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THE DIMINISHING NATURAL LANDSCAPES OF TERTIARY NEW ZEALAND

A CASE STUDY: THE CAPE PALLISER AREA, WAIRARAPA
NORTH ISLAND

Presented in partial fulfilment of the requirements for
the Degree of Master of Science in the
University of Canterbury

by

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1980
ABSTRACT

The natural landscapes of New Zealand are diminishing. The causes are complex. The result disturbs many of us. Over the next generation we will have to decide which landscapes we will retain in a natural state and which we will develop for economic ends. These decisions will be made by a host of individuals representing themselves, groups or the general public. It is proposed that these individuals, particularly those representing the public good, apply a rational and comprehensive planning process to the issues of diminishing natural landscapes. This planning process should be guided in part by resource management principles. The result should be a series of guidelines that will govern discussions concerning the protection or destruction of natural landscapes. Their most urgent use will be for those areas currently lying outside a protective status. It is likely a new social structure will be needed to debate the application of the guidelines in any particular situation. This forum should be judicial in nature and function rather like the Maori Land Court when it deliberates on the 'best' use of Maori lands.

The National Parks Authority is one of the key actors concerned with the issue of diminishing natural landscapes. Its membership also contains the heads of the Department of Lands and Survey and the New Zealand Forest Service; the two largest land-owning bodies in New Zealand. Between them they control directly, are adjacent to, or are involved with the vast majority of the remaining natural landscapes.

The aims of this report are: one, to help all those individuals concerned with decisions that will affect natural landscapes to understand the complexity and scope of the issues; two, to help the National Parks Authority to adjust its orientation and policy to the challenge that it is the diminishing of natural landscape nationwide that is the main issue to which they should direct their efforts, not ephemeral discussions involving status changes or pseudo-scientific questions of 'representative' land forms and 'unique' features.
To satisfy these aims, the following objectives we set: firstly, to describe the philosophical relationship between rural land, rural planning and resource management; secondly, to show the scope and complexity of the resources and issues involved in questions of diminishing natural landscapes; thirdly, to discuss the strengths and weaknesses of the aids commonly available to help decide issues such as diminishing natural landscapes; fourthly, to undertake a practical exercise for the National Park Authority to exemplify the weaknesses in their approach to National Park assessment and the need for them to involve themselves in the broader issues of diminishing natural landscapes; and, finally, to discuss the prospects of using a 'forum' to help promote co-operation, co-ordination and a rational approach in deciding issues pertaining to the destruction of natural landscapes. Each of these objectives is approached in order in the report, beginning with Chapter One and ending with Chapter Five.

The technique used to join these diverse objectives is focusing them on a common area, hence a case study of the Cape Palliser area in the Wairarapa.

I would like to acknowledge the help of Mr K. Ackley, Senior Lecturer, Lincoln College, Mr R. Hodder of the New Zealand Forest Service, my classmates, the staff of Wellington District Office, Department of Lands and Survey, especially Mr D. Robinson and Mr G.A. Turner, the librarians in Head Office New Zealand Forest Service and the Department of Lands and Survey and finally the typists for their patience.
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This report uses the following abbreviations:

C.E. - COMMISSION FOR THE ENVIRONMENT
D.L.S. - DEPARTMENT OF LANDS AND SURVEY
D.S.I.R. - DEPARTMENT OF SCIENTIFIC AND INDUSTRIAL RESEARCH
F.C.C. - FEATHERSTON COUNTY COUNCIL
H.P.T. - HISTORIC PLACES TRUST
H.S.F.P. - Haurangi State Forest Park
M.A.F. - MINISTRY OF AGRICULTURE AND FISHERIES
M.O.W.D. - MINISTRY OF WORKS AND DEVELOPMENT
N.C.C. - NATURE CONSERVATION COUNCIL
N.F.A.C. - NATIVE FOREST ACTION COUNCIL
N.P. - NATIONAL PARK
N.P.A. - NATIONAL PARKS AUTHORITY
N.Z.F.S. - NEW ZEALAND FOREST SERVICE
P.G. - PRIVATE INTEREST GROUPS
R.B.F.C. - RURAL BANK AND FINANCE CORPORATION
W.C.B. - WAIWARAPA CATCHMENT BOARD
W.S. - WILDLIFE SERVICE
W.R.D.C. - WAIWARAPA REGIONAL DEVELOPMENT COUNCIL
THE AORANGI MOUNTAINS
"Spirit of place; genius of place?
This is no longer for us."
Rene Dubos.

Chapter One -
Introduction.

1.1. Background

Natural landscapes in New Zealand face increased pressure for development and use. At the same time these lands have moved from a plentiful resource to a scarce resource over the past hundred years. The result of both situations is an increase in conflicts in society.

The outcome of these conflicts will likely see the natural landscape reduced further. Indeed ultimately a Britain-like countryside will evolve with definite fenced boundaries around those lands preserved in a natural state and all the remaining lands significantly modified for traditional, economically oriented, productive purposes. This situation has caused much work to be done to try to establish which lands will be preserved in a natural state and which will be altered for or by development. Wendleken and Hannan (1974) summarized the issue in terms of the following question, "What proportion of the existing largely undisturbed native vegetation may be required in the future: (a) to add to the productive area of New Zealand in the years ahead; (b) to be preserved in its natural state?" Many public and private agencies, organisations and individuals have addressed themselves to these questions with mixed success. Most agree a more holistic approach is needed if we are to decide these issues in an efficient
and rational manner.

New Decision-making structures may be required but interim decisions will have to be made using existing systems.

1.2 The Problem.

The National Parks Authority (N.P.A) has been one of the key actors involved in the work of assessing which natural landscapes should be preserved and under which status such lands shall be managed. The general methodology used is often identifying candidate areas by largely intuitive means, a preliminary study is undertaken by professional staff of the Department of Lands and Surveys (D.L.S) to see if the area meets the criteria set down by the N.P.A for National Park status. If the results are positive then a more detailed study is undertaken including in it the reaction of the public to the proposal. If the results are negative then NP status is not pursued though recommendations for other types of reserve status for the area are entertained. This latter analysis related more to the specific interests of the D.L.S who control many different types of reserves throughout the country.

Throughout the past decade the N.P.A. has commissioned several preliminary N.P. assessments. To date several have been completed and in spite of often positive recommendations no new N.P. has eventuated or appears likely to move beyond the preliminary stage. No one seems clear as to where the problem or problems exist let alone what might be done to make the assessment process more efficient and effective.
Map 1. Locality
NZMS 242 sht 2
Scale 1:500,000
It is the intention of this report to explore the situation existing in a block of rural lands in the Wairarapa (see Map 1, P 3) that contains within it a large segment of natural landscape that is the subject of a current preliminary NP assessment. By studying the broader local context and implications of the NP proposal it is hoped that the problem or problems facing the assessors and decision-makers can be clarified or anticipated. The solutions advanced will thus use a broader conceptual basis than past NP assessments. The results of this attempt to build a broader conceptual and practical basis for assessments and the resolution of other land use conflicts will have to be judged on its merits. Like all similar attempts at problem resolution the success of the method is the true test of its worth.

1.3 The Approach.

The report contains three basic parts.

Part one is designed to provide a broad perspective of the whole study area. This holistic approach will then investigate the resolution of some of the area's problems including a detailed preliminary NP assessment. The work involves two basic steps:

(i) a description of the natural and cultural resources in the area and a description of the conflicts currently acting on the area.

and (ii) a discussion of the strengths and weaknesses of the decision-making aids commonly used to resolve these conflicts.
The second part of the report undertakes a preliminary N.P. assessment in that part of the study area thought to have potential for such a status. Bearing in mind the effect of the results of Part one might have on any decision.

This work involved two basic steps also:

(i) a discussion and critique of existing NP assessment criteria and procedure.

and

(ii) the actual carrying out of a preliminary assessment including a conclusion as to the area's potential for NP status.

A final part of the report will summarize the findings of the previous parts and propose the need for a new type of decision-making structure that would help resolve similar issues more efficiently in the future.

1.4 The Nature of Rural Lands, Rural Planning and Resources Management.

It is important that the reader gains some basic insights into the nature of rural lands and the traditional fields of study responsible for guiding its future use. Much of what is said in this section has direct relevance to the chapters that follow but will not be discussed as such, serving only to provide to readers a common perspective or viewpoint which they can use to gain an understanding of the overall setting in which this type of work takes place.
1.4.1. The Nature of Rural Lands.

Problems in rural lands often have common characteristics and sources. This section is intended to introduce the reader to some of the more widely acknowledged problems and characteristics so that an understanding and appreciation of the nature of rural lands and their general problems can be generated.

The following assumptions concerning rural lands were largely drawn from Davidson and Wibberly (1977) and though aimed at the British experience I feel they can with some qualifications be equally applied to New Zealand.

The first assumption is that the appearance and functioning of the whole of the rural landscape is as important as the working of its component parts. This assumption has been reinforced in recent years as subjects such as ecology highlight the reality of the interconnectedness of living systems to each other and the lands in or on which they live. Thus any study of rural lands too narrow in scope will likely omit one or more critical elements. In practical terms this has meant a very wide data base is needed for any study covering a large area of rural lands. Thus a multi-disciplinary approach is essential.

The second basic assumption is that no single agency is responsible or actively involved with the planning of the whole rural landscape. Thus no single theoretical or practical integrated basis exists to guide many of the decision-makers struggling with problems in rural areas. It is recognised that in New Zealand regional planning schemes drawn up under the Town and Country Planning Act 1977
do in theory cover the full range of issues (except national priorities) involving the whole of the rural landscape. However, since no schemes have yet appeared and it is unlikely they will be as comprehensive as theory allows the second assumption will likely remain relevant for many years to come. It is also by no means clear that future regional planners will be able to address issues such as NP assessments more successfully than past or present planners.

Assumption three underlines the very essence of most conflicts in rural land use. This is that though rural resources may be used directly by one or more interest groups (e.g. agriculture, active recreation) they are valued by many other groups in less tangible ways (e.g. scenery, solitude). This characteristic represents a host of problems to land use planners and decision-makers alike. The former must try and anticipate as many combinations of uses or potential uses as he can in order to prepare his alternatives while the latter has the difficult job of trying to decide which of the alternatives has the greatest merit. This becomes very difficult for both professions if they represent the elusive 'public good'. Though outside the scope of this report O'Connor (1979) in his Mavora Land Use study has gone a long way towards establishing a system whereby the planner can build a comprehensive combination of possible uses. This approach almost certainly has widespread prospects in many areas of rural New Zealand. Likewise the development of sophisticated benefit-cost analyses has gone a long way towards guiding the decision-makers through the complex webs being drawn up by the planners.
The fourth assumption is more a corollary of the preceding three than a separate entity. It simply states that extra benefit may be derived from co-operation rather than the segregation of rural planning responsibilities. This seems initially a very obvious statement. Its importance lies in its emphasis on the constant attention that should be paid to ways in which conflicting parties might be joined to resolve problems. It was this assumption that led to the development in this report of a proposal for a forum designed primarily to bring all or some of the conflicting parties together as required from time to time.

The final assumption is that rural planning in New Zealand has largely followed worldwide trends. That is, statutory land planning has had little positive effect on decision-makers to date whereas various resource management measures (e.g. soil erosion prevention) have had a strong and often single minded appeal. This assumption is closely related to assumption two except that it refers specifically to existing, operative planning schemes. The resource management measures referred to in the assumption are often tailored to meet the compartmentalised nature of government and ad hoc authorities. This reality cannot be ignored but we should not lose sight of the need for statutory guidelines to express and define the social implications of decisions affecting rural lands.

In conclusion it is worth noting that these five assumptions operate simultaneously in rural lands.
1.4.2. **Rural Planning.**

Rural planning is mentioned many times as the way to resolve the conflicts besetting rural lands. Unfortunately there is little agreement as to what rural planning is and how it should be carried out. We shall approach the question by looking at planning theory and then tacking on the implications of the word 'rural'.

There are many definitions for planning. McHarg (1979) sees it as consisting of the formulation of hypothetical alternative futures. He goes on to explain that in order to formulate these alternative futures the planner and the people he serves must be aware of the full cultural and ecological implications of each alternative. It is very unlikely that many people hold this holistic view of their future or their culture's future and this includes most planners. Young (1966) in a less idealistic way than McHarg says planning may be defined as the process of determining goals and the means by which the goals may be defined. This definition introduces the important idea of goal identification.

A combination of both previous definitions might give the following pluralistic concept of planning; that is, planning is a process that involves the orderly application of reason to a goal resulting in a range of alternatives and their consequences being presented to the appropriate decision-making authority. In the public sector the selection of any particular alternative should be aimed towards the greatest net social gains over costs possible. Normally the alternative chosen will solve an
existing problem as well as chart a future course of action. Planning is by definition subject to errors because of the many value judgements made in the course of decision-making. However, a rigorous attempt to adhere to a hierarchy of interconnected ideas that is constantly open to scrutiny has made planning an effective tool for resolving problems.

If we add the five assumptions of section 1.4.1. to the planning theory above, we will have some idea as to the problems and scope of rural planning. In essence, the failure of society to identify its goals and priorities and given the nature of rural lands and their problems, little progress will be made towards comprehensive rural planning schemes in the near future. The need for interim decisions that will not prejudice future options have led the planners to look to natural resource management ideals for guidelines to follow in presenting alternative futures for rural areas. The prospects and problems with this appeal to resource management criteria is the subject of section 1.4.3. to follow.

Before leaving the section on planning theory, there are some commonly used planning terms that need definition so the reader can fully understand the section of the report outlining the nature of the cultural conflicts affecting the study area. This section includes some reference to a hierarchy of statements of intent involving goals, objectives and policies of the various public and private organisations operating in or conflicting over various aspects of land use or management.
Thus the following definitions will apply throughout the text:

A **goal** is a broad statement of purpose which reflects societal values. It is the broadest statement of intent.

An **objective** is an attempt to state goals with measurable criteria. It should be precise enough to allow some sort of quantification. Normally goals and objectives are more related to ends and policies to means.

A **policy** is a specific activity capable of both attainment and quantification. It must be precisely stated to avoid misapprehension. It must be achievable or it will not effectuate policy.

It is surprising to find when trying to summarise the conflicts and issues at stake in an area how few individuals, groups and public agencies have enunciated their intentions in clear goals and objectives while at the same time having a multitude of policies to guide their daily decision-making. This causes much confusion, inefficiency, overlapping responsibilities and contradictions in the everyday management of rural lands. Thus forcing all the actors to reflect on their broader goals and objectives will be a positive step in itself.

1.4.3. **Resource Management.**

The need for immediate decisions on the wide range of problems and conflicts besetting rural lands and in recognition of the absence of guidelines from society led most agencies actively involved in rural planning to turn to resource management for guidance. Initially solutions were sought that were based
totally on the inherent characteristics of natural resources as established by fact. This led to much detailed study of the physical resources of rural lands. The results were inconclusive. This failure was based on the mistakenly held belief that facts are superior to ideas, a notion deeply rooted in superstition.

Gradually the focus shifted from fact to the study of the nature of the various resources and their interaction. It was hoped that these studies would establish some absolute though still factually based limitations, restrictions or constraints to various resource management options. This was not to be. It is true that many useful concepts were developed (e.g. multiple use) and that certain limits, constraints and parameters on the nature and use of various resources established (e.g. the altitudinal limits of growth for a species) but these remained general and thus not able to resolve the often complex problems to which they were applied. At the same time these guidelines proved too narrow to solve broad questions concerning the land's potential use or the ramifications of choosing one use over another. These questions contain broad cultural implications not included in appeals to factual physical guidelines. The full circle had occurred and planners and decision-makers found themselves back to needing to know the goals and needs of society and its priorities. This is still the case.

Yet in spite of the failure of resource management to provide the final answers it was clearly established that planning options that appealed to an understanding of the natural resources of rural lands were superior. Thus some resource
analysis proved essential. To do otherwise would be to abandon any hope of rationally guiding our futures, a situation which history has shown will lead to disastrous consequences. Our problems in rural land use are far too complex to omit the need to place them in some simpler forms. However, at the same time we cannot face the complex issues of our day with simple appeals to former times.

We can take from resource management sound ideals such as sustained yield, multiple use and biological limits as well as broader philosophical perspectives such as conservation and the limits to growth and by applying these to problems give planners and decision-makers a sound foundation from which to test the response of society to the alternatives produced and their implications. The reality of resource management is more about ideas than facts and as such its work should ultimately help society to perceive its goals in realistic terms and set its priorities accordingly.
Part 1

(i) A description of the natural and cultural resources of the study area and a description of the conflicts currently acting on the area.

(ii) A discussion of the strengths and weaknesses of the decision-making aids commonly used to resolve these conflicts.
"We cannot turn back. We cannot choose the dreams of unknowing."

Dr. George Steiner.

Chapter Two
Resources and Conflicts in the Cape Palliser Area.

2.1. Introduction.

The quote above makes the point that given the world's complexity and our increasing understanding of that complexity we cannot forget or ignore what we have learned and return to simpler days. Yet we need a simplified perspective in which to view and solve our problems. Chapter two is designed to give us such a perspective for the Cape Palliser area.

There are two basic sections in the Chapter and both use the general theme that the processes of ordering, summary, clarification and simplification are valuable in themselves when applied to a complex of physical and cultural facts and conflicts. It is necessary for planners and decision-makers to use this theme if they are to understand the full context and scope of their collective work in rural lands. When applied to decisions on the future of our remaining natural landscapes, better results can be expected from this holistic approach.

The first sections of this Chapter deal with a description of the natural and cultural resources of the Cape Palliser area. The data is arranged under terms such as: scientific fields (e.g. geology), physical features (e.g. soils), and
cultural parameters (e.g. settlement pattern). Weaknesses in the data sources are noted.

The second section is a description and discussion of the major conflicts and issues currently acting in the Cape Palliser area. This work will be organised in two broad groups; land owners and non-land owners. Only groups currently active or directly involved in the management or planning of the area are mentioned though it is recognised that there are many other groups who may indirectly affect the use of the Cape Palliser area.

2.2. The Cape Palliser Area.

The large piece of rural landscape that is the subject of Chapter 2 is named after the general vicinity's most famous feature, Cape Palliser. It contains within it the large piece of generally natural landscape that will be the focus of a NP assessment in Chapter 4. The area of land chosen has no official status, political, administrative, or cultural, but is totally the invention of this report for study purposes. The terms 'study area' and 'Cape Palliser Area' are references to the same area and will be used interchangeably in this report.

The Cape Palliser Area, as shown on Map 1, is located in the extreme south-east of the North Island in a region historically and commonly called the Wairarapa but which has no official status as such. The area is approximately 120 kilometres (km) by road, and half that distance in a straight line, from the Wellington urban complex. The Rimutaka Mountains form an effective geographical barrier between the two regions.
The nearest urban centres of the Wairarapa all lie to the north of the study area along State Highway No. 2, on the flat valley bottom lands. Masterton Borough is the largest of these centres with a population of nearly 20,000 people.

2.3. Boundary Definition.

The study area is an irregular shape approximately 30 km long north-south and 15 km wide east-west. This represents about 450 square km or 45,000 hectares of land. To establish the boundary between the study area and other lands adjacent required much thought because such lines represent the limits of data reference and to some extent the level of understanding applied. Several fundamental assumptions were needed to establish a boundary meaningful to this report's aims.

The first assumption is that boundaries should reflect the nature of the main theme to which they are applied. For example, if a report was studying local government statutory planning then local government administrative boundaries would be appropriate. The main theme of this report is an enquiry into the nature and future of land use decisions that affect natural landscapes. Property rights contained within the land tenure legal system are responsible for the practical daily control of the use of lands in the rural sector. Thus the boundary chosen should reflect the limits of direct control exercised by all tenures over the remaining natural landscapes of the Cape Palliser area. This means that
all land units defined by tenure statutes and shown on cadastral maps which contain elements of natural landscapes will be combined to form a nucleus around the Haurangi State Forest Park lands, which themselves are the subject of a N.P. assessment.

The second assumption is that should the legal land units described in assumption one be only part of a larger farm unit the the whole farm unit should be included within the study area. This assumption recognises the reality that the management of the farm unit will be as one conceptual unit by its owner or owners. It is possible that the legal units are separated in space but still treated as one farm by the owners. The important idea to recognise though is that decisions affecting the developed paddocks will affect the paddocks containing natural features and vice versa.

The overall effect these assumptions had on settling a boundary was establishing that it should generally run around the outside of the farm units backing onto the H.S.F.P. except where the ocean formed a clear natural boundary. There was still trouble in establishing a farm boundary because of the large number of farm units and the difficulty in figuring out precisely who controlled which legal land units in which farm units. A simpler boundary was needed which did not abandon the principle of tenure control. The solution lay with accepting the road system which surrounded the H.S.F.P. on three sides. The acceptance of the road system as the boundary came after some readings of the European history of the area. The existing
roads were designed originally to give each farm unit legal road frontage and though modern transport and the sub-division of farm units has changed this historical situation somewhat the boundary established is still conceptually useful in the context of this report.

Map 2 p 19 shows the Cape Palliser study area with the boundary representing the concepts outlined above.

2.4. The Natural Resources of the Cape Palliser Area.

2.4.1. Geology and Lithology.

The geological and lithological descriptions of the Cape Palliser Area can be simplified into three groupings based on geological time.

The first group are the rocks of the Mesozoic. These are the oldest rocks and they underlie approximately 70% of the study area. The north-western Mesozoic formations are almost pure sandstones and very similar to the main rock formations of the Rimutaka and Tararua Mountains to the west. The rest of the Mesozoic formation forms the Aorangi Mountains and is composed of mixed layers of siltstones and sandstones. The entire formation is heavily fractured (N-S) and faulted making the rocks very susceptible to erosion especially if the vegetation cover is removed. There are still at least two active faults in the south-central area. Numerous intrusions of lava, sheet lava flows and jasperoid chert intrusions can be found throughout the Mesozoic formations. These harder rocks are
of scientific interest, provide some of the offshore reefs noted for their scenic qualities and are of significance in studies of pre-historic Maori culture, being possible sites of adze and drill manufacture (Prickett, K.E. 1979). There has been little comprehensive study of the Mesozoic rocks and much of the above information is taken from the Geological Survey Map, Sheet 12.

The second group are the rocks of the Tertiary. These rocks are next in age to the Mesozoic. They form a discontinuous band around the Mesozoic rocks being mainly in the east, north-east with a scattering in the north and west, with virtually none in the south. The types and composition of the Tertiary rocks are more complex and varied than the Mesozoic. The older Tertiary rocks of the eastern areas are thick layers of sandy siltstone, limestones, sandstones and mudstones. Thinner layers of these same rocks occur as remnant pockets along the western coastal area often exposed as distinctive layers on top of the older rocks of the Mesozoic. Many of these rocks have weathered to scenic effect or have some significance in Maori legend or both. See Photo 1 p.23 for an example of the type of formation. The younger Tertiary rocks lie as pockets in the north of the study area and are commonly remnant terraces of marine origin. They are composed of silts, gravels and sands with good fossil content, and are heavily weathered or dissected. It is supposed that these terraces were created when the sea filled the Wairarapa Valley and formed part of the massive terrace complex further north.
The old tertiary rocks along the coastal areas have been the subject of several recent studies but the other formations have only been roughly surveyed many years ago.

