their claims for sections in the redefined town or accept scrip in compensation.

When, upon the withdrawal of the Company, the Colonial Government assumed responsibility for the Petre town surveys, it inherited a legacy of chaos and disorder, much of the Company's restructuring consisting of no more than 'pencil marks on a plan"
SURVEY PLAN 6: ROUGH PLAN OF THE TOWN OF PETRE...

DATE: 1852

DESIGN: R. Park

PRESENT LOCATION: Wellington District Office, Department of Lands & Survey. (S.O.10510, R.P. 549E)

Note consolidation of town sections into suburban lots.
and resurvey of even the town centre on the ground being far from complete.\textsuperscript{46} The surveyors detached in 1851 to restore cadastral order were instructed to rationalise the Company's piecemeal restructuring as best they could, and to properly redefine the boundaries according to existing plans.\textsuperscript{47} It took three years for a semblance of order to be imposed on the butchered layout, and many more before the task of rationalisation was completed.\textsuperscript{48} While the town boundary was pushed out to encompass a further 100 residential sections, there was no effort to restore the embellishments excised earlier. (S.P. 6) To the north-west 832 quarter acre sections were amalgamated into suburban lots the majority falling into the possession of a few holders. The former town lands to the south-west, more than 600 sections in all, became reserve land, set aside for educational purposes.

For more than a decade, Petre, now transformed into the 'Town of Wanganui', remained in this abbreviated form. Survey activity in the district was largely confined to the rectification and measurement of country lots, a quiescence which mirrored the relative stagnation of the district economy.\textsuperscript{49} It was also an index of the continued availability of unoccupied town sections and the lack of scope for subdivision with residential sections having been restricted to a quarter acre. Not till 1862 was there sufficient pressure on Wanganui town land to merit the first significant addition to the reconstructed urban cadastre; the satellite village of 'Campbelltown' on the left bank of the river.\textsuperscript{50} Surveyed by order of the Provincial Government on a former country section, Campbelltown exhibited marked differences from the town to which it was related. (S.P. 7) Set mainly on elevated ground, its roading pattern and mix of section sizes reflected the undulating nature of the site. The first sections, laid out on the river frontage and therefore narrow, were offered in December 1862, the majority being immediately sold.\textsuperscript{51} Over the ensuing ten years further sections were periodically schemed and put up for sale; but strictly according to perceived demand. Significantly, as sections were pushed back from the river they steadily increased in size, a number exceeding one acre.

From the late 1860s, however, as exploitation of the Wanganui hinterland gathered pace, the form of the town proper also began to change. Between 1867 and 1874 the population of the town of Wanganui increased by 20%.\textsuperscript{52} With the possibility of minutely subdividing
SURVEY PLAN 7: PLAN OF THE TOWN OF WANGANUI

DATE: 1875

DESIGN: Compiled by G.F. Allen from official surveys

PRESENT LOCATION: Alexander Turnbull Library

Note the subsidiary settlement of Campbell Town, on the left bank of the River Wanganui. A detailed plan, entitled 'Plan of Campbell Town, Wanganui', is held by the Wellington District Office, Department of Lands and Survey. (S.O. 10661).
further sections limited, expansion of the town boundaries set in the 1850s became necessary. (S.P. 7) Whereas for almost 20 years the consolidated suburban allotments to the north-west had either been utilised as farmlets or had remained fallow, in the early 1870s a part or all of 11 of the 45 allotments had been reconverted to the purpose for which they had been originally set down. At 1876 the private subdivision of other suburban allotments was being planned. To the south-west the Provincial Government had itself encroached on the fringes of what had been designated the 'Industrial School Reserve', an additional 37 quarter acre residential allotments having been set down fronting two main thoroughfares. Less obvious, but also important in the long term, was the haphazard development of housing clusters on country sections adjacent to the town. 53 Arising almost spontaneously, and with lack of prior survey ensuring irregular section sizes and street alignments, villages such as Gonville and Castlecliff were to bring diversity to the Wanganui cadastre when they eventually coalesced with the town.

(ii) Port Napier

How best to rationalise the cadastral disorder left by the Company at Petre was still being pondered when, in late 1851, the Colonial Government announced its intention to establish a secondary town, Port Napier, on the southern shores of Hawke Bay. 54 With the example of Petre before them, there must have been misgivings. Only the sheer distance from Port Nicholson of the newly acquired Ahuriri district, of which the projected town was to be the developmental hub, forced the decision. The isolation of the north-eastern district was not merely one of mileage; major physical obstacles and dense bush belts effectively cut off overland communications with the main settlement nucleus and, if the potential of the massive Ahuriri acreage was to be exploited fully, it was essential that it be opened up with little delay. If servicing and decision-making remained narrowly centralised at Wellington, however, this was unlikely. A vision of immediate gains from Ahuriri land sales was persuasive. Thus, while Petre had been established as a closely linked branch of the Port Nicholson colonising venture, it was accepted that Port Napier would be the heart of a decentralised operation. 55 Port Napier was also a radical departure from the towns established by the Company. Despite variations in detail and scale, both Wellington and Petre had been
schemed on the same broad planning principle: the imposition of a rigid rectangular grid on the chosen site. With the results of these exercises having been mixed, at the third attempt a new approach was tried. The design of Port Napier was formulated with constant reference to the contours of the selected site, the need to adapt urban form to the conditions encountered being recognised.

The site chosen for Port Napier was dominated by the presence of a former island, described by one contemporary observer as "...an oblong mass of hills; the whole being flattish topped..., with precipitous or very steep sides, but rent or cracked... into several ravines, forked and branching as they recede from the sea or the lagoons which almost surround the elevated mass". On the seaward sides of the former island were extended shingle spits. A gap in the northern spit, about half a mile distant from where it joined the hilly block, formed the entrance to a refuge for vessels, with an extensive shallow lagoon lying beyond. A further northern shingle spit lay at the base of the island to the west, eventually joining with the southern shingle spit to constitute a triangular-shaped expanse of low ground, which, together with the narrow strips at the entrances to the gullies, presented the only land readily available for subdivision. It was as well that the environs of Scinde Island provided the best available port facilities in hundreds of miles of coastline, for the site had little else to recommend it.

Although a start was made in December 1851, the scheming of the town was a spasmodic and protracted business which ground to a halt in mid 1852, the officers involved being transferred to the rationalisation surveys in the Wanganui district. The Port Napier town survey did not seriously recommence till early 1854, at which point one of the most senior surveyors in the Government's employ was diverted there from triangulation work on the plains to the south of the port. In the course of the ensuing twelve months, that individual, virtually singlehanded, brought the town survey to completion, and, in the words of his superior, "took very great pains in the matter". The survey of Wellington had occupied eight months, that of Petre less than twelve; the setting out of Port Napier had been spread over nearly four years.

In reporting the completion of the town survey, in mid 1855, the Commissioner of Crown Lands stationed at Ahuriri made it plain that he considered the final design to have been arrived at with due consideration
both for efficiency and good taste. The town, as devised, had been split into several distinct parts: the port locality, lying to the north of Scinde Island; the town proper, laid out on the restricted lowland to the south and south-west of the island; and a mosaic of suburban sections laid out atop its bulk. (S.P. B ) The majority of the town residential sections (365 out of 522) had been surveyed off on the lowland triangle of shingle and sparse soils, most of the remainder being situated on the northern shingle spit immediately contiguous to the island. There were, however, several dispersed clusters of residential sections on the island uplands: one row upon the most level and easily accessible of the saddles between the gullies; and another row in a broader than usual ravine. Somewhat incongruously, further sections had been schemed on a small islet just inside the port entrance, while on the Meanee Spit, north of the entrance, an impromptu satellite village had been surveyed.

The topography of the site ensured that there were appreciable variations in the size and arrangement of the sections. As far as possible the ideal of quarter acre lots was carried through, but many were necessarily between a quarter and a half acre, while on the poorest soils and on the island tops all were of half an acre, some considerably more. The two rows of town sections previously noted apart, the elevated saddles and gullies of Scinde Island had been apportioned into suburban allotments, the boundaries defined in accordance with "the character of the surface, and the conveniences of access and survey". This, it was averred, would be most conducive to the lands being turned to useful account, whether for gardens or paddocks, at an early date. Yet it was not only in their shape that the Port Napier suburban allotments differed from those schemed at Petre. Instead of the usual five acre lots, those at Port Napier (90 in all) ranged between two and 39 acres. Quite different principles were also employed in the arrangement of roads and streets within the new town. At points the regular grid pattern was broken by the utilisation of lines already in use prior to survey, ease of access being considered more important than symmetry. Within the town, areas set aside for special purposes were plentiful and well defined, it being considered that the southern North Island's earlier towns had been insufficiently equipped in this respect.

That much had been learned about colonial town planning in the 1840s, that this knowledge had helped refine settler requirements,
SURVEY PLAN 8: PLAN OF PORT NAPIER

DATE: c.1855

DESIGN: T.H. Fitzgerald

PRESENT LOCATION: Head Office, Department of Lands and Survey (Statutory Branch Collection)

Note the layout of the town according to prevailing topography.
and that these requirements had led to a more utilitarian approach in
the laying out of the southern North Island's third town, in no way
ensured immediate success for Port Napier. Five years after the first
sale of town sections, it could still be described as "... a hopeless
spot for a town;... precipitous, barren, uninhabited ridges, covered by
fern and rough grass... (surrounded by) narrow strips of shingle". 62
Moreover, despite the presence of surveyors' pegs, much of the skirting
lowland remained as devoid of population as the island heights, the
thin sprinkle of cottages and hutments little suggesting a developmental
hub in the making. Though almost all of the lots offered at the first
sale had found buyers, this early promise had proved illusory. 63 Every
one of the 66 residential sections then purchased, together with the 14
suburban allotments put up, had been in the vicinity of the port, and
even then the majority of the purchasers had been absentee speculators,
in particular, Wellington merchants. Thereafter, interest in Port
Napier townlands had waned, many of the sections offered at subsequent
sales in the 1850s failing to attract takers, even at upset prices. 64
It was from the early 1860s that interest in the town quickened, that
an increasing stream of settlers was attracted, and that modification
of the initial cadastre began; but by that time the whole of the
Ahuriri district had been removed from the Wellington orbit.

THE 'SMALL FARM TOWNSHIPS' OF THE WAIRARAPA

Following the establishment of Wellington and the scheming of
secondary towns in the Wanganui and Ahuriri districts, town building
was relegated to secondary importance for more than a decade, virtually
the only addition being a line of minor townships strung along the
Wairarapa Valley floor. Proximity to the main town precluding the
establishment of a further secondary town, five 'small farm townships'
were laid out east of the axial ranges, four in the space of 40 months
in the mid 1850s, and the fifth, more than ten years later. 65 While
strictly the townships created were no more than components of more
extensive subdivisional layouts, for convenience the urban hearts of
these areas have here been separated out for consideration. Utilitarian
in outline, at least initially, the majority of the small farm townships
internally reflected the purposes for which they had been established.
Though designed for relatively small populations, the sections
incorporated within them were disproportionately large; not, as in the
main town, as a basis for speculative subdivision, but so that they
might be utilised as 'home plots', permitting subsistence production within the township boundaries. The more commercial facets of small farming, however, would be carried on on the contiguous 40 acre farmlets. It was this arrangement that gave the Wairarapa small farm townships, at least on paper, a distinctly European air.

The first two small farm townships set down, Greytown and Masterton, were essentially the product of private settler initiative, although the promoters were always dependent on official co-operation, and the survey of the townships, while undertaken by contract, was subject to supervision by senior officers of the Colonial Government survey corps. Many of the potential small farmers had proved to themselves the promise of 'yeoman farming', having either rented small lots or simply squatted on sections still unoccupied. The shortage of suitable land in the vicinity of the 'first and principal settlement', and the consequent high prices attached to such pieces as did become available, however, made it plain that if small farm settlements were to be established, they must be located in districts beyond Wellington newly acquired from the Maoris. An outcome of this realisation was the setting up of the first Small Farms Association, based in the Hutt Valley, and an approach to the Governor requesting the setting aside of 100,000 acres for schemes of this nature. Surprisingly, the Association's proposals met with considerable official sympathy, and in early 1853 tracts in the Ahuriri were placed at the small settlers' disposal. The principals of the Association, however, had a nearer site in mind, and the acquisition by the Crown of a large Wairarapa acreage later in that year provided them with their opportunity. At that point the establishment of only one settlement was projected; one incorporating a township of at least 200 residential sections. After diligent searching for a suitable site, and discussion with the official surveyors already operating in the district, it was decided, however, that the interests of all concerned would be best met by the foundation of two settlements, each with its own central township. One, to be known as Greytown, should be sited partly in bush, partly in clearing, in the Kuratawhiti locality, just south of the Waikarame River; the other, to be Masterton, should be located some miles further to the north, on a crescent-shaped grassy plain south of the Waipoua River. With the sites selected, and with their purchase from the Government arranged, the survey of the two townships proceeded through most of 1854, and, by its end, Greytown and Masterton, both
incorporating 120 one acre sections, had been staked on the ground and committed to paper.

As beffited the circumstances of their origin, the townships were strictly utilitarian in form. (S.P. 9) Greytown, the first to be completed, was in the form of a ribbon almost a mile and half in length, the town sections being set down in two ranks on either side of a half chain wide central road. Narrower roads ran parallel to the central road and to the rear of the ranks of town sections, the attenuated appearance of the layout being broken by five crossroads set at 14 chain intervals. To the east of the township a ten chain wide strip of 'town belt', or common land, extended the full length of the ribbon. There was no attempt to provide a predetermined town centre for concentration of commercial functions, or to provide a focus for public affairs. While in most respects the layout of Masterton was similarly austere, there were important variations, the most striking being the setting out of the second township in the form of a cross, the one crossroad providing at least an incipient township centre at the junction. Moreover, while there was no attempt to survey a 'town belt' running the length of the township, a more generous allocation of township reserve land had been concentrated at Masterton's north-eastern tip on the banks of the Waipoua River.

However mixed the consumer reaction to the Association settlements, and the initial response was disappointing, the very fact of their establishment suggested to the minds of those then holding political power that if more than a sprinkling of settlers could be attracted onto the valley to settle on small lots under the aegis of the Association, then others might be inveigled to an alternative small farms settlement, and this time one established without the profit-sapping involvement of an intermediary. It was thus purely as a revenue-building exercise that the third Wairarapa township, Featherston, was launched. In mid 1854, a 10,000 acre reserve had been set aside where the road over the Rimutakas from Wellington descended to the Tauherenikau Plain. Superficially, it was a promising site. By its positioning at the gateway to the Wairarapa, and by virtue of being the township nearest to the main town, it was widely regarded as the future market centre for both the Wairarapa and the East Coast districts; and this was clearly in mind when
SURVEY PLAN 9: GREYTOWN AND MASTERTON

DATE: c. 1855

DESIGN: After original plans by W. Corbett (Greytown) and J. Hughes (Masterton)

PRESENT LOCATION: Wellington District Office, Department of Lands and Survey. (S.O. 10488)

Probably prepared for record purposes, from contract surveys, in Wellington Survey Office.
instructions were given for the survey of the settlement nucleus to begin.\textsuperscript{72} When completed in mid 1856, the central township encompassed almost 400 acres.\textsuperscript{73} (S.P. 10) Though incorporating many more residential sections than the earlier townships, Featherston was relatively compact, the sections being laid off in 45 rectangular blocks, the size of each varying according to localised topographical site features. Some 336 residential sections were provided for public competition, ranging in size between a quarter and just over one acre, but with the majority just under one acre. Within the township two squares provided foci for the envisaged administrative and commercial functions, the two being linked by a diagonal crossroad, itself an extension of the main road from Wellington. While the concept of a town belt was discarded, eight one acre sections, in addition to the square centres, were reserved for public purposes. Further public reserves totalling 236 acres were set aside amongst the adjacent suburban sections.

Not one of the initial three Wairarapa townships was an unqualified success. The suburban and rural sections of the Greytown and Masterton settlement schemes underwent considerable modification, portions being consolidated and appropriated by opportunist pastoral purchasers, but the township nuclei round which they had been laid off remained relatively unchanged.\textsuperscript{74} The Association townships stagnated till the 1870s, the total population within their boundaries actually declining in the early 1860s. Though the majority of the sections within the townships were early fenced, with at least shacks being built on most, this being a requirement of the Association's terms of sale, such constituted no guarantee of bona fide occupancy. Conceived in a burst of enthusiasm for 'yeomen farming' in the early 1850s, when trade conditions were promising for this class of enterprise, interest in the settlements waned as trading opportunities narrowed. It was not till the late 1860s, when changes in the structure of the regional economy became necessary, that Greytown and Masterton began to gather strength. As late as 1875, there were still fewer than 100 houses in Masterton, many sections remained vacant, and settlement was still heavily concentrated in the vicinity of the main road junction.\textsuperscript{75} Greytown, though it had become the main district centre, had fared only marginally better. The population of the two townships combined totalled no more than 700.\textsuperscript{76} If anything, the early years of Featherston were even more desultory. In January 1857, when the first 336 lots in the township were put up for auction, only
SURVEY PLAN 10: PLAN OF THE TOWN OF FEATHERSTON, WAIRARAPA

DATE: 1858

DESIGN: W.R. Carver, after W.M. Smith

PRESENT LOCATION: Wellington District Office, Department of Lands and Survey (S.O. 10587)

Smith's original survey was conducted in early and mid 1856. The reproduced plan was subsequently constructed for record purposes.
two found immediate cash takers, and no more than 28 were disposed of at the upset price in the following two months. While in later months and years investment in Featherston town sections became a modest but acceptable punt for Wellington's shrewdest, at no stage did the township appear likely to become the respectable settlement centre planned. By mid 1865, almost ten years after it had taken shape on the ground, Featherston amounted to no more than "... a few straggling dwelling houses, a store, the survey office and a public house." Away from this frieze adjacent to the main road, the lines of the town sections had become blurred, streets and unsold sections having been illegally fenced off to form impromptu grazing paddocks. No semblance of regularity was to be restored till the early 1870s.

More than a decade elapsed before a further attempt to plant a township-based 'small farms settlement' in the Wairarapa was essayed. In the intervening years the establishment of the settlement of Carterton had been the only related effort, and the decision to dispense with a predesignated township nucleus in that instance precludes its consideration at this point. Though stimulated by a Provincial Government decision, the seeds of the fifth 'small farms settlement' scheme lay in the Wairarapa itself. A Provincial Government motion, in mid 1866, that the possibility of promoting further settlements of this type be examined, followed swiftly by further exploration of the broken bush margins lying to the north of Masterton, with this end in mind, was the precursor to the formation in August of a new and independent small farms association based on the most northerly of the existing townships. The Moroa Small Farms Association drew up its plans even before the official reconnaissance was complete and informed the Government that it would be satisfied with nothing less than a central township, set out in quarter acre residential sections, and surrounded by a phalanx of 50 acre suburban sections, with rural sections of even greater size beyond. Despite their close proximity to the Moroa country, it is evident that the Masterton supporters of the proposal little knew its bush and manuka-clad hills, for the exploring surveyors recommended that only rural lots of considerable size (in excess of 200 acres) should be immediately laid out, and that any thought of surveying a township or suburban sections should be deferred. Although for political reasons Wellington's Chief Surveyor was instructed to meet the small farmers demands, instructions to the surveyor undertaking the work suggested that the township be
SURVEY PLAN 11: TOWNSHIP OF ALFREDTON

DATE: 1871

DESIGN: J.J. Dennan, under instructions from H. Jackson

PRESENT LOCATION: National Archives of N.Z.
(Misc. Lands and Survey plans).

Lithograph prepared for sale purposes.
laid out in five acre sections, the suburban sections fronting main lines of road as 100 acre lots, with all other lots a minimum of 320 acres. The task was to be plagued with problems from the beginning. The only feasible site for a township was a narrow and irregular river valley at the southern foot of the Puketo Range, studded with marshes and stands of bush and with most of the available land within occupied by a Native Reserve. The Moroa surveys halted in late 1867, by which time only 125 fifty acre 'suburban' lots had been set down in the vicinity, no progress having been made on the settlement's township heart. Almost three further years elapsed before survey of the township recommenced with a valiant attempt to tailor the design to the available site. The result was Alfredton, a composite of 24 blocks of varying sizes set out largely on the northern bank of the Te Hoe River. The township comprised 233 sections: 169 of one acre in size; 41 of less than one acre (the majority of at least half an acre); and 23 greater than one acre, but with none larger than two acres. No provision was made for a township square, but the creation of a 'main street' area was implied by a cluster of smaller sections on both sides of McLean Street. To the west of the township, and adjacent to the remnants of the Native Reserve, a small reserve for 'public purposes' was provided. Despite the early enthusiasm, comparatively few travelled further north to settle in the fifth small farm township. It was too isolated, with its road link uncertain, and the promoters of the Moroa Small Farm Association had overlooked the necessity to insist upon residence as a condition of purchase. Less than ten years after being laid down the outlines of the settlement were blurring, roads were being fenced off and stock grazed on informally consolidated blocks of unoccupied town sections. By 1890 fewer than ten households on the settlement were recorded.

A PLANNED CLUSTER OF URBAN NUCLEI: TOWNSHIP BUILDING IN THE MANAWATU

It was not until almost three decades after the European colonisation of the southern North Island had begun that the opening up for farming purposes of bushed acres of the Manawatu lowlands seriously commenced. Once systematic settlement was under way, however, the process of township building to provide centres for the introduced population was dramatic. Between 1866 and 1876 the outlines of six major townships, together with a scatter of associated villages, were scribed onto the plain, with the survey of further townships contemplated.
The Wairarapa 'Small Farm Townships' had been the testing ground for design. Now, with a changing economic climate making closer settlement a more attractive proposition to the official land brokers, the lessons learned to the east of the axial ranges were turned to good effect. Although the broad classes of section offered (town, suburban, and rural) remained constant, the townships at the hearts of the Wairarapa settlements had, with the possible exception of Featherston, been surveyed in an ad hoc manner. In contrast, the Manawatu settlement hubs were the products of considerable presurvey thinking. Each site had been selected, after careful exploration, for the particular advantages it offered. Before a single section had been laid off, preliminary sketch plans of the sites had been perused and tentative layouts devised in the Survey Office. After official approval, these were meticulously surveyed out on the chosen site and, after further inspection, put up for sale. Again with the possible exception of the Featherston plan, the townships of the western plain were larger and grander than those set out in the Wairarapa district. They were townships established more with a view to the future than an eye for immediate requirements.

Though the opening up of the Manawatu had been a lively topic of debate through the early 1860s, it was not till late 1864 and in the early months of 1865 that a draft survey programme, incorporating the survey of town, suburban and rural lands, together with the major road lines, but also permitting ample choice for prospective purchasers, was produced. Necessarily, townbuilding loomed large. Early it was decided that two townships would be immediately required: the first to be located near the mouth of the Manawatu River, to serve as a port; and the second to be situated many miles up river, to function as the inland centre and future administrative focus of the district. There was a sound economic motive for the decision. For the timber industry resulting from clearing the forest cover to operate effectively, it made sense for one township to be situated in the midst of the district's best stands and the other at the point of egress for the timber. The site chosen for the port township of Awahou, Foxton, was about 3½ miles upstream from the mouth of the Manawatu River. Here, both a cattle run and a mission station had been founded in the late 1840s, and in the 1850s a small number of additional settlers had illegally clustered about the informal nucleus. While the architect of the planned township accepted that the presence of prior settlers...
SURVEY PLAN 12: TOWNSHIP OF FOXTON

DATE: 1866

DESIGN: J.T. Stewart et al.

PRESENT LOCATION: Alexander Turnbull Library

Reproduction of a copy subsequently prepared for photo-lithographing. Note insets of heart of township proper.
might present problems, and that otherwise the lands adjacent to the river were less than ideal, he nevertheless commenced the laying out of Awahou with little delay. By April 1866 he was able to report that the survey was complete, along with a considerable acreage of suburban and rural sections, the survey of which was continuing. When his township plan was forwarded to Wellington, however, the impact of the earlier settlers was plainly evident. Awahou, far from being compact and symmetrical, was broken up by the presence of native reserves on several of the prospective commercial waterside locations, and by the award of a wedge through its centre to the half-caste children of an early settler. Both residential sections and reserves for public purposes were scattered about in irregular patches. While it is difficult, in retrospect, to clearly distinguish between sections deemed 'town' and those 'suburban', there frequently being little difference between the larger of the former and the smaller of the latter, some 62 town sections, in addition to 55 suburban sections were included in the first offering in October 1866, the town sections ranging in size between a quarter and slightly more than one acre. Though the initial response was disappointing, a further 210 town sections of similar size were put up over the succeeding five years.

Even as Awahou was taking shape on the ground, the survey of the inland township of Palmerston, soon to become Palmerston North, was proceeding apace. Located 24 miles to the north-east of the port, the inland township was far more optimally sited for survey on the agreed lines. Laid out mostly in the uninhabited Papaioea clearing, a near 100 acre flat and scrubby expanse in the midst of tall trees, Palmerston presented a clean slate for the planners. In both size and arrangement, it was far more ambitious undertaking than its coastal counterpart. Palmerston's envisaged future role as a central node was reflected in its layout as a crude St George's cross, the arms, set down as major roads, being aligned to the four points of the compass. Each of the roads converged on a central square, placed a little to the westward of the midpoint of the clearing, and it was about this square that it was anticipated that commercial, retail and administrative functions would gather. In appreciation of this fact, the western half of the square was bordered by quarter acre sections. Away from the square, the township was rectilinearly laid out in blocks parallel to the main road lines. The most detailed subdivision of the blocks, into half acre town sections, was
SURVEY PLAN 13: PLAN OF TOWN AND SUBURBAN SECTIONS, PALMERSTON NORTH, MANAWATU.