The last group of rocks are the youngest and least consolidated and belong to the Quaternary. These formations are represented exclusively along the western side of the study area outside the Tertiary where it exists or directly adjacent to the Mesozoic rocks. This group is a series of terraces of various heights and degrees of weathering thought to have been laid down during the last series of glacial and interglacials by marine or fluvial deposits. Outside the terraces is either a narrow wave cut platform covered by recent marine deposits mixed with outwash from adjacent streams (principally in the south, south-east) or a deep layer of undifferentiated alluvium from river flood plains, the lowest terraces, fluvial or estuarine deposits (in the west and north). The Quaternary formations are hosts to the best farmlands, the major settlements in or adjacent to the study area, the coastal recreation grounds and the major archaeological finds.

2.4.2. Geomorphology, Topography and Relief.

The three main groups of rocks outlined previously have inherent structures that create landforms typical of each.

The Mesozoic rocks form the main topographical feature of the Cape Palliser Area, the Aorangi Mountains. The mountains are the product of folding and faulting processes that are still active today. The Aorangi Mountains are a series of peaks up to 900m in altitude, joined by a sharp ridge network which runs
Photo 1 - Kupe's Rock

Photo 2 - Ridge-Peak Topography
generally in a north-south direction. The peaks and ridges are heavily dissected by deep ravines which contain small streams. These streams have eroded rapidly the crushed rock of the fault lines. Often these streams have their headwaters less than a km apart, indicating the very sharp nature of the ridges and peaks. Photo 2 P 23 illustrates these qualities of the Aorangi Mountains.

The Tertiary formations in the east and north of the Cape Palliser Area form a series of rounded hills or terraces. These features are heavily dissected but do not exhibit the steep ravine pattern of the mountains adjacent. The one major exception is the Ruakakaputuna River which forms a very deep ravine structure as it flows through a thick Tertiary limestone formation. This ravine is noted as one of the most scenic features in the study area and in the Wairarapa generally. Where smaller streams flow through the same limestone formations on their way to the Ruakakaputuna River, some classic Karst topographic features are created, such as caves, stalagmites and stalactites and sink holes. These features have become scenic attractions and important as locations for fossil remains. The other tertiary rocks along the west of the study area have also formed scenic attractions such as the 'Pinnacle' formation which is a severely eroded marine terrace which created needle like features more than a hundred metres high.

The Quaternary group is represented by a series of terraces of different heights. These are a dominant feature of the north-west of the study area covering an area up to 10km wide gradually reducing in width to the south until they disappear just north of Cape Palliser. The degree of erosion in these terraces is slight though some are rather small in height and borders have
been blurred. Uplift progressively raised each terrace higher with some over 250 metres above sea level. Cliff-like structures between the terraces were likely formed by ocean wave action. The final characteristic features of the Quaternary group are the coastal flats and river valleys outside the other two major groups.

Information for this section was drawn from geological reports, personal observations and a few university studies of the Quaternary terrace formations. The Cape Palliser Area has not been studied in depth and remains one of the only areas of the southern North Island for which a topographical map series has not been prepared.

2.4.3. Soils.

The soils of the study area have never been surveyed in detail. The whole area was covered by the general nationwide survey in the 1950s and subsequently two sections totalling the northern half, by more detailed surveys in recent years. The latter two surveys have never been published and are titled: An Interim Report of Soils of the Wairarapa Valley, and the Provisional Soil Map of the Opouawe Catchment. Their titles suggest their degree of completeness and both were undertaken by the Soil Bureau of the Department of Scientific and Industrial Research (D.S.I.R.).

Using the above sources it seems there are three basic classifications for the soils of the study area: one, yellow-grey earth; two, yellow-brown earth; and three, intergrades between one and two. There are also some small tracts of recent soils based on alluvial deposits along river and stream courses and the coastal flats.
Yellow grey earths develop in areas with a well defined dry season and an annual rainfall of less than 1150mm, distributed over fewer than 150 rain days. They are derived from lightly consolidated alluvial, marine or wind blown sediments but a few soils can form on older sedimentary rocks. Their drought characteristics cause gully erosion on cracked surfaces. These soils are generally confined to the river terraces and rolling lands of the south and north-west of the study area and together cover only a small percentage of the total area.

The yellow-brown earths are formed under forest covers and an annual rainfall in excess of 1150mm. They change in character primarily with altitude, rainfall amount and tree cover type. As forest soil, if the cover is removed erosion results. The purer forms of yellow-brown earths occur in the main Aorangi mountain area.

The largest group of soils in the Cape Palliser area are intergrades between yellow grey and yellow brown earths. The intergrades dominate the eastern hills outside the main mountains where falling rainfall, summer drought and various changes in the parent materials take these soils from yellow brown earths to intergrades of various strengths. These soils were developed under forests and so continue to be classified towards the yellow brown earths more than the yellow grey earths. Thus the yellow brown earths and intergrades of the study area all tend to be steepland soils.
The most naturally fertile soils of the study area are those based on the Tertiary limestones of the north-east and the most recent alluvial deposits along the river valleys and coastal strips.

2.4.4. Hydrology.

The basic hydrological pattern of the Cape Palliser area reflects the geological, geomorphological and topographic features discussed in preceding sections. That is, the Aorangi Mountains form a central feature, with a series of streams and small rivers radiating out from them. The streams and rivers could be organised into three basic drainage systems; one, those that drain into the main Wairarapa valley system of the Ruamahunga River, Lake Wairarapa or Lake Onoke and then into Palliser Bay; two, those which flow directly into Palliser Bay or the Tasman Sea; and three, those that flow into the Opoawae River in the east and hence into the Tasman Sea.

The rivers and streams have quite small flows over wide gravel beds except in times of heavy rains when they rise rapidly and carry great amounts of gravel and soil. Summer drought periods can cause intermittent surface flows to occur. The Ruakakaputuna River is a major exception to this basic pattern. It is entrenched in a very deep valley but has not formed the wide gravel beds of the rest of the region. It also maintains a steady year round flow not being affected by drought though high rainfall causes freshes to occur.
The generally fractured nature of the main geological structures coupled with widespread deforestation and occasional large rainfalls has led to some downstream flood problems especially in the north-west of the study area where the rivers and streams cross highly productive and developed farmlands into the main Wairarapa valley hydrological system. Some of the higher lands have been retired from farming and either allowed to revert to native vegetation or actively planted in exotic tree species of *pinus*, *salix* (willow), or *eucalyptus*. Overall, though the local Wairarapa Catchment Board hopes the retirement and planting programmes will help stop the problems accompanying large amounts of detritus moving down the streams in flood as well as arrest soil erosion, no detailed studies of the rivers and streams being managed have occurred to date. The Turanganui River and Tauanui River catchments are the main concerns in the Catchment Board's plans and most likely to receive some study in the future. The rest of the study area will remain in its present state of intuitive management and an understanding of the processes at work will remain sketchy for many years to come.

2.4.5. Climate.

There is no official meteorological recording station in or near the Cape Palliser area. The climatic statements of this section are drawn from records kept by the Cape Palliser lighthouse, the HSFP headquarters at Te Kopi, various private farmers, the Wairarapa Catchment Board and some archaeological expeditions in the south-west. Differences in these records
indicate a very complex climate pattern and the total lack of data from the Aorangi Mountains leaves a large area of conjecture. There seems little doubt that an area so topographically diverse and which contains several elements important to climate formation such as aspect, altitude and nearness to the sea would cause the formation of many significantly different micro-climates. Nonetheless a broad pattern emerges from the scattered records and a general extrapolation from climatic principles.

The Aorangi Mountains are considered a fine weather range compared to the mountains to the west. They receive generally hot dry summers with rainy, cool winters including infrequent snow or hail showers during strong southerly gales. Roughly 75% of the winds into the area come from the west, north-west excepting coastal breezes. Historically it is high winds from the north-west which have damaged the native forest cover, the last major storm occurring in the 1930s. It also seems that many inland areas except ridges and peaks would be sheltered from all winds.

Rainfall ranges from less than 1100mm in the north-west and coastal areas to more than 2,500mm in the central Aorangi Mountains. The occurrences of fog and cloud are less frequent than in the mountains to the west.

The overall area likely averages around 2000 sunshine hours per year with most occurring in the summer. This sunshine total is average for the North Island but considerably higher than the mountains to the west. An average summer maximum temperature above 20°C and an average winter temperature below 10°C could be expected inland with both moderated along the coast.
2.4.6. Flora and Fauna.

(a) Flora.

The vegetative cover of the Cape Palliser area ranges from European species grasslands in the developed farmlands through mixed native scrub, European grasslands on the terraces and rolling hills to various native forest associations on the Aorangi Mountains. Exceptions to the general pattern occur: one, in a few valleys not developed previously for farming where mixed podocarp-hardwood forest remnants survive; two, on the tops of the higher peaks where tussock grassland-scrub associations have evolved; and three, along the coastal plains where remnant dryland scrub-forest remnants mix with native grasses, shrubs and European grasses.

The following description of the native forest cover of the HSFP, taken from its draft management plan, is worth quoting in full as it highlights this element so important for any discussions concerning the future of the natural landscape of the Cape Palliser area:

"The most extensive forest type in the park is an association of mohoe, hinau and rewarewa occupying the more stable slopes and the flats up to an altitude of 520-580m. To the north of Otakaha stream, rimu, matai and miro occur, with densest stands of podocarps occurring in the headwaters of the Makotukutuku Stream. On the drier more exposed spurs below 490m black beech predominates; and in the north-west corner of the park this species dominates the forest, forming a dense 15-20m high canopy. Hard beech is found in association with black beech in the north of the park, particularly in the Paharakeke catchment. Red beech forest is extensive
north of Otakaha stream and generally occurs in a transition zone between 430 and 580m and an upper altitudinal limit some 60 to 90 m below the crests of the higher ridges, where silver beech is found. In the south of the park silver beech extends from the ridge crest to the mahoe, hinau, rewarewa forest with no red beech transition zone.

Adjacent to the pastoral lands on the fringe of the park fire-induced kanuka seral communities are evident, with even transition to high forest occurring when no further fire has occurred.

Subalpine scrub and tussock associations about Mt. Burton mainly consist of Dracophyllum filifolium, Cyathodes fasiculata, Coprosma parviflora manuka, and Chionochloa Cheesemani; whereas on the summit of Whawenui, Mangatoetoe and Bull Hill, Hebe venustula, Senecio elaeagnifolius occur with manuka."

If we add to this description the following known coastal forest-shrub associations from outside the park being; occasional karaka, kanuka, cabbage trees, kowhai, ngaio, kawakawa, flax and tree nettle, a very complex pattern is evident.

It is also true that in spite of the good description the preceding paragraphs provide there has never been an intensive vegetation survey of the whole study area. However, Appendix I provides an extensive list of the species identified up to 1971 in the Aorangi Mountains as compiled by A.P. Druce, Botany Division, DSIR and Appendix II provides an extensive list of the coastal and cliff dwelling species of the Cape Palliser Area as compiled by the same author.
The depth of description of the flora introduced in this section of the report was done on purpose because an understanding of the vegetative resources is essential to decisions concerning the natural landscape.

(b) Fauna.

Very little is known of the indigenous bird and insect life of the Cape Palliser Area. No surveys have been undertaken to date. It is common knowledge though that bellbirds, tuis, parakeets, saddlebacks, fantails, pigeons and tomtits are present. There is no reason to suppose that a representative range of indigenous insects, common to similar country elsewhere, do not inhabit the study area.

Similarly there is likely a representative range of introduced birds and insects present. There is definite evidence that introduced mammals such as red deer, opossum, goat, pig, European rat, sheep, feral cat, dogs and cattle inhabit all or parts of the study area. The introduced mammals have thrived due to lack of natural enemies; some to the extent that active management of numbers is needed.

2.4.7. Ecology.

Ecology is the science that studies the relationship between the biological resources of an area and the lands they inhabit.

The prehistoric ecological pattern of the Cape Palliser area is little understood, but it is generally believed (Leach and
Leach 1979) that it fluctuated significantly during recent glacial and interglacial periods. Archaeological evidence indicates many bird species such as; the blue-wattled crow, robin, takahe, kakapo, weka, flightless duck, New Zealand(NZ) falcon, rails, kiwis, and NZ owlet-nightjar were extinct or near extinction before the Maori occupation. Moa species remains have also been found in the area but it is likely these were actually brought from the South Island. Similarly the native flora patterns changed considerably during glacial periods with their accompanying climatic variations.

With the coming of man rapid and extensive changes occurred. There is evidence to suggest that before European settlers arrived much of the area had been burned, though regeneration was well advanced. The exception were the coastal-scrub-dryland forests and totara-broadleaf-mixed grasslands, which, being the main areas of Maori occupation, had all but disappeared and been replaced by scrub and mixed grasslands. European settlement speeded up this conversion to grassland with introduced European species, and the felling of almost all the mixed podocarp forests of the terraces and river valleys for timber and/or farm conversion. This forest clearance gradually moved higher into the Aorangi's, finishing only a few years ago.

The resulting pattern today, after both Maori and European occupations, is a scarcity of the coastal forest associations, coastal shrub associations and the mixed podocarp forests. The former being confined to very small remnant patches of older trees, the coastal shrub associations on the cliff faces of the extreme south and the latter confined to the headwaters of some streams with the exception of the upper Tauanui
River flats where a good example of this type of forest still exists (see photo 3 p 35) The coastal shrub and herb associations contain the only nationally rare species in the Cape Palliser Area (see photo 4 p 35) The higher country with its good cover of either beech of beech-hardwood species is not as modified as the lowland forests. None of the individual species of the beech forest are rare but several of the associations of species are unique at least on the North Island. The best example of rare beech forest association is in the Upper Waitetūna Valley where the mixed silver and black beech stands exclude tawa and red beech, the normal succession species. (See photo 5 p 36) This association evolved from a combination of: past natural environmental changes, prehistoric fires, the unique climate and altitude of the area and the effect of introduced animals browsing the vegetation. Changes in the current situation could be expected with animal or fire controls. Support for this idea comes from Forest Research Institute (FRI) studies where plots of land in the Aorangi Mountains fenced off from all animal browsing showed very strong regeneration qualities and a different succession of species than the surrounding terrain.

Finally it would be fair to say that as the vegetation has been altered drastically the insect and micro-fauna of the former ecological networks either adapted or joined the bird species listed previously in extinction.

2.4.8. Coastal Area.

The inshore waters and sea bed that border the study area in the south-west, south and south-east are such an integral
Photo 3 - Tauanui Valley

Photo 4 - Rare Coastal-Cliff Plant Communities
part of most recreational activities and the overall scenic attractiveness of the area that they will be considered part of the study area. Though the sea bed is considered crown land, no surveys have been undertaken and no tenure maps show this status. The marine animals and plant life are vested in the Crown for management purposes but the actual sea water is not owned by the Crown. This section will cover all the relevant factors from the previous sections as they relate to the coastal areas. Finally it is worth mentioning that this report recognises the importance of the sea in influencing the climate, flora, fauna and human cultures (past and present) on the land adjacent.

The sea bed of the coastal areas reflects the same structure as the land with rock of the Mesozoic dominant with small areas of the harder Tertiary forming occasional inshore reefs. The Palliser Bay side of the study area has comparatively shallow water with a regular sloped sea bed of sand, gravel and boulder beds. The sea bed deposits come from the erosion of the lands nearby and the drowning of the whole lower Wairarapa Valley in the Tertiary much of which has re-emerged since. The south and south-eastern coastal areas are different. The sea bed has a rocky, irregular surface. The general structure is a very narrow continental shelf of a few km width, subject to folding and faulting pressures that parallel those identified on land, falling off very rapidly into the Hikurangi Trench, some of the deepest waters near New Zealand. Antarctic currents sweep past this eastern area bringing water temperatures seasonally similar to the south of the South Island; the coldest summer temperatures in New Zealand. This factor affects certain
recreational activities such as swimming and water skiing greatly.

The inshore coastal ecology has been modified greatly in the past few hundred years. Filter feeding shellfish present in large numbers in prehistoric times (Anderson, A.J. 1973) have all but disappeared as they appear to have been unable to handle increased sediment loads caused by land developments. The surviving shellfish such as paua and rock lobster have been subject to intense exploitation in recent years. The inshore fishery is limited to weed eating species (e.g. butter fish) and the rough nature of the sea and the reefs have served to discourage past and present exploitation. The offshore fishery though subject to severe weather restrictions provides species such as blue cod, groper and tarakihi in economic numbers.

A considerable variety of sea mammals visit the area but not in large numbers. There is currently a NZ fur seal winter resting area at Black Rocks and prehistoric evidence cited in Anderson, A.J. (1973) suggests sea lion, sea elephant and several species of porpoises and whale inhabit the coastal waters from time to time. The rough sea conditions deterred Maori and European exploitation of these mammals though a small whaling station existed at Te Kopi in the mid nineteenth century for a few years.

The coastal marine vegetation and micro-fauna has never been studied but one can assume that a full range of species typical of rocky coasts in the south of the North Island inhabit the area.
2.5. The Cultural Resources of the Cape Palliser Area.

2.5.1. Prehistoric Man.

The information in this section is drawn from the National Museum of New Zealand, Bulletin 21, edited by Leach and Leach, 1979.

Over the past decade the Anthropology Department of the University of Otago has examined portions of the Cape Palliser region. Approximately 200 sites of early habitation have been found, examined and noted on sketches and maps. Figure 1 p 40 is a typical site sketch and shows the wide variety of features found in these prehistoric sites. Most of the sites are along the Palliser Bay foreshore or up the adjacent stream valleys. It is thought that these sites are part of a complex of sites stretching along the east coast north to Hawkes Bay where the dominant Maori tribe was said to come from after displacing the earliest group to the South Island.

Research on these sites shows a record of habitation dating back to around 1200 AD, a date that unexpectedly places the area amongst the earliest settled areas in New Zealand. To date research has been done into various aspects of these people including their settlement patterns and building structures, agricultural practice, implements, social structure, diet, physiology and the change in ecological patterns over time. Much work remains to be done.
It is felt that the earliest inhabitants were a fairly well-fed horticulturally-based society that through time gradually evolved into a more sickly hunting and gathering society that had all but disappeared by the advent of European settlers. This pattern is contrary to the normal world pattern for civilizations and as such is of interest.

Many theories can be put forward to explain these changes. The most likely states that because the original climate was unsuited to most traditional crops except kumara, and it was marginal, changes in climate that made kumara sub-marginal caused increased starvation. This situation, coupled with problems created by land development such as soil erosion, lowered soil fertility, and the diminishing of filter feeding shellfish and food birds, caused a gradual lowering of reliable food supplies until the area could not sustain the people and they moved. These are important ecological lessons to be learned from these prehistoric times, some of which still apply to modern civilizations.

All the sites noted in the archaeological work are registered with the Historic Places Trust and cannot be disturbed or destroyed knowingly, according to the law. Unfortunately, many of these sites are being threatened by current land use practice, either directly or indirectly, by the acceleration of natural processes of erosion. This problem of preserving these sites and similar ones around the country remains very difficult. Public education of their worth provides the best long-term solution, and recognition and respect for their existence the best short and medium-term answer.
2.5.2. Present Settlement Patterns.

Much of the information for this section is drawn from a Geography Dissertation submitted by I.S. Hendry at Victoria University, 1972.

There are four bach settlements in the study area and all lie along the Palliser Bay coast. By name from north to south they are Whangaimoana, Te Kopi, Whatarangi and Ngawi. Parts of these settlements were planned and parts evolved as individual builders saw fit. In total there are one-hundred-and-thirteen units (1972), the majority of which are holiday homes. All the settlements are now actively controlled by statutory planning regulations and by-laws set down in the local District Scheme. Their current plans; concentrate any further subdivision at Ngawi (see Photo 6 p 47), which is the only settlement with a commercial base (rock lobster, fishing); stop further growth at Whangaimoana and Whatarangi and seeks to eliminate the Te Kopi baches in the long term.

The roading system in the Cape Palliser area is complex. Generally a legal road encircles the entire area, though the relationship between the track used in the roughest coastal areas and the legal surveyed road is often tenuous or at best approximate. The circular road is at times paved and unpaved and includes fords in several areas. Currently a four-wheel drive vehicle is needed to journey around the southern areas from past the Cape Palliser lighthouse to White Rocks Reserve but this also proves impossible from time to time. The road system carries many names which change at major intersections, presumably for historic reasons. There are several legal roads from
the circular system into the Aorangi Mountains but few are formed beyond a couple of kilometres. The only access completely through the Aorangi's is a rough track formed by the New Zealand Forest Service for travel within the Haurangi State Forest Park. The Haurangi Road which joins the eastern end of the New Zealand Forest Service track after running several kilometres up the Rukaakaputuna River is one of only two formed roads to the Haurangi State Forest Park boundaries, the other being the main Cape Palliser Road which touches the Park's western boundary for a short distance where the other end of the rough track emerges. At each end of the New Zealand Forest Service track where it meets the legal formed roads are a collection of buildings used by Park staff. Overall, the lack of vehicle access to much of the Haurangi State Forest Park is a problem.

The rest of the study area outside the Haurangi State Forest Park and its immediate boundary areas consists of pastoral farms of various sizes, intensities of management and connections with other farmlands outside the study area. In the east, north-east, they are mainly large, non-intensively managed, station-type units with large areas of scrub of various ages and types. To the north and north-west the farm units become smaller, more intensively managed and diverse in production, using the lower flatlands fully but leaving the higher terraces and foothills of the Aorangi's in scrub-grassland or scrub-forestland.

The south-west is different again, being non-intensively managed large blocks, with few owners living on the properties and scrub-forestland or forestland at the back of the sections along the Haurangi State Forest Park boundary. The owners often live elsewhere
in the north-west of the study area or outside it, either leasing the blocks or running them in conjunction with their other farm units. In the far south the units are the least developed, being largely steep cliffs or slopes running into a narrow rocky coastal plain.

The history of the area is the gradual evolution of these pastoral units over the past 130 years, with the best lands of the north-west and north developed first. The total population of the whole area is likely to be only a couple of hundred, including the bach settlement's permanent residents.

2.5.3. Recreational Assets.

The Cape Palliser area has two main recreational foci; one, the rugged coastal lands which provide opportunities for fishing, good scenic panoramas and isolation from urban life for campers, day trippers and bach owners; and two, the Aorangi Mountains with their variety of easy tramping opportunities, scenic vistas, natural surroundings and hunting opportunities. Hendry's (1972) study showed that fishing and hunting were the favourite recreational activities of those interviewed and that the distinctive scenery, natural surroundings, feelings of remoteness and privacy were the qualities most liked about the area.

The generally better summer weather of the area compared to the western mountains, cited in section 2.4.5, may be a factor in day trip visitation.

Hendry (1972) also listed tramping, walking on the beaches,
reading and swimming as the next most popular recreational activities to hunting and fishing. All can be directly related to the mountains or coast, except reading which is a more passive recreation related to isolation and privacy.

The Haurangi State Forest Park staff, through the Haurangi State Forest Park management plan, confirm hunting as the main recreational activity of the Park. Hendry's work was directed at the coastal bach settlements and thus is not aimed at clarifying the recreational assets or needs of the whole study area and its people, but it is the only recreational study undertaken in the Cape Palliser area to date.

2.5.4. Scenic Assets

The scenery was cited by Hendry (1972) as one of the qualities most liked about the Cape Palliser coastal areas. It is important that the scenic assets are discussed because they play such a key role in National Park assessment later and should play a similar role in any deliberations dealing with the future of the area's natural landscapes. No formal scenic evaluation has been done to date and the following paragraphs reflect the views of the author, excepting the specific sites listed at the end of the section.

The overall scenic asset of the Cape Palliser area might be summed up by referring to the variety of landscapes it has in a relatively small area. The vegetation ranges from pasture to forest in a few kilometres and as described in section 2.4.6, (a) is very complex in structure and has great variety. The terrain rises from sea level
to over 900 metres in a short distance and includes rocky peaks, a series of terraces, a rocky coast with rough seas and deep ravines. The nearness of the Aorangi Mountains to the sea, the flat Wairarapa valley farmlands and rolling hills of the eastern Wairarapa means a great variety of vistas are possible in a short distance, some of which are quite dramatic to those not familiar with the area or such scenes.

Various specific features within the study area have been identified as scenic assets either by reservation under the Reserves Act 1977 as Scenic Reserves or by the number of people who visit a particular locality who give as their main reason the scenic attraction.

The 'Pinnacles' of the Putangirua Valley (see Photo 7, p 47) and several ocean headlands and reefs represent the former while the upper Ruakakaputuna River valley and the Martinborough caves represent the latter. These specific scenic features draw visitors from at least a regional base as does the general coastal area of the Palliser Bay section of the study area and the Aorangi Mountains. It is difficult to assess the importance of the scenic attractiveness of the area, but it is thought a significant factor in judging the value of the land for alternative uses.

2.5.5. Tenure Patterns

In section 2.5.2. it was made clear that the Cape Palliser area was a mixture of farmlands of various types and degrees of management and public lands of various functions. In practice there is a significant degree of overlap between the two, including the direct leasing of public land for farming by private individuals or groups,
and the negotiation of public access across private land.

A third type of tenure in the study area, Maori lands, though they are often included with private lands, contain cultural elements and sale and management regulations different from freehold title. In practice, though, the Maori lands of the Cape Palliser area have been sub-divided for bach settlements, sold to private individuals or groups and government agencies, reserved for cultural, scenic and historical reasons and leased for farming, including the development of pasture lands. In this use pattern described above little difference can be distinguished between the Maori lands and freehold lands though this could change rapidly in the future if the Maoris seek a closer personal working union with their lands.

Lands under Crown tenure have very strong tenure rights and are not subject to current operational statutory planning laws. In theory regional planning schemes will bind the Crown once the Crown approves the schemes, but no regional planning schemes have yet been drafted for the study area and one is not likely for many years. Thus the various public agencies controlling Crown lands will continue to have complete freedom to plan the use and futures of their areas. The New Zealand Forest Service is a good example of this situation with respect to its control of the lands comprising the Haurangi State Forest Park. Other public lands leased by private individuals or groups for the purposes of farming or other uses are either long or short-term leases with various conditions attached. In general the leased Crown lands in the Cape Palliser area are the long-term type and will continue to be managed by their lessees as parts of farm units. The Crown agency controlling the land will be able to exercise some
control over the use and management of all or any part of these lands should the need arise and ultimately as of right could retrieve control by purchasing the leases back.

The Maori lands that are leased are in a similar situation to the Crown leased lands in that ultimately the Maori owners can control the use or management of all or any part of their lands. They are, however, bound by the statutory planning regulations, unlike the Crown.

The private lands of freehold title are controlled by those that own them but are also bound to abide by the statutory planning regulations operating through the local government's District Scheme. Conflict can and does arise between the owners and local government but the local government prevails unless otherwise directed by a planning tribunal or a Court of law. This situation applies to Maori land also.

In section 2.3, tenure was used to define the boundaries of the study area. In the sections to follow, tenure becomes the basis for describing the conflicts and problems besetting the area so defined.

2.6. A Description and Discussion of the Issues and Conflicts Acting in the Cape Palliser Area.

2.6.1. Introduction.

The major conflicts and issues acting in the study area can be divided into two groups:
(i) those individuals or organizations who through
legal tenure directly control or own property
rights to land

(ii) those individuals, groups or public agencies
that are actively involved with some aspect of
land use, management or planning in the study
area but do not have tenure.

The first group can actively use, manage and plan the lands
under their control while the second group can only seek to influence
the first either directly through legislation (e.g., Town and Country
Planning Act 1977) and finance (e.g., bank lending policy) or
indirectly through discussion, political pressure or the media.
Finally it is noted that public agencies with tenure control often
have internal management conflicts which can divide their effective
control by forcing long delays in active management programs. They
often also have institutional or statutory interests in lands outside
their tenure.

2.6.2. Land Owners

2.6.2.1. New Zealand Forest Service (N.Z.F.S.)

(a) The Land. The N.Z.F.S. controls the largest piece of
public land in the Cape Palliser area. This is made up of
the 15 148 hectare Haurangi State Forest Park and a further
3 730 hectares of former D.L.S. controlled farm settlement
land managed as part of the Park since 1974 but not yet
officially vested in N.Z.F.S. control. The latter area will
also be discussed in section 2.6.2.2.

The H.S.F.P. was proclaimed on 19 December 1974 (New Zealand Gazette No 122, 2975) and is also known as Haurangi State Forest 34 of the Wellington Conservancy of the N.Z.F.S.

(b) N.Z.F.S. Forest Park Policy. Since the H.S.F.P. was proclaimed, the N.Z.F.S. has been working on a Management Plan for the area. An analysis of the Plans, guiding philosophy and policies, procedures followed and results, will serve as the basis for describing and discussing the conflicts and issues pertaining to the N.Z.F.S. controlled land.

There are several Government Acts, regulations and policies which serve as guidelines to the administration and philosophies of management of Forest Parks (see Appendix III.) From these, the following main guidelines emerge:

(i) Water and soil conservation, by the maintenance of flora and fauna, is the primary management objective in Forest Parks.

(ii) The development of National Parks and Forest Parks should be complementary with the pressure on National Parks being relieved by strategically located Forest Parks and recreation areas within easy reach of growing urban populations (Conway 1977).

(iii) Large areas should be maintained predominantly in
a natural condition but with the provision of tracks, bridges and huts for public access and safety.

(iv) To safeguard sites and features of scenic or historic value and to preserve biological associations of scientific interest, including non-forested land.

(v) To permit the limited development of facilities for intensive public use close to forest boundaries.

(vi) To utilize for the production of exotic timber, scrublands, within the boundaries that have no value for preservation.

(vii) To allow limited utilization of merchantable indigenous forest with the aim of encouraging regeneration and management in perpetuity as indigenous forests.

(viii) Each Forest Park shall have an advisory committee.

(ix) Access to Forest Parks is unrestricted (except for hunters, boats and aircraft (including helicopters), who need a permit.

(x) Within a year of the gazettal of a Forest Park a management plan must be produced and submissions on any plan called for from the public.
We can now judge the effects of these guidelines on the H.S.F.P. Management Plan and in turn the plan's effect on the natural landscapes it controls.

(c) The Management Plan (the Plan). The H.S.F.P. Management Plan contains zoning techniques and a multiple-use concept as the main tools to apply the guidelines of section (b) to the specific situation, issues and conflicts of the H.S.F.P. lands. Zoning was adopted so that compatible uses are allowed in the same physical area and incompatible uses are separated. Zoning is also an efficient and effective way of achieving multiple-use strategies and satisfying plan objectives. One must always be careful that these tools do not become ends in themselves (i.e., the fact that many zones are recognised as useful in Forest Park environs does not mean all of them must be used in each Forest Park).

The remainder of this section will seek to match up elements of the H.S.F.P. Management Plan with the N.Z.F.S. policy guidelines, at the same time discussing any problems or conflicts relevant to each policy.

The H.S.F.P. Management Plan adopts water and soil conservation as its main goal in keeping with guideline (i). This has the effect of protecting the existing natural landscapes and as such meets with no opposition from any quarter.

Policy (ii) talks of managing Forest Parks in a way complementary
to National Parks. This question is never specifically raised in the Plan though its presence near the Wellington urban complex and the Wairarapa may take some pressure off National Parks, especially if travel is restricted by energy shortages or prices. In a N.Z.F.S. document analyzing public submissions on the Plan, mention is made that a preliminary N.P. assessment is pending, but no comment is offered. It has been my experience that there is passive resistance amongst some N.Z.F.S. staff to a N.P. status or even a study occurring as to the area's potential. However, in carrying out the assessment of the areas N.P. potential, documented in Chapter 4 Part II, I found co-operation throughout the work. This may have been because the H.S.F.P. lands did not have a strong intuitive appeal amongst N.Z.F.S. staff for N.P. status under existing criteria and no real threat to N.Z.F.S. control was perceived. Nonetheless, there is nothing in the Management Plan that prejudices the long-term prospects of the area becoming a N.P. and in fact the main goal, noted previously, implies the opposite. There are some policies such as deer control and exotic tree planting which would need to be altered but these are relatively minor issues in the overall retention of the area's natural character. It is fair to conclude from the above that any conflict concerning N.P. status or assessment in H.S.F.P. area remains at a personal level and outside the official policy guidelines of the N.Z.F.S. This does not mean the problem is insignificant. The conflicts between staff and outsiders and amongst staff often lead to delays, bad feelings and the inefficient use of resources. If allowed to go unresolved these problems between various personnel will result in a complete stalemate and the crucial element of co-operation will be lost.
A great deal of work is needed to overcome this problem, beginning with the official recognition of its existence. This recognition has yet to be forthcoming. Before leaving this topic, it is worth mentioning that the staff conflicts are not necessarily focused or based on one area or issue, but can be nationwide or have their roots in issues, seemingly un-connected either physically or theoretically. Thus the conflicts in the Cape Palliser area could have their roots in Southland which makes the job of resolving these differences very difficult indeed.

The H.S.F.P. Plan covers guidelines (iii) and (iv) by either policies aimed at achieving better access for the public and promoting the safety of visitors, or by establishing zones that recognise biological associations of scientific interest, scenic features and historic sites and seek their preservation accordingly. There is no major conflict surrounding these policies on zones, except where groups argue for wilderness areas where currently huts and tracks exist, or where the type of control of deer numbers in ecological zones is disputed. These outstanding issues appear resolved by the Management Plan and articles in the Plan allow for review of the situations in the future should circumstances change.

One of the most complex conflicts in the H.S.F.P. lands surrounds the Management Plan's zoning of three small areas for recreation facility development. The general theme for these zones is outlined in guideline (v) so they are not extraordinary items.
The essence of the conflicts seems to lie with disputes over what is the appropriate use of the coastal lands in the area. The Department of Lands and Survey (D.L.S.) does not want development in one area near Cape Palliser because it feels the scientific value of the biological resources in the area outweighs the recreational value. At another coastal site the D.L.S. preferred to have native species planted instead of exotic trees. These two conflicts, coupled with staff conflicts, led to a whole host of other conflicts concerning land use in general. Submissions have been made on the H.S.F.P. Management Plan by the D.L.S. concerning the two outstanding coastal sites and use of exotic tree planting in general. The Park Advisory Committee and N.Z.F.S. staff seem to have agreed with the D.L.S. positions and altered the Plan accordingly. The resolution of these specific issues by clear statements in the Management Plan should lead to the resolution of other less specific conflicts that are connected to the overall area's future as perceived by the staff of the two government departments. The main remaining stumbling block is the mistrust built up through time which has resulted in some D.L.S. staff having little faith in the Management Plan intentions, even when amended. It is likely that eventually trust will be regained enough to allow satisfactory local or regional arrangements even if national conflicts remain unresolved.

There is no scope for the indigenous tree production described in guideline (vii) and so the Plan simply excludes this possibility. There are no objections to this policy because in
general everyone perceives the area as depleted of merchantable timber except for a few areas where recreation is considered more important.

Guideline (viii) calls for the establishment of a Park Advisory Committee and one has been duly set up by the N.Z.F.S. The main complaints about the Committee are that N.Z.F.S. staff make up a disproportionate number of the members, that it is also the Advisory Committee for the Rimutaka State Forest Park which has a different character, and use; and that the appointment of Committee members is totally in the hands of the N.Z.F.S. In answer to the first complaint, one must say that though N.Z.F.S. staff do make up about half the Committee members and chair the meetings, this representation is not out of step with N.Z.F.S. responsibilities. N.Z.F.S. staff provide all administration and research personnel and resources and run the Park on a daily basis. They have also built up some expertise in Park management and are familiar through field staffs with the realities of many problems. Finally the N.Z.F.S. remains responsible for the control and use of the H.S.F.P. lands by virtue of its tenure rights and can be expected to retain that control in any structure it establishes. The second complaint is more difficult to dismiss because other Forest Park Committees have been composed of people who have experience in or represent the main users of the Park in question. Thus the H.S.F.P., because it has different user patterns and a different geographical situation, should not be treated like the Rimutaka Forest Park lands. In defence of the status quo one must refer to the expense and time used by
Committee meetings as well as the reality that the H.S.F.P. does not seem to have a sufficient work-load to warrant its own Committee. The last complaint is connected to the other two and contains a further element of trust of N.Z.F.S. intentions. This trust is essential if a rational planning system is to emerge. Legitimate complaints and opinions from the public should be heard and acted on by N.Z.F.S. staff for these people are the clients for whom they plan. Overall, the Committee system seems a good one even with a large N.Z.F.S. membership, provided the public are heard and the users of the Park have a voice in its Management. The H.S.F.P. may need its own Committee to fulfill its job properly, though the meetings might be well spaced in time compared to the present situation.

Guideline (ix) covering access rights and special uses is catered for in policies of the Plan and no objections are pending.

The final guideline is covered by the actual procedure followed in producing the final Management Plan for the H.S.F.P. The procedures were; a draft plan is prepared by N.Z.F.S. staff, public submissions are called for through the media, the submissions are compiled and analyzed by N.Z.F.S. staff in conjunction with the Advisory Committee, changes are made and a final plan is produced. The procedures as outlined above are reasonably rational, comprehensive and efficient, though the following points might help to make them more responsive to the public client, and anticipate the conflicts at work in the areas:
(1) N.Z.F.S. staff should make greater attempts to solicit public opinion on the use of the Parks and to recognize and understand the many issues acting on any Park and the lands adjacent. If this perspective was developed before the draft plan was formulated and released, a great deal of conflict and delay could be alleviated.

(2) A strong statement concerning the stature of the Management Plan should help to win the trust of those organisations skeptical of N.Z.F.S. intentions, though there is no substitute for action on the ground that adheres strictly to the Management Plan's intent.

(3) The proposed alterations to the Draft Plan should be circulated to at least those who won points so that what is finally written is a realistic representation of the intended changes.

More time than is presently allocated for the procedures may be needed to include these points. The current time allocations are unreasonable, for the H.S.F.P. Plan procedures are running several years behind schedule resulting in contradictory statements to the effect that the Plan will cover the period 1977 to 1987 and it is still not released in mid-1979. It seems better to take the time to get an adequate draft Plan organized, thus speeding up the later stages.

(d) Outstanding Problems and Issues. It is obvious from the previous section that the H.S.F.P. Management Plan and its development procedures were successful in anticipating and alleviating many of the issues and conflicts raised by the submissions on the Plan. There are, however, several major problems with the scope and structure of the Plan and the Forest Park status. They could be summarized as follows:
(A) The Management Plan objectives (see Appendix IV) do not give enough guidance to the administrators of the Park or information to the public as to which objective has priority over which others when they conflict. Without a clear hierarchy and considering the broad nature of the objectives, almost anything could occur in any given situation. This runs contrary to the intent of rational planning and makes the resulting Plan much less effective a guiding document. It is true that often the current staff know the underlying intents and priorities of each objective, but staffs change and the public is entitled to be clearly informed on the intent.

(B) The Management Plan identifies some areas outside the Forest Park boundaries as having qualities or resources suitable for inclusion in the Park. Several of these areas have been identified by other public and private organizations as valuable. The response of the Plan, after having identified some of these areas, is to give low priority to the pursuit of their inclusion in the Park. This seems an inappropriate stance by the N.Z.F.S. since these very areas will face the brunt of development pressures. The N.Z.F.S. by virtue of its ownership role in the Cape Palliser area and its institutional role in preserving and conserving indigenous tree and plant species, should take a leading role in the decisions and discussions of the future of these areas. There is no other organization so placed in the study area. This intent to participate should be clearly spelled out as an objective in the Plan... Failure to broaden the present horizons will almost certainly result in the destruction of the natural areas remaining outside the H.S.F.P.

(C) Forest Park status with its institutional foundations and lack of legislative basis, has been the subject of much debate concerning the ease and speed with which major objectives and policies can change. This is in theory correct. The N.Z.F.S. could alter the entire intent of a Management Plan with a notice in the press and no public involvement. I feel, however, that the N.Z.F.S. by adopting the Management Plan procedures they have and setting up the Advisory Committees are committed to a long-term social contract with the public. In practical terms this means any major change attempted (e.g., logging indigenous trees) with undue haste and no public consultation would raise considerable public ill-will and political pressures. Having said this, it still remains true that vigilance is the best protection to any group with a continued interest in the area.
Map 3. Haurangi State Forest Park
The final point concerns the N.Z.F.S. policy of making recreational uses secondary in all zones where it is permitted. This issue raises some fundamental theoretical problems with calling an area a 'Park', but giving logging and works such as hydro-power schemes, precedence over recreational uses. Though not too great an issue in the H.S.F.P. area, this has been contentious in other Forest Parks. I understand a recent policy change has occurred in the N.Z.F.S., making recreation a primary use. This would, of course, remove a substantial theoretical problem area and at the same time instill trust to those who believe Forest Park status is only a device to hide offensive practices and prevent loss of tenure control while continuing in traditional policies of exploitation and development.

Map 3 (p 61) shows the H.S.F.P. area, the major zones of its Management Plan and the natural areas lying outside the boundary.

2.6.2.2. The Department of Lands and Survey (D.L.S.)

(a) The Land. The D.L.S. is the second-largest land owners by tenure control in the study area. Out of a total ownership of approximately 12 000 hectares, the following categories could be derived:

(i) 3 730 hectares is former farm settlement land now managed by the N.Z.F.S. as part of the H.S.F.P.

(ii) 7 000 hectares is on long-term lease to private individuals or groups for pastoral farming.

(iii) 1 270 hectares is reserve lands of various
types of status administered by the local authority.

The net result of the above situation is that the D.L.S. has a long-term guidance role, rather than a short or medium-term administration or planning function over the lands it owns. The right of ownership is retained (except where the right to freehold is part of a lease agreement) by the Crown which means the land could be taken out of any current use by either purchasing lease rights and improvements back or cancelling the informal control vested in the N.Z.F.S., or formally in local authorities. Both these methods of regaining direct control can be done as of ownership right. In practice the retaking of control seldom occurs. The D.L.S. almost always seeks to persuade or control by amendments to leases the use of its lands. It can in its role as a farm development loan advisor or supervisor also influence land uses through financially-based regulations.

(b) D.L.S. Policy. Traditionally the D.L.S. has been a land development agency. This has meant that its policies for Crown land, apart from the lands specifically set aside for reserves, have been oriented towards either directly developing farm units for settlement by private individuals or organizing the leasing of land for farming purposes where possible. In recent years several new dimensions have been added to its function. These include:
Coastal reserve investigations designed to identify: specific areas needing protection, and principles of coastal land use that will help local authorities guide the planning and conservation of their coastal resources. These investigations cover lands of all tenures including those lands under the control of other public agencies (e.g., N.Z.F.S.).

Investigations into the ways the margins of lakes, rivers and streams can be protected from development and where possible public access negotiated.

The general principles involved with the maintenance of important rural vistas are being explored.

From the Department's involvement in the planning and administration of National Parks and many hundreds of reserves of various types throughout New Zealand, a general program of assessment of potential reserve and National Park areas is under way.

In consequence of all the above, the Department has become involved in the planning and management of many areas of Crown land for purposes other than farm development. It has also become a guiding force in local authority statutory planning where Crown lands are involved or where one of its new functions or directions dictates acting in rural lands at large.
The greatly broadened scope of D.L.S. functions and policy has led to both internal problems with staff who are development oriented and external problems with other land owners. The former issues revolve around the best use of Crown lands and the latter around the best use and planning of virtually all rural lands, at least in the fields of the conservation of natural landscapes. We can now turn to the Cape Palliser area to examine the D.L.S. position both as a landowner and as an advocate of natural landscape conservation.

(c) Conflicts and Issues. The conflicts and issues outlined in this section will initially be ordered around the three categories of Crown land set down in section (a) with a further category added dealing with the functions outlined in section (b).

The former farm settlement, now managed as part of the H.S.F.P., is the centre of some complex conflicts and issues. Soil erosion and flooding problems downstream from the Turanganui River catchment, which drains most of the area, caused the idea of farm development and settlement to be abandoned in the early 1970s. An exotic tree planting program and transfer of control to the N.Z.F.S. was proposed as a solution initially. The change in control and planting was begun. Then some of the other functions of the D.L.S. took hold. The need for, and desirability of, exotic tree planting was questioned in favour of letting native species regenerate and the N.Z.F.S. plans for the development of coastal areas both within the old farm settlement boundaries and outside met with objections. Many years elapsed while the
H.S.F.P. Management Plan took shape. The draft version stuck to the ideas disagreed with by the D.L.S. and so they held up the formal transfer of control to the N.Z.F.S. Many more years passed and the N.Z.F.S. found itself in a peculiar and uncomfortable position. Antagonism built up between staffs of the two departments and the matter stalemated. After recent submissions on the Management Plan by the D.L.S. and others, plans have been dropped to use exotics both inland and on the coast in favour of native species and development plans in the coastal areas recognise the dominance and importance of conserving the natural landscapes. If these changed ideas are clearly transferred to the final Plan, no reason for not transferring control will remain. There will still be some suspicion amongst opposing staffs as to the sincerity of the new plans and the validity of original objections, but hopefully reason will prevail.