DATE: 1875


PRESENT LOCATION: National Archives of N.Z. (Public Works Department Collection)

Part only of the Palmerston town plan. Those sections first set down lay predominantly to the north-east of the central square.
predominantly confined to those adjoining the lines running to the north and south of the square, one acre core sections abutting those running to the east and west. The remaining specifically town sections, the majority one and a quarter to two acres in size, and all at least one block removed from a main access route, filled the interstices between the core of the township and the ranks of suburban sections. While the first Palmerston town sections were put up for competition on the same day as those surveyed at Awahou, sale of this inland real estate was even more protracted. Between October 1866 and August 1876 more than 600 individual town sections were offered, sales being restricted until 1871, but thereafter gathering pace.98

Almost six years elapsed before a third township was surveyed in the Manawatu and in both its form and origins Sanson more closely resembled the Wairarapa prototypes than either of its predecessors. Surveyed specifically for members of a resuscitated 'Hutt Small Farms Association', the procedures earlier adopted for the disposal of Wairarapa sections were near replicated with respect to Sanson, members of the Association purchasing shares entitling them to a choice of town sections and suburban lots, the only variation being that provision was made for settlement under a 'deferred payments' system.99 Only after the needs of Association members were satisfied were sections to be placed under offer to the public. The first step was the reservation of a 5000 acre block, about 15 miles to the north-west of Palmerston in 1871.100 Early in 1872 survey of the township nucleus of the settlement began, the Provincial Government having agreed to undertake the layout on behalf of the Association.101 When the staked out township, together with the surrounding suburban allotments were handed over for initial choice late in the same year, however, the startled Association members discovered that, instead of the one acre residential sections they had requested, Sanson was laid out in 343 quarter acre allotments. (S.P. 14) The Government's intention to serve far more than the Association members was clear. While the ribbon layouts of the early Wairarapa townships had been eschewed, the township being set out in rectangular blocks, the variation and ornamentation in design that had characterised the later layouts was also discarded. There was no attempt to define a business area by the survey of a square, it being considered that the placement of the township astride a major crossroad provided a natural central focus. Differences in the width of the streets separating
SURVEY PLAN 14: TOWNSHIP OF SANSON, MANAWATU DISTRICT

DATE: 1872

DESIGN: A. Dundas

PRESENT LOCATION: Wellington District Office, Department of Lands and Survey (S.O. 11014)

the blocks emphasised the relative value of sections. The setting aside of a school reserve was the only reservation of land for public purposes within the township, while the survey of a narrow town belt surrounding the residential sections was the only other concession of any kind. Utilitarianism had returned.

As the urban footholds established at Awahou and Palmerston struggled to consolidate, and the first flickerings were fanned at Sanson, an even more grandiose attempt at township building was initiated to the north of the Manawatu Plain: the 'Manchester Settlements'. A joint venture between the Wellington Provincial Government and the Britain-based 'Emigrants' and Colonists' Aid Corporation', the former made available the land required, and the latter capital and immigrants. Following a visit to New Zealand by a representative of the Corporation in 1871, a Y-shaped 106,000 acre block was acquired, and in 1872 joint planning for its peopling began. As they arrived, the settler groups were to be located in one of the three planned townships: one, the main township, to be sited at a central position in the block; another to be sited at or near its western boundary; and yet another, in the eastern portion of the block. It was from these township bridgeheads that the breaking in of the surrounding bushland would be attacked. The site selected for the main township, Feilding, was in the south, near the confluence of the Kiwitea and Oroua Rivers. Though lowlying, and therefore inclined to be swampy, the new flat tract was made attractive by the existence of another large clearing, thereby rendering immediate expensive clearance of the land unnecessary. Begun in early 1873, the laying out of the township was entrusted to a corps of contract surveyors, but under precise instructions from Britain and subject to intermittent inspection by Wellington's Chief Surveyor. Extending over almost 600 acres and neatly bisected by a railway reserve, the two parts of the township were each centred on a square, Manchester Square to the south and Denbigh Square to the north. (S.P. 15) Within the boundaries of the township lay 778 town sections, varying in size between a quarter of an acre and a little under two acres. In both instances, the squares were bordered by quarter acre sections, section size increasing from these centres outwards. From the outset, Manchester Square was designated the administrative hub of the township, 12 sections in its northwest corner being reserved for public purposes. Other reserves, for religious, educational and recreational purposes,
SURVEY PLAN 15: PLAN OF THE TOWNSHIP OF FEILDING, MANCHESTER BLOCK, MANAWATU ...  

DATE: 1874  

DESIGN: J.H. Jackson et al.  

PRESENT LOCATION: Alexander Turnbull Library  

A manuscript version of this plan, incorporating the bushline and site notes, is held by the National Archives of N.Z.
were distributed mainly through the northern half of the township. No town belt was provided, but in the north-west corner of the town an extensive 'Botanical Reserve' was set aside.

The survey of the second Manchester township, Halcombe, was delayed until 1876 when sufficient settlers had been despatched to necessitate activation of the next phase of township building. Some eight miles to the north-west of Feilding, Halcombe was favoured by a better natural setting than the first Manchester township, the chosen site being drier and more elevated. It was this elevation which gave the township its distinctive stamp. While on paper superficially similar to Feilding, with two squares, with section size increasing with distance from the squares, and also being bisected by a railway reserve, the layout on the ground was split into two contrasting parts. To the north-west of the railway reserve, on relatively flat land, the arrangement of cadastral forms was indeed remarkably akin to Feilding. To the south-west, however, on rising terrain, sections varied in shape and size according to the topography. Altogether 720 sections, varying in size between one quarter and just under two acres, were offered in the township, the greatest concentration of larger sections being naturally situated on the south-western slopes. As 1876 drew to its close, with the peopling of Halcombe just under way, there was not yet a need to survey out the third Manchester township, Ashhurst. The setting down of that nucleus was to be a task for the late 1870s.

Prior to 1876, there was one other attempt to found a major township in the Manawatu. The survey of Bunnythorpe, seven miles to the north of Palmerston, and five miles to the east of Feilding on the boundary of the Manchester block, was a Provincial Government venture, and another strictly commercial in nature. With a railway about to be constructed across the northern section of the Manawatu Plain it was considered prudent, and potentially highly profitable, to establish a township where the lines from Wanganui would meet those advancing from Hawkes Bay. Just as Foxton had been cast as the centre for seaborne traffic, so was Bunnythorpe to be cast as the focus for that borne by rail. The design, submitted late in 1874, was pragmatic. Confined to the lands south-east of the projected railway line, the arrangement of sections owed rather more to the examples of Sanson and the Wairarapa townships than to the innovative efforts essayed at Palmerston North and Feilding. Some 340 town sections, mainly a quarter to a half acre in size, but with a
spattering of sections of from one to three acres on the outer margins, were set down in three ordered ranks. Few reserves for public purposes were set aside, no discernible attempt was made to define a township centre, and no unnecessary ornamentation was provided. The reservation of several internal blocks for railway purposes bespoke the Provincial Government's previously expressed intention for the township. Unfortunately, even before the surveyed sections had been placed on the market, the General Government's plans had changed, Palmerston North instead being designated as the Manawatu's primary railway junction.109 There were to be few interested takers for highly priced lands at a phantom crossroad.

By late 1876 the six Manawatu townships, all located within a 30 mile radius of the designated inland administrative centre, were at varying stages of development. At Awahou (Foxton), the projected port township had firmly rooted. Although the node was dominated by its wharf and by the terminus of the tramway from Palmerston North, more than 300 settlers had made their homes within its legal boundaries.110 Hotels, stores and public offices fringed the wharf area. Palmerston, after a slow start, had gathered pace in the five years after 1871. Though expansion was still spatially restricted by the ringing tall trees, some 200 had taken up residence in the township proper, the majority in the vicinity of the central square.111 That it would forge ahead further in the future was undoubted, for in addition to being the focus for main road lines, the township was now to be the junction for railways reaching down the western coast and through the ranges from Hawkes Bay. In recognition of Palmerston's likely future pre-eminence, administrative functions previously dealt with from the port township were transferred inland in 1873. The most striking early success story, however, was the development of the first Manawatu township, Feilding. From a near deserted clearing at the beginning of 1874, by the middle of the following year nearly 800 residents occupied its tents, shacks and barracks.112 While certainly not all were destined to remain long term, many simply preparing for subsequent movement to the surrounding country sections, the initial presence of this number at least gave the township a flying start. At Sanson, though many of the quarter acre sections had been amalgamated into miniscule farmlets within the township boundaries, a population in excess of 200 had been successfully settled.113 For Halcombe, with most of its staked
sections still to be distributed, it was as yet too early to assess future prospects. Indeed, of the six Manawatu townships laid out, only Bunnythorpe could be classified a failure.

THE UNPLANNED ACCRETIONS OF THE RANGITIKEI

Approved disposal of Rangitikei lands, first by the New Zealand Company and then by the Crown Colony Government, had predated the opening of the Wairarapa and Manawatu districts for sponsored settlement. Yet, although a considerable acreage in the district passed into private hands in the early 1850s, to be followed by a surge in sales later in the same decade, at no point had any of the involved colonisation agencies exhibited interest in the early survey of planned townships. The Company's position had been quite clear: the siting and layout of concentrated settlement nodes in the Rangitikei "... should be left to chance or individual enterprise". In the short term, the district could be serviced from Petre. By default or neglect, the succeeding Crown Colony and Provincial administrations had also embraced that philosophy. With the subsequent growth of the population of the district, however, the need for the establishment of minor servicing centres was recognised locally, and it was as the result of local initiative that two townships sprouted to the west of the Rangitikei River in the 1860s.

The first to be founded sprang from the entrepreneurial activities of James Bull, a new arrival in the district in the late 1850s. Initially leasing a five acre plot from one of the largest Rangitikei landowners, Bull established an accommodation house and store on a terrace top on the right bank of the river, and it was from this nucleus that 'Bulltown', later shortened to Bulls, developed. With his merchandising business established, Bull next founded a sawmill, then a carting business, a smithy and finally flax mills. As his personal interests expanded, so other businesses collected in the vicinity. By 1875, Bulltown incorporated more than 40 houses, a population of 237, and, handily placed on the main route to Wanganui, it was regarded as the focus of coastal Rangitikei. Its future was assured when, in early 1876, the Provincial Government surveyed the haphazard collection of ill-defined lots into regular sections.

Most of the early Rangitikei settlers, however, had made their homes further inland, and from the late 1850s there were calls for a
central township to be laid out on the Tutaenui Plain. The calls went unheeded, the District Surveyor at Wanganui reporting in 1860 that such a township was "neither possible nor necessary" in the foreseeable future. Believing otherwise, the settlers continued to clamour, but it was the unilateral decision of one of the largest local landowners to lay out a village, Crofton, on a portion of his property which eventually led to the founding of Marton, soon to become the main town of the Rangitikei. That Crofton was to be a utopian temperance settlement spurred others of less abstemious habits to band together to provide an alternative. In late 1865 three smaller landowners agreed to permit a township to be schemed on their contiguous 60 acre rural sections on the right bank of the Tutaenui Stream, and also to bear the initial costs of subdivision. When the first 34 half acre allotments were offered in January of the following year, the land was described as of superior quality and "situated in the very centre of civilisation". The site had been so well selected it was averred, that the township "could not fail to be the great centre and depot of the Upper Rangitikei, the Lower Rangitikei and Turakina, each being nine miles distant". It would also provide a useful launching point for the opening of the bushed back country lying beyond the boundary of the block then purchased from the Maoris. While a part of this was persuasive sales patter, for much of the site was subject to occasional inundation, the first sales were sufficiently encouraging to warrant the regular marketing of additional parcels and by late 1868 the whole of the three original rural sections had been alienated. In excess of 120 sections had been taken up. By this stage Tutaenui, as it was known, had the appearance of a typical frontier township: a sprawl of shanties on the residential sections, with a wide dirt main street lined by facaded wooden commercial buildings. Its population totalled less than 200. From 1869, however, there was a sustained drive for respectability, the first step being a switch to the more decorous name of Marton. As the surrounding district thrived, so too did the township. By 1874, the resident population had grown to 339 and the whole settlement had developed an air of permanence. It was in acknowledgement of this apparent stability that the Provincial Government, in the same year, agreed to verify the surveys privately conducted and to prepare an official plan of the township. Given the seal of approval, Marton exhibited, in the words of a settlers' guide published in 1875, "all the characteristics of a model English village".
SURVEY PLAN 16: PLAN OF MARTON

DATE: 1876

DESIGN: R M Skeet

PRESENT LOCATION: Alexander Turnbull Library

Compiled from the official surveys as private Sale Plan.
It was a quite different catalyst which stimulated the establishment of townships in the district lying between Wanganui and the Province of Taranaki. Till the 1860s, European settlement in the north-west had been sparse, largely confined to a few itinerant graziers and their entourages. With the outbreak of armed interracial conflict in Taranaki in the early 1860s, it became a key buffer zone between the main war theatres and the comparatively calmer districts in the south. As part of the colonial defence strategy, extensive blocks on both sides of the provincial border were confiscated from their allegedly disaffected owners, it being proposed that introduced military personnel should provide the required bulwark. It was thus in the context of a comprehensive military settlement scheme that the first north-western townships were laid out by the General Government, a chain of township-based land divisions being strung from Hawera in the north to Wairoa in the south. Though the emergency was quieted by the early 1870s, the cantonments earlier founded remained as the centres from which civilised settlement was promoted.

Under General Government aegis, the 'West Coast Confiscated Lands' were administered as an enclave, the fact that the appropriated blocks straddled the boundary between the two provinces being effectively ignored. Carlyle, situated near the mouth of the Patea River and just north of the provincial boundary, was always conceived as the central military command post. From February 1865, considerable numbers of troops were encamped on both sides of the river, but the transient nature of the encampments, however, most of the troops being regulars, precluded the usual immediate surveying out of a township. In late 1867 and early 1868 a start was made on the formal laying out of a small township on the flatter land behind the beach, but when hostilities in the district suddenly escalated, the project was abandoned. In the latter months of 1869, with an uneasy peace restored, the township of Carlyle finally took full shape. With the site now unquestioned as the natural base for any proposal to open up the confiscated lands further, the adjacent river berthages being no small factor, this second attempt at township formation was a far more ambitious undertaking. While Carlyle's role as a military cantonment was still not over, clearly provision had been made for the future. When sections were presented for inspection by potential purchasers in March 1870, they found that due attention
had been given to the prevailing local topography, that the township had been set out in 39 separate blocks and that each block incorporated between three and 16 sections, with the majority of sections a quarter acre or less in size. Initially 196 town sections were offered together with 59 neighbouring suburban allotments, these latter ranging in size from five to 191 acres, but with only ten of more than 100 acres. After respectable sales in the first year of offer, and with the trickle of civilian settlers to the pacified lands steadily swelling, the main north-western township grew quickly; spectacularly compared with the other southern North Island townships. By 1876, the resident civil population was more than 300. Further discussion of the evolution of Carlyle, however, is precluded by its placement within the Taranaki Province, and by its consequent orientation towards population centres further to the north.

The only military township lying fully within the bounds of Wellington Province was Wairoa (Waverley), situated on the elevated coastal plain about midway between the Waitotara and Whenuakura Rivers. The most southerly of the chain of defensive settlements, Wairoa formed the nucleus for the first small farm land divisions in the confiscated blocks south of the provincial boundary. Following the destruction of Okotuku Pa, in late 1866 two companies of Taranaki Military settlers were despatched to the locality; the contingents' first assignment being to construct a redoubt, almost 18 months elapsed before even the outlines of the projected township were set down. When surveyed, the township incorporated 144 residential sections, split among 20 blocks, and bordered on three sides by extensive reserve lands. The design was plain, but at least permitted the allocation of one town section to every individual military settler, with a number in reserve to cater for possible reinforcements. By 1870, however, the military settler ranks had thinned, and, with a surfeit of sections in hand, the authorities resolved to make them available to civilian purchasers. At the same time, further Wairoa sections passed informally into civilian hands per medium of a brisk trade in military land orders. With the commitment to provide rural allotments for the military settlers early fulfilled, survey parties were constantly engaged in the preparation for sale of further Okotuku sections through the early 1870s. By 1875, the township boasted not only a resident Armed Constabulary force, but also some 81 civilian settlers, both served
SURVEY PLAN 17: WAIROA TOWNSHIP, OKOTUKU DISTRICT

DATE: 1868

DESIGN: O Carrington

PRESENT LOCATION: Head Office, Department of Lands Survey. (Statutory Branch Collection)

Prepared for Colonial Defence Office.
by an hotel and several stores, and with a sprinkle of simple cottages as tangible evidence of what was being achieved. With Wairoa as the heart of the operation, a gratified visitor reported, "settlement was rapidly progressing all along the coast from Waikorora to the northern boundary of the Province".

THE DEVELOPING VILLAGE LANDSCAPE

At an even more rudimentary level, through the first 36 years of European settlement in the southern North Island nearly 50 villages were established to serve localities within the constituent districts. The range of services offered by villages was modest: an accommodation house, a store or two, perhaps a smithy or other craftsman workshops, and, at especially favoured locations, a church and community building. Yet, despite this limited prescription, the post foundation history of the villages was far from uniform. Some were shortlived; others were eventually upgraded into more advanced settlement forms; others again changed little. Varying from quite sophisticated planned divisions to but crudely nucleated irregular population clusters, the layout of individual nodes was mainly determined by the date and circumstances of establishment, village building pulses tending to run parallel with growth movements in the larger urban concentrations. Accorded high priority in the 1840s, though the promoters' motives were curiously mixed, enthusiasm fell away in the 1850s and early 1860s. From the mid 1860s, however, village building was encouraged by the closer settlement policies then promoted. Nevertheless, the parlous survival rate of drawn village representations prevents detailed study of the southern North Island villages, no more than three formal plans having been traced. For this reason, representative examples only will be considered in the following discussion, the evidence even in these instances being drawn from scattered documentary sources.

The first villages to be systematically laid out in the 1840s were private subdivisions on rural sections previously surveyed by the Company. Between 1840 and 1844 there was a flurry of village formation in all of the districts opened up by that organisation, nine having been noted in the contemporary press. The motives for establishment were invariably speculative. With the reapportionment of Wellington town sections having proved profitable, the notion that village lots might also prove attractive, especially to settlers of moderate means,
was seductive. The first tests of the notion were in the Hutt Valley, the villages of Aglionby and Richmond being privately surveyed and offered for sale in the latter months of 1841. Aglionby was laid out on part of the abandoned first Britannia site, the land having been subsequently reallocated in a single 100 acre country parcel. While in the absence of a formal plan it is impossible to adduce the general design of the node, it is at least known that the residential lots were to be of a quarter acre in size and that reserves for a church, market and other public places were made. The venture was never to fulfil the promoters' expectations. By 1845 the site sported little more than an hostelry, several cottages and buildings associated with the country section owner's farming enterprises. Yet it was the success pinnacle, for the other speculator villages fared even worse. The village of Richmond, surveyed a little further up the valley a few months later, was founded on different principles, most of the subdivision being in farmlets of from five to twelve acres. There were few takers, the asking prices being simply too high. A subsequent attempt to lay out a third village, unnamed, and even further up the valley, was equally abortive. Thereafter, more than a year passed before the village of Moreton was schemed near the confluence of the Hutt River and the Waluhetu Stream, the general arrangement being similar to Richmond, and the result the same. Villages of similar design were also laid out at Porirua and Kaiwarra prior to 1845. At Wanganui, the village of Rhodes was surveyed on the left bank of the river in late 1841, but the subdivision stirred little interest, and during the troubled mid 1840s all trace of it was erased. In the Manawatu district, where the Company endeavoured to lay out yet more country sections, there were at least three private attempts to provide village nuclei for the expected settler influx. The most elaborate was Te Maire, potentially of township proportions, some 283 residential lots being offered for sale on three riverside sections in mid 1842. It was, its promoters averred, "judiciously laid out... with ample reserves for quays, exchange, customhouse, marketplace, church, courthouse and botanical gardens". It would undoubtedly, be the hub of the Manawatu colonising effort. When, however, the entire Manawatu settlement scheme collapsed, Te Maire, together with the other villages laid out, sank also. By 1850 little sign of any of the villages schemed in anticipation of quick profits survived, at least in their original form.
Quaintly, the other early endeavour to etch planned village forms into the southern North Island landscape sprang from the missionary-induced reforming zeal of Crown Colony officials. From the arrival of the first settlers, the build and layout of the Maori pa was regarded with distaste, their 'primitive' form being incompatible with the imported civilising ethic. Following the quieting of the disturbances of the mid 1840s, the time seemed opportune to begin a remodelling of these settlement concentrations, and in early 1849 pahs at Waikenae and Wainui, just north of the Porirua Harbour and at Putiki, near Wanganui, were selected as the prototypes for European-style villages. It was intended that these three 'Maori villages' should have a distinctly theocratic air, but somewhat incongruously God and Mammon were placed on almost equal footing. Though a church reserve was central to each, a matching market reserve was in each case placed hard alongside. Surrounding these foci, residential lots were set down in regular ranks. Significantly, to hasten redevelopment, monetary incentives were thoughtfully provided. As had been forecast, there was an immediate jostle among other tribal leaders to have their pahs recast in the same European mould, and in the course of the next two years a further nine villages were surveyed off, all to the same design. There was also a determined endeavour to attach names more in keeping with their revised form, Waikenae village, for example, being grandly retitled 'London'. Unquestionably the most successful of the official village building ventures was Otaki, described by a smug cleric as "living proof of the power of religion in civilising man". Laid out "according to the regular plan, and intersected by wide streets... adorned by rows of trees", Otaki was a centre of Maori agriculture, and to further assist in 'civilising' a grain mill was gratuitously provided. Yet, despite the enthusiasm with which the remoulders had set about their self-appointed task, the survey of Maori villages proved to be a passing phase. After the first emulative flush, and with the removal of the associated subsidies, Maori interest in the schemes fell away. In succeeding decades, many of the divisional lines laid down were modified beyond recognition.

With the early forays into planned village building, both private and official, having proved less than completely successful, there was an understandable reluctance to again promote formally settlement nodes of this type till late in the 1860s. With the resources of potential promoters turned elsewhere for nearly 20 years, those few villages
SURVEY PLAN 18: PLAN OF NATIVE VILLAGE AT WAINUI

DATE: 1849

DESIGN: S M Scroggs

PRESENT LOCATION: Head Office, Department of Lands and Survey. (Statutory Branch Collection)
which did take shape tended to evolve as minor accretions, unplanned, generally unsurveyed, and therefore totally irregular in form. While frequently these extempore villages originated at convenient points on communication routes, once established they tended to attract subsidiary residential accumulations. Typical of villages of this type were the already established nuclei at Awahou and Bulls on the western coast, together with that at Turakina. While the two former villages were eventually to be upgraded into townships, the last was to maintain its village status throughout. Situated to the north-west of the Rangitikei River, on the main road to Wanganui, and in the midst of country sections laid out by the Company, Turakina was born in the early 1850s. Its hostelry was as much for passers-by as for the quenching of local thirsts, but its stores and services were largely for the benefit of local settlers. So also with the village of Carterton, to the east of the dividing ranges. Although no township had been schemed when the small farm settlement of the same name was thrown open in 1858, within two years a straggle of buildings faced the adjacent main Wairarapa road. Nearer the main town, the village of Rawsonville, progenitor of Johnsonville, was also surveyed in 1858. A little too distant from Wellington to be termed properly a 'satellite village', Rawsonville became the nucleus for a 'rapidly rising and thriving agricultural district', but at the same time owed much of its relative prosperity to its position on the main road to the western coast. These extempore villages, though restricted in number, proved to be of a more enduring character than their more elaborate predecessors.

From about 1866, with attention turning back to the possibilities of closer settlement, the prospects for floating successful village schemes seemed more promising, and once more speculators were first in the field. Between 1866 and 1871 seven private village subdivisions were put up for sale, all save one in the central and upper Wairarapa. The first was the village of Kuripuni, laid out on a run homestead remnant adjacent to the township of Masterton. Three years later the village of Waiohine, or Borlase, was laid out on a similar remnant not far distant from Greytown. Not all of the villages formed were so closely related to their neighbouring townships, Gladstone, tucked at the base of the eastern Wairarapa foothills, being some nine miles south-east of its nearest neighbour, Carterton. Though success, with respect to these ventures was far from instantaneous,
the results were nevertheless sufficiently encouraging to spur others to follow the lead. After 1871, the private village subdivision movement gathered increasing momentum, not only in the Wairarapa but also in other parts of the Province.

Not to be outdone, the Wellington Provincial Government soon embarked upon village building on its own account. While the formation of much larger townships remained central to its closer settlement strategies, the Provincial Government exhibited a willingness to consider now the laying off of subsidiary villages in conjunction with those schemes. At the same time, village settlements were substituted for townships where lesser servicing hubs were deemed appropriate. The most obvious official examples in the early 1870s were the 'Scandinavian villages', designed to lay open bush country in the Manawatu and to the north of the Wairarapa. Though the village sites were actually laid off in small farm allotments, it was always anticipated that nucleated hearts would develop through the occupiers' initiative. Two Scandinavian villages were laid off in the Manawatu, both on the outskirts of Palmerston, while two others, Mauriceville and Mellemuskov (Eketahuna), were laid off in the dense bush at the head of the Wairarapa. Their general form will be considered in the context of rural land division. Even this, however, was not the full extent of the Provincial Government post-1871 involvement in the business of village building, Waitutara, in the north-west affording but one further example.

For the first time a smattering of nucleated settlements became evident in the overtly pastoral districts, especially in the eastern Wairarapa and on the East Coast, where large grazing units dominated. Though not villages in the strictest sense, the homestead complexes central to many of the stock runs closely resembled villages in form, and fulfilled many of the same functions. Unlike the Australian colonies, specifically pastoral townships had not developed earlier to meet the needs of the graziers. Indeed, the stockowners' links with the main town had always been stronger than with the district centres. While this remained unchanged, the displacement of the crude form of pastoralism which had prevailed in the early settlement decades by more sophisticated stockrearing methods brought an inflow of labour to the pastoral districts. The formation of pastoral villages thus arose from the need to house that labour, to
cater for its immediate needs, and also from the need to centralise many of the new management requirements.