Blame for this conflict is difficult to attach to any one person or idea. The N.Z.F.S. on one hand should have approached the D.L.S. concerning any outstanding coastal reserve or conservation ideas and looked carefully at native regeneration potential (i.e., F.R.I. experimental plots) before advocating exotic tree plantations, especially on tenuous commercial grounds. The D.L.S. on the other hand should have made its position clear before transfer of control was initiated. One or a combination of both the above moves would have likely saved a lot of time and prevented the whole conflict from escalating and its origins becoming rather blurred as staffs changed through time.

The 7 000 hectares of Crown lease lands present few problems
except where they contain native bush or scrub associations thought rare or as part of the concept of preserving scarce natural landscape resources against unnecessary development. The D.L.S. has not identified those areas in these lands (if any exist), nor designed any policy to conserve them if identified. The consequences of this failure to increase the basis of existing land use administration concepts with respect to these areas will likely mean they will be progressively destroyed for farm development. This possibility is increasing presently through public policies designed to increase stock units nationally by below-market interests on loans for the development of reverted and undeveloped lands. The Department needs to take an active role in identifying the important natural areas on its lands so that any development plans take these into account and an example is set to other owners of adjacent but similarly endowed country. In real terms the amount of land in the Cape Palliser area Crown leases worthy of conservation or preservation will be quite small so most development plans will be affected only slightly. In other areas of the country under the same pressures the amounts of land may be considerable but the principles remain the same. The D.L.S. must identify the areas it wants preserved and actively pursue the reservations beginning with its own lands.

The areas designated in a reserve status in the study area are all vested in the local authority for daily control, except a reserve strip along the upper Ruakakaputuna River which has no active management control as such. It may be that reserves adjacent to the Forest Park such as the Pinnacles Scenic Reserve
could be better managed in conjunction with the Park and should change status and control. This step could lead to a better use of resources and more comprehensive visitor planning. There are no significant conflicts at present in these reserve areas, though conflicts could develop quickly especially in the Cape Palliser area if a large scientific and scenic reserve is formed adjacent to the Forest Park. A better solution would be a Forest Park expansion with appropriate zonings. The Ruakakaputuna River valley deserves more attention for its scenic assets and access development and either the D.L.S. with its function of river margin conservation or the N.Z.F.S. by expanding the H.S.F.P. boundary, could help protect and manage this regionally important feature.

The broader concerns of the D.L.S. have manifested themselves in a comprehensive coastal lands study designed to help guide the conservation of coastal lands resources through the statutory planning procedures in conjunction with the local authority, the Featherston County Council. A report is nearly complete. This report could, in co-operation with the County Council, N.Z.F.S. and other owners of the coastal lands, ensure a more holistic view is taken of the future planning and management of the Cape Palliser area's coastal lands.

The preservation of natural landscapes not in Crown tenure and away from the coast will require a similar co-operative approach if ill-advised incremental development is to be arrested. Much can be gained if a forum is established in which all the groups
mentioned above can interact with other interested groups (i.e., Wairarapa Catchment Board) to plan these areas. Such a forum could deal with many other outstanding issues (e.g., soil erosion) involving the overall planning of the whole of the Cape Palliser area. The N.Z.F.S. would be the logical chairman in view of its large land holdings and central position in the issues at stake, at least until statutory regional planning is established and working in the region. The sheer complexity and scope of the issues at stake and the fundamental conflicts in land use philosophies amongst the various parties and society at large require that such an ordered, comprehensive planning tool is needed if the best land use and status for these lands is to be decided rationally. No progress is likely in the meantime. This idea will be explored in more detail in Chapter 5.

Map 4 (p69) shows the various Crown lands in the Cape Palliser area.

2.6.2.3. Maori Land.

(a) The Land. There are approximately 2 500 hectares of Maori owned lands within the study area. In physical terms these lands can be broken down into two basic locations. The first group of units are large blocks, little developed for pastoral farming and located in the southern part of the study area between the sea and the H.S.F.P. The second group is much smaller blocks, usually completely developed for pastoral farming and lying along the margins of the Turanganui and Tauanui Rivers.
Both groups of land are leased for pastoral farming purposes under the general guidance of the Maori Affairs Act 1953 and the Maori Land Court. The actual tenure could be either Maori freehold land, Maori Reserve lands or Maori land incorporations and trusts. Each type of tenure involves a different organizational approach by the hereditary owners to the use of the lands.

Much of the Maori land in the Cape Palliser area seems organized through Maori land trusts, though no comprehensive survey was possible. A trust may be constituted by a group of Maori landowners applying to the Maori Land Court to have their land vested in appointed trustees. The owners retain a direct interest (not shares) in the land. The trust then authorizes or directs the trustee to use and manage the land for any purpose.

(b) The South Blocks. The large partially developed blocks of land in the south often contain important natural landscape features such as; rare cliff and coastal plant associations and scenic coastal and mountain vistas. The lack of development in these lands is due to the naturally rough characteristics and the fact that the lands are leased and the lessees were not enticed or obliged to develop. There has been, however, some sub-division of Maori coastal lands for bach settlements but statutory planning has confined this practice in the future to only one area not of Maori tenure.

The Maori owners have been approached through their representatives to get certain features officially designated in reserve
status and Crown ownership, being successful on one occasion (i.e., Kupe's Sail Rock Scenic Reserve). Talks continue sporadically on the management of the other areas considered as having potential for reservation. The D.L.S. may approach the Featherston County Council to get some of these potential reserve areas designated on the District Scheme, thus giving them some protective status and management orientation. This program of designation will be run in conjunction with talks on the area's values with the owners in recognition that should the owners fight the designations, political pressures could be generated and financial remunerations sought that are beyond the means of the local authority or the D.L.S. to satisfy. To date the owners generally disagree with reserve plans, but agree there are important natural and cultural features in the areas. They are also unwilling to sell the lands to the D.L.S. and the D.L.S., not having funds to purchase the lands at the present time, is not pursuing this avenue. The N.Z.F.S. could enter the fray by negotiating the purchase of the lands for inclusion in the H.S.F.P. but the unwillingness to sell would almost certainly remain. Thus a stalemate has developed, involving: the D.L.S. representing the conservation of coastal resources unwilling to request the designation of the areas as proposed reserves for fear of losing current co-operation with the owners who allow complete public access to their lands and the inability to bear the financial costs; the N.Z.F.S., holding back any active pursuit of adding the areas to the H.S.F.P. for fear of losing the present goodwill established that helps in the management of the Park areas surrounding much of these lands, and lack of
funds to purchase the lands; and the owners who refuse to sell but recognize the need to conserve various natural and cultural features.

One solution, not fully explored by any party, is a rate relief grant to the owners. This would mean they would not need to lease for grazing to raise annual county land rates and at the same time one of the greatest causes of the depletion of the area's native vegetation cover would be removed. The county, or the N.Z.F.S., could then undertake to manage the human use of the area primarily to prevent the destruction, by fire or the indiscriminate use of vehicles, of the native vegetation, but also to preserve archaeological sites, provide camp sites, undertake replanting of native species and establish more access into the H.S.F.P. The Maori owners could then have a member on the Forest Park Advisory Committee to oversee the management, safeguard cultural resources and be a consultant on appropriate Maori interpretation of the features and history of the area.

(c) The North-West. The smaller blocks of land along the main rivers of the north-west and the Te Kopi block each contain a certain portion in grassland and scrub often with patches of forest in which grazing takes place. The preservation of the more important natural features requires first identification and then negotiations with the owners either using rate relief and fencing, or outright purchase as the case may dictate and if the owners will sell. The former program seems to have the greatest prospect of success where the lands are not of
reserve quality, but of general landscape value and not adjacent to the H.S.F.P. The latter tactic may apply where the lands are adjacent to the H.S.F.P. and/or the owners are willing to sell.

The few patches of native bush along the main rivers are almost the only such remnants left in the lowland country of the north-west and continued grazing under the mature trees will ensure the eventual destruction of these areas. Since access to the H.S.F.P. in the north-west is along these river beds (by foot) the retention of the native bush areas has a direct impact on the whole nature of the land and the visitors. Because of this, the N.Z.F.S. might correctly interpret a role for themselves in maintaining the patches of bush by helping with fencing of the larger areas and giving some financial help to the owners for the loss of grazing revenue experienced. Ownership of the land need not change if these policies were adopted by the N.Z.F.S. or any other interested party.

(d) Conclusions. The Maori lands in the Cape Palliser area have diminished considerably over time as can be seen on any cadastral (tenure) map noting the section names and numbers. This has left some small areas in the north-west along the rivers and the extreme south. These areas contain a disproportionate amount of natural landscapes to the freehold lands adjacent, partly because they are on the roughest areas remaining (south) in the study area outside the reserves or H.S.F.P. and partly because they are leased (north-west) so as to not promote full development by the lessee. Purchasing the important areas of Maori land for
reservation is out of the question at the present and may be culturally undesirable in the long term anyway. Other methods need to be used such as rate relief, co-operation and financial assistance from the D.I.S. or the N.Z.F.S., that leave Maori ownership intact but help protect the various features needing preservation. Statutory planning should only give effect to these ideas after agreement is sought and reached. It should not be used to force a polarisation of positions, that is, unless a valuable area is in imminent danger of destruction.

Map 4 (p69) shows the lands of Maori tenure.

2.6.2.4. Freehold Lands.

(a) The Land. The remainder of the study area, approximately 15 000 hectares, is freehold tenure divided amongst several dozen farm units owned by individuals or groups. The size and degree of development of each unit is dictated by the history of settlement and the physical nature of the land.

In the south-west, the land is broken up into large blocks and usually farmed in conjunction with other lands outside the area. There are few owners living on the properties and consequently few buildings. The buildings that do exist are used in conjunction with seasonal activities such as shearing and tailing and occasionally a bach is present for the recreational purposes of the owners or friends and used by the seasonal farm workers.

The farm units of the north-west, north and north-east tend to
be made up of smaller blocks of land more intensively managed and containing a residence for the owner or manager. The lower lands at the outside of the study area boundary are the most developed in the farm units and the higher lands adjacent to the H.S.F.P. the least developed. Most farm units are a mixture of the two degrees of development. Several of the farm units in the north and north-west contain one or more blocks of Crown land leased on a long-term basis. These farm units with Crown land elements tend to have a higher portion of their land in a less-developed state partly because of physical limitations and partly because of the Crown tenures.

In the east of the study area the land blocks become larger and so do the farm units. These units are entirely freehold and often contain large areas of undeveloped land. Most of the farm units have the owners or managers living on site and are run as pastoral stations. The more developed areas are along the Opouawe River, the streams and the flat areas adjacent to these water courses, not only because of the easier terrain but because summer droughts are frequent.

(b) Land Use Policy. It would be incorrect to assume that each individual farm unit is managed only so as to maximize profits. There are as many different social circumstances (e.g., family history, the age of the farmers and the individual philosophies of life) as there are physical circumstances to combine to form any farm unit's ultimate management orientation. However, it is generally true that man wants to maximize his well-being and
this idea is very closely associated with his income and the ability to use the income to maintain or increase the resources needed to pursue his and his family's well-being. Overall, further development is possible on most of the farm units and the farmers see this as one option for increasing income. The fact that historically they have not borrowed in the market place to develop these lands but usually to increase the efficient use of already developed areas, leads one to believe the returns for effort of developing were not attractive enough to compete with other options. It may have been that recognition of past mistakes in developing unstable higher lands or even environmental consciousness in one form or another, also played a part in these decisions. It is not possible in this report to assess each farmer's motives, but it is significant that they did not embark on development programs in their lands marginal to farming in the past under normal market conditions.

This situation has altered in recent years as loans have been organized through government agencies (e.g., the Rural Bank) at interest rates below and repayment terms significantly easier than the market allows and aimed explicitly at undeveloped land. The result, not surprisingly, has been a significant increase in the development of undeveloped areas in many of the freehold and freehold-Crown leasehold farm units.

(c) **Conflicts.** The situation described in part (b) has led to several levels of conflict. On one level agencies such as the D.L.S., the N.Z.F.S. and the Wairarapa Catchment Board, are
trying to maintain the water, soil, landscape and ecological values of these same lands being developed. A lack of policy and identifiable parameters for these values has led to much confusion as to whether any particular developed program is, on balance, in the interest of society at large. Most decisions to date seem to favour development and it is a matter of urgency that some guidelines are developed by those agencies mentioned above in their fields of concern. Added to this broad conflict on both sides are positions held by other government, ad hoc and private interest groups, thus making judgments on the desirability of development very complex indeed.

In real terms an observer can see lands retired from grazing almost adjacent to lands being developed for grazing. Statutory planning has not helped resolve these conflicts, being handicapped by the same lack of data and parameters as those groups opposed to development and having no clear social priorities to guide it. It is also evident that once an area is developed, much conflict ceases because the resources have been altered completely.

(d) Conclusions. The questions raised concerning the development of forest and scrub lands, being part of freehold tenure or freehold-based farm units, by using public money at better-than-market conditions, are complex. The government appears to be working against itself. A full discussion of the economic problems inherent in these conflicts, and their possible solutions, will take place in Chapter 3. At this point a general discussion of the theoretical background and its manifestations will suffice.
Freehold tenure has historically guaranteed the owner theoretical control of land use planning and practice. However, over the years Government has exercised increasing control of land use by regulation, legislation, or finance. In support of this statement I cite a former Minister of Lands and Survey and current Minister of Agriculture (Hon. D. MacIntyre 1976) who said, "so-called freehold land is fenced around with enough laws, regulations and customs to make something of a nonsense of the term freehold". Nonetheless, the freehold tenure owners continue to have a large say in the daily use and future use of their lands. In order to promote a more rational use of land Mathieson (1976) suggests that freehold tenure should be replaced by some kind of Crown lease system where conditions could be spelled out more carefully. Mathieson further claims that in fact since the Crown owns all land, ultimately the Crown lease system is in effect already and only needs reform. This answer to the problems of organizing land use may be correct in law but the cultural, psychological and political aspects of such a shift, even if in name only, are considerable and would be seen as extremely radical by almost all of society. There are no simple answers but clearly the Government is working against itself when it promotes the development of and preservation of the same lands simultaneously. In the study area, though not necessarily the whole country, the use of financial assistance outside the market may have been an error considering the lack of knowledge of the ramifications and the resources being altered. In short, closing future options may not have been wise or necessary. At the same time the freehold owners are caught between decisions on whether to take up
Government loans that will increase their personal income and Government regulations and pressure group ideals that will close the development option. It is obvious what they will choose, and it is up to Government to make clear the constraints within which they will develop or offered alternative income-increasing programs. Failure to do either of the above lies strictly with Government and it cannot claim simply that it wants development and preservation considered equally by the freehold owners. Guidance must be provided or the pretence of rational, comprehensive planning abandoned, resulting in the disappearance of all natural landscapes not currently under protective status.

Map 4 (p.69) shows the freehold tenure lands of the Cape Palliser area.

2.6.3. Non-Land Owners.

2.6.3.1. Historic Places Trust (H.P.T.)

The H.P.T. comes under the Department of Internal Affairs for purposes of Ministerial control and parliamentary responsibility but carries out its statutory duties as an independent agency. Its statutory duties are contained in the Historic Places Act 1954, the Antiquities Act 1975 and the Historic Places Amendment Act 1975. These Acts empower the H.P.T. to control, identify, research and manage all historic sites in New Zealand and control the distribution of artifacts. The scope of these powers is far beyond the current staff and resources of the H.P.T. Thus, privately-run interest groups, i.e., Historic Societies and University Departments, often help in all facets of the work.
Still there remains many gaps in the historic puzzle that makes up any land area.

The Cape Palliser area's European history has been researched by the Wairarapa Historic Society and several authors have made reference to the area in their books on the Wairarapa. The main sites noted are old farm houses, the whaling station at Te Kopi, an old graveyard and a memorial established to commemorate a ship wreck near Cape Palliser. All these sites are noted and given protective status under the local District Scheme except the Te Kopi whaling station which has all but eroded into the sea. There are really no outstanding problems concerning European historic sites in the Cape Palliser area, except the usual lack of data or records.

The prehistoric sites are a different matter. The staff and students of the Anthropology Department at the University of Otago have provided virtually the only information on the prehistory of the study area. To date several hundred sites have been identified and research into their structure, function and the nature of the people inhabiting them continues. Map 5 (p 82) shows the general areas where the investigations have occurred.

The H.P.T. controls these sites by virtue of legislation which gives archaeological sites whether they are Maori or not, registered or unregistered, protection by law. The basic problem the H.P.T. staff face is that even though they know these sites exist, there are not the resources to either acquire the lands
Map 5. Archaeology
which contain major sites or design management plans that would protect the sites from directly damaging developments or indirectly accelerated natural erosion. The only viable option open, then, is to make all land owners and the statutory planning authority aware of their existence and the law, leaving decisions on whether any particular proposed land use or development will destroy the sites up to the owners themselves. These decisions will require some liaison with the H.P.T. There are public agencies who recognize the importance of historic sites (Forest Park Policy and Reserves Act 1977) and who own land in the Cape Palliser area. It would be useful if their support was sought, so that their staffs can act as agents for the H.P.T. in judging the practicalities of what will or will not harm the sites. The Wairarapa Catchment Board and the Rural Bank also have significant connections with owners in the study area and should be approached to educate their staff as to the nature of the problem.

In the longer term the H.S.F.P. might incorporate all the major sites within it and then lease back the lands with no historic significance (with appropriate conditions of use) to the original owners so as not to disrupt their farming regime. The sites currently undergoing either erosion or burial by erosion will require a different approach. Retiring areas nearby from grazing and tree planting will help in some cases but in others the sites will disappear in any event. Perhaps these sites warrant the greatest emphasis of study before they are destroyed, but even limiting the work to these areas would be beyond the current H.P.T. resources and staff. It seems if society is
serious about the value it places on historic sites, more resources must be made available or the destruction of many sites is guaranteed.

2.6.3.2. **Wildlife Service** (W.S.).

The Wildlife Service, like the H.P.T., works under the political umbrella of the Department of Internal Affairs, but is independently operated. Its institutional and constitutional framework is set down in the Wildlife Act 1953. Its main terms of reference are the protection of rare or endangered indigenous fauna and the management of water fowl for sporting purposes. It has been recognized by the W.S. that the most effective way of carrying out its job is to preserve the range of native habitats and wetland areas respectively. The control of introduced predators is also important to the maintenance of rare and endangered species.

The W.S. has not carried out any studies of the fauna in the Cape Palliser area. It is felt (pers. comm.) that the maintenance or extension of the range of indigenous habitat in the area would best serve to safeguard the indigenous fauna until field studies could be undertaken. Attempts have been made to re-introduce some indigenous species (e.g., Weka) but success has been limited.

Conflict with the idea of preserving habitats is most notable in areas where freehold owners are seeking to develop their scrub
and bush lands for pastoral farming. Lack of staff and resources preventing general studies also prohibits assessments of the specific areas to be developed. One solution could involve the N.Z.F.S. assessing the value of each area proposed for development and if found to be a habitat not currently protected in the H.S.F.P. proposals for its inclusion, other reservation status or statutory protection could be advanced. The W.S. could then officially support such moves by the N.Z.F.S. for inland areas or the D.L.S. on coastal lands. Another solution might involve W.S. staff approaching the development loaning institution (if there is one) to seek co-operation in its objectives. It is likely that the areas removed by either option would be small in proportion to the total areas remaining free for development, though fencing or other management conditions might raise the amount of capital needed.

Like the H.P.T. the W.S. needs more resources and staff to properly fulfill its responsibilities and failure to do so will almost certainly reduce native fauna populations and reduce the possibilities of re-introducing species presently extinct in the Cape Palliser area.

2.6.3.3. The Rural Bank and Finance Corporation (R.B.F.C.)

The Rural Bank and Finance Corporation is a quasi-governmental organization established under the Rural Bank and Finance Corporation Act 1974. It has broad interests in general rural finance, sometimes dictated directly by Government policy. The Government loan schemes often contain policies that loan money
for specific purposes at below normal market interest rates, or with conditions more lenient than those normally found in the market place. It is these Government-sponsored schemes with their easier-than-market terms that cause conflicts of interest in the Cape Palliser area.

Beginning 1 August 1978 a Government-sponsored Land Development Encouragement Loan Scheme began. The scheme (Assistance and Incentives for Farmers, 1978) is aimed at encouraging the development of unimproved or reverted land. The terms offered are well below the normal market interest rates and outside normal repayment criteria. The result of the scheme has been to encourage farmers to increase their stock numbers by developing parts of their farms capable of improvements, but which would not prove economic under normal market loan conditions or be of sufficient priority amongst possible alternatives for increasing incomes. This is one of several such schemes administered by the R.B.F.C. that are designed nationally to increase overall stock numbers and ultimately foreign exchange earnings. The result of such a scheme is increased pressure for the development of scrub and bush lands in areas such as that in the Cape Palliser area.

Conflicts arise when the developments are proposed for lands which contain or have the potential to contain other values such as scenery, scarce ecological associations, wildlife habitats or historic places and effectively close options for their preservation. In recognition of these other values, the policies
for the loans state that:

"intending applicants as custodians of the land for the time being are reminded of the need to consider such matters as the preservation of historic places, wildlife habitat, scenic features, native forest species, flora, fauna, and natural areas". (R.B.F.C. pamphlet, 1978).

The problem is that the R.B.F.C. personnel who vet the applications do not have qualifications to judge these issues nor is the information available from other sources. It seems the R.B.F.C. staff are not directed to even seek out advice on these issues, but leave the matter up to the applicant's discretion. The overall result is that these issues are often ignored while the R.B.F.C. concentrates its decision-making solely on economic grounds. Thus, decisions on development approval and conditions of development largely ignore these issues.

The conflicts generated involve a complex mixture of private owners, government agencies and private interest groups, resulting in delays and controversy. In real terms the lack of information in many of these fields mentioned above results in development being approved.

The foundations for the economic decisions will be outlined and criticized in Chapter 3, but we can offer some solutions here. Society must ultimately decide its priorities; it cannot develop and not develop the same land. In the interim, staff could be provided for the R.B.F.C. that are skilled in matters other than economic analysis and they could use a multi-discipline
approach, seeking as much guidance as all the public and private interest groups can offer. This would at least ensure a more balanced decision. If Crown leasehold land is involved, then the D.L.S. could provide this guidance and an example beyond its lands would be set. The R.B.F.C. itself might have separate policies for lands in dispute or adjacent large reserved areas or development policy whereby the funds are to be supplied only to regions with the best returns per development dollar and away from controversial natural landscapes. Essentially, this would require a definite national target for stock increases that would first be met from lands not subject to controversy and may mean that one region is favoured over others. Some or all of these solutions will need to be actively pursued if the erosion of natural landscapes is not to become a direct corollary of national economic policy when it does not have to be.