1.3 FROM AGRICULTURAL ESTATES TO SMALL BUSH FARMS: THE DELINEATION OF INTENSIVE FARMING LANDSCAPES

While the setting out of properties for extensive stock grazing overshadowed all other categories of survey activity in the 1850s and 1860s, and while by 1876 the total southern North Island acreage encompassed within the pastoral cadastre far exceeded that in small and medium sized 'agricultural' parcels, the delineation of lots for more intensive farming uses was an on-going phenomenon. The optimum form in which such lands should be presented to prospective settlers remained a matter of vigorous debate throughout, the clarification of the real estate requirements of those determined on arable or mixed farming futures being reflected in altering spatial goals, and, as far as economic and political circumstances permitted, changing section collages in terms of shape, size and general arrangement. During the 1840s, the concept of the 'country estate', regular lots of 100 acres or multiples of that figure, founded on an intensive stockrearing grain farming mix, held sway. Conceived as colonial replications of British model farms, these national estates owed more to ill-informed London postulations than to any sober assessment of the locale to be colonised. By the early 1850s, though a sprinkling of the estates set out remained as vestigial cadastral forms, the inutility of the concept as an organising framework for the distribution of lands deemed agricultural had been amply demonstrated. Through informal aggregation and fragmentation, the ranks of regular 100 acre parcels initially provided were already being drastically reorganised. Over the following three decades, there was a protracted search for more appropriate divisional models for the setting out of lands reserved for intensive farming purposes. 'Small farm settlement' schemes, the promotion of 'agricultural reserves', and, finally, the introduction of a distinctly Wellington variation of the 'township' form of land division were all tried; and with varying degrees of success. In almost every instance, loopholes were found which permitted far-reaching departures from the intentions of the cadastral planners. Regardless of the relative success of the various cadastral innovations in actually fostering intensive farming, however, the lines engraved, whether in original or blurred form, remained as evidence of the
experiments. Moreover, while new districts being opened up for settlement were almost invariably selected as the sites for the successive major cadastral experiments, the treatment of unsettled niches in previously unsurveyed districts frequently brought further diversity to existing arrangements of survey lines. Whether in the form of unselected parcels reoffered, earlier undetected or ignored interstices between existing parcel ranks, or simply tracts initially held back from sale, these fragments were resurveyed and offered in sections of a size and shape in accord with the prevailing thinking at the time of sale.

THE NEW ZEALAND COMPANY'S RURAL IMPRINT

The New Zealand Company's survey corps arrived in New Zealand in 1840 with precise instructions to lay off the rural lands surrounding the southern North Island's first town, and any subsequent towns, as a symmetrical chequer board of paddocks and cornfields, the individual parcels separated by neat hedgerows and dotted with trim country seats. The basic cadastral units were to be 100 acre rectangles, set out in seried ranks, and with all to be provided with road frontages. While there was never any intent that individual purchasers be confined to single sections, it was envisaged that the construction of larger estates would be on 'building block' principles, and that the essential rectangular symmetry of the rural cadastre would be always preserved. The distinctive layouts of sections set down in the first decade of settlement, while in some measure reflecting the planners' ideals, were a far cry from the spatial ideal earlier approved in London.

The first Company surveys of country lands began in the vicinity of Port Nicholson in late 1840, it being anticipated that 1100 estate units would be laid out in close proximity to the southern North Island's main town. The setting down of the nominally 100 acre parcels was carried on steadily through 1841, feverishly in 1842 and 1843, and desultorily in 1844, before being halted in 1845. Early, however, it was realised that it would be impossible to lay out the already sold parcels in the regular ranks desired; and that it would not always be possible to preserve the constant shape and size of parcels, even within quite small areas. Examination of a comprehensive plan of the 'Port Nicholson Country Districts', as laid
down to January 1843, indicates just how far the eventual layout diverged from the compact and regular rural cadastral originally envisaged. (S.P.19) Largely confined to the limited flat, or moderately sloping, lands within 25 miles of the town of Wellington, the emerging cadastral was already a diverse mix of loosely connected attenuated strips and irregular collections of surveyed parcels. In recognition of the impossibility of maintaining contiguity in the rural surveys, the Company's staff had instead concentrated on making the best use of the scattered sites available. In all, 17 separate sub-districts were distinguished, ranging from Porirua, the most extensive sub-district, with 106 separate parcels, to the tiny Evans Bay District, which encompassed but four parcels. A closer examination of the Lower Hutt sub-district reveals no vestige of internal unity of design. While a series of north-south running rectangles, of varying length and width, fronted the greater part of the Petone foreshore, breaking into a variety of irregular forms to the east, the valley proper was predominantly surveyed into banks of skewed parallelograms running roughly northeast-southwest. On the eastern margins of the valley, towards its midpoint, and near the northern limit of the sub-district, the parcels devolved into a curious collection of geometric shapes. In contrast, the layout of Watts Peninsula, while still diverging from the prescribed form, exhibited a more regular appearance. With the layout possibilities limited by the natural shape of the peninsula, almost all of the delineated parcels were trapezoid in form, aligned in semi-regular ranks, but with the length of the sides of individual parcels adjusted to permit the provision of the sold acreages. In all sub-districts, irrespective of the shape of individual parcels, the objective of 100 acres in each was theoretically adhered to, but, as the Company's second Principal Surveyor feelingly wrote "... the difficulties attendant upon correct survey of the country could scarcely be conceived". Subsequent checking revealed that few of the '100 acre sections' surveyed in the vicinity of Port Nicholson conformed to their stated size, in some cases excesses of up to 40 acres being recorded, and in others deficiencies of equal magnitude.

Before the Company's survey of the Port Nicholson Country Districts had been under way 12 months it became all too apparent that there would be insufficient suitable land available at the toe of the island to accommodate all of the 1100 rural parcels initially
SURVEY PLAN 19: SKETCH OF THE COUNTRY DISTRICTS IN THE VICINITY OF PORT NICHOLSON, NEW ZEALAND

DATE: 1843

DESIGN: W M Smith, S C Brees

PRESENT LOCATION: Alexander Turnbull Library

Printed version of manuscript plan held by the Wellington District Office, Department of Lands and Survey.
projected, much less others sold subsequently. The necessity to create 'overspill' settlements at some distance from the first town therefore had to be acknowledged. Yet, despite the difficulties in giving it firm expression at Port Nicholson, there was no suggestion that the spatial goal of a regular grid of 100 acre allotments should be discarded or even modified. Rather, the surveyors were instructed to begin afresh at the new sites. Wanganui, 150 miles to the northwest of Wellington, was chosen as the location for the first 'overspill' settlement. While the survey of the town of Petre, an integral part of the contingency strategy embraced, occupied the latter months of 1841, by the beginning of 1842 the scene was set for the laying out of the surrounding rural lands. By May of the following year the task was complete. The arrangement of parcels presented, however, bore no more relation to the London planners' objectives than that being contemporaneously schemed at Port Nicholson. With the town providing an impromptu hub for the settlement, country properties had been laid to the south, north and east, the sandy fringe between the town and the coast being largely left clear. The created rural cadastre had an almost tentacular aspect, the lines of sections tending to follow valley floors, particularly to the east of the town, where parcels were faithfully aligned to the course of the Wanganui River, but also in the case of tributary streams on the river's right and left banks. In total some 360 rural parcels of heterogeneous form were laid out, about two thirds being broadly rectangular, but with the relative dimensions differing greatly, according to location. Amongst the remaining parcels a miscellany of geometric forms had been embraced to enable fit, some even being triangular. An intriguing feature was the presence of blank interstices between the clusters of parcels.

Low-lying lands to the south of the Manawatu River, a point roughly intermediate between Wanganui and Wellington, were selected as the location for the second 'overspill' settlement, though on this occasion no provision for the survey of a town was made. The Manawatu country estates were to be regarded as linked to Wellington. Begun early in 1842, the survey of the area took some 15 months, though by the beginning of 1843 the work was sufficiently advanced to allow the compilation of a preliminary plan of the layout. Fundamentally, the crude crescent form of the cadastre was dictated by the course of the Manawatu River, the belt of parcels being confined
SURVEY PLAN 20: A MAP OF THE DISTRICT OF WANGANUI

DATE: 1843

DESIGN: F Sheppard

PRESENT LOCATION: Wellington District Office,
Department of Lands and Survey.
(S.O. 10439)

Slightly varying versions of this plan are held by the Alexander Turnbull Library.
SURVEY PLAN 21: PLAN OF THE COUNTRY SECTIONS IN THE
DISTRICTS OF MANAWATU AND HOROWENUA

DATE: 1843

DESIGN: R Sheppard

PRESENT LOCATION: Alexander Turnbull Library

Manuscript versions of this printed plan are held by the National Archives of New Zealand and Wellington District Office, Department of Lands and Survey.
PLAN
OF THE
COUNTRY SECTIONS IN THE
DISTRICTS OF
MANAWATU
AND
HOROWHENUA.
JANUARY 4TH 1862.
to its left bank, extending some 27 miles inland, and widening to between six and seven miles in breadth at several points. For the most part, long narrow strips abutted the river bank, giving this portion of the layout a superficial resemblance to the cadastral forms common to French Canada. Beyond this first tier of sections, however, more regular ranks of sections were measured out from the near uniform backlines provided, the distortions distinguishable being attributable to the need to accommodate gaps created by twists in the river's course. Despite its overall shape, the Manawatu rural cadastre internally more nearly resembled the postulated ideal than any other laid out by the Company. Nevertheless, in terms of the size of individual parcels, the Manawatu sections, together with those at Wanganui, proved as error prone as those previously surveyed in the vicinity of Port Nicholson.

Both at Port Nicholson and at the 'overspill' settlements the parcels measured had been set down with the needs of colonists of considerable means predominantly in mind, an approach not varied till early 1844. In the previous year, Company officials in the colony had been directed by London to set aside 'within a convenient distance from Wellington' 5000 acres of good land and to subdivide that land into parcels of 25 acres for the settlement of men of moderate means. At first, attention had been focussed primarily on the Pakuratahi Valley, to the north of Upper Hutt, but, with the discovery that the available acreage was insufficient and that the quality of the land did not easily lend itself to such a venture, there was a subsequent switch of interest to the narrow valleys lying to the east of Port Nicholson. When the survey of the 25 acre parcels commenced in March 1844, there was an initial concentration on the valley of the Little Wainuiomata Stream, extending north-west of the Lowry Bay district, and on the Wainuiomata Valley proper and its main tributary, lying further to the east. By late in the same year some 122 sections, incorporating a nominal 3050 acres, had been laid out. In both valleys the layout of the parcels had been restricted to the valley floor, enabling an arrangement of two ranks in the Little Wainuiomata Stream Valley, but with confinement to a single line through the greater part of the Wainuiomata's length. In the latter valley, the parcels snaked sinuously down from the headwater tributaries almost to the sea. Late in 1844, a further 18 25 acre parcels were surveyed in the upper Orongoronga Valley, even further to the east of the harbour.

Following the cessation of the Port Nicholson surveys, in early 1845, there was an interval of almost five years during which Company
SURVEY PLAN 22: PLAN OF WORKING SETTLER SECTIONS IN THE WAINUIOMATA VALLEY

DATE: 1844

DESIGN: H S Tiffen

PRESENT LOCATION: Head Office, Department of Lands and Survey. (Statutory Branch Collection)

A portion of PLAN SHOWING THE BOUNDARIES OF THE PORT NICHOLSON PURCHASE.
survey activity was largely confined to the amendment and rectification of earlier surveys. The impetus for resumption of estate surveying was a decision that earlier purchasers from the Company should be awarded additional lands in compensation for delays in giving possession. For this purpose, the Rangitikei Block, a 225,000 acre area on the western coast, just to the south of the Wanganui Block, was secured. While the full instructions for the survey of the Rangitikei, received in Wellington in late 1849, suggested that the basic rural cadastral unit should henceforth be no more than 50 acres, and that the parcels be 'so far as circumstances and the natural features of the country permit ... of a rectangular form', the result was a scatter of sections of varying shape and of much greater size.\(^{188}\) (S.P. 23) The survey of the first 36 sections, all nominally 160 acres in size, began on the right bank of the Rangitikei River in October 1849, and was followed two months later by the survey of a further 41 sections, between 150 and 420 acres, on the left bank of the Turakina River on the opposite side of the block.\(^{189}\) Early in 1850, the survey contingent moved further inland. Above the first surveyed Rangitikei River sections, but on the 'Tutunui (sic) Plain' still adjacent to the river, a further eight sections were laid out for what were euphemistically termed 'the larger holders of compensation land'.\(^{190}\) Averaging a little over 1500 acres each, with a maximum of 2850 acres, these sections were destined to become the first true freehold pastoral estates in the southern North Island. By mid 1850, when a final halt was called to all Company survey work, a start had also been made on the survey of further compensation parcels, running down from the back boundary of the block towards the Turakina River.\(^{191}\) It was left to the Crown Colony surveyors to complete the survey of the compensation lands and to set out further sections for public competition.

Despite their immediately visible idiosyncrasies, the Company's rural surveys were always more elegant and definite on paper than they ever appeared on the ground. Even the local modifications of the preferred arrangement of sections were insufficient to cope with the problems posed by a frequently difficult landscape. These problems, moreover, were compounded by the often rudimentary character of the surveys conducted.\(^{192}\) It was regularly found, for instance, that lines drawn meticulously on plans had only been partially cut or not cut at all. Equally, lines that had been cut were easily lost through trampling by animals, fire, fern regrowth, or even deliberate sabotage.
SURVEY PLAN 23: PLAN SHOWING COUNTRY SECTIONS AT RANGITIKEI

DATE: 1850

DESIGN: W M Smith

PRESENT LOCATION: Wellington District Office,
Department of Lands and Survey.
(S.O. 10471)

Part of a series of plans of sections set out for compensation purposes.
Additional verification surveys in the former Company districts thus became a necessary fact of life for many years after the founding decade. Clear definitions, humourings and correcting of the size and shape of parcels, either by extension or reduction, were prerequisites for the issue of Crown Grants. At the same time, the blank interstices left between blocks and parcels were subsequently surveyed into a variety of forms and offered for sale.

Even in those districts where the Company's rural cadastral remained relatively untouched, the initial lines being retained as the foundation for future surveys, more subtle cadastral overlays were invariably superimposed. From the mid 1840s subdivision of the 100 acre sections by private surveyors gained momentum, the trend being pronounced adjacent to the main town, along the natural corridor leading to Porirua Harbour, and in the Lower Hutt sub-district, the new rural slivers being largely intended for the use of 'working settlers'. From a sample of 28 Lower Hutt 100 acre sections, it was found that just under half had been partitioned at least once by 1853. Between that date and 1876, subdivision of favourable sections in the locality continued in sporadic bursts. Sampling of the Kerori and Kinapora sub-districts revealed similar results.

Conversely, in some areas aggregation of the 100 acre sections by the emergent economic elite proceeded apace. The Watts Peninsula sub-district, for example, was by 1860 entirely in the hands of a single purchaser. Aggregation was equally pervasive in the Porirua, Ohariu and Makara sub-districts and about the Wanganui settlement, reaching its zenith in the Rangitikei.

In only two instances was the Company's rural mark both obliterated completely on the ground and erased from the governing record maps. The more serious excision was the 'overspill' settlement situated south of the Manawatu River. While completely schemed and laid down, with a proportion of the parcels delineated being actually selected, the blocks were never systematically settled by Europeans prior to 1876. With tenurial problems proving insuperable, ownership remained in Maori hands, the lines becoming overgrown and losing any significance. The second instance of complete obscuration was less dramatic, but equally definite. The working settler allotments in the Wainuiomata and Orongorongo Valleys secured few takers, lying fallow until the 1850s when they were occupied on a random basis by squatters. When, in the following decade, the eastern valleys were
resurveyed by the Wellington Provincial Government, all trace of the original divisional boundaries was wiped away, the allotments being included within sections of much greater size.

ENGRAVING THE FIRST SMALL FARM SETTLEMENT - THE WAIRARAPA VALLEY EXPERIMENTS

The 1853 decision by the Governor of the Colony, subsequently endorsed by the Wellington Provincial Government, to foster the establishment of 'small farm settlements' for colonists of moderate means in the Wairarapa Valley has already been noted. Earlier discussion centred only, however, on the arrangement and size of the parcels surveyed as the 'township' hubs of the settlements. As integral to the prospective success of the complexes set down were the surrounding parcels of suburban and rural land. At no stage was it envisaged that these sections would be residential, rather that suburban sections would be utilised for mixed farming, with the rural sections affording additional grazing land, if required.199 In this way the essential unity of the settlements would be preserved. While no precise instructions as to the form or arrangement of the parcels were issued to the contract surveyors employed to lay out the settlements, it being left to individuals to make the best of the available sites, no leeway was to be permitted with respect to the size of the parcels.200 Suburban sections were to be of a uniform 40 acres, and the optional rural sections were to be between 40 and 100 acres. The diversity of form exhibited in the layout of the suburban and rural parcels of the small farm settlements might, therefore, have been expected, but before the 1850s were out the size of the parcels set down also showed great variations from the stipulated norm.

Following the survey of the Association townships of Greytown and Masterton, in early 1854, the delineation of the suburban parcels associated with each was addressed. Commenced in late 1854, the work was complete, or apparently so, by April of the following year.201 The plots produced, however, exhibited no regularity, orderly layout of the parcels being constrained both by natural features and the presence of unpurchased Maori land. At Greytown there could be no pretence that the suburban allotments surrounded the previously surveyed township.202 (S.P. 24) Rather they were presented in two parts: the first containing 46 numbered suburban sections, lay immediately to the west of the township; the second containing 32 numbered sections, lay
SURVEY PLAN 24: PLAN OF GREYTOWN SUBURBAN SECTIONS

DATE: 1856

DESIGN: After J Hughes' rough plot

PRESENT LOCATION: Wellington District Office, Department of Lands and Survey. (S.O. 10551)

A portion of PLAN OF GREYTON (sic) AND MASTERTON SMALL FARMS RESERVES, WAIRARAPA.
to the southeast, about half a mile distant from the one acre residential sections. While from the outset there was a serious deficiency in the number of sections provided, that was only where the discrepancies began. Though the majority of the sections were nominally of 40 acres, a small number in the western cluster, predominantly of an aberrant shape, were acknowledged to be of much lesser extent. To the southeast, a strip of 17 unnumbered sections of 7 to 16 acres had also been appended. At Masterton the suburban parcels were at least contiguous, though viewed as a totality the settlement assumed an amoeboid-like form. Of the 102 suburban parcels set down, 81 were to the west and north of the township, only 21 in a compact block to the east, and to the south none at all. Most of the suburban parcels had been surveyed in long narrow strips, due to the proximity of 'Native Reserve' land, with the 40 acre size requirement being approximated in most cases.

If the layout of the suburban components of the Small Farms Association's schemes had been far from ideal, the survey and subsequent disposal of the projected rural allotments was a travesty. Not till late 1855 was any move in this direction made, and by this time the official attitude towards the Association's settlers had perceptibly hardened. Whereas it had been initially envisaged that the rural parcels would be set down as further concentric rings round the township and suburban parcels, when these allotments were eventually surveyed they were inscribed on the Taratai (Taratahi) Plain, a 37,000 acre tract situated between the Waingawa and Waiohine Rivers. Moreover, though it was grudgingly conceded that the Small Farms settlers might exercise their rural land options in this location, the sections were schemed with quite other purchasers in mind. Few of the men of moderate means exercised their options. Almost all of the rural parcels opened for general competition were greater than 100 acres in size, some considerably more.

The first small farms settlement exclusively sponsored by the Wellington Provincial Government was far more unitary in design. Though conceived in anticipation of quick profits, the layout of Featherston was more carefully schemed than either of its predecessors. With all of the incorporated parcels being laid out in little more than the first six months of 1856, by superior personnel, and on a site relatively flat and devoid of bush, there was every opportunity
SURVEY PLAN 25: PLAN OF SUBURBAN SECTIONS, MASTERTON, WAIRARAPA

DATE: c. 1855

DESIGN: J Hughes

PRESENT LOCATION: Wellington District Office, Department of Lands and Survey. (S.O. 10523)

Deposited plan, prepared under contract.
SURVEY PLAN 26: PLAN OF RURAL SECTIONS, GREYTOWN AND
MASTERTON SMALL FARM RESERVES

DATE: 1856

DESIGN: After J Hughes

PRESENT LOCATION: Wellington District Office,
Department of Lands and Survey.
(S.O. 10551)

A portion of PLAN OF GREYTON (sic) AND MASTERTON SMALL
FARMS RESERVES, WAIRARAPA.
to ensure that the settlement's parts were in comfortable juxta-position. The 10,000 acre block set aside for the settlement was almost triangular in shape, hemmed to the west by the Rimutaka Range, to the east by the Tauherinikau River, and running to the head of Wairarapa Lake in the south. At about the mid point of the block's western boundary was the settlement's elaborate township focus. (S.P. 27) Ranged about this nucleus, on the three available sides, were 204 parcels of between two and ten acres in size. These constituted the suburban lands proper, being intended for cultivation by the township residents. Predictably, allotment size generally increased with distance from the township, though soil quality was also taken into consideration as a size determinant. Beyond the inner frieze, the larger 'suburban' sections, 281 in all, varied between 17 and 57 acres in size, but with the majority being in excess of 40 acres. Insofar as was possible, rectangular parcel shape was preserved throughout the design, the variations in shape and size encountered being dictated by natural features and the placement of existing road lines. As a relic of the Tauherinikau Plain's immediate past use, a former pastoral run homestead, now shrunken to a farm property of more modest proportions, was surrounded by the larger southern suburban parcels.

The fourth 'small farm settlement' established in the Wairarapa Valley in the 1850s, Carterton, was situated within a dense bush stand on the Taratahi Plain block, adjacent to the line of road surveyed between Greytown and Masterton, and was conceived as the destination for immigrants newly introduced by the Wellington Provincial Government for Great Britain and Australia. Why not, it was reasoned, employ the newcomers on building the promised road, and, by allocating them small holdings on a time payment basis, ensure that the irritating bush cover would also be speedily cleared. Carterton was thus cast as the prototype for the 'bush farms' policy to be prosecuted in later decades. In April 1857, some 1200 acres to the east of the road line were legally set aside, and in the following month urgent instructions were issued to subdivide the land into 115 ten acre parcels. Compared with Featherston, the layout was plain in the extreme. (S.P. 28) There was little chance for it to be otherwise. On all sides the new settlement was blocked in. To the east of the road line, on three sides of the block reserved, rural parcels had already been surveyed and were open for competition. To the west of the road line the available acres had already been swallowed up by several of the largest and most influential pastoralists in the Province. The first line of
SURVEY PLAN 27: PLAN OF THE TOWNSHIP OF FEATHERSTON, WAIRARAPA; SUBURBAN SECTIONS

DATE: 1856

DESIGN: W M Smith

PRESENT LOCATION: Wellington District Office, Department of Lands and Survey. (S.O. 10558)

Note the preservation of a run remnant amidst the suburban sections to the South of the Town proper.
SURVEY PLAN 28: PLAN OF CARTERTON RURAL SECTIONS

DATE: 1858

DESIGN: Under general direction R Park

PRESENT LOCATION: Head Office, Department of Lands and Survey. (Statutory Branch Collection)

The crescent of larger sections to the east of the Main Road was not initially included within the bounds of the settlement.
29 sections ran at right angles to the road itself, thereby providing the maximum number with main road frontages. Beyond this first rank, the remaining sections reverted to parallel alignment with the main road, in seven rows, with frontages being provided by five cross roads. In recognition of their favourable position, the front sections were little more than eight acres in size, those behind purported to be ten acres.

Established at the foot of the Puketoi Range to the north of Masterton, and with the township of Alfredton at its heart, the 'Moroa Small Farm Settlement' was almost a postscript to the small farm experiments in the Wairarapa Valley.\(^{212}\) Established ten years after the Middle Wairarapa ventures, in form it was probably more related to the 'township settlement schemes' being contemporaneously activated in the Manawatu than to the intensive farming nuclei nearer at hand.\(^{213}\)

In view of the broken country encountered, and the scrub cover punctuated by stands of bush, the first surveyors to inspect the site seriously recommended that it be laid off in parcels of at least 200 acres, preferably larger. The Masterton-based promoters of the Moroa Small Farms Association urged, however, that, instead, the lands bordering the prospective township should be laid off in 50 acres suburban parcels, with rural parcels of greater size further out. To a large degree the promoters had their way.\(^{214}\) Whereas all the land surrounding Featherston had been declared 'suburban', that surrounding Alfredton was deemed rural. The differentiation was essentially one of semantics. In the early summer of 1867 some 125 rural sections were set down in the vicinity of the chosen township site, survey of the latter being temporarily delayed.\(^{215}\) (S.P. 29) Three years later, in conjunction with the township survey, a further 65 were laid out.\(^{216}\) While the largest was 76 acres in size, and the smallest 36 acres, most of the parcels were a uniform 50 acres. Just as the township exhibited a regular rectangularity, so did the rural parcels built around it.

As experiments in colonial land division and intensive settlement promotion, the Wairarapa small farm settlements were much less than a complete success. In a technical sense they continued to present survey problems. Having been laid out haphazardly, without proper planning, and often in almost indecent haste, they were to occupy the further attention of platoons of surveyors right till the end of the provincial period.\(^{217}\) Within three years of their initial inscription,
SURVEY PLAN 29: PLAN OF MOROA RURAL SECTIONS

DATE: 1868

DESIGN: J Kelleher

PRESENT LOCATION: Wellington District Office, Department of Lands and Survey. (S.O. 10873)

The site reserved for the township of Alfredton was top left, adjacent to the Native Reserve. Note conformity of layout to prevailing topography.
the internal boundary lines of the two privately surveyed settlements, Greytown and Masterton, were found to bear no relation to those sketched on the record maps. The Government 'emulations', Alfredton possibly apart, were found to have fared equally badly. Yet these, relatively, were matters of detail. The rationale for setting up the experiments had been, the lure of profits from land sales for the Government aside, the perceived desirability of promoting the establishment of a Valley landscape of small mixed farms operating on a family basis. This simply did not take place, or only on a very limited scale, and the failure of the strategy led to the development of a tenurial overlay unenvisaged by the original small farm advocates. The opening of the Taratahi Plain allotments to all-comers showed the way. In short order most of the available rural parcels were taken up by men of means, medium and large sheep farms, several well in excess of 2000 acres, being assembled. While the properties so created remained a far cry from the extensive leasehold runs secured by pastoralists elsewhere in the Wairarapa and on the East Coast, the intention was similar. As the small corps of resident small farmers struggled to eke out an existence, even the suburban sections of the established settlements came under intense pressure from the eager graziers. At Masterton, for example, unsold sections fell readily into their hands, while resident settlers were inveigled into selling out their interests. Featherston provided even easier pickings, several graziers taking the opportunity to build subsidiary holdings out of the unsold suburban parcels. By the late 1860s there were more sheep farmers in the Middle Valley, the main site of the experiments, than elsewhere in the whole Wairarapa. Their total mustering might have barely equalled that of one of the larger runs, but the face of the locality had been transformed.