2.6.3.4. National Parks Authority (N.P.A.).

The National Parks Authority is an ad hoc Government Authority created by the National Parks Act 1952. It is serviced by the D.L.S. and one of its duties is to report on areas' potential for National Park status or extensions to existing National Parks. The Cape Palliser area has been identified for a preliminary assessment for its potential for National Park status. Some of the problems in such a study were covered, along with discussions of the issues at stake and the conflicts, in previous sections and the actual assessment is carried out in Chapter 4. It is worth stating here that the N.P.A., by commissioning the study,
was echoing the concern of many public and private organizations on the destruction of natural landscapes in the Cape Palliser area. Total public control, with management oriented towards preservation, was seen as one possible solution to the multitude of problems that had arisen, while at the same time no study area could readily be defined nor did the area contain any intuitive appeal for National Park status under existing criteria. In brief, the N.P.A. saw a possible holistic solution without comprehending a holistic approach.

2.6.3.5. The Ministry of Agriculture and Fisheries (M.A.F.).

The Ministry of Agriculture and Fisheries has only a small direct interest in the lands of the Cape Palliser area. It has responsibility for the safety of the marine mammals inhabiting New Zealand's territorial waters under the Animal Protection Act 1960.

In the Cape Palliser area a large winter hauling ground for the New Zealand Fur Seal occurs at Black Rocks. The management of these grounds is a direct concern to M.A.F. Any reserve proposed for the area will have to have management policies that have the approval of the M.A.F.

The management of the inshore fishing of paua, rock lobster and wet fish, as well as the general preservation of all marine fauna and flora, come under M.A.F. staff acting under the Fisheries Act 1908. Any major land use changes onshore, or future uses of off-shore resources will affect the status quo and the M.A.F. should be consulted accordingly.
The economic livelihood of the Ngawi settlement along Palliser Bay depends on the rock lobster and offshore fisheries and the recreational element of the settlement depends for its standard of services on the long-term economic health of the settlement. Major onshore land-use changes, leading to accelerated erosion and increased silt deposits in the sea, could be significant to the health of these fisheries. M.A.F. staff will also continue to police paua collection so that the resource is not destroyed.

The M.A.F. also has some financial lending powers and some farm management advisory and research duties. These powers and duties might be guided by the same issues the R.B.F.C. faces and a more holistic approach taken overall to problems of the destruction of natural landscapes and other features in Cape Palliser area.


The Department of Scientific and Industrial Research has, over the years, produced papers, articles and reports both published and unpublished, about various aspects of the Cape Palliser area. These reports were usually confined to a small part of the whole area. Most reports were inventories of the flora or descriptions of the ecology. Often the reports were interpreted in such a way as to give the flora or ecological systems importance with respect to preservation and recommendations for management via a certain reserve status or in the case of the H.S.F.P. an appropriate zoning. This element of value judgment in the reports makes them different from the Soil Bureau and Geological Survey
reports in that the latter stop at the inventory and descriptive stages and do not move into the realm of value judgments unless applying values arranged through the use of Land Classification systems. The result of these value judgments is considerable pressures on the land owners to recognize the biological resources of their lands and manage them accordingly. The pressure is applied often in round-about ways through the authors of the reports being members of various privately-organized interest groups or advisors to agencies such as the N.P.A.. There are seldom any official D.S.I.R. representations directly to the land owners unless requested. The D.L.S. and N.Z.F.S. have been working with D.S.I.R. personnel on an ad hoc basis, though often it is still difficult to find out which reports are available and to programme the direct use of D.S.I.R. personnel for a particular job. It is also difficult to find out which staff member is pressing for a reserve status and in what capacity. The small size of the New Zealand scientific community means many of the authors of the reports are members of several Government and private committees and organizations making the job of deciding the relevance of their value judgments difficult. This job is made even harder when the authors of reports comment on fields such as recreation, scenic appreciation and historic significance which lie outside their scientific backgrounds but fall within the scope of their personal or private institutional interests (e.g., tramping clubs).

The diverse nature of interests and small size of the scientific community has advantages as well. The situation promotes a
multi-disciplinary and holistic approach to issues dealing with rural land management. It is often true that if one person can be made to understand the scope and nature of the problems in an area he will then bring that understanding to a large number of organizations interested in the same area for different reasons.

In summary the D.S.I.R. plays a vital role in scientifically collecting and analysing the data needed to understand the rural lands in the Cape Palliser area. The present system of publication and distribution of the data and its analysis needs organizational reform. It is also essential that the scientific opinion and personal interests of D.S.I.R. staff are separated so that planners and decision-makers do not get confused with the two. The small size of the scientific community and the fact that it wears many hats can add continuity to opinion across a broad section and serve to promote a multi-disciplinary view of the overall problems.

2.6.3.7. Featherston County Council (F.C.C.).

The Featherston County Council has the statutory responsibility under the Town and Country Planning Act 1977 for rural planning in Featherston County which contains within it the whole of the Cape Palliser study area. The county's first operative District Scheme (official planning document) was released in 1971 and recently a revised edition has been completed.

The District Scheme contains the following main points related to the Cape Palliser area: one, the H.S.F.P. is shown but with-
out its various zones, making the job of changing zones and uses within the Park totally at the discretion of the N.Z.F.S.; two, many of the sites along the coastal portion of the study area recommended for reserve by the D.L.S. have been shown as proposed reserves including a walking access strip right around the coast. However, the coastal lands have not been recognised as a separate zone and their management is the same as other rural zones. This lack of a zone for the coastal lands means the D.L.S. ideas for the retention of natural coastal landscapes have no basis in current statutory planning. Thus it will be harder to appeal against developments or convince the various land owners to consider the retention of natural landscapes as important and worthwhile ideals; three, Ngawi bach settlement is promoted and the others are allowed no expansion; four, the existing reserves are all shown except that one along the Ruakakaputuna River valley. This omission should be brought to the attention of the F.C.C.; and five, the rest of the study area is a rural zone which makes no mention of the problems faced by those seeking to develop the scrub and bushlands nor any mention of the archaeological sites along Palliser Bay and the problems they face.

It can be seen from these provisions that the F.C.C. was not aware nor informed by the organizations and groups of the many problems in the area. It is also likely that they do not have the resources to carry out the many studies needed or even collect the existing data and interpretations. Consequently, many conflicts and issues are not noted or discussed and the
opportunity for the local inhabitants to comment on the issues was lost. Many of the organizations and interest groups actively involved with issues concerning the use and management of the area did not take advantage of the planning tools available to design zones and management criteria that would highlight their causes.

Though the F.C.C. could have done more to solicit these views, some of the fault lies with the planning system itself. The Ministry of Works and Development (M.O.W.D.) is responsible for organizing the collective central Government position on these issues and failure on the part of the various agencies to get together and present their collective ideas to the M.O.W.D. led to virtually no central Government approach or leadership on the resolution of the problems. Therefore, the M.O.W.D. said nothing, resulting in the F.C.C. adopting the status quo on the issues. The non-government groups did not have a central Government position to scrutinize in the District Scheme and so they approached their problems through other avenues which tended to polarize opposition and at the same time divide the overall concept of rural planning into many small issues, losing co-operation and multi-disciplinary advantages.

In summary the F.C.C. could not carry out its task of planning in the study area and must begin to actively solicit the views of the many groups interested in the use or preservation of the Cape Palliser area. The M.O.W.D. at the same time should force the other Government agencies to state their interests and
resolve their problems so a rational position can be passed on to the F.C.C. and the private interest groups and individuals who can then formally object or support the position thus presented. If regional government and planning, as allowed for in the Town and Country Planning Act 1977, get underway in the Wairarapa, they will be better able to achieve these two objectives but the prospects are that many years will pass before either occur and interim decisions to resolve existing conflicts are needed.

2.6.3.8. **Wairarapa Regional Development Council** (W.R.D.C.).

The Wairarapa Regional Development Council is an ad hoc agency supported by the Minister of Regional Development, which by its nature and terms of reference is interested in the development of the Wairarapa. It recently completed its first major publication, being a resource survey with comments on the restraints to and prospects for development in the Wairarapa. The broad conclusions of the report are that there is considerable scope for increased farm and forestry development, especially in areas they called 'unproductive'. It is likely that some of the 'unproductive' areas are those very areas recognised for other values throughout this report. Though the Cape Palliser area contains comparatively little land cited by the W.R.D.C. for development, it is still a force promoting the use of these lands for purposes other than what their existing natural features provide.

The W.R.D.C. provides some useful opinion and fact from the
business community on the needs of the Wairarapa to supply work, business opportunity and social services in the future. It would be an even more useful document if some view of the worth of the remaining natural landscapes to the region was expressed.

2.6.3.9. **Private Interest Groups (P.I.G.)**

The Private Interest Groups can be distinguished from the other Government groups in that they have no statutory or legislative mandate for operations in rural lands or the Cape Palliser area in particular. This lack of government ties is partly their strength as an active, organized and well-informed membership lobby Government politicians (local and national) and government departments, often successfully; and partly their weakness as they have no public monies granted to them, often placing them at a disadvantage with their wealthier opponents and government-funded agencies.

Appendix V (p.250) gives a list of some of the Private Interest Groups who might show a direct interest in the Cape Palliser area by submissions to: the N.Z.F.S. concerning the H.S.F.P. Management Plan, the D.L.S. coastal reserve investigations or the F.C.C. District Scheme Review. The list does not necessarily cover all interest groups active in the area but will give the reader some idea of the scope of interests and numbers involved.

It is worth mentioning the main Private Interest Groups active in the study area; as they have large memberships regionally and nationally, they often write detailed submissions on a wide
range of topics and they represent similar themes of large sections of the general Interest Groups. The main groups are: the New Zealand Deerstalkers' Association, the local and Wellington area Tramping and Alpine Clubs and the Royal Forest and Bird Protection Society.

The New Zealand Deerstalkers' Association and the Tramping and Alpine Clubs represent the vast majority of inland recreational users in the Cape Palliser area. The two groups have been successful in influencing the H.S.F.P. Management Plan, though some conflicts over various management practices still exist, notably the shooting of deer for control purposes by N.Z.F.S. staff when the Deerstalkers claim they can keep numbers to an acceptable level. The Deerstalkers' Association is also totally opposed to a change in the status of the area that would require policies to be enacted aimed at totally eliminating the deer population.

The Royal Forest and Bird Society is the leading and most prestigious conservation oriented group actively concerned with the preservation of indigenous ecosystems in the area. They have also influenced the H.S.F.P. Management Plan to some degree by supporting the ecologicalzonings.

2.6.3.10 Wairarapa Catchment Board (W.C.B.).

The Wairarapa Catchment Board gets its institutional basis and functions from the Soil Conservation and Rivers Control Act 1941 and the Soil Conservation and Rivers Control Amendment
Act 1959. The principal functions of the W.C.B. are to minimize and prevent damage within its district by floods and erosion, to promote soil conservation and to carry out or supervise drainage schemes. Any dispute between the W.C.B. and the local body or private individuals goes before the National Soil Conservation Council whose decision is final. Each board is elected independently of the territorial local authority.

In the Cape Palliser area concern for flood and erosion problems has historically been focused on the upper Turanganui and Tauanui River catchments where Crown and freehold tenure lands have been retired from grazing and either regeneration to native species allowed or exotic trees planted. In more recent years, tributaries of the Opouawe River in the east of the study area and the short streams that flow straight into the Palliser Bay, have received some exotic tree planting programmes, designed to prevent flooding and soil erosion.

Overall the W.C.B. has a continuing interest in water and soil conservation measures of any kind carried out on lands of any tenure. It also has some broad financial powers to subsidize any water and soil conservation measures attempted by land owners and could play a key role in deciding what effects the removal of some of the scrub lands will have on water and soil regimes in the area. To date the W.C.B. has not taken an active part in the debate over the conservation of natural landscapes in the study area, nor actively sought out opinions from all the parties involved in the area. This role should be followed
if the clearing of scrub lands is not to proceed in lands directly adjacent to lands retired from grazing or in areas where water and soil conservation values will be endangered.

2.6.3.11. Other Groups.

The title 'other groups' contains many government and non-government groups and agencies not directly involved in the Cape Palliser area, but who have an institutional basis that covers aspects of the problems outlined in the other ten sections. The most important of these groups are: the Native Forest Action Council (N.F.A.C.), the Nature Conservation Council (N.C.C.) and the Commission for the Environment (C.E.).

These groups have not had a significant involvement in the Cape Palliser area for several reasons. Some of the most important are:

(i) Lack of staff and resources.

(ii) The C.E. and N.C.C. usually only react to major proposals of which there have been few and do not yet get involved in the advocacy of ideas on a regional level.

(iii) There is a lack of perceived problems in the areas relative to these organizations.

(iv) N.F.A.C. has been busy with some major conflicts elsewhere and its staff and resources are committed to these problems.
At any time, though, these groups could become active in the Cape Palliser area, especially if major clearings of the indigenous bush are proposed. Other groups involved in the planning of the area might profitably call on these groups for ideas or opinions, especially if evidence is needed for statutory planning objections or appeals. These groups remain as a latent challenge to specific ill-founded developments, but might better use their resources to influence organizations such as the R.B.F.C. loan policies for undeveloped lands.
"It's better to be right than consistent".

J.K. Galbraith
"The Age of Uncertainty".

Chapter Three

An Examination of the Decision-making Aids Available to Resolve Conflicts in the Cape Palliser Area

3.1. Introduction

Galbraith's statement reflects his experience in decision making and brings out the two most crucial elements in the process. Decision-makers try to be consistent in their judgments so that all options receive a fair hearing and similar situations in the future or present receive equal treatment. At the same time decision-makers must not sacrifice wisdom for consistency. It is to this dilemma of deciding when to abandon pragmatic decision-making in favour of change that I address this Chapter. I propose that much change is needed if natural landscapes are not to continue to diminish unnecessarily.

It is not intended to establish a normative or ethical theory of how rural land use planning decisions 'ought' to be made but rather to present a systematic and reasonably comprehensive description of what decision-making entails, its connections with the planning process and what basic decision-making aids are available,
their current uses and any weaknesses inherent in them. Chapter Three will fulfill the same function as Chapter Two, that is, a valuable clarification and simplification exercise done in a systematic fashion useful to the reader in promoting an understanding of the nature of rural land use problems and their solutions. Social emphasis will be given to problems concerning the preservation of natural landscapes where appropriate.

The decision-making aids currently available to resolve problems in rural lands will be discussed under the following broad themes:

(a) Natural Resource Analysis

(b) Economic Analysis

(c) Social Analysis

3.2. The Nature of Decision-Making

Decision-making is a personal thing. It has been described (Lichfield, Kettle and Whitbread 1975) as "largely a value judgment with facts thrown at it". Thus the process revolves more around 'who' rather than 'what'. No individual makes decisions isolated from his cultural background. This means that in the role of decision-maker there are often many collective social values and structures that are taken into account. These social values or collective structures are mixed, or react with the personal experience, personal values and facts to become a decision.
The decision-making structures of the Cape Palliser area are the individuals or groups who control freehold tenure rights, those individuals who collectively or individually have responsibilities for public lands, those individuals who collectively or individually have responsibilities for Maori lands, and the individuals who collectively or individually have decision-making positions in organizations interested in affecting the directions of the other three categories.

These groups of decision-makers could be divided into units according to their guiding philosophies and positions in society. Such a division might create the following units:

(i) Those decision-makers individually or collectively oriented towards personal goals.

(ii) Those decision-makers individually or collectively oriented towards group interests.

(iii) Those decision-makers individually or collectively guided by the overall 'public good'.

These units will form the basis for a discussion of decision-making in the Cape Palliser area using examples where possible and as a method of giving the reader some insights into the practical and complex world of decision-making.

(a) Personal Goals. The membership of the first unit would include all those who hold freehold tenure. These men act largely on a personal basis and could be said to generally pursue their individual
welfares through income derived from their properties. These incomes can be maximized by seeking economic efficiency with the greatest return for the least input. This general position can be tempered by many cultural factors and physical limitations that run contrary to or restrict the use of economically efficient management practices. Examples of these tempering elements are: the religious beliefs that restrict the use of modern machinery; legislation by Government forbidding the development of freehold lands containing archaeological sites; the family practice of cropping being preferred to other uses that may bring a greater return; and the development of scrub lands (encouraged by Government loan) that would normally not bring the greatest return per input, except for easier-than-market terms on the capital input. Because these people are concerned with personal goals, it is likely these are reasonably clear and decisions can be made relatively easily.

(b) Group Goals. The second unit is composed of those individuals whose interests are not personally oriented but who really represent a collective group interest that goes beyond personal goals and gains but falls short of the whole public sphere. In the Cape Palliser area this would include: the Maori Trustees charged with the management of Maori lands in which income is a factor but in which many cultural factors predominate or can predominate; the Secretary of the New Zealand Deerstalkers' Association Inc.; and the Environment Co-ordinator of the Federated Mountain Clubs New Zealand Inc. Each of these individuals follows a set of guiding policies designed to promote the specific aims of the groups they represent. These policies can be very broad or very exact depending on the group's field of interest,
the degree of organization (national, regional or local) and the
degree of consensus in the group on any given issue. In practice the
second unit of decision-makers, like the first, has little difficulty
in formulating decisions because the group interests are usually well
articulated. The second unit members, though, unlike the first unit
and with the exception of the Maori trustees, have no tenure rights.
This means the decisions made are always subject to subsequent deci-
sions by any of the tenure controlling individuals or agencies and as
such are less likely to be effectuated. In effect this group decides
to try to affect other decisions which in turn directly relate to land
use.

(c) Public Goals. The third unit contains those people who individ-
ually or collectively are charged with decisions in various fields
guided by the 'public good'. The unit can be broken down into two
important subdivisions. The first contains the decision-makers who
belong to organizations who directly control tenure rights (e.g.,
D.L.S.) and the second, the decision-makers who belong to organizations
without tenure control but who have legislative responsibility or
institutional direction based on the 'public good' (e.g., H.P.T.).
There is always a degree of overlap in these two sub-groups because
the tenure-controlling agencies also have a legislative basis and
responsibilities in some aspects of land use covering lands of all
tenures.

It seems fair comment that the decision-makers who belong
to agencies who directly control the tenure rights of public lands
are better placed to ultimately decide the overall management of the
lands in question. Their advantage lies in their daily management experience, the historical connections with the land, their larger staffs and resources and the fact that tenure control means land use will be decided by its controller (unless over-ruled by political or judicial decisions at the highest levels). The group of decision-makers belonging to agencies without tenure control seek to formulate policies in their fields of interest, bearing in mind their interpretation of the law and the 'public good'. Once formulated, these policies serve as a basis to try to influence the tenure-controlling groups both public and private.

In recent years the decision-makers from tenure-holding agencies have come under increasing pressure from their non-tenure-holding counter-parts to co-ordinate their planning and co-operate in decision-making on land use. This pressure is based on the belief that the former group were ignoring pertinent opinions from the latter sector and thus did not have a full view of the 'public good'. At the same time much conjecture has taken place between and inside the various agencies of both types as to the meaning of 'public good'. No definition has been forthcoming. The result has been an increasing inability to make decisions, increasing conflicts within the overall unit charged with the 'public good' and sometimes the polarisation of personal opinions leading to conflicts, indecision, lack of co-operation and subsequently a loss of credibility with the public and between the staffs' members themselves.

(d) Conclusion. The third unit has been the focal point for possible reforms in decision-making with respect to land use in New Zealand.
It is widely recognized that the inability of the Central Government to define the 'public good' and order its priorities based on the public needs and wishes lies at the heart of the problem with any reform. It is also clear that decisions must be made in the present. One interim solution requires the use of planning theory to help organize physical and social data in such a way as to begin appealing in an open manner to various options the 'public good' might entail and the consequences of adopting any options. In this way the long process of establishing society's priorities can begin. This is painstaking work but preferable to forcing the decision-makers of unit three to make decisions based more and more on personal values and a personal perception of the 'public good'. The same can be said for the politicians who, in the absence of public consensus, tend to retire to personal values and force these on other decision-makers in the public realm.

3.3. Decision-Making and the Planning Process

This section is expected to benefit most those decision-makers dealing with the 'public good' because it is they who are most likely to use a comprehensive planning process to evolve alternative land use proposals. The other decision-makers involved with personal or group interests can benefit too, by understanding the nature and processes of planning and its results in the public sector, for these results in turn will ultimately affect the opportunities open to them.

Values are personal; institutions do not hold values and purported expressions of institutional will cannot be proved or
disproved. Therefore, though decision-making is itself a personal act, the process followed and the influences on it are really the product of a cultural envelope encompassing all aspects of the community. It is essential that the people involved in decision-making do not make uninformed decisions without due regard for the cultural matrix in which they act. Planning is seen as one way of informing them of the cultural matrix in a comprehensive and orderly fashion.

Bolan (1969) suggests that the steps followed by any community in resolving a conflict, regardless of its nature, must follow a decision-making process that closely mirrors the classic concept of rational planning (see Section 1.4.2.) with specific adaptations for group decision-making. Bolan further states that significant differences first appear after proposals and alternatives have been inserted into the system. Predicting consequences and calculating options led to a primary emphasis on managing and maneuvering the social processes intrinsic to collective decision-making.

Planners do not make the final decisions transforming values into policy commitments. Their role relative specifically to decision-making is to identify the distribution of values among people, and how values might be weighed against each other. To do this the planner must be aware of his client; often the general public in the case of rural land use. These people should then be grouped according to various categories relevant to the problems identified at the beginning of the decision-making process (e.g., those for natural landscape conservation and those opposed). Any one individual might fall in several categories. However, just as an institutional will
can be denied, neither shall we find a group interest in all matters pertaining to any given issue. In regard to this reality, it is well to remember that that which expresses the values of a majority of a group need neither represent that class's permanent view nor the view of each member. Thus, the decision-maker can be guided by the values identified by the planners but must realize these are dynamic and need not apply to every issue. It is for these very reasons that decision-makers and planners need to be constantly informed of, or to seek out, information about public opinion. The main drawback to this process is getting the public informed enough about the issues to then draw useful opinions. The scientific complexity of many land use proposals often mitigates against the development of useful opinions, and planners face a constant challenge to find ways to simplify the issues so that the public can understand and react to the proposals in a meaningful way. Statutory planning has helped to approach this issue through the advocacy of proposals which are then formally opened to debate by the public. Proposals for a regional 'forum' which acts in a judicial manner are put forward in Chapter Five, partly to try to provide another tool that would help planners and decision-makers acquire some accurate judgments of public opinion on a range of land use issues.

In summary, the connection between planning and decision-making is a common process that requires the recognition of both parties of their respective roles. The planners, amongst other things, try to put on paper the range of values people hold when involved in an issue and present them to the decision-maker who applies various facts and his personal experience to come to a decision.
3.4. **Decision-Making Aids with Examples drawn from the Cape Palliser Area**

This part of Chapter Three is designed to describe the decision-making aids available to the people responsible for or interested in the lands of the Cape Palliser area, though many of the principles established will have application throughout all rural lands in New Zealand. There will be three main parts to this work: Natural Resource Analysis, Economic Analysis and Social Analysis. Each part deals with a different theme of decision-making, using different data sources and approaches to the problems of land use. Comments on the use and limitations of each theme will include practical examples from the study area where possible. The resulting structure described should provide a reasonably comprehensive check-list of the areas any decision-maker should study before reaching a decision on rural land use. In practice all three themes are usually combined for land use decisions covering reasonably large areas of rural lands.