AN ALTERNATIVE OPTION: THE PROVISION OF 'AGRICULTURAL RESERVES'

An alternative method of promoting intensive farm settlement, toyed with by the Wellington Provincial Government in the late 1850s and in the early 1860s, was the public auctioning of parcels of varying size in specially designated 'agricultural reserves'. For the authorities, this system of lands disposal potentially had much to offer. Whereas the 'small farms settlement schemes' had been specifically aimed at men of moderate means, the availability of medium to large sized rural parcels, on land selected for its superior quality, might, it was felt, attract
settlers with considerable capital to invest. Gentlemen farmers, a caste with which the politicians felt affinity, had already developed commercial mixed farming units in the Port Nicholson Country Districts and in the vicinity of Wanganui, and it was believed that others of this ilk should be given every encouragement to extend their interests. Even more persuasive was a belief that parcels of this type were likely to fetch high prices. First mooted in the Provincial Council in 1855, and then brooded on at length, the option was introduced with fanfare in 1857. Between that year and 1866 four 'agricultural reserves' were gazetted within the Province of Wellington. Only one of that number, however, was put to offer after the first flush of enthusiasm. In their layout, the 'agricultural reserves' were far less formalised than either the Wairarapa 'small farms settlement schemes' or the Manawatu 'township settlement schemes', the latter yet to come. No attempt was made to set out a central focus in any of the four reserves created. The reserves themselves were of no set shape or size, the individual parcels being randomly surveyed either according to the lie of the land or in accord with perceived demand.

The first agricultural reserve to be gazetted, and that which came closest to the planners' conception, was in the Rangitikei, to the southwest of the properties laid out by the Company for the largest compensation holders and inland from coastal country already apportioned into leasehold runs. The initial intention was to offer the first batch of land in 640 acre parcels, the square mile holdings so formed being divided by a lattice of road reserves. This, it was contended, would be a suitable size for substantial farms, but, in the event of further subdivision of the parcels proving necessary, neat lesser lots of 320, 160, or even 80 acres, might be afforded with relative ease. As with so many early Wellington schemes, idea and reality were soon found to be far apart. When the surveyors detailed to lay off the reserve forwarded a plan of the parcels in May 1857, it had been possible to set down no more than nine in the figure desired. Through the unforeseen constraints of irregular and incorrectly surveyed prior boundaries, the latter having led to encroachment upon the reserve by previous purchasers, a further 24 surveyed parcels ranged in size from 56 to 453 acres. Not unexpectedly, the sections of lesser size were heavily concentrated on the margins of the tract surveyed, more especially adjacent to the compensation land. Despite high official expectations, sales of Rangitikei Reserve land, between 1857 and 1859,
SURVEY PLAN 30: PLAN OF SECTIONS IN SMALL FARM BLOCK,
RANGITIKEI

DATE: 1857

DESIGN: G F Swainson

PRESENT LOCATION: Wellington District Office,
Department of Lands and Survey.
(S.O. 10573)

Still discernible, though blurred, the original layout of the
Reserve has had subsequent purchases and subdivisions superimposed.
were in driblets rather than in streams, and consequently there was little pressure to open the remaining reserve acreage for sale.\textsuperscript{227} Not till late 1859 were further parcels in the Rangitikei Agricultural Reserve surveyed and put up, the second offering exhibiting the same diversity in section size and shape as the first.\textsuperscript{228} In 1861, 1863, 1865 and 1866 the remaining reserve acreage was made available.

More modest in all respects was the Aorangi Agricultural Reserve, already under survey as the first Rangitikei sections were being offered.\textsuperscript{229} Less than 5000 acres in extent, it amounted to little more than a probing of agricultural land sales possibilities in the Ahuriri. Situated on the Heretaunga Plain, more than 20 miles up river from the mouth of the Ngauroro River and on its right bank, the chosen lands were bounded on two other sides by the Maraekakaho and Mangatahi streams. While the original plans of the Reserve have been long destroyed, some impression of the arrangement of the Reserve's parts may be discerned from the reports of the surveyors who set it out.\textsuperscript{230} Schemed as rectangles where possible, the 39 numbered parcels ran roughly east-west, with the 14 largest, those 160 acres in size, located towards the centre of the reserve. The remaining parcels ranged from 40 to 153 acres in size, 12 being of less than 30 acres. Though sales in the Reserve were also initially slow, it was, nevertheless, decided that a site for a further reserve in the district should be actively sought.\textsuperscript{231} Before that could be accomplished, however, administration of the Ahuriri passed from the Wellington Provincial Government to the newly established Hawkes Bay Government.

Before 1857 was out, the proclamation of a third 'agricultural reserve' was made public. The 'Pahautanui Agricultural Reserve', the first parcels of which were placed on the market in February of the following year, was in startling contrast to the Rangitikei venture.\textsuperscript{232} Situated on broken and bushed country inland of the eastern arm of the Porirua Harbour, land which had previously been partially surveyed by the Company into 100 parcels, but which had subsequently been thrown up, it was essentially an isolated response to an immediate need. The accelerated building of medium to large mixed farms in the Port Nicholson Country Districts in the early 1850s had placed land within easy reachable distance of the main town at a premium.\textsuperscript{233} Such building, however, had been largely confined to the already wealthy. Intermediate between this group and those seeking their salvation in the Wairarapa was a phalanx of potential purchasers of limited but
still appreciable means; those wishing to remain at the first settlement, financially able to freehold a moderate acreage immediately, but unable to compete with the larger land aggregators. It was with them in mind that some 5000 Pahautanui acres were set aside, and orders given to subdivide the tract into parcels of 40 to 60 acres. Carried out under contract in the later months of 1857, the Reserve eventually yielded almost 100 parcels, all arranged in a tidy chequer-board pattern, and, with but two exceptions, all of the size stipulated. A little over half of those sections were offered at the first auction of Pahautanui land. The initial sales success was not spectacular, but within 12 months only 20 of the 64 sections put up remained. These, in addition to the other parcels surveyed, were disposed of in the course of the next four years.

For a variety of reasons, not the least being the mixed success of the first three ventures, almost five further years elapsed before the Wellington Provincial Government resolved to give the 'agricultural reserve' option one final trial. With the attention of the Province's economic elite turned to the promotion of pastoralism, and with land suitable for mixed farming with a strong agricultural component in even shorter supply, there seemed no reason why a further offering of smaller holdings, modelled on the Pahautanui rather than the Rangitikei example, should not be keenly sought after. This time the chosen site was the Upper Mungaroa Valley, a narrow ribbon of flatish land between the hills to the east of Upper Hutt. The decision to launch what was to be termed the 'Agricultural Reserve-Hutt District' was taken in early 1862, but it was not until late in the year that the actual delineation of the parcels within the reserve actually commenced. It was Christmas before the resulting plan was ready for inspection. With the 63 parcels having been confined to the valley floor, with the Mungaroa stream running through many of them, the layout was a straggling affair. In size, 52 of the parcels were regular rectangles of 40 acres, the remaining 11, irregular in shape, were up to 20 acres larger. One parcel of 126 acres was allowed, a recognition of the claims of an established resident of the Valley. When the lands surveyed were put up for auction in February 1863, however, fewer than half sold immediately.

Contrary to the expectations of the framers of the 'agricultural reserves' concept, it proved no more effective in the promotion of closer settlement, nor in the stimulation of mixed farming and agriculture,
SURVEY PLAN 31: PLAN OF SECTIONS IN PAHAUTANUI AGRICULTURAL RESERVE

DATE: 1858

DESIGN: T D Triphook; later A Beetham

PRESENT LOCATION: Wellington District Office,
Department of Lands and Survey.
(S.I. 10505)

The sectional layout has been superimposed on a plan of the district first prepared by the New Zealand Company. A portion of the layout.
SURVEY PLAN 32: PLAN OF AGRICULTURAL RESERVE, HUTT DISTRICT

DATE: 1863

DESIGN: E Anderson

PRESENT LOCATION: Wellington District Office, Department of Lands and Survey. (S.O. 10677)

Note stringing of sections along the valley bottom.
SURVEY PLAN 32: PLAN OF AGRICULTURAL RESERVE, HUTT DISTRICT

DATE: 1863

DESIGN: E Anderson

PRESENT LOCATION: Wellington District Office, Department of Lands and Survey. (S.O. 10677)

Note stringing of sections along the valley bottom.
than the half-heartedly embraced 'small farms settlement' schemes. Instead, just as in the Wairarapa, all that was achieved in the majority of cases was the provision of additional provender for pastoralists, both actual and aspiring. Modification of the presented cadastre by overlay began almost as soon as the auctioneer put down his hammer. At Rangitikei, the gouging out of pastoral property from the Agricultural Reserve was pushed on from the northeast, by the holders of adjacent compensation land, and from the southwest, licensed runholders finding the opportunity too good to pass up. A single individual secured nearly 3000 acres of reserve land between 1859 and 1861, these freehold acres augmenting 20,000 leasehold already held on the coastal country. His was by no means an isolated example. Only at the shrinking centre of the first collection of parcels offered were true mixed farmers, and by 1860 no more than three of the original parcels remained cadastrally unmodified. At Aorangi, the pastoral filch was equally remarkable. Even at the comparatively miniscule Mungaroa Agricultural Reserve, of the 27 parcels put up at the first sale, no less than 19, in four contiguous blocks, fell into a single pair of hands, ironically that same pair of hands which had secured 3000 acres at Rangitikei. Paradoxically, only at Pahautanui, the reserve contemporaneously considered least likely to succeed, did the seeds sown strike and flourish as intended. The relative success of this enterprise, however, perhaps had more to do with the fact that its broken and bushed hill slopes held little immediate attraction for stockowners than any inherent superiority in planning or design.

NEW VISTAS FOR INTENSIVE FARMING: THE INITIAL MANAWATU 'TOWNSHIP' SCHEMES

Following the relative failure of the 'small farm settlement' schemes, and the bastardisation of the 'agricultural reserve' alternative, the growing intensity of the clamour for lands suitable for the prosecution of farming based on traditional European principles forced upon the Wellington Provincial Government a reappraisal of the approaches adopted to the layout and disposal of lands for this purpose. The immediate result was the launching of the first phase of the most ambitious undertaking in closer settlement rural landscape formation since the Company efforts of the 1840s: the Manawatu 'Township settlements'. In the terminology employed there was some ambiguity. The 'townships' set down were to be in no sense strictly urban settlements, though concentrated sub-divisions, designated 'town
SURVEY PLAN 33: OUTLINE PLAN OF THE INITIAL THREE MANAWATU “TOWNSHIPS”

DATE: 1869

DESIGN: J T Stewart et al.

PRESENT LOCATION: National Archives of New Zealand. (Public Works Department Collection)

A portion of plan entitled SKETCH MAP OF MANAWATU AND RANGITIKEI-MANAWATU BLOCKS, PROVINCE OF WELLINGTON, NEW ZEALAND. With the general layouts of the "townships" here outlined, S.P. 34 - S.P. 36 will focus on detailed section arrangements.
lands', were to be surveyed at central points where appropriate. Rather, the new cadastral arrangements were to be mixes of town, suburban and rural parcels, surveyed according to demand, and with no standard juxtaposition of parcel types. Unlike any previous venture, the townships as a whole, not just their hearts, were to be meticulously planned. A wide choice for purchasers was to be paramount when the lands concerned were put up for public competition. Essentially, it was intended that the new townships be evolutionary in form, but hopefully eschewing the pitfalls previously encountered. In pursuance of the new policy, three separate townships were surveyed out in the five years to 1870, all adjacent to the Manawatu River. (S.P. 33)

Across the Manawatu River from the previous scene of the Company's survey activities, the first of the Manawatu townships, Foxton, encompassing about 60,000 acres, was situated in the south of the Awahou Block, acquired from the Maoris in 1859. The planning of Awahou, the port town which was to be the township's focus, had begun in late 1864, but not till late 1865 did the survey of additional suburban and rural lands commence. Thus it was October 1866 before the plans of the township were at a sufficiently advanced stage to enable the first sale of sections to be publicised. In its layout, the township of Foxton was split into two distinct parts. (S.P. 34)

The larger collection of suburban and rural parcels, generally referred to as Foxton proper, was located towards the centre of the township, the smaller collection in what was known as the Motoa locality, on the banks of the Manawatu River at the township's eastern extremity. Between the two, in the southeast, was an extensive tract of lowlying marshland, the Motoa swamp. Linking the two parts, and skirting the northern edge of the swamp, was a major roadline, banks of rectangular suburban parcels being set out on either side. In neither of the parts was any rational cadastral pattern easily distinguishable. In strict accordance with the instructions issued, the arrangement had been primarily determined by consideration of natural features and soil quality, and the distinction between suburban and rural lands was often so arbitrary as to be only resolved by reference to the sale notices. Town lands apart, of the 217 parcels surveyed out towards the centre of the township, 142 were designated suburban, 75 rural. Ranging in size between one and 23 acres, the suburban sections were threaded through the town lands, scattered about the town's nominal boundary and distributed adjacent to the road lines. Mainly between
SURVEY PLAN 34: SECTIONS IN TOWNSHIP OF FOXTON AND MOTOA BLOCK

DATE: 1866

DESIGN: J Thomson; under general direction of J T Stewart

PRESENT LOCATION: Wellington District Office, Department of Lands and Survey. (S.O. 10800)

A portion only of the sections laid out.
20 and 100 acres, the central rural parcels tended to increase in size towards the township boundaries, especially on the sand country towards the coast. There were at least 18 rural sections of more than 100 acres, seven more than 300 acres, and one a massive 857 acres. Conversely, in the environs of the town, there were rural sections of less than ten acres. At Motoa, 60 suburban and 13 rural sections had been set down, while a further 17 rural sections were added in the course of 1867. Generally, the Motoa rural parcels were smaller, ranging between eight and 408 acres, the majority being less than 60 acres, and with only two greater than 60 acres. The suburban land, on the other hand, ranged between one and 267 acres, the majority less than 20 acres, but with four more than 100 acres. Ample choice, to suit all pockets, was therefore afforded. Deliberately, not all of the parcels surveyed in the Foxton township were released simultaneously, auctions of new lands, together with any unsold parcels held from previous sales, being conducted at regular intervals after the first sale in December 1866. After October 1867, however, few new parcels were surveyed and added to the offerings. By February 1869 more than three-quarters of both classes of rural land in the township had been sold.

Palmerston, the second Manawatu township, was situated further up river, in the densely bushed Ahurutanga block, and on the right bank of the Manawatu. While of a much greater proclaimed acreage than Foxton, in order to test the popularity of the parcels offered, the first surveys were heavily concentrated just inland from, and on the banks of, the river, the sites with easiest access. The only divergence from this practice was the laying off of parcels adjacent to a main road already set down across the township to its western boundary, and then running to the Rangitikei. In the mind of those in control, the laying out of Palmerston lands should have presented few problems. The bush cover aside, the topography was unaccentuated, and there were not the apparent differences in soil quality encountered at Foxton. Accordingly, a notional figure, in the form of a large, if slightly skewed, inverted 'T', was devised for guidance. When the plans of the parcels surveyed up till late 1866 were presented for the first auction, however, the desired figure was scarcely recognisable. So incomplete was the work undertaken, the first parcels were to be offered in locations several miles apart. Immediately to the west, and to the north, of the Papaioea townlands, 219 parcels, 102 suburban and 117 rural, were made available. Despite the incompleteness,
SURVEY PLAN 35: PLAN OF SECTIONS IN TOWNSHIP OF PALMERSTON

DATE: 1866

DESIGN: W H Alzdorf; under general direction of J T Stewart

PRESENT LOCATION: Wellington District Office, Department of Lands and Survey. (S.O. 10769)

A portion only of the sections initially laid out in the Township. Those depicted represent the southern arm of the capping bar of the inverted T form. The second sheet details the arrangement of the Karere sections. For further detail see S.P. 42.
their arrangement in regular ranks was in striking contrast to the erratic distribution of the two classes of rural land at Foxton. Abutting the town lands and fringing the main road lines running from them, were the suburban parcels; almost invariably rectangular in shape, and ranging from four to 80 acres in size, though with a preponderance of 40 acres or less. Extending in rows and forming outer cordons were the rural parcels, equally regular except where surface configurations or the necessity to effect junctions forced otherwise. They ranged in size from 10 to 315 acres, with an almost equal division between those more or less than 100 acres. Away to the south of the township was the second concentration of parcels, the 'Karere Sections', uniformly designated rural in recognition of their distance from the planned focus of the township. They ranged in size from three to 301 acres, but with fewer than one third of the parcels more than 100 acres. Perhaps to help boost sales, it was announced in December 1866 that, while the survey of Foxton could be virtually considered complete, the laying out of Palmerston parcels would continue till the 'T' had been fleshed out, and that the extension of the surveys to the blank portions of the township, would then be considered. What was not acknowledged was that the speed with which future surveys would be prosecuted would be dependant on the reaction from potential buyers. The Provincial Government can have taken little encouragement from what transpired. While by February 1869 some two thirds of the 'Karere Sections' had been purchased, less than one third of the rural parcels further to the north, and substantially less than half the suburban parcels, had passed from the vendor's possession.

Before the disappointingly limited interest in upriver land had become fully evident, the survey of the third township in the district was already well in hand. Situated on the left bank of the Manawatu River, immediately opposite Palmerston, and running eastwards to the Taranaki Ranges, 'Fitzherbert' was intermediate between the two townships previously surveyed in size and in its layout clearly demonstrated that, as with earlier schemes, the objectives of the architects had undergone a partial metamorphosis in the course of translation into lots on the ground. Fitzherbert, it seemed, was to be viewed as an adjunct to Palmerston. With the projected main town for the district being schemed in the twin township across the river, it was considered there was little point in laying out further townlands in the new unit. Instead, Fitzherbert would comprise only suburban...
and rural lands, with the number of parcels of each description roughly equal. The survey of the first 108 parcels in the township was initiated in April 1867, carried on spasmodically through the winter of that year, and then brought to completion by the beginning of October. Undeniably, the land surface of the township presented operational difficulties, its densely bushed flights of terraces being broken by deep gullies and wet hollows, but the resulting cadastre resembled the scattered pieces of a moderately complex jigsaw puzzle. (S.P. 36) While suburban parcels, 58 in all, and ranging in size from three to 20 acres, had been sited mainly towards the centre and on the northern margins of the surveyed lands, the rural parcels, up to 360 acres in extent, were clustered to the south and east. This, in itself, was unexceptional. It was the shape and internal arrangement of the parcels that was startling, long narrow strips being juxtaposed with near squares and staggered lines of parallelograms. In early 1868, a further collection of 40 parcels, 18 suburban and 22 rural, was surveyed out to the south of the first, running almost to the township's southern boundary. This assemblage, broadly horseshoe in shape, carefully avoided the notorious Makurerua swamp, which was left as the horseshoe's blank centre. Both in December 1867 and November 1868, the available Fitzherbert parcels were put to auction, but to minimal effect. Although a further 22 parcels were added to the Fitzherbert stock in the summer of 1868/1869, by February of the latter year nine tenths of the lots in the township remained unsold.

As the poor sales returns of the late 1860s showed, especially with respect to the two inland townships, the Manawatu schemes by no means constituted an immediate answer, much less an optimal one, to the related demands for promotion of closer settlement and the provision of suitable lands in lots of appropriate size for mixed farming or agriculture. Yet it was not that the clamour had in any way lessened. As the rapid alienation of most of the Foxton parcels demonstrated, there were eager buyers for lands considered attractive. Conversely, the early reluctance to establish either at Palmerston or Fitzherbert reflected a disinclination on the part of most farmers to invest funds unnecessarily in bush clearance, and an inability by those of lesser means to meet clearance costs in addition to the high prices put on the land. In both cases the reluctance was reinforced by adverse economic conditions. For the
SURVEY PLAN 36: PLAN OF SECTIONS IN TOWNSHIP OF FITZHERBERT

DATE: 1867

DESIGN: W H Alzdorf; under general direction of J T Stewart

PRESENT LOCATION: Wellington District Office,
Department of Lands and Survey.
(S.O. 10814)

A portion only of the sections laid out.
bush townships to flourish properly an upturn in the colonial economy, the introduction of a body of settlers prepared to grapple with the difficulties of turning forests into fields, and the allowance of purchase terms sufficiently favourable to draw such settlers, were all important desiderata. A disquieting feature of the limited early township sales, moreover, and one not always readily appreciated by contemporary observers, was that many of the Foxton parcels and by far the majority sold at Palmerston had been acquired, not by prospective farmers, but by speculators. Both Wellington merchants and, intriguingly, members of the Provincial Government's survey staff, sensed that purchase followed by patience might eventually bring handsome rewards.

SPECIAL SETTLEMENTS, CAPITALIST ESTATES AND SMALL FARMS: EXTENSION AND DIVERSIFICATION OF THE MANAWATU 'TOWNSHIP' SCHEMES

Despite the faltering start, the township system of land division for settlement gathered strength and then attained a new significance through the early and mid 1870's. A new boom mentality, the result of structural economic changes and a consequent revision of political objectives, ensured that previously unsold land in the established townships was soon soaked up, and that new lands were regularly brought forward. Two new townships had soon to be surveyed to cope with the augmented demand. Yet, questions of scale of sales aside, township settlement in the 1870s, both in terms of the lands disposal methods employed and the cadastral arrangements derived from them, was a far cry from the first awkward attempts to plant farms on the banks of the Manawatu River. In the 1860s it had been anticipated that the main beneficiaries of the schemes floated would be moderately well off settlers, but after 1871 the targeting of prospective purchasers was more catholic. At one extreme an influx of genuine small farmers was facilitated by the introduction of a 'deferred payments' purchase scheme, and by the encouragement of a 'small farms settlement' reminiscent of those tested in the Wairarapa. 'Immigrant Village' schemes, improvements on the Carterton prototype, were also supported. At the other extreme, the Wellington Provincial Government expressed its readiness to treat with large capitalists wishing to establish commercial farms, and with consortiums desirous of obtaining unsurveyed blocks to settle on their own account. At the same time, those in between continued to be catered for. The resulting lines in the landscape constituted the most tangible sign of the major changes
in policy direction. Though the concept of the 'township' as the primary spatial organisational unit was retained intact, within the boundaries of each a diversity of cadastral forms emerged.

Between early 1869 and the beginning of 1872 no auctions of either Palmerston or Fitzherbert land were held, and only a sprinkling of parcels in the townships were disposed of at upset prices. Over the same period some 122 Foxton sections, 77 suburban and 45 rural, and a further 24 Motoa sections, all bar one suburban, were unexpectedly produced for competition. The continued demand for largely bush-free land had provided the incentive to squeeze out a few more parcels and in several instances to subdivide larger unsold blocks. After 1872, however, only 16 further parcels were offered in the township.

Sales of land in the two established bush townships did not pick up till mid 1871, hence it was not till late in that year that the survey of new parcels was once more put in hand. In February 1872, at the first major auction held in three years, the parcels offered were a mixture of remaining and newly surveyed lots. Altogether 209 parcels, 76 in Palmerston and 133 in Fitzherbert, were put up, of which 97 were suburban and 112 rural. In their general size and shape, they were indistinguishable from allotments previously surveyed and offered in these townships. Yet, despite the buoyancy of this sale, a clear indication of the changing mood in the Province, the survey focus switched, in response to demand, to the new townships to the west of Palmerston, and Fitzherbert was placed in reserve till the more readily available Manawahutu lands had been taken up and improved overland access had been assured. In the meantime, the survey of Palmerston into saleable lots gathered pace. In the vicinity of the township's centre a further 153 suburban lots were laid off between 1872 and 1876, the growth of the town and consequent buyer pressure ensuring a drastic reduction in parcel size, not one being more than 6 acres and most considerably smaller. At the same time, 108 standard rural lots were surveyed, but with none larger than 200 acres. The envisaged 'T' form at last assumed a definite shape.

There were three major lands disposal innovations in Palmerston township in the last years in which the Provincial Government held sway, each of which may be traced in the formed cadastre. While the survey of Scandinavian 'immigrant villages' immediately to the north and south of the town will be considered separately, the laying out
of a concentration of 'deferred payments' parcels and the scheming of suburban lots contiguous to the projected junction settlement of Bunnythorpe merit attention. An official decision to encourage men of limited means to clear bush lots, the incentive provided being the spreading of payment for parcels over five years, led to the setting aside of a restricted block, adjacent to the Taonui Stream and to the northwest of the town, in late 1871. By the end of the following year, the block had been subdivided into 91 separate parcels ranging in size between 44 and 173 acres. While similar blocks were set aside in each of the new townships, that in Palmerston was by far the largest, and, with more modest price tags attached in recognition of the clearing involved, the offered parcels attracted considerable interest. Less popular were the Bunnythorpe suburban sections, near Palmerston's northern boundary. With 136 high-priced parcels set out round the town sections, Bunnythorpe constituted almost a township within a township, but the failure of the planned junction to materialise stilled popular interest before it had a chance to arise. It was not till early 1876 that the time was deemed right for the placement of further Fitzherbert parcels on the market. Even so, with the exception of nine parcels immediately opposite the growing urban centre of Palmerston, there was no attempt to lay off the remaining Fitzherbert lands in other than rural parcels. Late in 1875, some 91 rural lots had been surveyed north of the existing sections between the Kahutuawa Stream and the boundary of the Manchester Block. On this occasion there was no lack of takers.