3.4.1. **Natural Resource Analysis**

(a) **Introduction.** The first theme any planner would explore if given a problem such as diminishing natural landscapes in a rural area would be the natural resources of the area in question. This work will involve an extensive data collection phase that covers a multitude of physical and cultural aspects in the area. During this data collection phase, limits of present knowledge would be noted, boundaries established and opportunities for future research identified. The second phase of the work would be interpretations of the data by experts of the various fields. The planner guides the direction the interpretations take by assessing the client's problems or goals.
The last phase of natural resource analysis involves the presentation and evaluation of data and its interpretations in the form of alternative futures. The decision-maker then decides between the futures proposed and can follow the building process back through interpretation and data collection if he wishes to gain a greater depth of knowledge or check the logic of the processes followed.

(b) Public Land. Decision-making that involves public lands should cover all three phases outlined above. The degree of depth in any phase should depend on time, finance and staff allowances and be directly relative to the importance of the problem. This is not often the case. Usually an incomplete data base and a lack of proper interpretation results in restricted and often useless alternatives from which decision-makers have to choose. Many agencies responsible for the control of public lands have not practiced setting priorities for their various jobs or problems resulting in an inefficient use of staff and resources, as minor issues often receive more indepth treatment than major issues. A rigorous hierarchy of work priorities made available to all staff would help move many public land problems from their present chaos to positive results. This process is badly needed throughout the country.

(c) Private Land. The people responsible for decision-making over private lands usually do not need to use the same depth of analysis of their resources. They do not often follow a complete planning process to arrive at alternative futures. The alternatives they perceive are usually straightforward and restricted in scope to economics. This picture has altered somewhat in recent years as the diversifica-
tion of agricultural practice has led to in-depth analysis and interpretation of some resources (e.g., soils) though usually only in small select units of land. Personal economic goals are still the driving force for this work which means many important elements are omitted.

(d) **Interest Groups.** The third group of decision-makers, that do not control land directly, tend to concentrate on their special interests only and as such have become collectors and interpreters of a small range of data. Their services are usually used in aid of or opposition to the decisions made by the land-owning groups. Thus decisions they make are either on the degree of involvement or which side of an issue to support. The full planning process with its comprehensive data collection, interpretation and evaluation is not needed. This third group usually represents a very important source of cultural and physical data and to a lesser degree interpretation of the data. To this degree they are now part of natural resource analysis rather than strictly users of it. In recent years this group has become very active in trying to influence decisions over public lands (e.g., Forest Park Management Plan submissions) and less frequently private lands (e.g., the Town and Country Planning Act 1977). To be effective their data collection and interpretation services have often become increasingly sophisticated and complex, though their recognition of the overall scope of problems in rural lands has remained limited by their constitutions. They, like many private owners, do not have the resources to delve into many issues so they concentrate on one or two and may unite with other groups to give them more say in a particular issue or region. The larger groups hire professional staff who administer and plan their strategies, though data and interpretation of
Data are often left up to non-paid members with professional qualifications.

3.4.1.1. Data Collection. The data pool for any area or on any issue is generally available in New Zealand on request. To be effective in its collection, one must be familiar with a host of agencies and who within them has what information. This work requires much personal initiative if it is to be achieved quickly. There are few central reference points where one can get a list of the publications concerning an area or its issues, though this is changing in recent years as the need for data grows along with the amount of work being produced.

The Cape Palliser area is described under several scientific, cultural or resource headings in Chapter Two, Section 2.4 and 2.5. These were: geology, geomorphology, topography and relief, soils, hydrology, climate, flora and fauna, ecology, coastal areas, prehistory, settlement patterns, recreation, scenery and tenure. In this part of Section 3.4, the sources of the data, its nature and weaknesses will be discussed briefly under each heading, or for the sake of brevity under combined headings. This process should highlight the problems and limitations faced by planners in trying to understand the nature of and the conflicts surrounding an area like Cape Palliser through a study of the data concerning its resources.

(a) Geology, Geomorphology, Topography and Relief. The geology and geomorphology of the study area are not very well documented. There is enough information in the Geological Survey Sheet 12
at a scale of 1:250 000 to get a picture of the basic geological formulations but not enough data on many areas to make judgments of specific land use limitations or potentials. More detailed studies of the area number only eight, some unpublished, and all restricted to some aspect of the coastal areas only. These documents were released by different organizations over several decades and consequently it is difficult to gain knowledge of their existence and basic content without either extensive personal contacts in the Geological Survey D.S.I.R. or an exhaustive survey of all likely sources of geological data. Currently the Geological Survey is undertaking a more comprehensive study of the Mesozoic formations that make up the bulk of the study area but this will not be complete and published for many years. The various planning documents or discussion papers concerning land uses in the Cape Palliser area released by interest groups or public land owners have all used some of the eight sources, resulting in a remarkable consistency in the physical descriptions. None pointed out the lack of data or need for more data in certain areas. This is surprising in view of the needs of agencies such as the Wairarapa Catchment Board who perceive a major erosion problem in the area and are actively trying to manage the situation.

The topography and relief of the Cape Palliser area is even less studied than the geology. There is no topographic map (equivalent as a basic data source to the Geologic Survey Map) of the area showing altitude contours, making it one of the few such areas not so mapped in the North Island. The geologic documents refer to some aspects of relief in the area but only in a few
small coastal localities is detail provided. However, a quick intuitive personal study of the area is possible and gives a clear general impression of the topography and relief. This is largely due to the compact nature of the area and the vistas possible. For more detailed work, except in the coastal areas, a study would likely have to be commissioned.

(b) Soils. The soils of the study area have only been completely surveyed once. This was a very general study that would serve for general descriptive purposes, rather like the Geologic Survey Map, but would not be detailed enough to provide a base for most modern land use decisions. The two other soil surveys carried out in the area cover together the northern half. These provide considerably more detail than the general survey and would be of use in modern land use decisions at least insofar as limitations to uses are relevant. Neither of the two more detailed soil surveys are readily available for land use planning and remain unpublished. The one covering the Opouawe River catchment is even still at a provisional stage and restricted to one or two copies held at the D.S.I.R. Soil Bureau, Lower Hutt. There are plans for a complete detailed soil survey of the whole study area but this has low priority and even the release of the two interim reports appears to be in the medium term. Once again no public agencies or interest groups involved in the area saw the lack of data on soils as a hindrance to their planning or as a reason to prohibit land use changes until surveys are carried out. This is again surprising in view of the responsibilities of agencies such as the Catchment Board and the policies and interests of agencies such as the N.Z.F.S. and D.L.S. It is true that much of the study area
is not subjected to pressures for a land use change but in some of the areas that are, the question of a lack of soil data availability seems critical.

(c) **Hydrology.** There have been no studies of the hydrological factors acting in the study area. There are no lakes or estuaries present and the rivers and streams are all short with small flows. To date only the hydrology of the Turanganui and Tawangui Rivers have received even intuitive consideration and only because it was thought that land use practice in the headwaters affected downstream flooding. This claim remains unresearched and unsubstantiated not only in the major premise but also in the causes and effects of land use practice on the rivers' flooding. No agency involved in the area advocates any hydrological surveys, research or monitoring which is surprising when one considers the way intuitive estimates of the factors affecting flooding have been used to pursue some large-scale land use policies in the past (farm development) and the present (retirement from pastoral farming). It is obvious these intuitive land use decisions led to severe erosion problems and the diminishing of the natural landscapes in the past and may have led to the retiring of farmland whose use was not contributing to downstream flooding in the present. The area does not warrant priority for any major research nor is it likely to in the future. Nonetheless if land use decisions concerning those natural landscapes not currently reserved by tenure status are to be more rational, some basic data is needed from at least a few streams. This data could then be extrapolated to the surrounding streams with some degree of validity and some principles of resource management established.
for the use of land which considered hydrological factors.

(d) Climate. Little official data exists as to the climate of the Cape Palliser area. Most scientific or planning documents which mention the climate are very generalized accounts gleaned from weather stations at Masterton Borough or Ngamu State Forest Headquarters, both several kilometres to the north. There is little doubt that the climates of both stations are considerably different from that in the Cape Palliser area. These differences could be significant enough to affect even general land use decisions but do not appear to be considered so in the past or present.

From scattered unofficial records of the Cape Palliser area it is obvious that many significant micro-climates exist in the area. This is not surprising considering the area's altitude variations, nearness to the sea, position in the North Island, variation in vegetation cover and variety of aspects to the wind and sun. Many of these micro-climates could significantly affect land uses from crops to pastoral farming and from exotic tree planting to bach settlement location and design. No official climatic studies are planned in the area nor likely warranted but the existing scattered records could be co-ordinated and collated to give a useful continuing source of information on climate for use when required in interpretation and planning. Even if all the sources of existing data were recorded in one record on a regular basis, much work in finding the sources and actually collecting the data would be saved. It would be possible for the N.Z.F.S. with its permanent staff in the H.S.F.P. to
run regular climate studies as part of the Park work program and themselves collecting much useful data currently missing from the mountain areas. This data in turn would be useful in any hydrological or soil erosion studies undertaken.

(e) Flora and Fauna. The flora of the Cape Palliser area is perhaps its best documented natural resource. The Ecology and Botany Division of the D.S.I.R. and the Forest Research Institute have contributed the bulk of the data and have plans for more comprehensive surveys in the future. The existing data is contained in a variety of reports carried out over several decades and is not yet compiled in one document for use by planners. All the reports are unpublished and it takes considerable personal contact with D.S.I.R. and N.Z.F.S. personnel to acquire the unpublished documents. It is important that planners, especially those involved with the conservation of natural landscapes in the area, should have access to a complete record of this work. Only with this data available can decisions on the management, preservation or development of various natural areas be made. Since the records are still incomplete for several areas subject to development pressures, this job should have a high priority for all groups interested in the conservation of important biological values or interested in comprehensive and rational land use decisions.

The native fauna of the study area is totally unrecorded. Only the most superficial species lists are available, being based on personal observations by N.Z.F.S. staff and assumptions of the
likely species present by the Wildlife Service. Detailed surveys are needed if the existing species are to be preserved and management policies adopted that will promote their health. Any work done in this area should be concentrated on the areas not protected from development so that consequences of development might better be judged. These assessments could be done in conjunction with flora inventories of the same areas.

The introduced animals in the area seem better documented, especially through records of game animal shooting programs but these figures are considered only indicative of the animal numbers and health and not the effect these animals or their management have on native flora and fauna.

(f) **Ecology.** The ecological systems of the Cape Palliser area are not well documented. Several studies by D.S.I.R. Ecology Division staff and F.R.I. staff, relating to small areas on the coast or in the mountains (respectively) provide some insights into the general ecological associations and their changes through time. However, these documents make no claims to be either definitive descriptions of or inventories of the ecosystems present. Archaeological studies make reference to past environments and state some likely reasons for changes to the present, but again they only cover small sections of the study area. Many groups involved with the planning of the area and others interested in its future have commented on the need for more information on the functioning of the area's ecosystems. This is needed so management can adapt itself to the systems at work or seek to preserve ecological associations of scientific
interest with appropriate management tactics. The focus for these needs has been directed at the H.S.F.P. but it is likely that areas outside the Park presently subject to development are more in need of this work. The presence of basic ecological data will allow principles of resource management to be formulated and applied to the threatened areas, mitigating the needless destruction of valuable natural resources through ignorance or design. Organizing these studies should be a top priority of public agencies working or interested in the Cape Palliser area.

(g) Coastal Resources. Very little is known of the coastal resources. No studies have been undertaken by any organization responsible for the coastal resources and only the Coastal Reserve Investigations of the D.L.S. focus on even an intuitive inventory of the resources present and the factors affecting them. It is unlikely that any studies will be undertaken in the future. Thus any future management will have to be based on principles of coastal conservation extrapolated from similar coastal areas and the broad principles of conservation and preservation present in current resource management ideals (e.g., retention of options).

(h) Historical Perspectives. Historical perspectives in the study area range from fairly comprehensive anthropological and archaeological studies of the prehistoric sites along Palliser Bay through scattered records of European settlement and Maori history since the settlement. The prehistoric history is studied mainly in two theses done in the Anthropology Department of Otago University (Leach, B.F. and Leach, H.M. 1976) and National Museum Bulletins, while the Maori and European history is contained
mainly in a book by A.G. Bagnall (1975) called "Wairarapa: an Historical Excursion" and scattered newspaper accounts. The existing data is likely adequate for planners to incorporate relevant elements in any land use planning document.

(i) Existing Culture. Data relevant to understanding the existing culture is scarce. The prime sources are tenure and topographical maps which show a record of tenure titles than can be translated into an understanding of the various controlling interests in the land and cultural features (e.g., roads, townships). These combine to give some idea of the current settlement patterns and cultural resources available to the inhabitants and visitors. However, very little is known about the needs or wants of the inhabitants of the area either collectively or individually. The only study available which focuses on cultural elements is a dissertation in the Geography Department at Victoria University (Hendry 1972) on the dynamics of the bach settlements along Palliser Bay. A study of the local people's opinions on land use issues, such as the development and consequences of development of some of the remaining natural areas, would be invaluable to planners and decision-makers trying to deal with these problems.

(j) Recreation and Scenery. The recreation use and potential use of the study area has not been researched except as part of Hendry's dissertation which was confined to the bach settlement inhabitants. The N.Z.F.S. staff of the H.S.F.P. have a reasonable working knowledge of visitor use, but this has not been documented except very generally in the Management Plan.
Presumably information on users of the Park is passed by word-of-mouth when staff changes but planning for recreation in the Park should be based on sounder data, records and sources. Current development and access planning is based on intuitive guesses as to the needs of visitors and on submissions from various recreationally-based interest groups. This system would probably be adequate within the Park, at least until some recreational use surveys were undertaken, but because the management of lands for recreation adjacent to the Park are not considered in the planning, problems can be expected in the near future. The N.Z.F.S. does perceive the need for better recreational information and data collection programs are being designed currently.

(1) **Summary**, It is obvious from the preceding pages that data is lacking in almost all aspects important to planning for the preparation of alternative futures used in decision-making. It is also apparent that many public and private agencies interested or responsible for planning in the area do not perceive the lack of data as critical to their roles as decision-makers. The combined result of the lack of data and perceived need for it is many conflicts between the various parties over what resources are present and what is happening to them. Many of these conflicts can be resolved by appropriate data collection research and few comprehensive rational land use decisions can be expected based on existing natural resource data.
3.4.1.2. **Interpretation of Data**

(a) **Introduction.** Because none of the public and private organizations interested in the Cape Palliser area have felt that the lack of data was critical to management and decision-making, none of them has worried much about getting professional interpretations of the existing data either. The result has been no systematic, comprehensive attempt to interpret the existing data by these groups. Partial problem-oriented interpretations have occurred (e.g., submissions by interest groups to the H.S.F.P. Plan), but usually only in support of or opposition to policies already adopted by one of the parties, not in an attempt to find solutions to broader conflicts outside compartmentalized interests or perceived tenure boundaries.

(b) **Land Use Inventory and Classification.** The only comprehensive interpretation of the natural and cultural resources of the Cape Palliser area has been undertaken by the Water and Soil Division of the Ministry of Works and Development (M.O.W.D.). This work was part of a nationwide program and was not done with only specific problems of the Cape Palliser area in mind. When completed this study will represent a summary of selective existing physical data arranged into a classification system which purports to show the limitations of the area for various land uses measured against a base of cropping agriculture.

Criticisms of the same inventories and classifications done elsewhere in New Zealand can be applied here. A complete detailed
critique is beyond the scope of this report but the main points to consider are:

(i) The eight classes used purport to represent land use potential when they really represent recommended use.

(ii) Many relevant options for land use in rural areas are not accounted for in the system (e.g., natural landscape preservation).

(iii) If the existing basic data is incomplete and/or not detailed enough, then the interpretations of land use options will be incomplete and not soundly based.

(iv) Several of the interpretation categories (e.g., degree of erosion) are subject to weaknesses in their scientific basis.

A combination of these basic faults and the lack of understanding by the interpreter of the needs and problems of the various groups active in the Cape Palliser area leads to the conclusion that the completed M.O.W.D. Land Inventory Worksheets covering the study area will not help resolve the area's main problems or conflicts. Any attempt to resolve these problems by comprehensive interpretation in the future will need to try a different system. Such a system must first recognise the complexity, interrelatedness and dynamics of the problems before designing a system to interpret the area's natural resources. It is also important that cultural elements be included in any such system. This means economics
and cultural practice must be incorporated into the interpretations of the natural resources in order to achieve sound and meaningful land use analysis or decision-making.

(c) **Land Systems.** O'Connor (1979) has evolved a method of land use interpretation recently that may remove many of the faults inherent in the M.O.W.D. system. This required adopting the approach of Christian and Stewart (1968) in Australia to the New Zealand system. The methodology used is to describe the environment of an area and its dynamics by:

1. Independent factors, e.g., climate, geology, topography.
2. Independent factors, e.g., soils and vegetation.
3. Dependent attributes, e.g., erosion, problems of utility and potential productivity.

By approaching the understanding of any area in this manner the interpreter can provide a series of land models of various scales. These models are likely to contain land systems and land units. Christian and Stewart (1952) define a land system as, "an area, or group of areas, throughout which there is a recurring pattern of topography, soils and vegetation", and land units as "... distinctive and recurring units of topography with which are associated equally distinctive groupings of soils and vegetation". The Cape Palliser area likely contains several land systems and many land units within each system. Sheer lack of basic data would prohibit the use of O'Connor's approach in the study area.
It is also likely that the expense, time and staff resources needed to collect the required data and then apply the interpretation process would be prohibitive to even the largest public agencies involved in the area. It would be possible if all the major interest groups and land owners decided to co-operate to complete a land systems approach in the medium term. This would appear to be a very useful objective for all those involved.

Until a land systems approach can be tried, problems will still have to be resolved. This will necessitate the upgrading of problem identification, priority setting and classification procedures in the main public agencies involved in the area. There will also have to be more active attempts to get specialist interpretations of the existing data so that learning and rational management processes can be initiated that will at least safeguard existing values until the more comprehensive work is complete. The following basic resource management principles might help guide the interpretations of the generalized data: one, options in land use should be retained; two, existing resources should be identified and conserved; and, three, co-operation in data collection and interpretation should be promoted.

(d) **Summary.** None of the main land owning groups have sought a systematic interpretation of the resources in their lands. The interpretations that have been done have been on a personal basis and directed at only a small number of the issues identified in the study area and only at small parts of the whole. The
M.O.W.D.'s attempt at a comprehensive land resource inventory and land use classification is handicapped by a lack of base data and several shortcomings in the theoretical approach. O'Connor's land systems approach to the interpretation of land resources has a sounder theoretical base but is handicapped by a lack of basic data and the human resources to carry out the work. Until the land systems approach can be tried, the agencies interested in the area can make some progress through co-operation and the adoption of some general resource management principles in their decision-making.

3.4.1.3. Presentation and Evaluation of Data

(a) **Introduction.** It is difficult to discuss the presentation and evaluation of data and its interpretations for the study area simply because little of either is available. There are, however, some publications on the study area that offer examples of the main types of presentation and evaluation techniques used in natural resource analysis in other parts of New Zealand.

(b) **Mapping.** Several publications concerning the Cape Palliser area present some of their data in Map form. These include: the Geological Survey Geology Maps, the Soil Bureau Soil Surveys, H.S.F.P. Management Plan, the Coastal Reserve Investigations and the studies of Prehistoric sites. The area is also covered by several types of maps showing cultural and topographic features. In spite of all these maps, the area is not covered as intensively as most areas in the North Island. The Land Inventory and Classification Maps of the M.O.W.D. are not complete, the standard
topographic Maps of the D.L.S. have no contour lines, and apart from the two unpublished Soil Bureau Soil Maps, all the other maps are of a very large scale, useless for land use planning except perhaps on a national scale. The future is likely to see various maps produced for the area, filling in missing information and using much smaller scales. Once produced, these maps could be used after McHarg's (1968) technique. That is, maps portraying various data bases and value judgments (related to the data and problem being tackled) are overlaid on each other to help identify solutions. This technique has been used extensively in New Zealand and other countries and will have uses in the future. The main problems in the technique are involved with mapping all data and values and with finding common units of measure for comparison purposes. The Cape Palliser area would need a great deal of mapping work after the basic data was collected to take advantage of this technique.

(c) **Land Utilization Types.** O'Connor (1979) following the ideas of Brinkman and Smyth (1973) and BenPenna (1975) proposed that once land systems and land units (see Section 3.4.1.2.) were identified for an area in New Zealand, the evaluators could then design a series of relevant use possibilities (termed "land utilization types") to be applied to the area. Such a technique was applied to an area of mountain country in the South Island (Mavora 1979). The process followed involves the following:

1. Designing a range of theoretical uses for
the area (e.g., pastoral farming).

(ii) For each theoretical use a series of alternatives is considered that defines a land utilization type appropriate to the intensity of data survey and evaluation (e.g., Pastoral-Intensive Self-Contained - P.I.S.C.).

(iii) Each of the alternatives is assessed as suitable, conditionally suitable or unsuitable for each land system or subsystem.

Land suitability (Brinkman and Smyth 1973) is "the fitness of a given tract of land for a defined use". "Differences in the degree of suitability are determined by the relationship, actual or anticipated, between benefits and required inputs associated with the use of the tract in question" (O'Connor 1979). This evaluation technique has much to commend it in an area with the problems of Cape Palliser. As discussed in Section 3.4.1.2, the formulation of land systems and units is not possible in the Cape Palliser area, given the lack of basic data and interpretations and the likely lack of staff and financial resources of the agencies involved in the conflicts. Without the formulation of land systems and units the land utilization types would be difficult to formulate and impossible to apply in a meaningful way. Thus, though this system is promising, especially if all the groups co-operate in the work, it will not be available in the near future.

(d) **Summary.** Weakness in the basic natural resource data and its interpretations leads to weakness in the presentation and evaluation
of the significance of natural resources in the Cape Palliser area. Decision-makers are generally unable to achieve a comprehensive or holistic view of the natural resources available, their limitations for various uses and management strategies. Thus, though there is promise that techniques are available (i.e., McHarg, O'Connor) to efficiently analyze natural resources information, greatly aiding decision-makers in their work, these are not available in the Cape Palliser case chiefly because of a lack of basic data and initial interpretations. Co-operation amongst the many public and private groups interested in the area seems the only practical way of gaining the human resources needed to gather necessary data and apply a comprehensive interpretation and presentation and evaluation system. A 'forum' proposed in Chapter Five might supply the tool needed to initiate the co-operation and organize the human resources amongst other things.