It was the demonstration that lands such as those included within the township of Foxton would continue to stimulate interest, even in the face of a Province-wide recession, that brought about the delineation and proclamation of the fourth Manawatu township: Carnarvon. A 114,000 acre coastal tract running from the mouth of the Rangitikei River in the north to the Foxton boundary in the south, and inland to the Oroua River, Carnarvon offered every advantage discerned at Foxton, and more, for its swamps were by no means as extensive, and the land surface was predominantly covered by shrubs and native grasses. The proof of its utility lay in the presence of more than a dozen squatter pastoralists prior to completion of the Manawatu-Rangitikei purchase. Instructions were issued, in late 1870, to lay off the first batch of Carnarvon parcels in the northern portion of the township. All the lots were to be deemed rural, with a wide
SURVEY PLAN 37: PLAN OF SECTIONS IN THE TOWNSHIP OF PALMERSTON ... TO BE THROWN OPEN FOR SELECTION ON DEFERRED PAYMENTS

DATE: 1872

DESIGN: After A Dundas et al

PRESENT LOCATION: Alexander Turnbull Library

Composite from lithographs produced by the Wellington Provincial Survey Department. From the papers of Levin and Co, the shading indicating negotiated purchases.
PLAN
Of Sections in the Township of Palmerston in the
MANAWATU DISTRICT
To be thrown open for Selection on Deferred Payments
On Tuesday the 19th Nov. 1872.
Scale 40 Chains to an Inch.

H. Jackson
Chief Surveyor.

E. Buller Eske.
choice as to section size being afforded, but with parcels of more than 200 acres being kept to a minimum. The instructions were faithfully carried out. Of the first 154 parcels, offered at Marton in February 1871, no more than 11 exceeded 200 acres, with a maximum of 312 acres.\(^{282}\) Parcels of less than 100 acres, 61 in total, were concentrated along the left bank of the Rangitikei River and near the townships northern boundary, with the larger parcels to the south and further inland.\(^{282}\)

In the course of the next 20 months more than 100 additional rural sections, ranging in size from 21 to 249 acres, were surveyed out in the northern section of the township and auctioned.\(^{283}\) The first divergence from this method of selling the Carnarvon estate came in October 1872 when, at the same time as 'deferred payments' land was offered at Palmerston, 40 parcels were offered under similar terms in the coastal township, not however in a compact block, but largely scattered amongst the existing rural sections, the policy being considered a useful means of disposing of previously offered but unsold parcels.\(^{284}\) The drift towards smaller parcels at Palmerston was also counterbalanced by a steady increase in the size of offerings at Carnarvon. This first became evident at auctions held in 1873 when the vexed question of the squatter pastoralists, some of them still in situ, was faced. With official sympathy being manifested in a decision to permit them to compete for parcels of a much greater than usual size, it was further resolved to declare openly parts of the central and southern portions of the township 'first class grazing land', and to offer them at the ruling rates for such property.\(^{285}\) Of the 34 Carnarvon rural parcels put up in April 1873, half were considerably more than 500 acres in size, with three exceeding 1000 acres.\(^{286}\) After that date, and despite the existence of a considerable vacant acreage in the south of the township, no more than a dozen further rural sections, all less than 200 acres, were brought forward. This, however, was no indication of a loss of public interest in Carnarvon land. It was rather that the Wellington Provincial Government had other plans for the disposal of the remaining lands. In mid 1874, the authorities entered into negotiations with the Dunedin-based Douglas Company for the sale of between 7000 and 20,000 acres for the private promotion of a 'special settlement', the lands purchased to be laid out in 100 acre sections.\(^{287}\) While the survey of the Douglas lands commenced in the following year, the work remained incomplete as 1876 drew to its close.\(^{288}\)

\[\text{Sandon, the fifth Manawatu township, lay in the northwest of the} \]
SURVEY PLAN 38: PLAN OF SECTIONS IN THE TOWNSHIP OF CARNARVON, MANAWATU

DATE: 1871

DESIGN: After A Dundas et al

PRESENT LOCATION: Wellington District Office, Department of Lands and Survey. (S.O. 10959)

Lithograph produced for sale purposes from original record plans.
Rangitikei-Manawatu block, bounded in the north by the limit of that block, in the south by Carnarvon, in the east by the Rangitikei River, and in the west by the Oroua River. All told it encompassed some 134,000 acres. Its lower or southern portion closely resembled Carnarvon in character, being relatively flat and open, but further inland the flatlands gave way to rolling country covered in heavy bush. The initial efforts to survey out parcels were, not unexpectedly, confined to the south of the township, the first lands to be distributed being not open for public competition. Some 5000 acres of open country on the left bank of the Rangitikei River, and hard against the Carnarvon boundary, were set aside for the establishment of a settlement by the resuscitated Hutt Small Farms Association, the necessary surveys being carried out in the middle months of 1872.

Surrounding the nucleus of Sanson, the reserved block was laid off in parcels of from 40 to 60 acres, but with optional larger sections on the margins. While the first right of choice was given to Association settlers, the control of lands distribution ceded to its principals, and those introduced permitted to take up their lots under the 'Deferred Payments' scheme, it was always considered likely that some parcels in the block would be subsequently put up for auction. In the latter months of 1872, an additional 20 'Deferred Payments' parcels were laid out to the east of the small farms block, and when auctioned in November of that year no restrictions were placed on sales. On average much larger than the majority of parcels set out for the Association, all but two of these allotments exceeded 100 acres in size, the largest being 188 acres. It was a portent of things to come. At the two sales of Sanson land held in 1873, 80 rural sections were put up, the smallest 95 acres but with 38 considerably more than 200 acres in size. At the head of the offerings were four 640 acre parcels. The grazing influence was once more being felt, for each of these large parcels centred on a squatter pastoralist homestead, the residents thus being given an opportunity to freehold. There followed a lapse of almost three years before a substantial acreage of new Sanson land was brought forward. In January 1876, 118 rural parcels, all surveyed in the previous year, and all situated on the bushed downlands in the north of the township, were auctioned. From 60 to 300 acres in size, the interest exhibited in these bush sections testified to the new value placed on timbered land.

Following the passage of the 'Wellington Special Settlement
SURVEY PLAN 39: PLAN OF SECTIONS IN THE TOWNSHIPS OF SANDON AND CARNARVON, MANAWATU DISTRICT.

DATE: 1873

DESIGN: After A Dundas et al.

PRESENT LOCATION: Wellington District Office, Department of Lands and Survey. (S.O. 11069)

Lithograph produced for sale purposes from original record plans.
Act' 1871, and an indication by the Wellington Provincial Government that it would favourably entertain private enterprise settlement promotion proposals, a number of propositions were put forward. 295 Several fell through for lack of adequate backing. 296 Others were relatively modest in scope. 297 By far the most ambitious was the 'Manchester Settlement' Scheme. Alone occupying 106,000 acres in the unproclaimed northern portions of the Manawatu and Rangitikei-Manawatu blocks, this scheme constituted a further Manawatu 'township' by proxy. 298 While its promoters intended that the Manchester settlement should be an exemplar of 'small farming' writ large, the lands selected by the Emigrants' and Colonists' Aid Corporation provided no easy milieu for attainment of the objective. Faced with a predominance of heavily forested rolling country, the cover punctuated by only a few natural clearings, the settlement organisers were compelled to adopt an expansion from bridgeheads strategy. 299 Thus it was not until the town of Feilding had taken shape on the ground, and the first settler echelon had been introduced, that contract survey parties undertook the first division of farm lots in early and mid 1874. 300 As the resulting plans indicate, the clear differentiation between suburban and rural parcels was revived. The 184 Feilding suburban lots were laid off on flat country immediately to the north of the already surveyed town sections, with the size of individual parcels ranging from one to 48 acres. (S.P. 40) All were provided with a road frontage, the smallest parcels bordering the main routes, and with parcels size tending to increase with distance from the town centre. The rural parcels, 175 in total, and ranging in size from 25 to 200 acres, were much less compact, being set down in three attenuated and non-contiguous blocks: one to the northeast of the town, adjacent to the course of the Oroua River; one to the east, bisected by the Makakika Stream; and one to the west, abutting Sandon. (S.P. 41) The survey of the second Manchester node, Halcombe, was undertaken in early 1876, but it was not until late in that year that the scheming of the associated suburban and rural parcels began. 301

By 1876 almost all of the Manawatu district, a wilderness a decade earlier, had been surveyed for sale; most of the open country had been taken up; and, at least in the lowland bush, the tall trees were being rapidly razed. In its stated intention to encourage settlement of the district by all classes, the Wellington Provincial Government had apparently succeeded. Despite the laying off of a
SURVEY PLAN 40: PLAN OF SUBURBAN SECTIONS, TOWN OF FEILDING, MANCHESTER BLOCK, MANAWATU DISTRICT.

DATE: 1874

DESIGN: P Gillett

PRESENT LOCATION: Alexander Turnbull Library

Lithograph prepared by Wellington Provincial Survey Department from original plans executed under contract for the Emigrants' and Colonists' Aid Corporation.
SURVEY PLAN 41: PLAN OF RURAL SECTIONS, MANCHESTER BLOCK, MANAWATU DISTRICT.

DATE: 1874

DESIGN: F Gillett

PRESENT LOCATION: Alexander Turnbull Library

Lithograph prepared by Wellington Provincial Survey Department from original plans executed under contract for the Emigrants' and Colonists' Aid Corporation.
limited number of grazing parcels in the Carnarvon and Sandon townships, it was pointed out, the land surface had been carved into a myriad of small and medium sized parcels, and the existence of the Hutt Small Farm and Manchester Settlements, the clusters of 'Deferred Payments' sections and the Scandinavian 'villages' were advanced as evidence of the effectiveness of the policy. Yet, while undeniably a body of settlers of limited means had been introduced, just how far the initial cadastre truly represented the character of land holding in the district must be questioned. Blurring of the survey lines had commenced with the first sales of the 1870s. Beneath the surface land aggregation by the wealthy was proceeding at a rollicking pace. With fresh pastoral land in the Province now in short supply, not only resident squatters took advantage of the 1873 concessions in the western townships. Not far behind the eager pastoralists were other outside buyers with the acquisition of large 'commercial mixed farms', in short, capitalist estates, firmly in mind. For them, the largest agricultural parcels surveyed were individually insufficient. One such purchaser, a recent arrival from Scotland, appropriated no less than 32 parcels, totalling 6210 acres in the township of Sandon. His example was noted. While the bush parcels held lesser appeal for buyers of that ilk, they were in no respect spurned, or even left for the smaller buyers alone. Those who had established substantial footholds in the late 1860s, the Wellington merchants, continued to collect. The cadastral contrasts in the Manawatu, therefore, were far greater than ever the extant plans suggest.

THE SCANDINAVIAN IMMIGRANT VILLAGES: SETTING OUT '40 ACRE BUSH FARMS'

Amidst the scramble for parcels which typified the distribution of intensive farming lands in the early 1870s, the Scandinavian 'village settlements' stood out as instances of rigid cadastral stability. Established in the heavy bush country on both sides of the central ranges, these small farm clusters, the products of a joint initiative from the New Zealand and Wellington Provincial Governments, constituted the earliest attempts to give practical effect to the 'Special Settlements' legislation of 1871. Following decisions to open up to the southern North Island bushlands by means of arterial roads, the introduction of Scandinavian immigrants, with prior experience of forest conditions, appeared to offer two advantages.
On the one hand, by providing each of the introduced settler families with a Deferred Payments lot, each would have a tangible incentive to stay, to clear and eventually to farm. On the other hand, by ensuring that those introduced were truly working settlers, their lack of initial development capital would oblige them to engage in roadbuilding for a prolonged period, hopefully sufficient for the planned works to be completed. Set out mainly in 40 acre parcels, the Scandinavian 'villages' were generally astride or adjacent to main road lines. In form they were strictly utilitarian, attenuated strips of parcels being commonly favoured. Only four were floated within Wellington's boundaries prior to 1876, but they provided the spearhead for further opening of the forests in succeeding decades.

Though the Scandinavian 'villages' were to be of greatest eventual significance in the bush to the east of the ranges, it was in the Manawatu district, specifically in the township of Palmerston, that the first tentative trials were initiated. The selected initial site, Awapuni, was in a heavy stand immediately to the south of the newly laid out town centre in the Papaioea clearing. Already surveyed into Deferred Payments parcels, it lay in two parts on either side of the projected road line between Awahou and the Manawatu's inland town. (S.P.42) Fifteen 40 acre parcels to the west of the road and four to the east were reserved for the first assisted Scandinavians to take passage for Wellington. By early 1872 18 families had taken possession of their lots, with section clearance and roadbuilding being concurrently in full swing. Later in the same year a further Scandinavian contingent was similarly settled at Whakarongo, just to the north of the town and adjacent to the road line running to the Manawatu Gorge. Surveyed into mainly 40 acre parcels, but with a sprinkling of 20 acre lots for single men, the Whakarongo 'village' encompassed almost 1000 acres. Less than 12 months after the arrival of the first immigrants, the southern North Island's leading newspaper paid tribute to their efforts. "None but those perfectly at home amongst timber," stated the Independent "would have cleared so much in the time, besides doing a great deal of other work incidental to the work of settlement."

Encouraged by the promise of the Manawatu 'villages', it was to be expected that the sponsoring officials would raise their sights when attention turned to the task which had lent urgency to formulation of the scheme: the placement of 'village settlements'. 
SURVEY PLAN 42: PLAN OF SCANDINAVIAN SETTLEMENT, AWAPUNI, TOWNSHIP OF PALMERSTON, MANAWATU DISTRICT.

DATE: 1871

DESIGN: Unknown

PRESENT LOCATION: Wellington District Office, Department of Lands and Survey (S.O. 10769)

A subsequent addition to plan reproduced as S.P. 35. The four sections on the River side of the Main Road were inserted later.
in the dense bush at the head of the Wairarapa Valley. What had proved viable in the west, it was believed, could now be employed elsewhere on a grander scale. Yet the differences between this proposition and the earlier Manawatu trials were immense. Whereas in the western district the villages formed had been delineated in conjunction with the survey of lands to be publicly offered for competition, in the wilderness to the east of the central ranges the Scandinavians were to be cast as the settlement vanguard, part of a much wider settlement promotion policy. Not till a road was forced through the broken and forested terrain beyond Masterton right to the boundary with Hawkes Bay would the lands in what was known as the 'Seventy Mile Rush' be marketed more freely. It was in late 1871 that firm instructions were issued that a site suitable for a Scandinavian village be selected; a block of at least 4000 acres, one capable of subdivision into 40 acre parcels with ready access to each assured. By early the following year there was general agreement that, of the sites immediately available, only the Kopuraganga block approached the outlined specifications. In May 1872 further orders to undertake the necessary divisional surveys were given, it being suggested that the regular roadside grid be replicated. This proved impossible. Survey parties toiled in the forest for almost six months before it was finally conceded that there would have to be a change of plan. Only by shifting the projected village, together with the road line running through it, several miles to the east, to the adjoining valleys of the Kopuraganga River and the Moutere and Mangapakih Stream, would the layout of sufficient parcels of the specified size be possible. Even with that alteration, a strictly rectangular grid would be unattainable, while the division of the available land into parcels of precisely 40 acres would be impracticable. For a protracted period the Wellington Provincial Government pondered, with the immigrants waiting just north of Masterton all the while. Finally, with sanction reluctantly given, the village of Mauriceville was surveyed out. In form, Mauriceville took its shape from the valleys in which it was located. The 88 residential sections within the 'village' boundaries ranged in size from 35 to 61 acres, the configuration and size of individual parcels being dictated by position. At the junction of the village arms a 118 acre lot was set aside for further subdivision as a village centre, if the need for such arose.
SURVEY PLAN 43: PLAN OF THE TOWNSHIP OF MAURICEVILLE, KOPUARANGA BLOCK, WAIRARAPA.

DATE: 1875

DESIGN: A W Carkeek, with A Monro

PRESENT LOCATION: Alexander Turnbull Library

Lithograph produced at General Crown Lands Office, Wellington, from surveys executed by Wellington Provincial Survey Department.
SURVEY PLAN 44: SCANDINAVIAN SETTLEMENT, EKETAHUNA (MELLENSKOV).

DATE: 1875

DESIGN: Unknown

PRESENT LOCATION: Head Office, Department of Lands and Survey. (Statutory Branch Collection)

Tracing from original plan.
Before the Mauriceville parcels had been distributed, before even their final arrangement on the ground had been determined, the location of a second 'village', 16 miles further into 'the bush', was being finalised. Though the Provincial Government, preoccupied with its problems in setting out the first Scandinavian village, was understandably lukewarm, the survey of Mellemsovk (later known as Oketahuna) was carried through at the insistence of the General Government. The reduced scale of the second 'Seventy Mile Bush' village, however, reflected a revision of objectives, almost a reversion to the Manawatu model. (S.P. 44) Set out on terraces rising steeply from the Maikakahi River, with its 24 residential parcels ranging in size from 39-60 acres, strung along the projected main line of road, its attenuated arrangement was even further extended by the presence of a 1000 acre Maori Reserve. It was on the boundary of this Reserve, and slightly encroaching upon it, that land was provided for the future village centre.

THE NORTHWESTERN 'MILITARY' CADASTRE

As, in the course of the early 1870s, the Wellington Provincial Government enthusiastically promoted the demarcation and sale of lands suitable for mixed and arable farming, especially in the Manawatu and Rangitikei districts, the General Government was independently surveying out lots for similar purposes in the north-western corner of the Province. Desultorily between 1865 and 1869, but with increased momentum from 1870, successive centrally employed survey corps engraved a collage of small and medium sized farm allotments, together with a scatter of moderate grazing properties, between the Whenuakura and Waitotara Rivers, broadly that portion of the vast West Coast estate confiscated from the Maoris which lay south of the boundary with the Taranaki Province. Prior to 1870 sectional surveys were largely confined to lands in the immediate vicinity of the 'military township' of Wairoa (Waverley). With defence the primary objective, Wairoa being but one of a string of strategic settlements extending northwards to the Waingongoro River, and with tension ever present in the late 1860s, there were limited opportunities to provide other than the town nucleus. The associated rural parcels laid out in these years, ranging in size from 50-400 acres according to the ranks of those stationed in the township, were few in number. The passing of the emergency made it possible to survey out the remaining parcels
SURVEY PLAN 45: STANDARD PLAN OF THE OKOTUKU DISTRICT, PROVINCE OF WELLINGTON

DATE: Base 1869, with later additions

DESIGN: After O Carrington

PRESENT LOCATION: Head Office, Department of Lands and Survey. (Statutory Branch Collection)

While the base map was prepared under Army Department aegis, the subsequent additions were the work of the survey staff of the Confiscated Lands Department.
reserved for military personnel, but, with the military scheme having by that stage proved less than successful, the prospect of putting surplus and additional rural parcels up for public sale became an increasingly attractive proposition. After 1870, with the exception of 5000 acres set aside for the use of military settlers from Hawkes Bay, all parcels laid out in the Wellington confiscated lands were auctioned.

Though parcels in the Whenuakura and Waitotara blocks were also brought forward in the early 1870s, the emerging cadastral composite may be clearly demonstrated by reference to the mid 1872 'Standard Plan of the Okotuku District'. (S.P.45) By that year more than 200 parcels had been surveyed in the Wairoa surrounds, and despite steady Crown sales in the preceding two years and a lively undercover trade in military land grants, more than 10% of the surveyed lots remained vacant. In shape and size, the parcels continued to conform to the 'military township' specifications propounded by the Colonial Defence Office. Yet, while no parcel exceeded 400 acres, the set upper limit, there were a number of considerably less than 50 acres. In all cases the individual parcels were set out according to the lie of the land, with size being determined by the prevalence of bush or swamp, or by assessed soil quality. During the succeeding three years some additional 150 Okotuku parcels were laid off inland of the earlier offerings, but though there was a pronounced increase in average parcel size in the denser bush country, the limit of 400 acres was effectively maintained. Not till late 1875, when much larger sections were presented in the rough terrain to the very rear of the block, were the cadastral shackles initially imposed by military edict broken. Well before that time, however, aggregation of the earlier surveyed parcels had become discernible.

1.4 FROM FREE RANGE TO FENCED FIELDS: THE EVOLUTION OF PASTORAL LANDSCAPES

The architects of the first southern North Island settlements had proceeded on an assumption that a combination of arable and mixed farming would provide the economic foundation for their ventures. To this end the Company's 100 acre 'estates' system had been devised. Therefore the rapid emergence of a quite different rural economy, one based on extensive pastoralism, was neither expected nor welcomed. Not only were the theoretical principles underpinning the decision
to colonise being directly challenged; if the incipient pastoral wave was permitted to build to a crest, there was also every likelihood that future settler property requirements would have to be drastically recalculated. Yet, for more than a decade, the officials controlling land distribution were Canute-like in their opposition to the rising tide. Loudly proclaiming the folly of settlement dispersion and expansion on sheep's backs, they made no attempt to provide lands suitable in character and in acreage to meet the pioneer graziers' immediate demands. By this omission, any prospect of regulating the early pastoral eddies was thus forsaken. Critically, it was in this period that the barest outlines of the future pastoral cadastre were indistinctly sketched. By early 1851, more than 300,000 unsurveyed acres had been illegally occupied by stockowners. In the late 1850s and early 1860s, the pastoral breakers surged and pounded, flocks, in consequence, being swirled to all but a few pockets of the available open land in the Province. Only when their full force had been largely spent was there any sustained attempt to impose real cadastral order upon the resulting occupancy pattern in the pastoral districts.

By this juncture, there was little to be gained by other than regularising existing boundary arrangements and facilitating the further sale of pastoral lands to in situ occupiers in almost 'made-to-order' parcels. It was in this respect that the evolution of the pastoral cadastre most radically differed from that delineated for intensive farming purposes. Whereas the latter, invariably surveyed prior to occupancy, was the product of much planning, the former bore the appearance of an almost spontaneous addition. It was as if the blurred image distinguishable in the early pastoral years had, by the manipulation of a lens, been brought sharply into focus. From the late 1860s, however, with surveys of lands deemed 'agricultural' and 'pastoral' virtually integrated, some semblance of regularity was imposed on the grazing remnants offered. It was at this point, also, that consolidation of the pastoral cadastre commenced, the transformation of free-range properties into clusters of fenced fields necessitating cadastral 'cutting and tucking'.

THE BEGINNINGS: 'SQUATTING' ABOUT PORT NICHOLSON

Despite the New Zealand Company's entrenched opposition to the promotion of pastoralism, it was always likely that stock rearing on
extensive lines would figure prominently in the southern North Island's economic future.\textsuperscript{329} As early as 1832, an experimental flock had been shipped to Mana Island by Sydney interests, and it was the success of this speculative venture, rather than Company imprecations, that was foremost in the minds of the prospective pastoralists looking on.\textsuperscript{330} Within weeks of the arrival of the first Company settlers, a shipload of cattle had been landed on the Petone beach, and in the succeeding three years further shipments of stock from the Australian colonies were regularly received.\textsuperscript{331} By September 1843 there were already 4843 sheep and 1394 cattle depastured on the beach fringes, in bush clearings and on open scrublands adjacent to the main town.\textsuperscript{332} Yet, with the majority of the early stockowners harking from New South Wales or Van Diemen's Land, few had been able to take advantage of the Company's London land offerings. They were, therefore, compelled to make other arrangements. In a few cases surveyed estates were acquired from prior Company purchasers; in others, estate parcels were rented from resident owners or the agents of absentees; the most common course, however, was the unsanctioned appropriation of lands yet to be surveyed, unoccupied estate lands, and Māori reserves.\textsuperscript{333} So began the 'squatting' occupation of the open lands of the southern North Island. Though the Port Nicholson phase was destined to be shortlived, the initial returns were so encouraging that others, even some who had embarked for New Zealand under Company aegis, were soon drawn in. By the mid 1840s, the newly converted far outnumbered the first prophets.

With the running of flocks and herds on vacant lands fringing Port Nicholson being an essentially evanescent phenomenon, precise reconstruction of the occupancy pattern in the early 1840s is impossible. The predominantly landless stockowners had two basic requirements: the availability of sufficient forage for their animals, and the likelihood of freedom from objection from disgruntled land purchasers. When either feed ran out, or serious trespass disputes arose, the stock were driven to new temporary resting places.\textsuperscript{334} Hence, the location of any individual owner's stock might vary very greatly within a few months, and any suggestion of sustainable territorial claims, much less recognised boundaries, was out of the question. The most favoured locations, however, were the low hills and corridors immediately to the south of the main town, the sandy isthmus between Evans Bay and Lyall Bay, and the thin littoral strips abutting the
harbour's eastern shoreline. In the early months of 1840, the initial stock movements from Petone beach were to the eastern strips, with flocks strung out right to Pencarrow Head by the end of that year, and continuing to neighbouring Fitzroy Bay soon after. With the switch of town building focus to Lambton Harbour, the push was extended to the only open land in the vicinity of that town site. There was, it was asserted, 'good grass aplenty' on that country running from the town boundary to the south coast, and the stockowners were not backward in testing the veracity of the assertion.

Before 1840 was out, straggling stock columns had pushed down to Island Bay and Ohiro Bay, with detachments then heading east and west from those points. With little delay, further stock was directly off-loaded at Evans Bay, and from there spread over the sandhills of the isthmus and on towards Watts Peninsula. By mid 1841, with most of the first occupied localities crammed to capacity, newcomers were compelled to search for grazing in the hill country to the west of the town, and, with the opening of a track to Porirua, stock also began to filter through to the western harbour flats.

By late 1844, however, the pastoral cadre was under almost intolerable pressure. Over the preceding 12 months the number of sheep depastured in the district had near doubled to 8000 head, while cattle numbers had also continued to climb. At the same time, with the Company's major estate surveying burst drawing to a close, the land stock available for interim pastoral use had shrunk drastically. There was general agreement that some form of action was necessary.

It was in recognition of the need for a 'safety-valve' that several proposals aimed at making specifically grazing properties available through the existing lands distribution system were examined by local New Zealand Company officials. Though the distaste of the organisation's London sponsors had in no way diminished, there was a realisation, at least in the first settlement, that only in this way might further pastoral expansion be kept within acceptable limits. That such properties could not be laid off adjacent to Port Nicholson was axiomatic. Already there was insufficient good land in that district to satisfy even original estate purchasers. The existence of suitable land beyond the ranges encircling the first settlement site, however, suggested a way out. The proposition most frequently advanced in the early 1840s was that those lands
should be acquired by the Company, surveyed out into 640 acre blocks, and put up for local auction. Once such properties had been made available, the colonial administration must be enjoined to enforce rigorously the anti-squatting legislation being demanded. By this means, it was argued, the pastoral 'nomads' might be transformed into stable stockfarmers, and, though the pastoral district or districts created might constitute subsidiary Company settlements, the separating mountain ramparts would ensure the maintenance of Port Nicholson's arable-mixed farming purity.

An alternative proposition aired was that, subsequent to acquisition of the tracts concerned, the Company should offer 'squatting licenses' for competition, while reserving the right to dispose of the land eventually in any way it chose. The pastoralists, cast as the harbingers of settlement, would be permitted to occupy land till it was required for closer division. Thereafter, they could be transferred to pastures new. Neither proposal was actively put to the test. While prepared to debate, the Company officials were unready to commit themselves firmly to a radical departure from pre-settlement planning, much less the expenditure involved in securing the lands in question. The pastoralists, however, were as aware of the lands in the hinterland as the officials. In their view, the only course left open was unilateral action.

INDISTINCT ISLANDS IN THE WILDERNESS: THE ILLEGAL OCCUPATIONS

Less than a decade after the Cape Colony 'Voortrekkers' had set out on their epic journey, their advance into the wilderness was replicated, albeit on a much reduced scale, in New Zealand's southern North Island districts. With pastoralism on any significant scale having been effectively blocked out at the New Zealand Company's first settlement site, the Port Nicholson pastoralists, smarting at the apparent indifference to their plight, and despite warnings that any private arrangements with the Maoris for 'occupations' would not be officially recognised, assembled their stock and moved to lands beyond the Company's jurisdiction. From late 1844, mobs wending their way round the south-eastern coastline to the Wairarapa Valley, and northwards from Porirua up the western coast, became a not uncommon sight. Yet, whereas the 'Great Trek' had been a regimented exodus, the departure of the squatters from Port Nicholson was the product of individual
initiative. It fell to each stockowner to make his personal decision to decamp, to then make the transit arrangements necessary, and, once an agreeable site for his future run had been reached, to come to agreement with the Maori owners for rental occupancy. That many successfully negotiated these hurdles is testified to by the rapid increase in 'illegal occupations' in the mid and late 1840s. Within 12 months of the commencement of the pastoral migration more than a dozen runs, most of some considerable size, had been established on Maori land. By 1850, the total had tripled, with in excess of 40,000 sheep being grazed within their often indistinct boundaries. Nevertheless, if freedom from Company influence had been secured, the removal to the unpurchased districts brought new problems. By their very nature, the Maori leaseholds offered no security of tenure, the terms under which the runs were held, and even the actual run acreages, being variable according to proprietorial whim. Moreover, with the pastoralists' show of independence having been frowned upon, not only by the Company but also by the Colonial Government, there seemed little prospect of their claims being recognised even if the lands concerned passed to Crown ownership.

Without doubt, the Wairarapa Valley proved the most popular destination for the early pastoral 'trekkers'. From the arrival of the first Company echelons, intelligence of seemingly endless near empty lowlands to the east and north-east had filtered back to Port Nicholson, particular emphasis being laid on the open character of the lands. Following reconnaissance by the pastoralists themselves, during which the existence of "... sweet grass admirably suited for sheep pasture" was verified, two parties set out in May 1844. Where they led, others followed. By April 1845, the recorded European population of the Wairarapa Valley exceeded 40, spread over 12 separate pastoral 'laagers'. Two years later, when the Company sounded out the Maori owners as to the prospects of purchasing the Wairarapa, it was found that three further runs had been added. More than 13,000 sheep and nearly 1,400 cattle were now in the care of 59 Europeans. Late in 1848, the Colonial Government discovered that there were no fewer than 33 separate European 'occupations' of Maori land, and of this number, 21 could be classified as extensive pastoral runs. Ranging from 600 to 15,600 acres in extent, and held on annual rentals of from £12 to £76, but with the rentals by no means always related to the acreage, the runs were by that point depasturing 23,400
sheep and 2,400 cattle. The occupancy pattern in these early years was essentially fluid. The respective acreages held by individual runholders fluctuated from year to year, while, despite the existence of a stable kernel, a number of occupations changed hands, several regularly. Those distinguished represent only the crest of waves of hopefuls who endeavoured to establish themselves in the valley and on its margins. By late 1850, however, when the Government finally placed a firm clamp on further illegal leasing arrangements in the district, at least an informal outline of the future Wairarapa runholding pattern had been created, while pastoral penetration of the neighbouring East Coast district had begun. (S.P. 46) Even so, the occupations might have been likened to islands. Only those immediately suitable for free range grazing had been initially selected by the stockowners, leaving large less desirable gaps to be filled in at a later date. Similarly, though the pastoralists' grasp on their occupations was tenuous, they constituted European bridgeheads in districts still to be acquired.

Elsewhere in the Maori-owned districts of the southern North Island, the pastoral advance from Port Nicholson took the form of a slow rippled spread. First to be occupied was the narrow plain strip to the north of Paekakariki. By late 1846, the pastoral occupancy of open lands in the vicinity of Lake Horowhenua, regardless of Company claims to the locality, and the fact that much of the tract had already been laid out in 100 acre sections, brought about tripartite tensions between the Company, the pastoralists and the local Maoris. Grazing south of the Manawatu River, however, was always essentially transient, the owners making it clear that their estate could be regarded as no more than a temporary resting place. North of the Manawatu the stockowners, once arrived, were less ready to move on. Several large runs were leased in the mid 1840s on the open country between the Manawatu and Rangitikei Rivers, the fortunate holders being destined to enjoy relatively undisturbed possession for more than two decades. Latecomers, initially unprepared to settle for what was left, had little alternative but to continue the advance. In August 1849, just as surveyors were setting out the Rangitikei compensation lands', the first mobs were driven into that district. Over the next two years the newly arrived squatters, squabbling over the interim possession of unsurveyed Crown tracts to which they had
SURVEY PLAN 46: LOCATION OF WAIRARAPA ILLEGAL LEASEHOLDS AT 1850.

The information upon which this specially drawn plan is based has been drawn from Hill (1962) and from contemporary manuscript records.
WAIRARAPA AND EAST COAST

ILLEGAL PASTORAL OCCUPATIONS AT 1850

A Preliminary Plot

- MANAIA (Donald and Rhodes)
- TE ORE ORE (Collins)
- CASTLEPOINT (Guthrie)
- AHIAIUHE (Northwood and Tiffin)
- WAIHAIKEKE (Borlase)
- HAKEKE (Morrison)
- HUANGARUA (Smalls and Revans)
- WHAREKAKA (Clifford et al.)
- PIHALITEA (Bidwills)
- OTARAA (Gilles)
- TUIHITARATA (McMaster)
- TAUANUI (Allom et al.)
- PAHAOA (Cameron)
- TURANGANUI S. (Williamson and Drummond)
- WHANGAMOAANA (Russell)
- TE AWAITE (Riddiford)
- WHITE ROCK (Barton)
no shadow of a claim, were to become an irritant to the farming corps introduced to the district, to the privileged stockowners safe on large compensation grants, and, not least, to those in authority. Prior to 1849, grazing further to the north-west was restricted by hostilities in the Wanganui district. After that date, however, stock was shipped north by schooner, landed at the river port, and then drafted in small mobs further north along the coast to land beyond the boundaries of the Wanganui block. The only other immediately utilisable extensive grazing tracts lay in the north-east in the Ahuriri district, but it was not till 1850 that the movement of livestock into that district commenced on any appreciable scale. While the first incursion was by sea, mobs being off loaded at the future port site and then driven southwards to the inland plains, by the middle of that year, the first flocks were arriving overland from the Waitarapa, the formidable natural obstacles between the two districts having been surmounted.

There was no set procedure, legal or otherwise, for enterprising pastoralists to follow when determining the acreages and boundaries of 'occupations' in negotiation with prospective Maori landlords, nor any way in which security of tenure could be guaranteed after agreement had been reached. In reinforcement of early official warnings that such arrangements would not be considered valid, the Native Land Purchase Ordinance 1847 made it an offence for any individual to purchase such land, or, "by writing or otherwise ... agree with any person of the Native Race ... for the purchase of the right of Pasturage ... or the use or occupation of Land" without the express permission of the Colonial Government. With such permission being unlikely, the prohibition was ignored. What evolved, therefore, was a ritual based on Maori custom, lightly wrapped in the trappings of English Common Law. Previous to actually driving stock to a district, the pastoralist made contact with representatives of the customary owners of his chosen run. Thereafter lengthy discussions, marked by haggling on both sides, followed. When mutually acceptable terms had been hammered out, pastoralist and owners then proceeded to walk the boundaries of the proposed occupation, natural features being selected for definition wherever possible, but with traditional Maori markers, such as poles or cairns, being erected elsewhere. Only after all stages had been carried through were the terms of occupancy and boundaries enshrined
in a European-styled document. Not unexpectedly, few of these documents have survived, but the lease negotiated by C.R. Bidwill, leader of one of the 1844 parties which led the advance to the Wairarapa, may be proffered as typical. For a consideration of £12 per annum, together with the immediate provision of a horse, Bidwill was given over 'all that block of land called Maramamau'. For 20 years he was to have exclusive grazing of the 'occupation', together with the rights to build a homestead and cut timber. While the boundaries and acreage of the block were to be the subject of much further negotiation and friction between Bidwill and the Maoris over the ensuing five years, the initial selection rented was to provide eventually the foundation for one of the Wairarapa's most successful pastoral enterprises.

Boundary disputes flared regularly between the Maori owners and squatters, and between squatters and squatters, in the Wairarapa in the latter years of the 1840s. Perusal of other extant leases suggests the reason why. The capriciousness of certain Maori landlords and the aggressive attitude of some sections of the pastoral invasion force apart, many of the written boundary definitions were so vague as to be near uninterpretable.

In the light of the illegality of the process by which 'occupations' were taken up in the pastoral districts in the 1840s, and the mercurial nature of the process itself, the absence of contemporary maps and plans showing the relative location, shape and size of individual pastoral holdings is scarcely surprising. It was not until late 1848 that any serious attempt to map even a limited portion of the evolving pastoral landscape was made. In December of that year, the Company, still desirous of purchasing the Wairarapa, privately commissioned the preparation of "... an accurate general chart of the country comprised in the Valley... of the Ruamahanga, up to where the wooded ridges close it in to the northward, as would point out its extent, character and capabilities as a site for a large settlement". The supplementary instructions were quite specific. In addition to indicating the main topographical features, the production was also to record, with as much accuracy as possible, the location of runs then occupied by European settlers. There could be no mistaking the Company's intention. Unlikely to be contemplating the purchase of Wairarapa lands to resolve squatter difficulties, at least not to the stockowners' advantage, its local officials clearly had subdivision for closer settlement in mind. Yet, they were also aware that, if the Company's
objective were commonly known, there would be strong resistance, both from the pastoralists and the Maori owners, and, if such eventuated, all prospect of an early purchase of the district might recede. Their chosen surveyor was thus instructed to proceed with discretion, and to suspend his activities at the first hint of trouble. The survey proceeded with few hitches through the early months of 1849, and in June the master plan, together with additional detail plans and illustrative eye sketches, was forwarded to the Company's Principal Agent. While stressing that he considered the sketch to be "... as correct as such a survey can well be made", its creator was nevertheless quick to point out that, with respect to the location of runs, all that could be claimed was that "... it was tolerably accurate at the time it was made". If it had been considered that preparation of the plan might foreshadow an early transfer of the Valley to the Company's control, that organisation's officials were to be disappointed. Before the year was out, the Principal Agent was intimating to his London superiors that all negotiations had broken down, that the Wairarapa had become "... nearly filled with parties openly holding extensive runs", and that, in the preceding three months, news had reached him of the arrival in the district of new pastoral columns. Appeals to the Colonial Government had been to little avail.

Ten years after colonisation of the southern North Island had commenced, it was evident that the further proliferation of leasehold 'occupations' on Maori lands could not be permitted. Though undeniably profitable, the uncontrolled expansion of extensive stock grazing had given rise to new tensions in each of the established pastoral districts: between the occupiers and their landlords, amongst the stockowners, and between the pastoralists and their Company-sponsored neighbours. Yet, while the problem was recognised, there was no agreement as to the most appropriate form of remedial action. Publicly, the Company was unrelenting in its stance. The pastoralists must be turned off their illegally acquired acres, the lands acquired by the Crown, and then turned over to the Company for redistribution. Privately, however, its officials acknowledged that such a course would be unrealistic, probably not even desirable. The Colonial Government was equivocal. While it took no steps to accede to the Company's demands, or even to enforce its own laws, the Wellington-based Lieutenant-Governor's stated view that squatting was
SURVEY PLAN 47: SKETCH MAP OF PASTORAL OCCUPATIONS IN THE WAIRARAPA

DATE: 1849

DESIGN: W M Smith

PRESENT LOCATION: Wellington District Office, Department of Lands and Survey. (S.O. 10468)

A representative portion only.
... an evil of the most serious and complicated character", and one that should be promptly stamped out, can have been little comfort to the anxious stockowners. Tenaciously clinging to their free-range pieces, but seeing no clear way forward, they felt themselves caught in a vice. Not all of their fears were well-grounded. Irrespective of the pressures being exerted, by their autonomous movement to the hinterlands the pastoralists had established prior claims to consideration; and by taking no action against the leaders of the advance, the Government had made retrospective enforcement of the anti-squatting legislation a hopeless proposition. Possession, if not nine points of the law, nevertheless placed the 'occupiers' in an important bargaining position. Also, now included within the pastoralists' ranks were many of the 'big men' of the settlements, men too powerful and influential to be dislodged without a fierce struggle. Yet, if the pastoralists were not to be dislodged, they had to be more satisfactorily accommodated.

A SEMBLANCE OF CADAstral REGULARITY: THE INTRODUCTION OF GRAZING UNDER CROWN LICENSE

An opportunity to impose a semblance of order on the evolving pastoral occupancy pattern came with the removal of the New Zealand Company from active involvement in New Zealand affairs in mid 1850. Given a relatively free hand, the Colonial Government proved far more realistic in addressing the long-standing tenurial problems in the pastoral districts. Recognising the substantial contribution already made to the infant economy by stockowners, it sought to regulate rather than eradicate. The first step was to endeavour to bring the illegally occupied lands indisputably within official ambit by a systematic programme of purchase from Maori owners. This posed few problems in the Rangitikei, the occupied lands already being in Crown ownership, and relatively few at Ahuriri, where purchasing on a large scale was already under way. The situation in the Wairarapa and East Coast districts, however, those where the pastoralists had initially most heavily concentrated, was far more delicate. More than three years elapsed before proposals satisfactory to owners, squatters and Government alike enabled purchasing in the eastern districts to commence. In the meantime, the Government had signposted the way in which it intended to move. As an interim measure it made the grazing license system already devised for the Auckland districts
applicable to the southern North Island districts also. Only when
acquisition of the eastern pastoral lands was far advanced did the
Government take its remedial plan a stage further. From early 1854,
the purchase of run lands by established occupiers was freely encouraged,
while in mid 1855 a completely new set of pasturage regulations,
specifically formulated for the southern North Island conditions, was
proclaimed. The latter afforded a tenure intermediate between
freehold ownership and the variable short-term rentals which had
formerly prevailed, and it was largely on this basis that runs were
awarded, and recognised boundaries drawn up for the first time, in the
mid 1850s. Any impression that by this means the pastoral districts
had been neatly divided into a series of compact grazing units, however,
would be illusory. Rarely were the divisional lines arbitrarily
schemed on reference maps unquestioned, while the lands within the
boundaries of the legalised runs were commonly a pastiche of freehold
blocks, lands held under license, and even slivers of still unpurchased
Maori property. Complete regularisation of the pastoral cadastre was
still far off.

By enactment of the Crown Lands Amendment and Extension Ordinance
1851, the Colonial Government first made provision for the selective
issue of grazing licenses to occupiers of southern North Island land
already in the possession of the Crown. Secureable on payment of
an annual fee of £5, but with increments according to the number of
stock depastured, and with the size of individual occupancies also
determined by flock or herd size, the licenses proved immediately
attractive to many settlers in what were considered the secondary
pastoral districts. Within weeks of the terms being made public no
fewer than 53 applications from illegal occupiers had been received;
17 for lands in the Rangitikei, five for holdings in the older
established Port Nicholson and Wanganui districts and the remainder
seeking grazing lots at Ahuriri. In the latter months of 1851,
further applications continued to trickle in, and by the end of that
year, the majority of the applicants had been afforded a degree of
Crown protection. Admittedly some had been allotted much smaller
notional grazing acreages than they had sought, a stock numbers
criterion being enforced, but this proved a by no means insuperable
obstacle, for no serious attempt was made to define accurately the
boundaries between licensed occupations. With the license system
being officially considered no more than a holding measure, written
descriptions were considered sufficient. The folly of this omission was soon to be demonstrated. It was the concurrent receipt of applications from occupiers in the Wairarapa and East Coast, already regarded as the primary pastoral districts, that placed the Colonial Government in a quandary. While eager to bring the boundary warfare in those districts to an end, the authorities were unable to comply. Purchase of the eastern districts from the Maori owners was thus accorded a high priority.

Yet, more than two years elapsed before Crown acquisition was attempted. Loud complaints that resolution of the problem was being deliberately postponed had foundation; within Government circles there was some support for a notion that the pastoralists should be forcibly redirected further north, to the Ahuriri. The Wairarapa, it was believed by advocates of this course, would be better reserved for the location of agricultural settlements. A much more significant contributor to the delay, however, was the realisation that purchase of the eastern districts could prove an uncommonly difficult business. With the rentals paid to Maori owners having escalated, there was little incentive for them to relinquish a proven money-spinner. Moreover, hard-pressed though the European occupiers were, any attempt to dispossess them arbitrarily would be bitterly resisted. The confidence of all parties had to be won. In consequence, the Government's Chief Land Purchase Commissioner conferred at length with local chiefs and with the squatter elite. At the same time, the entry of newcomers to the districts was blocked. As the price of their support in the purchase negotiations, the established pastoralists were given firm guarantees of a pre-emptive right of purchase over their homestead blocks, a figure of 640 acres being substituted for the 80 acres allowed in the Ordinance, together with the right "to be considered the first applicant(s) for a depasturing license under the Government Regulations as soon as the land ... should be purchased". These were significant concessions. Before the purchases had been completed, indeed even before they were properly under way, applications under these terms were banking up.

Implicit in the Ordinance had been an assumption that license occupancy would be a short-term expedient. Permitted a breathing space, licensed pastoralists would either utilise their initial advantage to purchase lands of their choice, relinquishing any surplus, or they would eventually pass on to other newly opened
districts. The Colonial Government, also permitted a breathing space, would take the opportunity to survey the districts concerned into lots suitable for sale. With the preponderance of the southern North Island's immediately available grazing land in its possession by early 1854, however, the Colonial Government embarked on an ambitious promotion of sales, the necessity for prior survey being discounted. It initiated a new phase in the evolution of the pastoral cadastre, freehold run lands being offered for the first time. Purchasing, however, was largely confined to the former rental occupiers. Taking advantage of the 80 acre concessions in the secondary districts, and their 640 acre entitlements in the Wairarapa and on the East Coast, the former squatters modestly commenced the building up of extensive freehold pastoral properties; and these 'homestead' purchases were augmented by the acquisition of additional strategically located blocks and strips elsewhere on their occupations. A ragged freehold patchwork was thus created, which may be clearly demonstrated by reference to a plan prepared of the lower Wairarapa Valley in late 1854. (S.P. 48) Yet, substantially less than 100,000 acres were freehold in the pastoral districts combined up till June 1855, while the occupation of more than five times that acreage under pastoral license was sanctioned. It was this overwhelming popularity of the rental tenure that provided the Colonial Government with its most difficult problem. Of necessity, licenses continued to be issued under loose arrangements, often little more than 'gentlemen's agreements', applicants providing only vague descriptions of the lands sought, and occasionally crude sketch plans.

While it was acknowledged that the accurate definition of runs taken up under the 1851 Ordinance was likely to be long drawn out, it was nevertheless expected that the first purchases of pastoral land would be retrospectively delineated, both on the ground and subsequently on district maps. When the task was entrusted to surveyors employed by the Government Survey Office at Wellington, the ad hoc nature of the surveys required made it a nightmare. It was required that scattered pastoral pieces be located with some precision on the basis of such instructions as, referring to an 80 acre selection, "... on the banks of Tully's Creek bounded on the northwest by Native Reserve - (itself undefined) - surrounding Hume's sheep pen and including a small bush", or, with respect to a 40 acre purchase, "between the ... (Wairarapa) ... Lake and the Kaikaimukatea
SURVEY PLAN 48: LOWER WAIRARAPA OCCUPATIONS, SHOWING HOMESTEAD PURCHASES

DATE: c. 1854

DESIGN: W M Smith

PRESENT LOCATION: Wellington District Office, Department of Lands and Survey. (S.O. 10482)

It is likely that this is an amended version of Smith's 1849 plans, with subsequent additions.
Hill on the Otauitta Stream. With little general mapping of the pastoral districts having been carried out prior to their acquisition by the Crown, it became necessary to complete the district maps, which would provide essential reference points, concurrently with the setting out of selections. Ideally the district maps would not only function as records of past purchases, but also as sale plans for future disposals. For more than three years experienced men toiled on these dual assignments.

While logic dictated that the district maps should first be completed, the constant demands of purchasers ensured otherwise. By 1856, the control surveys in all districts were far from complete, while the pastoral selection surveys were drastically in arrears.

If the difficulty of determining the boundaries of runs taken up under the 1851 legislation was vexatious for the Colonial Government, its dissatisfaction was matched by that of the pastoralists with the license system then introduced. Increasingly, the governing regulations were regarded as no more than a base for negotiation. What the pastoralists hoped for were long-term leases on terms more advantageous to themselves, and with security of tenure for a specified period. While fixed term leases were ruled out by the Colonial Government, the local legislators, as they were allowed to do, went part way towards meeting the pastoralists' demands by the promulgation of 'Additional Land Regulations' in mid 1855. This new legislation favourably varied the terms of grazing under license, but at the same time required pastoralists to apply anew for licenses, this time within clearly identified boundaries. Once the boundaries had been established, applicants were required to send sketch plans with their applications, and, if a license was awarded, the dimensions were to be schemed onto the district maps for reference. To some degree, therefore, the wishes of both parties were met, and the proposals held sufficient promise to stimulate a spate of applications. For the officials charged with lands administration, there was every possibility that the boundary disputes which had plagued the pastoral districts could be eliminated. In anticipation of the new regulations, Courts of Inquiry had been held in the various pastoral districts earlier in the year, at which conflicting claims had been heard. It was in the light of these hearings that the first awards under the 1855 Regulations were made public.
In notifying the Colonial Government that licenses under the new terms had been awarded in each of the pastoral districts under his control, the Wellington-based Commissioner of Crown Lands forwarded tracings of the district maps with the awards made sketched in. In the Wairarapa and East Coast districts, licenses had been issued to 26 individuals, the approved runs ranging in size from 5,000 to 30,000 acres, with the average property being not quite 15,000 acres. The largest, by far, were located on the eastern coastal littoral, those in the valley increasing in size with distance from the southern sea coast. In shape, the properties exhibited little consistency, not surprisingly in view of the preference for natural features as boundaries. Significantly, of the near 380,000 acres in the two districts incorporated within run boundaries, less than 7% (25,224 acres) had been purchased by runholders under the concessions allowed. Despite the scramble for homesteads and strategic sites from late 1853, only seven of the pastoralists had purchased more than 10% of the acreage they occupied, nine less than 5% and six none at all. Equally significantly, of the 26 lucky applicants, 17 had formerly held the Crown lands they now occupied under Maori rental, while all had been previously granted licenses under the 1851 Ordinance. At Rangitikei, however, the majority of the licenses early awarded under the 1851 provisions had been for relatively small acreages, and in subsequent years most had been freeholded. After 1853, attention turned to the previously ignored sandy coastal country between the Rangitikei and Turakina Rivers, 58,000 acres, set out in seven runs, being awarded in this area in late 1855. Much smaller on average (8285 acres) than the eastern runs, the Rangitikei licensed occupancies ranged from 1800 to 20,000 acres in size, but with only a single property more than 10,000 acres. Few of the Rangitikei applicants had yet purchased substantially on their proposed runs, or in the district in which they were situated. At Ahuriri, the position was more complex and confusing. Moreover, with the district already under the jurisdiction of a separate Crown Lands Commissioner, it was more than 12 months after the eastern districts’ awards were publicised that those in the north-east were made known. While destruction of the detailed records for the period precludes reconstruction of the individual purchases, some 21,000 rural acres had been held in the Ahuriri at the beginning of 1856, almost all as homestead freeholds or additional purchases by
SURVEY PLAN 49: SKETCH MAP OF THE RUNS IN THE WAIRARAPA AND EAST COAST DISTRICTS

DATE: 1855

DESIGN: W M Smith

PRESENT LOCATION: National Archives of New Zealand (Misc. Internal Affairs plans)

Tracing formerly attached to IA.1/154 55/2566. Versions of this plan are also held by the Alexander Turnbull Library and the Wellington District Office, Department of Lands and Survey (S.O. 10535)
SURVEY PLAN 50: PRELIMINARY SKETCH MAP OF RUNS TO BE AWARDED IN THE RANGITIKEI DISTRICT

DATE: 1855

DESIGN: G F Swainson

PRESENT LOCATION: National Archives of New Zealand (attached LS.W Series 2, 56/210)

This tracing is apparently a preliminary draft prepared for the use of the Commissioner. By the time the Awards were made there had been major alterations to the layout depicted.
pastoralists. In November 1856, the first awards under the 1859 Regulations, 28 in all, were made. Varying in size from 640 to 24,960 acres, but averaging just under 10,000 acres, the grazing entitlements covered some 258,250 acres. No plan of the Ahuriri awards has been traced.