3.4.2. Economic Analysis

3.4.2.1. Introduction. The second major theme used by planners and decision-makers to organize their alternatives and identify their best choices is economic analysis. In the past three decades economic analysis has steadily gained in strength as a premier land-use decision-making aid. The study of economics is really a type of social analysis but through time it has evolved a separate image from social sciences as a quasi-scientific and mathematical field of study. It is because of its current importance to land use decision-making and separate identity that it will be treated as a section on its own in this report.
The main features of economic analysis that appeal to planners and decision-makers are the predictive and explanatory qualities respectively. These qualities have been developed in economics to a degree of sophistication not yet apparent in other social sciences. The planner is concerned with developing options and their consequences and economic analysis has many predictive aspects built on a basis of choice theory. The decision-makers seek to understand the problems and the range of options they face and economics often proposes several explanations for any given problem.

Historically political decisions have tended to dominate the market forces in the resolution of land use conflicts in New Zealand (Wendelken and Hannan 1974). This statement still likely applies today. The main difference that has occurred is that the political decisions of the past seem to have large elements of social justice while those of today are based on largely economic criteria. An example of the strength of economic criteria on land use decisions drawn from the Cape Palliser situation is that a national political objective of increasing foreign exchange earnings through increases in stock unit numbers has manifested itself in the Rural Bank Land Development Encouragement Scheme which will likely have an overwhelming effect on the resolutions of land use conflicts involving natural landscapes.

Economic analysis seems to have two main branches which are aimed at aiding two distinct groups of decision-makers. The first branch is aimed at helping provide a formal structure in which
freehold owners can assess their land use options on the basis of personal or group incomes using net benefits over net cost calculations. The procedures used in building the structure are widely practised throughout the business world and are taught in tertiary education institutions. Many private and public agencies use these procedures to run consulting services aimed at helping the freehold owners make the best judgments possible given their aspirations and limitations.

The second branch of economic analysis is aimed at helping decision-makers in various public land administration positions judge the best land use options under the guiding philosophy of the 'public good'. This branch relates to social welfare economics and is not as definitive in its structure or accepted in society as the first branch. The main reasons for the difference from the first branch are: one, there is no broad societal consensus as to what constitutes the 'public good' in any given circumstance; and two, attempts to define the 'public good' through welfare functions based on mathematical models have run into several major theoretical problems yet to be resolved.

The second branch of economic analysis will receive the main focus of the rest of this section because it is considered the most important in resolving the main problems identified in the Cape Palliser area. It is recognised that the first branch has a substantial role to play in initiating rural planning programs concerning the use of freehold lands. However, the role is subservient to decisions made within the framework of the second
branch and will be treated accordingly in the sections to follow. Support for these assertions comes from O'Connor (1979) who states that ultimately "when there is an increase in competition for land among different users or among different groups of people whether official or private, the land-administering agencies have to make decisions about land use in the public interest". The fact that the majority of lands in the Cape Palliser area are owned and controlled by public agencies and the main groups interested in the future of the area are either public or quasi-public institutions adds further weight to the decision to concentrate on discussing economic analysis techniques oriented towards the 'public good'.

3.4.2.2. Clarifying the Problems

(a) Introduction. Before beginning our discussion of the nature and use of economic analysis in deciding the 'public good' we first need to outline the type and nature of the land use problems to which it applies. The problems might be grouped into the following two categories for the purposes of this report:

(i) The problems relating to decisions as to the "best tenure" for public lands with a recognized conservation status or values.

(ii) The problems relating to decisions as to the appropriate policies to adopt in governing the use of lands without an established conservation tenure status.

(b) Category (i) Problems. In the first category of problems a series of political decisions manifest themselves through the
existing legal status or tenure attached to the land. The best example of this process in the Cape Palliser area is the existence of State Forest 34. Decisions as to the overall management of this block of land were significantly affected by the controlling authority's (N.Z.F.S.) designation of the area as the H.S.F.P. in 1974. The Forest Park status is controlled by legislative directives calling for the preparation of a Management Plan open to public input and criticism. The Plan, when completed, goes a long way towards resolving any conflicts of interest and land use identified within the Park boundaries. No economic analysis was apparently used in deciding conflicts in the case of the H.S.F.P. Plan. Economics was only mentioned in broad references to the growing of exotic trees for production purposes and the acquisition of lands outside the Park either for access or for broad recreational or conservation purposes. In view of the Plan's success in resolving conflicts without the need for economic analysis it seems valid to conclude that decisions on the appropriate status and management of lands with an existing conservation status lie generally outside the scope of economic analysis. The management planning process with its emphasis on natural resource and social analysis seems more appropriate. This situation may not necessarily apply in all such areas though a personal study of other Forest Park, Scenic Reserve and National Park Plans supports this conclusion. However, it is important to realize that economic considerations likely played a leading role in the original setting aside of these areas. That is, the resources were conserved because the market place in the past judged the resources contained in the areas as not worth exploiting.
This situation is altering with time as the easily exploited lands are developed, focussing renewed interest in the areas formally conserved. Any substantial change in economic circumstances can be expected to place increased pressure on areas with a conservation tenure, perhaps resulting in a change of use preceded by a change in status.

(c) **Category (ii) Problems.** The second category of problems concerns lands of all tenures which are not currently protected by a conservation status in tenure. In the Cape Palliser area these are either freehold, Maori or Crown leasehold lands. This category seems to have two major subsets:

1. Lands that contain features associated with natural landscape values (often bordering the established conservation areas).

2. Lands that do not contain any features currently identified with natural landscape values.

The first sub-set contains those lands we previously identified as containing conflicts of use to which public administration is normally directed. They are thus amenable to the second branch of economic analysis involving social welfare.

The second sub-set contains lands that are generally outside the direct interests of public administrators. These lands are subject to the personal economic analysis discussed in Section 3.4.2.1. and will not be discussed further except where lands of both sub-sets belong to the same farm unit and decisions affecting
one area will affect the other.

(d) **Summary.** We have identified two broad categories of problems facing decision-makers in the Cape Palliser area. One of them deals with lands not currently protected by a conservation status and contains two main sub-groups. One of these sub-groups contains lands with identifiable natural landscape values. These lands will be the focus of social welfare economic analysis discussed in the section to follow.

3.4.2.3. **Social Welfare Economic Analysis in the Cape Palliser Area**

Welfare economics (Winch 1971) is the study of the well-being of the members of a society as a group, insofar as it is affected by the decisions and actions of its members and agencies concerning economic variables.

(a) **Introduction.** It was mentioned previously (Section 3.4.2.1.) that national goals of increasing foreign exchange through the encouragement of land development, which provides for increased stock unit numbers, are in effect throughout the country. In the Cape Palliser area this has meant pressure for the development of scrub and bush-covered lands of all tenures outside those areas already with a conservation status (see Map 6 (p140) which shows these areas). Societal goals of conservation and increased stock units are not compatible in all cases in these lands, resulting in land use conflicts. Therefore, public agencies responsible
for resolving these conflicts have an opportunity to apply social welfare economics to the situation to try to resolve the conflicts and uphold the 'public good'.

The most widely used analytical framework in welfare economics is called benefit/cost analysis. This system attempts to establish and quantify all the benefits of various options and all their costs. The decision-makers thus become aware of the full range of issues at stake and can hopefully then choose the option with the greatest net benefit to society. The main problems with the system are: one, the difficulties of identifying all the important benefits and costs of the options; two, the difficulty in calculating, measuring, or quantifying some of the known benefits or costs (e.g., scenery) and three, the difficulty of comparing units of value to calculate net gain which do not have a common basis (e.g., loss of scenery versus increased wool production). The first problem is usually overcome by a comprehensive, multi-disciplinary approach to the identification of benefits and costs. The second problem area can often be dealt with either by using land as a measuring stick for the benefits and costs of items not amenable to being quantified in dollar terms or by simply describing as completely as possible the benefits and costs involved with any particular item. The final problem area is the most difficult to resolve because it requires an understanding of society's preferences in all cases, the knowledge of which has escaped documentation to date. Some recent studies which value all items in terms of a common energy unit (Odum 1979) seem to hold considerable promise of helping society with the role of
deciding their priorities. The net effect of the problems and their attempted solutions is usually a very complex analysis in social welfare economics. In spite of this complexity and the outstanding problems benefit/cost analysis seems to offer considerable scope as an aid to decision-makers working with problems such as those confronting the Cape Palliser lands with conservation values, but subject to development pressures.

(b) Pre-Analytical Assumptions. Before discussing the application of benefit/cost analysis in the Cape Palliser area there is an important preliminary step. When given an open-ended, multi-dimensional brief to which benefit/cost analysis is expected to be applied, the assessor often has to resort to working from a set of assumptions and pre-ordained decision-making criteria. These assumptions and criteria are necessary:

(i) To guide the course of the Study.

(ii) To define the measurement criteria for the components of the Study.

(iii) To help restrict the scope of the Study.

In practice this initial work amounts to a brief written by the assessor which is then submitted to the client agency for approval or amendment. This brief will force those that disagree with the values used to state why they disagree or set their own assumptions and criteria. This process is valuable in itself. The preparation of such a brief and its subsequent client-based scrutiny before the actual benefit/cost work begins, will also
likely save much time and is less likely to attract substantial theoretical criticism. Finally it must be said that a consensus on assumptions concerning the natural resources of an area will still be easier to obtain than a consensus concerning the social implications of any alternative land use.

The following are examples of the type of assumptions one might establish before applying a social welfare oriented benefit/cost analysis to the appropriate conflicts in the Cape Palliser area:

I Society should favour a conservation of its natural resources in times of an uncertain economic climate. In practical terms this may mean that the discount rates used in risk, uncertainty and capital investment appraisals in the public sector when applied to natural resource analysis should be adjusted to favour conservation. That is, calculations should not assume increasing future welfare as is the usual case.

II Society should prefer diversity of the rural economic base. Thus, any proposals that increase diversity should on balance get a better hearing than one that does not.

III Society should prefer any increases in production to come from lands already developed or without major conservation conflicts as opposed to those with conservation conflicts, provided the areas compare evenly in financial assessments. Again this may require the use of discount rate manipulation to favour those lands with known conflicts of use (i.e., a substantially higher return per investment unit may be required from those lands in conflict compared with those free of conflict).

IV Society should prefer its public decision-makers to take into account the long-term sustainability of any developments proposed that will alter existing values in a non-reversible fashion.

* Discount rate - this is the rate applied to Capital investments which reflects the trade-off between present and future consumption or benefit.
Map 6. Unprotected Natural Landscapes
Assumptions such as those cited here are not easy to formulate in the absence of a national consensus on societal goals but they do contain important elements of natural resource management principles broadly recognized as wise throughout most public agencies charged with land use management. The assumptions also provide some guidelines for the methodology to be used in any financial appraisals done during the benefit/cost analysis (i.e., discount rate manipulation). Finally, this type of assumption will provide some guide to the planners when they weigh up which alternatives are to be placed before the decision-makers.

(c) Benefit/Cost Analysis. In preceding sections we have identified the type of lands in the Cape Palliser area that best lend themselves to economic analysis based on the 'public good'. Refer Map 6 (pl40). The role of this section is to examine the use of the benefit/cost analysis technique and its limitations in helping resolve the conflicts in these lands. It must be emphasized that benefit/cost analysis is aimed at helping decide between competing uses and not competing values.

The basic steps to follow in any benefit/cost analysis are as follows:

(i) Identify all relevant benefits and costs.

(ii) Price these as far as possible.

(iii) Discount these items over a set time period.

(iv) Compare the resulting values.
The time element involved in the calculations is important. The time interval in which benefits and costs will be measured should be the same for each competing use. It is also important that the time period chosen reflects the nature of the conflicts. Thus, when the conservation of nature is a competing use, a long-time period would be appropriate because benefits (e.g., flood control, regeneration of bush) become more viable over long time periods. Even the Rural Bank loans for farm development are tied to at least medium-term (15 years) calculations. If the same time period can be chosen for both competing uses, then comparisons are made easier. This is not always possible.

Identifying all the benefits and costs can be difficult. The benefits are usually divided into onsite (e.g., scenic preservation) and offsite (e.g., flood control). The offsite benefits are usually easier to quantify and consequently price, while the onsite benefits are both often difficult to quantify and price. There is no simple formula to follow and much controversy surrounds this problem in benefit/cost literature. Each case should be judged on its merits. The general view adopted in this paper is that it is better to have some attempt at quantifying or at least identifying all benefits and costs than to abandon the attempt altogether. This position supports the idea that as many elements as possible should be put before decision-makers.

When benefits are difficult to quantify and price, they may be approached through the costs which tend to be more tangible and hence priced. It is possible, therefore, to use costs over time to get a measure of the benefits. This approach ultimately
results in a statement to the effect that given an expenditure
of $x$ dollars over time our benefits are as appear in the area now,
or to put it another way it would cost $x$ dollars to recreate this
resource. Thus either getting an outright consensus that the
expense was worth it or judgments of whether the same money
spent elsewhere could result in increased net social benefits.
These are very subjective judgments but at least they are based
on clearly spelled out costs which can then be considered along
with advice from other social and resource management fields
to give an overall rational opinion. Further, it is important
that the costs of retaining or replacing the qualities and
natural resources of a piece of land are calculated over and above
valuations aimed at purely development potential. If we accept
that the values so derived are useful, how do we go about getting
them?

We would need a list of all the costs. In the relevant lands
of the Cape Palliser area the costs of conservation might include
calculations of the following:

(a) The Capital Cost of closing up and holding
down the land (e.g., tree planting, fencing).

(b) The Maintenance Cost on an annual basis
(e.g., pest control, fence repairs).

(c) Some estimate of cost to replace resources
in the future or elsewhere in the present
(e.g., replanting native trees).

(d) The opportunity Cost of foregone production,
that is, the value of the land to produce
meat, wool, timber, etc.
The next stage is to set up a table showing these costs for the piece of land subject to the benefit/cost analysis. Figure 2 (p.165) shows an example of what such a table would look like.

With the total costs available, we could calculate the net present value (NPV) of the stream of net annual costs into the past or if enough years supply of information is not available we can project the costs into the future. The NPV is calculated by subtracting the initial capital cost from the gross present value (GPV) which is derived from the formula (Hawkins and Pearce 1971):

\[
GPV = \frac{A_1}{1+r} + \frac{A_2}{(1+r)^2} + \frac{A_3}{(1+r)^3} + \ldots + \frac{A_n}{(1+r)^n}
\]

"where \( A_1, \ldots, A_n \) are profits in their respective years, net of any operating costs, \( n \) is the rate of discount expressed as decimal, and \( n \) is the life of the project in years".

The resulting NPV will give us some indication of the value to be placed on the area and this in turn could be measured against the NPV of the potential pastoral uses which would traditionally omit several items used in costing for conservation in the calculations.

(d) **Net Present Value (NPV) and Internal Rate of Return (IRR).**

The NPV implies the use of a rate of discount that diminishes a particular land uses value into the future. This calculation takes into account our assumed preference for using resource
## Figure 2

Calculating Costs to get some Estimate of the Benefits

<table>
<thead>
<tr>
<th>Year</th>
<th>Capital Cost ($)</th>
<th>Replacement Cost ($)</th>
<th>Maintenance Cost ($) **</th>
<th>Foregone Production Cost ($)</th>
<th>Total Cost ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y1</td>
<td>10,000</td>
<td>10,000</td>
<td>0</td>
<td>5,000</td>
<td>25,000</td>
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<tr>
<td>Y2</td>
<td>0</td>
<td>0</td>
<td>1,000</td>
<td>5,000</td>
<td>6,000</td>
</tr>
<tr>
<td>Y3</td>
<td>0</td>
<td>0</td>
<td>1,000</td>
<td>5,000</td>
<td>6,000</td>
</tr>
<tr>
<td>Y4</td>
<td>0</td>
<td>0</td>
<td>1,000</td>
<td>5,000</td>
<td>6,000</td>
</tr>
<tr>
<td>Y5</td>
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</tr>
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<td>0</td>
<td>1,000</td>
<td>5,000</td>
<td>6,000</td>
</tr>
<tr>
<td>.</td>
<td>0</td>
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<td>.</td>
<td>0</td>
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<td>5,000</td>
<td>6,000</td>
</tr>
<tr>
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<td>6,000</td>
</tr>
</tbody>
</table>

* All figures are adjusted for inflation already.

** Relates to Capital and Replacement Cost.
today rather than resources in the future. Currently the Government uses a 10 per cent rate of discount in its capital works assessments. This 10 per cent is made up of an assessment of society's preference for resource use now and the opportunity cost of using the same resource for other uses. This figure is rather arbitrary and tends to be lower than private institutions use in their capital investment criteria. From both the private and public's point of view, the project with the higher NPV is the one with the highest value for implementation. Thus if the NPV of using an area for conservation compares favourably with the NPV of using it for pastoral development, a conclusion can be drawn that says a conservation use has more value to society; though ultimately this conclusion rests with the nature of the pre-analytical assumptions.

A comparison calculation to NPV's is the IRR. This calculation involves figuring out what rate of discount will reduce a NPV to zero over the relevant time period. Once established, the IRR of one use can be judged against the IRR of another use. The guiding theory states that the use with the largest IRR will bring the greatest net benefits. The guideline applies equally well in the public or private sectors. The public official will usually judge the IRR calculated for a use against the cut-off rate of 10 per cent.

(e) A Critique of NPV and IRR Calculations. The use of NPV and IRR calculations to judge the relative merits of land uses with large social and environmental impacts has many weaknesses.
The first major fault lies with the assumption that all resource uses diminish in value into the future. This assumption is itself based on the general belief that future generations will be better off. This belief may not apply if supply limits to various resources are approached (e.g., oil) or if the limits to ecologically sustainable exploitation are reached (e.g., fish). It might be argued that natural landscapes are limited and future generations will not be better off if we destroy more. The result of this belief is that no discount rate should be applied and no NPV or IRR calculations are then possible. It would be more realistic to argue for less present consumption, and more investment in conservation which implies a continued use of NPV and IRR calculations, but also implies the use of very low discount rates in conservation projects, regardless of the preferences of society. Thus conservation uses will return a higher value into the future as opposed to exploitive uses which will continue to decrease their value at a higher rate. Dasgupta and Pearce (1972) support the idea of using different discount rates for uses with different philosophical or resource backgrounds. They suggest that in choosing the correct discount rate we undertake sensitivity analysis. This means the application of several different discount rates in the calculations and will result in several different NPV and IRR figures. The same discount rate is applied to both uses simultaneously and comparisons made of the results. Comparisons can also be made between the results obtained from using the different discount rates on the same uses. No comparison should be made, however, between one use and another different use when different discount rates are applied.
The second major weakness in NPV and IRR calculations is the difficulty, already cited previously, in establishing the benefits and costs of conservation oriented uses. Our approach to benefits through costs is one way but it does not cover all the intangible benefits (e.g., scenic appreciation) fully. It has also been shown that NPV is GPV minus capital costs and this means that if we use costs to calculate benefits and then subtract capital costs we may be counting twice. This is a problem surrounded by much debate in the current literature on benefit/cost analysis. Thus, since most of the land use conflicts we are concerned with in the Cape Palliser area involve conservation valuations, any NPV and IRR calculations may have less usefulness as decision-making guidelines than is normally the case.

On the positive side, if those involved with the Cape Palliser conflicts saw that greater or equal returns for capital invested could be obtained from the pastoral development of other lands (regionally or nationally) and used NPV and IRR calculations to prove this correct, then this would result in the preservation of the endangered natural landscapes at least in the medium term. The NPV and IRR calculations used would be as straightforward as those used by private firms and individuals. In deciding which alternative areas to those threatened should be assessed (given the variety of possible areas) experience shows that hill country should be measured against hill country with similar climate and soils.

(f) Summary. Economic analysis has predictive and explanatory elements valuable to planners and decision-makers in the public
sector dealing with conflicts arising over the conservation of natural landscapes. In the Cape Palliser area benefit/cost analysis techniques of the social welfare economics field have an important role to play in decisions pertaining to lands which contain natural landscape elements, but are not at present protected by a tenure status which recognises these elements. Economic analysis does not seem to have a major role in decisions pertaining to the appropriate status or management of lands already protected for their natural landscape values. Present, nationally based economic policies designed to encourage the development of regenerated or undeveloped lands for pastoral farming pose a direct threat to the remaining natural landscapes in the Cape Palliser area (and elsewhere) not protected by a conservation status. Though there are theoretical and practical weaknesses in current benefit/cost analysis techniques, it seems on balance better to use current practice, bearing in mind the limitations, than to abandon their use entirely. The development and use of sound pre-analytical assumptions will greatly increase the chances of any benefit/cost analysis successfully aiding in the resolution of appropriate land use conflicts. Finally, the field of discount rate formulation and theory offers the greatest possibilities for reform of current practice in that lower-than-traditional rates might be applied to uses of land such as natural conservation in recognition of their diminishing area nationally and high cost of replacement.

3.4.3. Social Analysis

3.4.3.1. Introduction. The theme of social analysis is the most
complex, least understood and least studied of the three main aids to decision-making. In Chapter One it was stated that rural planners and decision-makers, unable to find clear guidance from society as to its goals and priorities, were using systematic planning models based on the natural sciences and economics to set guidelines for problem solving. This section intends not to seek society's goals and priorities but to examine the various fields or types of social interaction, their strength and weaknesses, to which planners and decision-makers may refer in order to begin the process of defining goals and priorities already at work in society. Examples will be drawn from the Cape Palliser situation, where possible, in support of the ideas to follow.

The main fields of social analysis might be discussed under the following headings:

(i) Historical Perspective.
(ii) Current Legislation.
(iii) Politics.
(iv) Pressure Groups.
(v) The Media.
(vi) The Individual.

It is recognized that all these fields are interrelated to a high degree.

3.4.3.2. **Historical Perspective**

(a) **Introduction.** New Zealand has moved in its short European
history from a substantially undeveloped landscape to a highly developed landscape. The process was guided initially by political and philosophical ideals based on the social needs (including economic) of the early settlers. In time as foreign trade grew in importance and scope, international economic considerations gradually injected themselves heavily into all levels of rural land use policy formulation. This results today in a land use strategy based generally on natural resource management, the ability to sell rural produce overseas and elements of social justice. It seems important, especially from the point of view of this paper, that planners and decision-makers understand the historical perspectives of past decisions relative to these three elements of strategy, at least insofar as they relate to a particular area under study.