By its own reckoning, the Colonial Government had made giant strides towards stabilising the southern North Island's pastoral landscapes. The general expressions of confidence, however, tended to hide the presence of several disrupting currents not far below the surface. However neat the appearance of the award lines on record maps, and however meticulously licensed acreages were recorded in registers, the impression of emerging order belied the true situation. With rent assessments having been switched to an acreage basis, gross underestimations of the extent of lands occupied became commonplace, the temptation to cheat being strong. As the district maps on which they were drawn were rudimentary, often little more than sketches, the boundary lines were necessarily arbitrary. Not until proper control plans were constructed, and the effective survey of run boundaries delegated to the official survey corps, were 'perfidious practices' to be eliminated completely. Moreover, the fact that grazing under Crown license had, even by the mid 1850s, become dominated by an emerging colonial elite, made any prospect of impartial administration in the immediate future unlikely. The growing economic power of the pastoralists was already being translated into political power, to be turned to their own advantage.

THE FIRST FREEHOLD GRAZING PROPERTIES

Almost as a counterpoise to the unregulated advance of flocks and herds to the unsettled districts in the 1840s, and the ensuing frantic attempts to legitimise the sprawling grazing occupations annexed, a scatter of wholly freehold pastoral properties had begun to emerge by the late 1850s. First evident in the former Company districts, then multiplying in those in which the large pastoralists had already established themselves, these properties, while initially of limited economic significance, were later to exert an influence out of proportion to their number and size. Invariably much smaller than the runs occupied under license, more compact and better defined, they were, nevertheless, frequently owned by men of substance. Their relatively modest proportions were a matter of choice rather than
necessity. Believing that handsome returns could be wrung from pastoralism by more than one stratagem, their owners, from the outset, concentrated on raising productivity by improved farming techniques rather than by continued expansion on free range properties. While the distinguishing line between these first intensive stock farms and neighbouring units operated as enlarged mixed farms was sometimes difficult to determine, the proven effectiveness of the techniques pioneered within their boundaries was to demonstrate eventually to the runholders that only when improved husbandry had been married with scale could the full potential of the pastoral industry be realised.

The building of intensive grazing units was already under way in the Port Nicholson district and, to a lesser degree, the Wanganui district, by the close of the 1840s. Without exception, these prototype freehold pastoral properties were assembled from sections surveyed out by the New Zealand Company for arable or mixed farming purposes. For some, the acquisition of contiguous 100 acre lots, and their conversion to pasture, signified an acceptance that the Company-favoured 'agricultural estates' system would not work. For others, it was simply an extension of earlier attempts to run stock in close proximity to the major settlement nuclei, but this time with the benefit of tenure. Being based on former Company land divisions, these impromptu stock farms were the most regular of all southern North Island pastoral properties in form, and, through the constraint of limited space, probably the smallest. On average, they totalled less than 2000 acres. Representative of the pastoral holdings created at this time was the Crawford property, pieced together on Watts Peninsula, later to be renamed Miramar. A former naval officer, James Coutts Crawford had grazed stock in the Australian colonies before embarking for New Zealand in late 1839. Though not initially holding any Company land orders, once disembarked Crawford had soon remedied that deficiency, and when the first Port Nicholson rural sections were distributed he had chosen six, his first stake on the Peninsula. The remaining 12 sections in the locality were split between six other selectors. The convenient central situation of Crawford's selections, however, prevented any ready challenge from his fellows. Tarrying no longer than was necessary to place stock shipped from Australia on his initial 600 acres, and to place a reliable caretaker in charge, Crawford then departed for Britain, but making it clear he would return. When he did so, in
SURVEY PLAN 51: J C CRAWFORD'S WATTS PENINSULA PASTORAL PROPERTY

This plan, illustrating the building of the property, has been constructed from records in the Wellington Lands and Deeds Office.
THE BUILDING OF J.C. CRAWFORD'S WATTS PENINSULA PROPERTY

INITIAL ACQUISITIONS 1840
ACQUISITIONS 1841-1850
ACQUISITIONS 1851-1860

SOURCE: LANDS AND DEEDS RECORDS
1846, he threw himself wholeheartedly into the development and expansion of his property. In less than 15 years he made the whole of Watts Peninsula his own. The first challenge was the elimination of a possible rival on his own southern boundary, six sections in that vicinity having been consolidated into a small cattle grazing unit. In 1848, these sections were purchased in toto from the executors of the Molesworth estate. In the following year, leasehold grazing rights to several other sections on the Peninsula were secured. Thereafter, there was a short hiatus, Crawford devoting his energies and capital to improvement of the acres already in his possession. By the mid 1850s, however, he was ready to bring the unfinished property-building task to completion. Between 1855 and 1860, the remaining six sections, five of them to the north of his initial selection, passed into his possession. With the exception of the speculative purchase of a few Featherston suburban sections, he bought no more in the southern North Island districts.

Incongruously, in view of its strident anti-pastoralist stance, it was the New Zealand Company itself which first provided single allotments of a size sufficient for specialist stock farms. Though the intentions of the fortunate recipients were discretely glossed over, there could have been little doubt as to the purpose for which the properties in the Rangitikei for the 'larger holders of compensation lands' were surveyed. Situated west of the Rangitikei River, on the 'Tutunui Plain', the properties averaged a little over 1500 acres in extent, with an initial maximum of 2850 acres. Less than a dozen individuals were thus assured of an early monopoly over the best grazing lands in the district. When the landless stockowners driving their flocks along the western coast of the island finally reached the Rangitikei, it was to find that the prime homestead sites had already been allocated, and that their activities were to be necessarily confined to the coastal sand country and still vacant pockets of better lands. Few lingered long, some choosing to become small selectors and others selling their meagre occupations to investors from the principal town. While a number of these pastoral latecomers prospered, it was those who had benefitted from the grant of compensation lands who turned their footholds to best advantage. Ownership of several of the freehold grazing properties changed hands in the course of the 1850s, at least two being subdivided, but the majority were extended. William Fox, sometime Principal Agent of
The plan appears to have been an interim record, minor modifications being evident in subsequent sheets and additional selections in contemporary registers.
the Company, though not appearing on the first plan of lots distributed, successfully secured 3568 compensation acres. 421 This was to be the basis of his well-known 'Westoe' property. By the late 1850s he had not only added to this holding the adjacent 1500 acres first allocated to W.M. Smith, but also nine Rangitikei Agricultural Reserve sections bordering his property. Others chose different tactics, their expansionism being not always easy to trace. Captain Edward Daniell, for example, owner of the 'Killeymoon' property, the largest of the compensation estates, apparently contented himself with his initial grant. 422 Yet, while purchasing no further Rangitikei acres from the Crown, Daniell, nevertheless, bought several additional small parcels privately, and at the same time sponsored his progeny on to illegal runs in the Manawatu district. 423

Interest in freehold grazing properties of moderate size gathered further strength when the Wairarapa lowlands were thrown open for selection. While the manoeuvring by runholders for strategic purchases tended to attract most public attention, and while almost all the grazing elite received preferential treatment, the building of intensive stock farms was nevertheless industriously pursued by a few. The most obvious early captures were within the reserves set aside for 'small farm' settlements. A decision to offer publicly presurveyed rural allotments on the Taratahi Plain, in 1855, provided the first opportunity, and while the majority of the offered allotments were initially secured by an itinerant English capitalist, one sheep farm of 2850 acres and several of less than 1000 acres, were forged. 424 (S.P.53) In subsequent years, further grazing properties were moulded from these rural allotments, while encroachment upon the ranks of suburban 'small farm' sections, and even the residential town acres became pronounced. At Featherston, for example, three graziers assembled respectable freehold properties, one of more than 3000 acres, from suburban sections passed in at the abortive 1857 sales. 425 At Masterton, 18 of the 40 acre sections surveyed out to the north of the town, fell into the hands of a single stockowner. 426 The most significant development in these years, however, was the infiltration of what had been exclusively a 'gentleman sheepfarmer' group by a swelling body of petty capitalists. Successful shop-keepers, tradesmen, and thwarted public servants, also sought to try their luck. These newcomers were in the forefront when the Moroa Plain, to the north of Featherston, was thrown open for selection towards the end of the 1850s. 427 With no section layout, in this instance,
SURVEY PLAN 53: PLAN SHOWING SMALLER PASTORAL HOLDINGS ON THE TARATAHI PLAIN, WAIRARAPA

DATE: c. 1857

DESIGN: Various, after J Hughes

PRESENT LOCATION: Wellington District Office, Department of Lands and Survey. (S.O. 10557)

A sale plan, with purchases inserted, based on S.P 26.
SURVEY PLAN 54: PLAN SHOWING SMALLER PASTORAL HOLDINGS ON THE MOROA PLAIN, WAIRARAPA

DATE:  late 1850s

DESIGN:  Various

PRESENT LOCATION:  Wellington District, Department of Lands and Survey. (S.O. 10540)

Based on an earlier plan by W M Smith, entitled MIDDLE WAIRAPA. Subsequent sale surveys have been inserted.
having been predetermined, the eager purchasers were permitted to submit applications in the same manner as the free range pastoralists. (S.P.54) That some used the provided purchase opportunities skilfully is evidenced by the case of Pierce Cotter, stock farmer and sometime flaxmiller, who by the mid 1860s held nearly 4000 acres in four linked blocks. The product of eight separate applications, spread over four years, this irregularly shaped freehold was to be one of the largest intensive grazing units on the valley lowlands. Close at hand were six similar holdings, all of considerably more than 1000 acres. Yet not all built with such care. Edward Toomath, former schoolmaster and owner of consolidated parcels totalling 548 acres adjoining Pierce's south-eastern boundary, had also accumulated nearly 1300 acres by the early 1860s, but his holdings were fragmented, being spread over several locations in the central valley. In whatever way they were built, however, and regardless of their limited initial economic significance, these small freehold pastoral properties were to prove an object lesson for other hopefuls making their way to the district in the mid and late 1860s.

'catch as catch can': A Further Scramble for Pastoral Advantage

Any prospect of useful debate on the relative merits of intensive stock farming, as compared with the free range grazing commonly practised, swiftly faded with the development in the late 1850s of a further scramble amongst the large runholders, not only to consolidate their claims to existing runs, but also, where possible, to widen their claims. The stimulus was the unabashedly pro-extensive pastoralism stance adopted by the new guardian of the public estate, the Wellington Provincial Government. With little vacant land left available for occupation in the Hengitikei, and with Ahuriri being wrested from the Wellington administration's control in 1858, the spotlight had turned fully to the Wairarapa and East Coast districts. The intense competition, firstly for grazing rights, and secondly, following securement of these rights, for selective freehold, amounted to no more than a primitive struggle for survival. Those who emerged triumphant from this second cut-throat phase of the pastoral advance, though bloodied, had succeeded in recasting the pastoral landscape of the eastern districts. In little more than four years the boundary lines drawn in 1855 had been subjected to bending and twisting, finally giving way completely. With their grassland spoils firmly
grasped, the victors’ attention turned to the erection of solid ramparts around them.

Four years after the award of grazing licenses under the 1855 Regulations, the cadastre in the southern North Island’s pastoral districts might have appeared more confusing than at any previous stage. Between 1856 and 1859 the acreage grazed under license, Ahuriri apart, had increased by almost 50% and sales of land for pastoral purposes, again Ahuriri apart, totalled some 60,000 acres. Significantly, however, the greater part of the augmented pastoral estate had fallen into the hands of fewer than 50 graziers. Beneath the apparent jumble of occupations, both extended and new, a more realistic measure of order, though still more de facto than de jure, had been imposed. Individual ‘spheres of interest’ had emerged, and it was from these territorial assemblages that the majority of the large pastoral properties consolidated in the ensuing decade were formed. The main task confronting the sheep barons in 1859 was translation of their piecemeal collections of rented land and purchased allotments into uniform and unencumbered freeholds. In this process, the surveyors had, necessarily, an important part. Firstly, the revised run perimeters had to be accurately delineated, all possibility of further boundary feuding thereby being eliminated. Secondly, the increased volume of strategic purchases called for more sustained layout efforts. To ensure undisputed possession, the eager graziers moved on from the acquisition of homesteads and limited freehold blocks to the wholesale accumulation of the choice grazing lands on their runs, together with access ways and water courses and contiguous strips along their perimeters. Thirdly, further surveys would be required to enable infilling by the purchase of lands initially grazed under license. By late 1859, while the last was still in its infancy, the definition and redefinition of boundaries, together with the setting down of the selective purchases, was in full swing. From about the middle of the preceding year, virtually the whole of the staff of the Wellington Provincial Survey Department had been transferred to duties in the pastoral districts. Yet even this gesture was insufficient to meet the demand, the employment of contract surveyors being also found necessary. In the survey of the pastoral districts there was much leeway to be made up.

The intense battle for grazing licenses seriously began in the Wairarapa and East Coast districts in early 1857, and over the following
two years sheep columns were driven to almost every remaining nook and cranny east of the central ranges. While no comprehensive run map comparable to that produced in 1855 has been discovered, examinations of the contemporary pastoral applications, and of the broken land transfer records of the period, indicate just how drastically the boundaries were being redrawn. The most favoured new locations was the hill country lying between the valley and the coast. By 1859, the total East Coast run acreage occupied had risen by almost 150,000 acres, but the 13 graziers of 1855 had only become 19, three of them transferred from Ahuriri. A contemporaneous increase in average East Coast run size to more than 18,000 acres is explanatory of how the additional licensed acreage was apportioned. Most runholders, however, still had to freehold the greater part of their runs. In the Wairarapa Valley proper, the trend was somewhat different. From the outset the runs in that district had been much smaller; now, with less free land available, and with the runholders being subject to stiffer competition from non-runholding purchasers, there was greater incentive to expedite the freeholding of grazing properties. The licensed acreage occupied increased by only 25,000 acres by 1857, and, while there was some movement amongst the holders, the total number of runs remained constant. By 1859 both the number of grazing licenses held and the total rented acreage had actually dropped below the 1855 baseline, from about 136,000 acres to 132,000 acres and from 14 to 12 licenseholders respectively, while the Crown rental component of individual properties averaged less than 8500 acres. Inland freeholding was thus advancing comparatively rapidly.

If the jousting for pastoral advantage in the south-eastern districts of the North Island was hectic in the mid and late 1850s, it paled in comparison with the intense competition for grazing rights at Ahuriri. It was also ironic that, just as the full potential of the open inland acres in the north-east was being realised, with the district well on the way towards becoming the southern North Island's new pastoral growth centre, it was plucked away from Wellington's control. In 1856, when the first Ahuriri licenses had been awarded, the total occupied acreage had been little greater than that of the East Coast alone. Two years later, on the eve of the district's elevation to separate Province status, the total acreage occupied under grazing licenses had almost tripled to more than 600,000 acres, while those holding licenses exceeded the total of license holders in all other southern North Island districts combined. Indisputably, the Ahuriri had shed its
secondary pastoral district' status. At Rangitikei, proceedings were far more sedate. The same seven pastoralists maintained their grasp on their 1855 awards, stirring only to safeguard their homestead blocks, to make limited additional purchases on their runs, and to snatch up blocks ostensibly surveyed for agricultural settlers. Only 3,000 rented acres were added to their holdings in these years. Yet the Rangitikei situation was atypical. The restiveness in the eastern pastoral districts was also discernible in the renewed movement onto lands previously skirted by the pastoralists, and onto other lands still in Maori hands. The windswept Terawhiti hills at the south-western tip of the island, for example, were taken up under license by four pastoralists. Others established runs in the vicinity of Waikanae and Whareroa on the West Coast, tracts previously utilised as temporary stock resting places. On the open lands north of the Manawatu River illegal grazing intensified, applications for 17 runs in that vicinity, encompassing some 188,000 acres, being hopefully submitted in 1857. With negotiations for acquisition of the Manawatu district from its Maori owners barely under way, the Provincial Government had no option but to decline these, and similar applications for runs at Waitotara, north-west of Wanganui.

The modus operandi for securing grazing licenses in the mid and late 1850s closely adhered to the procedures outlined in the 1855 Additional Land Regulations, but with the requirement that a detailed sketch plan of proposed run boundaries be submitted being insisted upon. Once received by the Commissioner of Crown Lands, these applications were dealt with, at least theoretically, on an 'in order of receipt basis. Where disputes over applications arose, the power of resolution rested largely with the Commissioner. If a disagreement arose purely from the priority allocated particular applications, it was generally resolved speedily, though with claimants retaining the right to take their applications to the Courts. Contested boundaries, or bickering over the extent of land in blocks applied for, were investigated by staff surveyors, their findings being subsequently presented before a specially convened 'Commissioners' Court'. Two representative examples of run applications received in these years indicate the varying standards of definition encountered by those required to make awards. The first, submitted by F.J. Burton and seeking a block of uncertain acreage in the East Coast district, is illustrative of the type of plan most likely to give rise to considerable
difficulties. Devoted of accurate measurements, and with physical features but crudely indicated, it provided no foundation for the careful assessment of the application. In contrast, the second, submitted by Job Wilton and requesting grazing rights over a 5,000 acre allotment in the same district, had been much more sensitively executed.\(\text{444}(\text{S.P. 56})\)

Drawn to scale, and with a serious attempt to place the depicted features in their true relationship vis-à-vis the proposed boundaries, it was approved with little delay. The necessity for representations of the latter quality, or higher, came to be generally accepted in the later 1850s, with applicants requisitioning the services of private surveyors to prepare sketch plans for submission.\(\text{445}\)

This, however, by no means ensured that all problems with run boundaries were eliminated. Even careful productions had major deficiencies, the designation of hill tops as boundaries being too ephemeral to permit accurate plotting on revised district maps. As the 1850s closed, Provincial Government surveyors were increasingly diverted to the checking of submitted plans on the ground, and, in instances where runs had been awarded previously but the boundaries remained uncertain, to the conduct of periphery traverses. In the absence of a survey control framework, doubts might linger, but the elementary definitions were considered adequate for the requirements of the time.

The mid 1858 diversion of the Provincial Government survey staff to the single-minded prosecution of pastoral surveys was an outcome of the major upsurge in sales of land of this description from early 1857. Between 1856 and 1859 some 47,000 acres formerly occupied under grazing license in the Wairarapa and East Coast districts were freeholded, 5,000 run acres at Rangitikei, and nearly 14,000 acres elsewhere in the southern North Island, some 66,000 acres all told; and this in addition to a mammoth 90,000 acres sold at Ahuriri.\(\text{446}\)

The scattering of the purchases in lots of various shape and size over the full extent of runs, in accord with the prevailing run-building strategies, made the accurate laying off of purchases as soon as practicable after sale all the more onerous. What resulted was a highly idiosyncratic pattern, the layout of freeholded pieces on each run being according to the particular requirements of each purchaser.\(\text{447}\)

Within eighteen months the required surveys had fallen seriously in arrears in all districts; and not even the removal of responsibility for Ahuriri relieved official anxiety. The abandonment of most other survey work in favour of 'selection surveys', followed by the employment of private
SURVEY PLAN 55: APPLICATION FOR GRAZING LAND SUBMITTED BY F J BURTON

DATE: c. 1856

DESIGN: Unknown

PRESENT LOCATION: National Archives of New Zealand.
( LS-W Series 2/8)

Attached to written application.
SURVEY PLAN 56: APPLICATION FOR GRAZING LAND SUBMITTED
BY J WILTON

DATE: c. 1857

DESIGN: Unknown

PRESENT LOCATION: National Archives of New Zealand.
(LS W Series 2/5)

Attached to written application.
Provision of Wellington

East Coast District

Contents
about 5080 acres

Topo. Willow

Border, about five thousand and eighty acres.
surveyors to work alongside the permanent staff under contract, made only a limited impression on the swelling backlog. To still the growing criticism, simple traverses were deemed to be sufficient to set out selections, the fragmented freehold parcels being tied to trigonometrical points where such existed, but elsewhere to readily identifiable natural features. \(^{448}\) Yet, while the grass ramparts so delineated fulfilled their preconceived function on the ground, they amounted to no more, in the words of a cynical contractor, than "simplified sketch diagrams", \(^{449}\) which would require extensive verification and correction work in the future. The 'infilling' of runs by purchase, the inevitable concomitant of framework formation, did not begin till mid 1858 and was to be on quite different terms. The General Land Regulations of 1853 had always permitted the larger scale disposal of rural lands at a much cheaper rate but, somewhat incongruously, only after prior official survey and public offer. Not a single acre of this latter description was put up till the run occupiers had safeguarded their holdings by the purchase of strategic points at the higher rates. While the first sales of 5/- lands were recorded at Ahuriri, some 8,000 acres being alienated prior to secession, by December 1859 only 4800 acres of the cheaper pastoral land had been sold in the other southern North Island districts. \(^{450}\)

As a new decade loomed, the leading runholders were even more firmly entrenched. If their property boundaries still had to be precisely delimited, at least the broad outlines had been established and accepted. If substantial portions of their properties remained to be freeholded, selective purchasing had established their claims beyond doubt and had largely precluded the possibility of further challenges. Pausing briefly, they gathered strength for the final assault in the campaign to carve out large private grazing domains. That last stage, acquisition of the remaining rental acreages within their boundaries, was to occupy their energies till the late 1860s. Only those who had failed to establish bridgeheads on the pastoral lands they occupied, by reason of their unfortunate location, by the fact that their lands had not yet been acquired by the Crown, or some other, now faced the future with uncertainty.

**SECUING PAST GAINS: THE FREEHOLDING OF PASTORAL DOMAINS**

Between 1860 and 1868 the foremost pastoralists, with full official co-operation, set about converting the remaining rented lands
within their property boundaries to private ownership. Whereas in late 1859 more than 571,000 acres of Crown land in the southern North Island districts were still being grazed under license, by early 1868 the rented acreage had shrivelled to less than 90,000 acres. Contemporaneously, strenuous efforts were made by the Wellington Provincial Government to validate tenurially at least some of the illegal occupations still flourishing on Maori land. Though comparatively slow in commencing, the 'infilling' of runs at bargain rates had run almost out of control. The vigour with which large scale purchasing had been prosecuted owed much to a fundamental alteration in the outlook of those near the apex of the pastoral pyramid. Previously concerned primarily with ensuring interim possession of their grazing lands, albeit on the best possible terms, once that was beyond question they hankered for possession in perpetuity. This, in turn, stimulated major improvements in pastoral survey efficiency and, consequently, in the standard of definition of pastoral properties. While by the nature of its origins the irregular pastoral cadastre could never approach the layout symmetry of the agricultural districts, it had, nevertheless, been transformed into a rational and relatively stable landscape composition.

While it was always accepted that the survey of lands for infilling purposes must precede the conclusion of sales, initially there was little agreement as to how such surveys should be conducted. Beyond specifying that no 'cheap land' lot should exceed 320 acres in size, and that each should be open to competition, the governing Regulations were silent. Given the known deficiencies of the earlier surveys of prime pastoral lands, the quandary in which the field surveyors instructed to lay out '5/- lots' for sale were placed may be imagined. They can have drawn little from the advice of the Commissioner of Crown Lands, tendered in 1861, that, while the cutrate blocks should be "... as regular in shape and as compact as possible, ... only so much of a survey as would exhibit to any purchaser... with map in hand... his general whereabouts" should be attempted. To further complicate matters, sales of selections on the old terms, and at the previous rate, showed no sign of slackening. Now faced with laying off two quite different classes of rural land, one prior to sale and the other post, with only the scantiest of procedural instructions on the one hand and virtually none on the other, and all in scattered locations, the surveyors were nevertheless
pressed to produce with almost indecent haste. Thus, in the first three years of the 1860s instructions for the layout of more than 170,000 pastoral acres were issued, more than half, significantly, still at the higher price. Not all infilling was being accomplished at bargain rates. By mid 1862 it was becoming evident, even to lay observers, that run consolidation could not continue on this basis. The setting out of lands, purchased and in preparation for purchase, in the pastoral districts had come to resemble faltering attempts to bring together the pieces of a badly made jigsaw puzzle. It was the confusion resulting from this realisation, more than anything else, which led to a temporary downturn in pastoral land sales in 1863. By late in that year, however, the run consolidation business was back in full swing, both new survey techniques and a new approach to sales having been embraced. Detached triangulations of pastoral localities previous to any further sales were to be carried out, with the classes of land being clearly distinguished on record maps. While the provision for free selection of prime land prior to sectional surveys was to be retained, all those lands certified of lesser value were to be systematically schemed into sections of up to 320 acres, though with due regard for existing run boundaries, and then put up for auction. The Government, rather than the runholder, was now to take the initiative in deciding the sequence in which lands were to be offered. It was to be up to the latter to keep pace. Keep pace they did. As fast as land was placed on the market, in offerings of up to 95 allotments at a single sale, they bought, the record of 140,653 acres alienated in a year being attained in 1865. The presence of survey parties in all of the established pastoral districts ensured that the supply was continuous. Yet, the surveyors were also constantly engaged on the adjustment of past surveys. The urgency of this rectification exercise weighed heavily when a comprehensive triangulation of the southern North Island districts was launched in the mid 1860s, the necessity to expedite incorporation of the pastoral districts within a regulatory framework being stressed. Once the comprehensive triangulation was under way, the relative location and boundaries of the collections of rural lots making up the pastoral cadastre, irrespective of the shape and size peculiarities of particular properties, were to be established beyond doubt.

When the acres provided for advanced level pastoral property
building were placed on the market, the occupying pastoralists were awarded no formal pre-emptory purchase rights. In truth, the encouragement earlier afforded to purchase selectively key points on their runs had guaranteed that, in most instances, purchase of the remainder of their properties at upset prices would be undisputed. Certainly, in a few cases, opportunists seized their chance to whisk allotments from under the noses of dallying or insufficiently vigilant resident graziers, whether for personal use or advantageous resale, but lands so secured constituted a very small percentage of total sales. In the Wairarapa and East Coast districts, for example, of the 300,000 plus cut price acres sold between 1860 and 1868, appreciably less than 10% went to other than entrenched large pastoralists. Likewise with the 182,000 premium priced rural acres sold in the two districts over the same period. The drastic decline in the acreage rented accurately reflected the changed tenurial status of the major grazing properties of the districts. With competition more pronounced, freeholding had always been brisker in the valley than on the coast and in the eastern hills. Yet, whereas in late 1859 19 graziers had rented nearly 133,000 acres of Wairarapa land, by 1868 all but 1000 acres of this total, and that on a single holding, had passed to private ownership. Similarly, east of the valley the acreage held under license had been reduced from 330,000 to less than 90,000 acres. In neither districts was there any decrease in the average size of the most significant pastoral units, many of the already large properties becoming larger still. The discovery, following accurate survey, that the acreage of many licensed occupations had been seriously underestimated was simply a challenge to be met by a further bout of purchasing. At the same time, the lands of those few unable to sustain the pace were snapped up by their neighbours, with further parcels being added by private treaty.

As no large scale record maps depicting 'infilling' in the eastern districts have been traced, two representative examples of run building must suffice. Those chosen, the properties of Edwin Meredith and the Cameron Brothers, were both located in the East Coast district, but nevertheless demonstrate two markedly different acquisition strategies. Meredith was a relative latecomer to the district. Awarded 17,000 licensed acres at Whearame in 1855, he had promptly exercised his purchasing option to secure a homestead and other key points on his run, freeholding nearly 1800 acres.
subsequent years, he persistently nibbled away at his rented acreage; 1200 acres in 1856, 2000 acres in 1858, and a further 2000 acres in 1859. By late 1860 he was ready to commence infilling and, at his request, some 4000 acres on his run were put up for auction. The care with which he had prepared his ground is evident from the sales plan exhibited. (S.P. 57) Both the coastal and river frontages on that portion of his run had been largely safeguarded, and it was the kernel which he now sought at bargain rates. Unsurprisingly, he was successful. Between 1861 and 1864 the process was repeated on several occasions, till the full extent of his original run had been alienated. That, however, was not the total of Meredith's territorial ambitions. Even as his Whareama property was being systematically freeholded, he was actually seeking out additional purchase prospects in the eastern districts.

In contrast, the Cameron clan, further south at Pahaca, were prepared to play more a waiting game in securing their rented gains. Having arrived on the East Coast nearly a decade ahead of Meredith, they had ample time to assess the locality in which their run was situated, and had in fact purchased shrewdly well in advance of the 1855 license awards. Purchasing no additional land in the late 1850s and little at Pahaca in the early 1860s, they instead devoted most of their resources to the collection of grazing lands external to the boundaries of their initial award. Only when the change in official policy brought their rental lands to the forefront did they seriously set about completing the purchase of their original award. By the end of 1866 their Pahaca property, slightly trimmed, had assumed its freehold shape. (S.P. 58) Though the infilling strategies adopted by these runholders had varied, the result was very much the same.

Elsewhere in the southern North Island the infilling of pastoral properties proceeded less hectically. At Rangitikei the steady sale of grazing land at the higher standard price continued almost till the mid 1860s, with little attempt to swell out existing holdings at the bargain rates. Indeed, it was by the accumulation of rural selections of better class land that three of the smaller pastoral properties in the district were eventually completely freeholded. Almost miniscule in comparison with runs east of the dividing ranges, and increasingly eyed covetously by the growing body of small farmers concentrating in the Rangitikei, their holders had deemed it both
SURVEY PLAN 57: EAST COAST DISTRICT, WHAREAMA RIVER,
SECTIONS ON EDWIN MEREDITH'S RUN

DATE: 1860

DESIGN: R Park

PRESENT LOCATION: Wellington District Office, Department of Lands & Survey. (S.O. 10627)

Original title indecipherable.
SURVEY PLAN 58: EAST COAST, CAMERON'S RUN, PAHAOA

DATE: 1866

DESIGN: T W Downes

PRESENT LOCATION: Wellington District Office, Department of Lands and Survey. (S.O. 10779)

Record of consolidated holding.
EAST COAST DISTRICT
CAMERON'S RUN
PAHAOA
1866

[Map of East Coast District with various landmarks and rivers marked]
tactically imperative and financially feasible to remove the licensed acres from any possible threat of sequestration. Thus, by late 1862, only four licensed graziers remained, and of the 38,800 acres they still collectively held, 20,000 remained in the grasp of one man. With each of the group being strong enough to resist most challenges, and also concurrently preoccupied with land acquisition in other districts, they were happy for the status quo to be maintained temporarily. It was, in fact, the Wellington Provincial Government which finally brought licensed grazing in the Rangitikei to an end. Following the official re-evaluation of pastoral survey procedures in 1862, a special survey party was detached to the district with instructions to prepare an accurate map of all run lands, distinguishing those which might be disposed of at the reduced rate, in addition to laying off outstanding earlier selections. In view of the accumulated errors of many years, this proved no easy task, it not being till mid 1864 that the work was sufficiently advanced for notice of the impending sale of the first 44 lots to be given. Thus confronted, the stockowners purchased, in the following 18 months 32,000 acres at the upset auction price and the remainder at the standard rate. In the Wellington or Port Nicholson district, the response to the new opportunities to build grazing properties was more immediate. The availability of land at cheap rates to supplement the initial homestead selections was considered a boon, and four properties had been free-held by 1863. An intriguing development in the same district was the conversion of further properties originally surveyed out for arable or mixed farming to pastoral purposes. This trend was particularly noticeable in the hill country to the north and north-east of the harbour, where cut rate acres were readily added to existing holdings.

The attempts of the Wellington Provincial Government to validate the occupancy by pastoralists of lands still in Maori hands, while carried on conscientiously and with optimism, brought disappointments. Most successful was the endeavour to give title to the five graziers who had settled themselves and their flocks on the coastal strips at Waikanae and Whareroa. By the beginning of 1860, negotiations for the Crown purchase of those localities had been concluded and, without fuss, the lands in the acquired blocks were officially thrown open for selection. Though nearly all the available land was immediately applied for by the occupiers, the outlines of relatively small
SURVEY PLAN 59: PLAN OF FIVE SHILLING LAND IN THE DISTRICTS OF RANGITIKEI AND TURAKINA

DATE: 1866

DESIGN: F W Knowles

PRESENT LOCATION: Wellington District Office, Department of Lands and Survey. (S.O. 10754)

Records purchases, the necessary surveys having been earlier completed. Damage to this plan permits a portion only to be reproduced, the area depicted being previously rented dune country adjacent to the Coast.
properties thereby being constructed, more than three further years elapsed before there was any concerted effort to lay out the selections. It was not till 1865 that any infilling land was made available to the purchasers, and then substantially less than 2000 acres. Endeavours to validate the illegal grazing occupations established in the Waitotara locality, through no direct fault of the Provincial Government, were even less satisfactory. In anticipation of a successful conclusion to negotiations being carried on in mid 1862, the Provincial Government let it be known that selection applications would be favourably considered, especially from those already running flocks on the north-western coast. Though such were forthcoming, with many actually changing hands, not a single Waitotara selection had been properly defined before war completely disrupted plans. The major validation task facing the Provincial Government, however, was the imposition of order upon those who had established between the Manawatu and Rangitikei Rivers. Although the Crown had successfully secured several Manawatu blocks in 1859, by the early 1860s there were still more than a dozen squatters illegally occupying substantial runs on the open coastal country retained in Maori possession. It was in recognition of the potential for even greater future problems as much as the desire for further land for eventual closer settlement, that led the Wellington politicians to open negotiations for the acquisition of the remainder of the district. The result was a painful quarrel between the reluctant sellers and the impatient would-be purchasers, which stretched over most of the 1860s and on several occasions threatened to erupt into armed conflict. Nevertheless, while the dispute was still unresolved by the beginning of 1868, with the anxious squatters remaining in possession of their 'native leaseholds', the more realistic among them must have realised that their uncontrolled grazing days were numbered.

By the late 1860s, the great pastoral wave had broken. There was little likelihood of the stock tide receding from the southern North Island lands already occupied, but it was at least certain that any future grazing expansion would be less furious. More effectively than any legal constraint, exhaustion of the previous ready supply of seemingly empty grass and fernlands forced a more sober assessment of possible future expansion strategies. From the point of view of the Wellington Provincial Government, almost all that could have been done to facilitate the advance of the freerange graziers had been done.

All that remained was the final resolution of the problems posed by
the squatter remnants, and the marketing of scattered odd pockets of land which had so far escaped the runbuilders' attention. For the pastoralists there seemed only two choices if the secured gains were to be capitalised upon fully. Either, by switching from extensive grazing to more scientific stock rearing, the use of established properties could be maximised; or, if extensive grazing was to be maintained irrespective of the likely expansion of flocks, new pastoral frontiers must be sought out. If the latter course was chosen, serious consideration would have to be given to penetration of the till then spurned forested country, which would necessitate expensive clearing, or a more concerted invasion of districts and localities previously designated agricultural, which would involve exorbitant purchase costs. Unsurprisingly, most opted for the former course. As transformation of the southern North Island's freerange grazing properties into more efficiently operated, but still large, sheepfarming units seriously got under way, the formerly blurred pastoral cadastre was brought into sharper focus.

SHEEPFARMERS LARGE AND SMALL: REFINEMENT OF THE PASTORAL CADASTRE

Change pervaded the southern North Island pastoral districts between 1866 and 1876; but change of a different kind to that which had marked earlier decades. Whereas previously the frenetic scramble to appropriate as much grazing land as possible had overshadowed all, attention now largely turned to the reorganisation of properties and the optimisation of returns from land already in grazier hands. In the eight years after 1868, the additional acreage taken up by pastoralists totalled less than one third of the alienations of grazing land in the early and mid 1860s, and that figure was swollen by the forced freeholding of lands held under license, by the tenurial validation of the remaining lowland illegal leaseholds, and by the first tentative opening of bushlands for pastoral purposes. Yet, while official survey activity in the established pastoral districts dropped away, many officers being diverted to the setting out of small farm allotments in districts such as the Manawatu, the concerted drive to convert many of the former freerange runs to neatly fenced sheep farms necessitated refinement of the pastoral cadastre. While in most districts the cadastral outlines etched in the 1850s and 1860s were broadly maintained, in matters of detail the precise arrangement of property shapes and boundaries continued to alter. Though the total grazed acreage rose only slightly, the gap between the large and small pastoralists, already wide, became immense. At the apex
of the grazing pyramid, the sheep barons rationalised their holdings. In some cases this actually led to reductions in property size, marginal or inconveniently situated lots being shed in the interests of better management. Conversely, and more commonly, some of the largest properties were further extended in the course of consolidation, to a limited degree by the purchase of scattered parcels from the Crown, most tellingly by acquisitions from other large property owners. It was inevitable that, given the costs of consolidation and conversion, and the determination of the most conspicuously successful to continue in that way, there would be casualties; and it was amongst the pastoralists of middle rank that the survival odds were slimmest. At the base of the pastoral pyramid, there was also considerable redefinition of the detail of individual properties. Especially in the more favoured lowland areas, the number of small grazing properties increased significantly. In some cases assembled from parcels previously provided for mixed farming purposes, in others moulded from run fragments, these intensive grazing units, together with the sprinkling of small to medium sized stock farms freeholded much earlier, ensured cadastral variety in the pastoral landscapes.

The rounding out of very large grazing properties was a phenomenon largely confined to the Wairarapa and East Coast districts. Involving freeholding of the remaining lots rented under grazing license, the procurement of complementary adjacent lands, and eventually compaction of the constituent parcels, this final construction phase frequently absorbed as much energy as the daunting parallel task of switching from free range grazing to more advanced stock husbandry. Yet, with additional Crown land in relatively short supply, and with almost the entire pastoral acreage in the eastern districts already taken up, new approaches were clearly required. Thus the late 1860s and early 1870s were characterised by an upsurge in private land trading. This did not mean, however, that what the Provincial Government provided was spurned. The valiant endeavours to squeeze extra pastoral parcels from the most isolated scrubby ridges and gullies in the districts was responded to in kind. Over the eight years some 68,000 southern North Island acres were sold at the minimum upset price, 40% of the alienated acreage in the eastern districts. Of the 140,000 pastoral acres sold at higher prices over the same period, 85% was to stockowners in the same districts, though this bounty was shared with the growing body of small property owners.
That a large proportion of the land was already being grazed, with sales representing only a regularisation of occupation, is testified to by the drastic dwindling of the acreage under grazing licenses. The 89,000 East Coast acres still occupied under this interim tenure in 1868 had by 1871 shrunk to an even more paltry 22,000 acres. In 1875 the last 5800 acres held under license were freeholded. The precise extent of property augmentation by large owners through purchases on the private land market is difficult to determine without exhaustive analysis of the contemporary land ownership records. That it was significant, however, is beyond doubt. At least three long established East Coast runs were sold up and reappportioned in these years, while the redistribution of properties in the Wairarapa Valley was even more widespread. While some voluntarily sold at a profit, not all the withdrawals were by choice. As those with insufficient resources to convert effectively their properties to intensively grazed farms stumbled and fell, the survivors, like vultures, closed in to pick over the remains. Would-be small graziers gathered in an outer ring, seeking opportunities to snatch stray morsels. Natural selection was the order of the day. By 1875 36 graziers dominated the pastoral industry, 35 of them with properties located east of the central ranges.

Just how successful pastoral land aggregation had been, at least for some, is demonstrated by the case of Daniel Riddiford, by 1876 holder of arguably the largest single compacted freehold in the southern North Island. Unlike many of the other very large holdings, Riddiford’s near 60,000 acre Te Awaite property had been little swollen by the remains of runs broken up, but in all other respects it was a model of how the shrewd stock owner could turn the opportunities afforded to personal advantage. Having established himself on a Māori leasehold near the south-eastern tip of the island in mid 1848, Riddiford was well placed to commence runbuilding when the land he grazed passed to Crown ownership in 1854. While no record of the acreage then occupied can be traced, the size of his flock, more than 7000 head, suggests that it must have been considerable. From that point he built methodically. Rather than taking his 640 acre homestead entitlement in a single block, he had confined the homestead proper to 150 acres, applying for the remainder in seven lots, ranging in size from 40 to 200 acres. Further small purchases had followed in 1855. When the first pastoral licenses
SURVEY PLAN 60: THE BUILDING OF D RIDDIFORD'S TE AWAITE STATION, EAST COAST

This plan has been constructed from "Crown Land Sales Returns" in W P GAZETTES and records in the Wellington Lands and Deeds Office.
THE FREEHOLDING OF RIDDIFORD'S "TE AWAITE" STATION

ACQUISITIONS TO 1860
ACQUISITIONS 1861-1867
ACQUISITIONS 1868-1876

SOURCE: LANDS AND DEEDS RECORDS
under the Additional Land Regulations were awarded later in that year, Riddiford benefitted to the extent of 30,000 acres. From these foundations, the former New Zealand Company emigration agent then seriously embarked on strategic purchasing, this occupying his attention for the following five years. During this early phase of property building, coastal strips and desirable flats, together with river and stream mouths and courses, were favoured, while especial attention was devoted to the erection of a freehold barrier across the southern boundary of the still largely rented run. In all, his selections at this time totalled 5460 acres. With the south effectively blocked off, Riddiford then turned to the erection of similar barricades on his northern and western borders. Between 1861 and 1867 a further 5084 acres had been selected. Before freehold encirclement of the already greatly enlarged property was complete, however, cut rate infilling was well under way. In 1860, Riddiford had made his first purchases of land of this class, 11,047 acres in three lots, and during the ensuing seven years an additional 13,286 acres were secured at the upset price. Thus, by 1868, 35,787 acres had been freeholded; but only a slightly lesser acreage was still being grazed under a multiplicity of rental arrangements. It was at this stage that Riddiford made his first, probably his only, miscalculation. With the strongly based rival properties to the north and south of Te Awaite offering little prospect of easy pickings, sharing in the dismemberment of properties elsewhere in the eastern districts became too attractive. When 23,866 acres at Te Awaite's heart, some of which had been grazed under license and the remainder without charge, were put up for auction in late 1871, the occupier, anticipating that he would once again be able to freehold at the upset price, allowed the land to be passed in. To Riddiford's chagrin, an alternative purchaser whipped the acres from under his nose. 495 Though by their placement these grazing acres could be of little practical use to the interloper, Riddiford was compelled to pay a heavy price for his overconfidence when bargaining for their return. Once the vitals of his property were repossessed, he bought no more. It was left to his heir to further rationalise the property.

The accelerated emergence of a stippling of small freehold intensive grazing properties, not only on the established pastoral districts but also in those in which lots had been specifically laid out for other forms of farming, was a feature of the late 1860s and
early 1870s. The way had been shown in the 1850s by those who, eschewing the mad scramble for licensed grazing acres, had chosen instead either to freehold immediately small properties from unsurveyed lands, or to assemble relatively modest stock farms from existing surveyed parcels. While the formation of small pastoral properties had continued in muted fashion in the early 1860s, conditions in those years had favoured the more ambitious. Consequently, aspiring graziers with more moderate goals had been overshadowed. It was the switch from free range grazing to more intensive stock raising methods that gave the small pastoralists their chance and, every bit as enthusiastically as the pastoral barons, they seized it. The proliferation of small intensive grazing units, though replicated in the other southern North Island districts to lesser degree, was most marked in the Wairarapa district. Whereas in 1855 the Crown grazing lands in the valley proper had been largely shared out between a dozen large stockowners, by the mid 1870s the original approved runs, or those which survived even in reduced form, had been matched by several hundred freehold grazing units, the majority substantially less than 5000 acres in size. The dream that the Wairarapa would be transformed into a chequerboard of small arable farms had been shattered. Reality was a patchwork of irregularly shaped grazing lots, the larger patches representing the remains of what generally had been substantial runs, the smaller the building efforts of the busy stock farmers. The latter had secured their footholds by a variety of stratagems. A number of the capitalists who had snapped up rural lots within the 'small farm' reserves had been encouraged by their progress, and had set out to acquire more. A leavening of the 'small farmers', realising early that grazing offered better prospects than tillage, had augmented their initial land stakes. Some, no more than speculators, had haphazardly bought dispersed lots, later reselling to the highest bidders. Others, gentlemen of means, had privately purchased significant portions of established runs as going concerns. For the most part, these forays proved no more than an occasional irritant to the large stock owners until the mid 1860s. It was only when the restrained nibbling at the existing property boundaries escalated to aggressive gnawing, with several vulnerable holdings falling apart, that real friction became evident. From about 1866, as a succession of the original valley runholders folded, competition for whatever land was offering was intense, with the small pastoralists
contesting fiercely, albeit not always successfully, with the grazing elite. The sparring, moreover, extended far beyond the dismemberment of previously occupied intermediate and large runs, encompassing also a tussle for the rugged and scrubby remnants offered by the Wellington Provincial Government to the north of the valley. By 1876, while the pastoral barons still dominated, the place of the small pastoralists was unquestioned. Elsewhere in the southern North Island, the extent of small grazing property establishment varied. The broken topography of the East Coast, for example, limited the small pastoralists to a few holdings in the major river valleys. At Rangitikei, conversely, subdivision of larger properties was a logical extension of the tenurial pattern long established. In the Wellington and Wanganui districts the conversion of former mixed farms to grazing continued.

Firm expectations in 1868 that the 'squatting problem' in the southern North Island would soon be finally resolved were borne out. Despite a further flaring of hostilities in the north-west in 1869, the laying off of the grazing selections made early in the decade in the Waitotara locality commenced late in that year. In other districts, also, delayed minor validation surveys were undertaken. With rapid settlement expansion in the Manawatu imminent, however, that district became the focus of attention. Recognising that change was probably inevitable, the in situ graziers had, from the mid 1860s, repeatedly petitioned the Wellington Provincial Government for concessions, some agreement similar to that concluded with the illegal occupiers of the eastern districts in 1853 being sought. While not prepared to go that far, the politicians were disposed to be liberal. That was already proven, for, when the first Foxton lands had been offered, the several squatters within the boundaries of that township, though required to compete for their lands at standard township prices, had been allowed allotments of far greater than average size, together with a promise of compensation for improvements if unsuccessful in their bids. The official conclusion was that their fellows in the Rangitikei-Manawatu block should be similarly treated. Some considerable time was likely to elapse, however, before sections in the block could be surveyed out and put up to auction. Thus, when purchase from the Maoris was finally completed in 1869, as an interim arrangement the existing runs were roughly traversed and, upon the payment of acreage assessments, the graziers became tenants of the Crown.
remained as renters till mid 1873. In the intervening years the Rangitikei-Manawatu block was triangulated, divided into townships, and then surveyed into sections. It was then that the full extent of official sympathy for the threatened stockowners was revealed. In addition to laying out 640 acre homestead parcels for the six remaining pastoralists, with the improvements tag still attached, it was further resolved to declare more than 20,000 additional acres in the Carnarvon and Sandon townships 'first class grazing land', and to offer them at the ruling rates for land of this description. 505 This exhibition of generosity induced an enthusiastic response. Stockowners from outside the district also entered the bidding, in several instances securing not only homestead lots but also large adjoining parcels. 506 Irrespective of the identity of the successful purchasers, however, the Provincial Government's primary objective had been attained. By the mid 1870s only one potential trouble spot remained. Towards the centre of the island, beyond the densely forested western hill country but inside the northern boundary of Wellington Province, several large illegal runs still flourished. 507 In the course of the 1860s, sheep had been driven westward over the ranges from neighbouring Hawkes Bay, subsequently fanning out over the empty grasslands at the base of the volcanic cones. Though the General Government initiated negotiations for the lands concerned, this was an incursion that the Wellington Provincial Government chose to ignore.

It was the shortage of grazing land that sparked the first official attempt to market bush country for pastoral purposes. From the late 1840s there had been isolated endeavours to carve extra grazing acres from the forest and undergrowth fringing and dotting the established pastoral districts, but the costs involved, both in monetary and human terms, had been found to be too high. 508 As long as relatively open land remained available there was little incentive to prolong the experiments. The nearest approach had been the sale of scrublands in the northern Wairarapa late in the 1860s, though small grazing units had been formed in several districts from sections previously cleared for arable farming. 509 By the early 1870s, however, it had become evident that only by pushing beyond the bushline could the continued demand for pastoral land be readily met. While it was considered unlikely, even at this stage, that bush parcels would prove of interest to the pastoral barons, it was just possible they would be attractive to would-be small pastoralists with more sweat
than capital to invest. Acquisition of the Paraekaretu or upper Rangitikei block from the Maoris in early 1872 afforded an opportunity for testing of this theory. 510 It was a good starting point. Though described as bushland, the heavy bush on the block was in dispersed stands, the greater part of the land surface being covered by light bush, manuka and fern. In the words of the first surveyor sent to evaluate the country, much of the estimated 47,000 acres would be 'perfectly suitable for grazing', particularly if laid out in properties of moderate size. 511 This opinion was backed by a more senior official, who, after visiting the locality, ventured to suggest that small farm sections be surveyed on the more level river flats. 512 On the basis of this intelligence a detailed plan for the survey and settlement of the block was formulated. In the course of 1873 and in early 1874 a survey party was constantly engaged in the locality, initially triangulating the block, and then laying it out in sections of an appropriate size for the envisaged mixed use. 513 By late in 1874 some 44,000 acres, in 125 lots, had been set down, the lots ranging in size from 98 to 997 acres. (S.P. 61) While 14 lots were subsequently withdrawn for educational endowments, the remainder were put up for auction. 514 All were sold, but the result was not quite what the authorities had intended. Broadly it had been envisaged that small mixed farms would be located along the eastern and western flanks of the block, with a cluster of small grazing properties in the central portion. Of the 111 sections actually offered, 51 were grabbed by two absentees, one a colonial banker and the other a Wellington businessman. 515 Together they monopolised the eastern half of the block, sections of all sizes being included within their holdings. The remaining 60 sections were split among 20 individuals or partnerships, the majority not small farmers setting out but men with established properties at Wanganui or in the lower Rangitikei. Yet, while there was a gap between preconception and practice, the enterprise had nonetheless been profitable. With this in mind, the Wellington Provincial Government began to plan the opening of other bush blocks. 516

At 1876 there were signs of a new assurance in the southern North Island's pastoral districts. The rawness and uncertainty which had marked earlier decades were fast disappearing. Technologically, the crude pastoralism of former years had given way to more sophisticated procedures. Economically, the transformation was paying off; and this
SURVEY PLAN 61: PLAN OF THE PARAE KARETU BLOCK

DATE: 1874

DESIGN: J McKenzie, under instructions H Jackson

PRESENT LOCATION: Alexander Turnbull Library

Lithograph prepared for sale purposes. A version recording purchases is held by the Wellington District Office, Department of Lands and Survey.
was reflected in the more orderly appearance of the individual properties making up the landscapes. The neat chequerboard may have been missing, but the fenced fields and trim country seats visualised by the Company planners were at last materialising. Cadastrally, the impression was one of solidity. The long-standing fluidity of boundaries and of property size and shape, had been replaced by a tightly fitted, if still irregular, marquetry of large and small properties. Yet the impression of solidity was, at least to some degree, illusory. While the size of a number of the very largest properties was maintained, and in several instances expanded, further subdivision, whether by fiat or family choice, was to be a striking phenomenon in later decades. At the same time, some initially small properties were systematically built upon. By these processes the thinned intermediate grazier ranks were again swelled out. The pastoral farm of moderate size, however, was to be the distinctive operational unit of the future. Continuing to thicken on the ground in the established districts, they dominated in the bush districts opened in the later nineteenth century. Consideration of this further evolution of the pastoral cadastre, however, lies beyond the scope of the present study.

The land divisional patterns outlined constitute the most tangible evidence of changing settler cadastral requirements, and of the institutional responses, in the southern North Island districts prior to 1876. While, as has been previously suggested, the redefinition of spatial goals may be dependent upon a host of influences external to the actual agencies of survey inscription, as well as to internal organisational factors, it has not been the purpose of the foregoing chapter to more than touch upon these matters. In attempting to determine the broad features of the cadastre engraved on the landscape by 1876, problems have been presented rather than answers. Establishing the broad pulses of survey activity, the agencies responsible for the pulses, the sequence in which the constituent districts were surveyed and the resulting arrangements of setdown survey lines in those districts, must be considered a necessary foundation for inquiry into two questions of fundamental importance. Firstly, why the particular survey activity pattern distinguished; and secondly, why the particular cadastral imprints in particular districts at particular times?