(b) Social Values. Wendelken and Hannan (1974) have discussed the legislative evolution of land tenure and land use in New Zealand from its earliest days. Their report shows that social issues such as farm settlement, the undue aggregation of land holdings, the owner-farmer production system and the rehabilitation of war veterans on farms dominated the first hundred years of rural planning in New Zealand. The last thirty years have seen a shift in emphasis from setting land use goals based on social needs to setting these goals based on so-called economic reality which may or may not contain an element of social justice. The full results of this shift are not yet clear, but O'Connor (1979) feels many of the problems now occurring in rural lands are caused because current policies do not contain a significant measure of social justice as their basis.
(c) **Land Use.** It is clear from the historical records that pastoral farming has long dominated all other uses at least in land physically capable of pastoral development and grazing. This is also the case today. In recent years the need for export diversification to capture new overseas markets, import substitution and Government policies aimed at exporting more, have caused a significant trend towards the diversification of rural land use. Crop farming, horticultural farming and forestry have continuously increased their roles in rural land use. This overall emphasis on diversification of land use has also led to the examination of present uses to see if any gains can be made from alternative uses. Thus, the remaining natural landscapes and the pastoral farms of marginal profitability have come under increasing analysis aimed at deciding their 'best' use (e.g., King Country Land Use Study 1978). Many current problems can be related directly to the social issues raised by this change in national strategy to diversification for export purposes. It is not yet clear what aspects of the change increase social welfare and which ones decrease it. Until the situation does clear, planners and decision-makers would be wise to document the existing social values and needs of the area they are studying along with recognizing the changing reality that many diverse land uses have equal claims for consideration. Neither of these strategies are commonly practised by land administrators currently.

Wendelken and Hanman (1974) further show that while the market system has been used to allocate rural lands in the past, increased conflicts today show it has not always performed the way society wished. Hence the increasing intrusion of legislation into the
rules of land use and the allocation of land rights in general. This process continues at present with society divided on when and where Government should intervene and when and where it should not.

(d) **Information Collection and Interpretation.** The historical evaluation of land use for a specific area may be difficult to find and organize. One can only look to local historic societies, the Historic Places Trust, old survey maps, local historians, Maori cultural representatives and any literature these groups prescribe for guidance on an area's past. In combination these sources should give planners and decision-makers a sense of the cultural worth of the land, an idea of the history of land use decisions in the area and an understanding of the cultural envelope in which they must work. This whole process can sometimes best be handled by one person whose philosophy of life is socially oriented and who has empathy with an area's people and its problems. Finding such a person is not easy and no firm formula exists. Nonetheless this whole process is essential because planning is for people and about people and an understanding of the history of the people of an area should have a strong role in forming the alternatives chosen by planners and in dictating the chances of implementing any alternative chosen.

(e) **Cape Palliser.** In the Cape Palliser area the individual farm owners are often the descendants of original settlers to the Wairarapa. Consciousness of this fact may be a valuable aid to planning because the individuals know each other and the land's
history very well. Consequently a consensus of opinion on various issues can be expected quickly. Planners, by arranging meetings can not only discuss the conflicts and problems of the area but also solicit historical information and win co-operation if the local people sense a sincere interest in themselves and their lands. In the Cape Palliser area these farm owners ultimately control the fate of lands containing threatened natural landscapes and any measure of co-operation or understanding engendered by meetings or personal contacts will likely be a strong and positive force in ongoing talks, negotiations and the effectuation of any plans. In an area like Cape Palliser there are only 50 to 60 owners to deal with and not enough value is placed on the role and contributions they can make to decision-making.

3.4.3.3. Current Legislation

(a) Introduction. There are a multitude of statutes and pieces of legislation that apply to rural land use. There are also usually several pieces of legislation that apply specifically to any given area. In the previous section we explored the historical evolution of legislation and its results; here we will examine the guidance available from studying current legislation. There appear to be two main types of guidance available:

(i) The recommended land use to be practised, including the limitations to use.

(ii) The social goals behind the recommended uses and the limitations to use.
The former is more easily identified and acted upon while the latter remains largely hidden or so general that any land use can meet the stated social goal. Both types of guidance cause conflicts with existing use or practice but the second is by its nature much harder to use to resolve problems.

(b) Practice. The easiest way to organize the land use guidelines of current legislation is to take a list of public agencies active in a given area and then find out their guiding legislation and the goals, objectives and policies they derive from this legislation. The information gathered in this way can be labelled either general to all rural lands or specific to a particular area. Dixon (1978) and O'Connor (1979) carried out such an exercise in land use studies of the Arrowsmith Range, Canterbury and the Mavora Valley, Southland, respectively. They seem to find the methodology an effective way to establish the present legislative guidelines and the interpretations various agencies placed on this legislation, nationally or locally. Examples of their system at work are contained in Appendix VI. Results of their exercise show in an orderly fashion; the range of fields of interests involved in an area, the degree of overlap in interest amongst the various agencies, the basis for many of the existing conflicts, the degree of legitimacy of each claim and the weaknesses of logic apparent when an agency moves from the general to the particular. This type of exercise and its results would prove very useful in an area like Cape Palliser where there are many public agencies acting on legislative guidance.
The greatest weakness found in drawing social values from operative legislation and statutes or government policy based on these, is summed up by O'Connor (1979), "cultural lag often means that public agencies have to approach the problem with administrative powers determined by earlier legislation which itself reflects the values of an earlier period". There is also often difficulty in identifying an agency's goals and objectives, interpreting them with respect to legislation and relating them to any specific area. The overall result of this situation is often very broad goals and objectives related to even broader interpretations which provide few concrete public value judgments and seldom any priorities amongst the judgments.

(c) **Town and Country Planning Legislation.** It is worth looking at one particular recent piece of legislation that could have a considerable impact on the whole of rural land use. This is the Town and Country Planning Act 1977. This Act provides not only a complete statutory and social framework for rural planning but also lists all the values to be considered in the planning at a national, regional and local level. Appendix VII provides a list of these values from the Act. There is no doubt that the lists are comprehensive, the framework of public participation extensive and the structure for planning and direction to plan strong.

Section 7 of the Act places great emphasis on land resource analysis and the Act even binds the Crown under regional planning structures. This results in forcing people to think more broadly about rural problems. The Act also provides a type of forum for
the discussion of local and regional problems and to a lesser
degree the debating of national issues if judicial rulings are
sought. The central Government and its agencies, now bound by
operative regional schemes (except on specific major issues)
have got to present a united and well-argued position, through
its Town and Country planning agency, (i.e., M.O.W.D.) with respect
to its plans in the field of rural social welfare and land use.
The net result of this broadened scope is a greater opportunity
to get to the roots of the problems besetting rural lands.

The main problems with this rural planning legislation are:
one, the values identified for all levels of planning are not
given clear priority and often overlap causing conflicts to
continue or even increase; and, two, the establishing of
regional planning bodies will be difficult because their political
base has yet to be established in many areas.

The first problem area requires that priorities are established.
This can be done by Parliament through legislative directive or
through many years of judicial rulings on the conflicts between
the various social values or goals in society. Neither course
will be easily followed in order to set the priorities needed.
The division of responsibilities in the Act will at least give
some interim direction to planners as to the scope and topics
of their planning which is an advance on past legislation and
makes local authority planning more effective than before.

The second problem area has no simple solution. At present the
regional political base can be formed from either a union of existing local body representatives (i.e., united council) or a directly-elected body (i.e., regional council). The first grouping usually displays problems of divided loyalties, a lack of a broad electoral base in its political policies and a lack of regional perspective in its planning and decision-making. The second grouping requires the setting up of a whole new level of representation, new election structures and regional policy platforms for the candidates. Both groups need substantial financial support for electoral purposes and for administrative and professional staff. None of these problems will be easily overcome especially in the rural areas with a small population base.

(d) **Summary.** Uncertainty as to societal priorities will continue to plague all those involved with rural planning and decision-making. The practice of seeking interim guidance on existing problems from existing legislation by systematically finding out the goals, objectives and policies of public agencies and their legislative basis will continue to be a useful tool. The practice of studying judicial precedents set by Planning Tribunals operating under the Town and Country Planning Act 1977 and the operative district schemes of local authorities will give some further leads as to existing social priorities. Should the regional governments and their planning agencies become established, tremendous progress is possible in rural planning.

3.4.3.4. **Politics.** The study of existing political ideals can
provide some leads to the concerns and priorities of society. At the same time all decision-makers operating in the public realm are required to be politically sensitive in their decisions. There are many sources of political policy on rural land use, chief of which are the various party manifestos. Decision-makers usually wait until the manifestos are translated into legislation but the various public agencies can play significant roles both in drawing up workable legislation and in making interim decisions based on the party or ruling party's manifesto philosophies. This process can occur at both national and local levels of politics and in the future regional levels as well.

3.4.3.5. Pressure Groups. There are a large number of social groups organized privately or by the Government who at least in the past are charged to examine various social issues and make recommendations to Government or its agencies. These can be short-term politically appointed bodies (e.g., Royal Commissions) and long-term politically appointed bodies (e.g., Planning Council) or they can be non-politically based groups, differing in their scope of interest from a national level (e.g., Native Forest Action Council) to a local level (e.g., local Scenic Reserve Board); in their fields of interest, from recreation (e.g., New Zealand Mountain Club) to ecology (e.g., New Zealand Ecological Society); and in the size of membership, from many thousands (e.g., Royal Forest and Bird Protection Society) to only a handful (e.g., Wairarapa Historical Society).

A study of this vast array of groups presents opportunities to understand their general goals or structures as well as any
policies, recommendations or opinions they might have on a particular issue or in a particular land area. This information can either be gathered in the same manner as existing legislative guidelines, that is by approaching each group to solicit their goals, objectives and policies, or by soliciting their inputs on an issue through media notifications calling for submissions. Both types of information gathering could be applied in a major issue, like that facing the Cape Palliser area, by seeking out opinions before building a draft plan and then after it is prepared calling for comments on its acceptability or validity. If a group's field of interest is thought to be particularly important to an issue then a representative of that group might be asked to join the planners or sit permanently on a decision-making advisory committee (e.g., New Zealand Deerstalkers' Association representation on the H.S.F.P. Management Committee).

Over the years many pressure groups have become well organized, sophisticated and very forthright advocates of their causes. They often hire professional staff to further their aims and present their points of view. Their power has been growing through time and some contain radical members who, if not given a hearing on their ideas, may move outside the law ultimately.

These groups are a valuable source of social information including facts, interpretations, opinions and recommendations. It seldom pays not to include the relevant groups right from the start of a planning process as they can become formidable enemies and hold up proceedings. It is unlikely that all of them will be happy
with any given decision but their inclusion in the planning and decision-making process will at least help limit conflicts and save time. A continuous dialogue is often needed between these groups and government agencies and between the groups themselves so that conciliation, arbitration and program effectuation procedures can run more smoothly. At present there is no forum in which these groups can interact and this alone causes many delays, much confusion and some conflict.

3.4.3.6. The Media. The media is a vast field of social dialogue, information and opinion on rural land use matters. Media use is usually unplanned but various Acts of Government require public notification of documents or issues (e.g., Town and Country Planning Act). In spite of its unplanned nature, a large number of radio programs, newspaper articles and (less frequently) television programs comment with varying degrees of depth of perspective on the full range of rural land use issues. Seldom is objectivity achieved or consensus reached, but much opinion is shown and debate occurs and these can provide valuable insights into the community's feelings on the issues.

The media can help to publicize pressure group and government agency ideas, aims and recommendations as well as the planning process and its resulting documents. It can also represent a valuable identification of interests, depths of feeling and conflicts in society, especially if used on a local or regional level. It is also at the local and regional levels that the media could have an increasing social role in education and advocacy of ideas as well as providing a forum for debate.
The reason the media could play this greater role in land use planning and decisions is that it can bring many ideas and people together without physically moving everyone, saving much time and expense. If organized properly the job of values identification and priority setting could also be greatly helped by a co-operative media. Further, any new social roles undertaken by the media would likely be in harmony with existing functions and no services lost.

In conclusion the various media technologies existing in society today could be used to much better effect in rural land use planning and decision-making than at present. Time could be saved, information gathered, values and priorities discussed, consensus established, decisions publicized and support for plan evaluation advocated if only the media was better planned and equipped for the field of social analysis. The media presents great opportunities for social interaction and will play an increasing role in the social analysis of land use planning in the future.

3.4.3.7. The Individual. It is likely that in any rural planning issue concerning a specific area, there are key individuals who not only have great knowledge of the area but are leaders in the community, officially or unofficially. It is important to try to identify these individuals early in the planning process and seek their information and support. If this job is done properly and with consideration, community spirit can be mobilized, much unnecessary conflict avoided, misunderstandings neutralized and error avoided. These individuals if they support a plan or idea can also give a credibility to it that people from outside the
The skills needed in staff to find these men and win their support are not taught in formal institutions but are largely personal attributes held by some people. It is surprisingly easy to pick the people who have these attributes though a mistake can be very costly. It has been my experience that a thorough knowledge of the area, subject to study, both physically and historically, helps greatly with this work of seeking the support of local leaders.

Other individuals can take part in the social analysis by personal efforts to submit recommendations and opinions on various aspects of a plan (e.g., H.S.F.P. Plan). They can also object as of right to local authority plans formed under the Town and Country Planning Act 1977. Many of the most involved individuals especially those concerned about issues on a continuing basis, join a pressure group or political party to further their views.

Both these aspects of individual inputs to social analysis have not been recognized formally or studied adequately, but find a quick practical usage in almost any land use planning exercise in New Zealand.

3.4.3.8. Summary. Social analysis is the most complex and least data intensive of the three main themes of decision-making. It is primarily about people. Techniques useful in understanding its many faces involve: the planners developing empathy for
the land and its people by gaining a broad historical perspective; a study and use of the existing legislative guidelines by seeking out the views of public agencies and working with the Town and Country Planning Act 1977; a better understanding and use of politically-based documents, the media and pressure groups; and finally a recognition that some individuals have a special place in the social order of an area and all individuals have something to contribute to social analysis.
Part 2

(i) A discussion and critique of existing National Park assessment criteria and procedure.

(ii) A preliminary assessment of part of the Cape Palliser area for its National Park potential.
Chapter Four -

A preliminary National Park Assessment within the Cape Palliser area.

4.1. Introduction.

The National Parks Authority and society face problems similar to Pirsig's character Phaedrus in *Zen and the Art of Motorcycle Maintenance* (1974). That is, what is quality and how do you define it? The National Parks Authority and society apply these questions to issues of what areas should be preserved in their natural state and under what orientation should they be managed. Science can take the issues so far and then value judgements are needed. The nature and urgency of these issues has been changed in recent years as natural areas dwindle. There are no simple solutions.

Chapter two shows that the National Parks Authority is limited in its work by a lack of information in areas such as Cape Palliser and that the issues it deals with are only part of a much larger problem society is currently involved in. Chapter three explains that there are many decision-making aids available to resolve land use issues and that issues such as National Park status have usually confined themselves in their use of these aids resulting in a limited number of alternatives being presented to the decision-makers. This Chapter will confine itself to these limits so that a practical exercise can be completed but the reader should view the overall problems in terms of the situation described and discussed in Part One.
The work of carrying out a preliminary National Park assessment within the Cape Palliser area will involve the following steps:

(i) A discussion of the National Park status.

(ii) The carrying out of a preliminary assessment using existing assessment criteria and guidelines.

(iii) A discussion of the other protective measures that may be used to preserve the natural landscapes in the Cape Palliser area should National Park status not be applicable.

(iv) A critique of the existing procedures and policies used in National Park assessment.

In completing a practical exercise, this chapter will fulfill one of the main criteria guiding RESM 604 reports. A National Park assessment was chosen as my practical work because:

(a) The need for the assessment and the nature of the work relates very strongly to the main theme of the paper; that is, diminishing natural landscapes in rural New Zealand.

(b) The area which is the subject of the assessment covers 75% of the overall study area, thus allowing for the use of a lot of the information contained in Chapter Two. This also means the reader will gain a good insight into the National Park issue by reading Chapter Two.

(c) A National Park assessment makes use of some of the decision-making aids discussed in Chapter Three and the reader can judge their value as compared to alternative aids available.
(d) If the preliminary assessment results either in a decision to undertake a detailed analysis of the area or a decision to search for alternative ways to preserve the natural features then the work done in Chapters 1, 2 and 3 will be of use to those doing these studies.

4.2. National Park Status.

4.2.1. Introduction.

The issue of what areas warrant National Park status has become increasingly complex in recent years paralleling the overall problems of diminishing natural landscapes. Chapter 1 points out that rural planning was handicapped by the inability of society to set its values clearly and more importantly to give them priorities. This situation resulted in planners and decision-makers appealing to principles of resource management to find guidelines and constraints to various land uses. This approach in turn ran up against the limits of science in defining relevant parameters and in reaching agreement on issues containing large elements of value judgement. Decisions on whether an area should have a National Park status or not have followed this same process with the added ingredient of an international commitment by the New Zealand government to the conservation of natural areas for the benefit of the world community.

4.2.2. International Views on National Park status.

The world view of National Park status appears to be chiefly
portrayed through policy guidelines offered by the International Union for the Conservation of Nature and Natural Resources (I.U.C.N.). The New Zealand National Parks Authority recognises this agency and in its General Policy for New Zealand's National Parks (1978) it states a general acceptance of the I.U.C.N. definition of a National Park as adopted in 1969. The I.U.C.N. definition is as follows:

"A National Park is a relatively large area
* where one or several ecosystems are not materially altered by human exploitation and occupation; where plant and animal species, geomorphological sites and habitats are of special scientific, educative and recreative interest or which contain a natural landscape of great beauty; and
* where the highest competent authority of the country has taken steps to prevent or to eliminate as soon as possible exploitation or occupation in the whole area and to enforce effectively the respect of ecological, geomorphological or aesthetic features which have led to its establishment; and
* where visitors are allowed to enter, under special conditions, for inspirational, educative, cultural and recreative purposes."

The I.U.C.N. definition introduces some important ideas to those who seek to assess whether an area measures up to National Park status. Chief amongst these are: one, the idea that National Park assessments should use the presence of complete natural ecosystems as both a boundary and a quality; two, the idea that the plant and animal species, geomorphological sites and habitats of an area should be judged for National Park status on the grounds of special scientific, educational and recreational qualities; three, the idea that an area considered to contain a natural landscape of great beauty warrants National Park status, and finally, the idea that an area judged to have one or all of the previous elements must receive management oriented towards the preservation of the natural elements in preference to cultural visitation and economic considerations.
These ideas are largely subjective and pose problems in defining words such as: special, relatively large, great beauty and ecosystem. However, once the relevant authority of a country has defined such words and the management orientation of the National Parks system is set, then concepts of resource management, guided by the degree of alteration by man and potential restoration, can be used to judge an area's ecosystem, geomorphological sites, habitats, scenic vistas and plants and animals to see if they warrant a National Park status.

The I.U.C.N. has also advanced some more quantitative ideas on what the minimum size a National Park should be and the amount of land a country should aim to preserve under this status. These more definitive statements have raised many problems because many smaller nations simply do not have natural areas of the recommended size nor can they meet the recommended percentage requirements for their land areas (i.e. 10%). If we add to their problems ones of population growth and increasing material needs the I.U.C.N. ideas seem of little practical value.

The general National Park definition does however continue to give useful guidelines with worldwide application.

New Zealand has not only adopted the general definition but is also trying to meet some of the more definitive I.U.C.N. guidelines (e.g. the percentage of total land area in National Park status). The only major policy conflicts the New Zealand National Parks Authority has with I.U.C.N. principles concern questions of the removal of exploitation from the Park area and the inclusion of modified areas within parks. New Zealand National Parks allow prospecting and mining within their boundaries.
and recreational facilities have been developed in some Parks. It must be stated that though these developments are allowed they are closely screened before approval and only very special or important projects approved. Decisions to include modified landscapes recognises the scarcity of natural landscapes and the need to establish Parks nearer the centres of population.

4.2.3. New Zealand Policy on National Park Status.

(a) National Parks Act.

The New Zealand National Park system began with the establishment of Tongariro National Park in 1894. Since the first dedication nine other Parks have been established. The National Parks Act 1952 serves as the guiding policy document for the entire system. The Act defines National Parks as those "areas of New Zealand that contain scenery of such distinctive quality or natural features so beautiful or unique that their preservation is in the national interest." (Section 3(1)).

The Act goes on to state that these parks are to be preserved as far as possible in their natural state with the public to have freedom of entry unless this conflicts with the need to preserve native flora and fauna. One of the most important characteristics attributed to National Park status by the Act is their management "in perpetuity". This idea led to policy in the Act that states that the revocation of National Park status can only be by Act of Parliament. This situation contrasts with many other types of status (e.g. Forest Parks and recreational reserves) which can alter their positions through internal decisions by
their controlling agencies. This attempt to elevate the status of National Parks above even party politics is a clear indication of the importance of these areas.

(b) Criteria.

It can easily be seen that the National Parks Act 1952 anticipates much of the general theme of the 1969 I.U.C.N. definition. The objectives of preserving natural resources and landscapes along with the management orientation of the Act and the Parks' high cultural place mirror exactly the I.U.C.N. intentions.

The National Parks Authority has, with a view to the intent of the 1952 Act, the I.U.C.N. definition and the existing situation in the country with respect to natural landscapes endorsed the following criteria for use in investigating new areas for National Park status:

(a) Relatively large unmodified or largely unmodified areas of distinctive scenery or containing beautiful or unique natural features.

(b) Relatively large natural areas representing particular types of New Zealand land forms, landscapes, vegetation and ecosystems generally.

(c) Relatively large distinctive and predominantly natural areas which include smaller modified portions capable of restoration and giving the potential of contributing to the integrity of the whole park or enhancing park values.

(d) Having regard to the prime criteria, relatively large areas where the chance of restoration is good and there are no other unmodified areas of a similar type, either regionally or nationally, that could be, or already are, protected.
These criteria are derived from the Department of Lands and Survey Administration Manual (Section H 19).

The Department of Lands and Survey manual adds a series of points to help in the interpretation of the criteria. These cover such issues as; size, restoration of modified areas and the perspective the assessors should use in their work. See Appendix 8 for the complete text of these points. Overall these additional points illustrate a need for flexibility in the interpretation of an area's chances.

(c) New Ideas.

The criteria and related points adopted by the National Parks Authority contain two main ideas not mentioned in either the legislation or the I.U.C.N. definition. The first concerns the inclusion of large modified areas in new National Parks and the second the notion of preserving areas that are 'representative' of particular types of New Zealand land form, landscape, vegetation and ecosystems.

The emphasis on including modified lands and how to judge their relevance in broader National Park proposals is in recognition that few large totally natural areas remain in New Zealand. Those natural areas that survive are either surrounded by lands in various states of regeneration or development or are themselves the products of regeneration after either Maori or European destruction last century. The recognition of the reality opens up many areas to assessment that would not traditionally have been considered, especially on the North Island. This idea also supports the notion that natural landscapes are a scarce and not
plentiful resource and the remaining areas should be assessed with
a view or preserving the important features remaining, "in perpetuity". Finally, the inclusion of modified areas in assessments recognises the reality that many existing National Parks contain modified lands.

The second new idea requires the judging of an area's representative qualities which implies the concept of preserving in an orderly fashion any large natural areas remaining that exhibit characteristics not currently preserved under National Park status. This idea seems to indicate that an area should get favourable treatment for National Park status if it is representative of a certain type of land form with a natural vegetation cover even though it could not be judged to be so beautiful or unique that its preservation is in the national interest. Thus such areas may lie outside the spirit of the National Parks Act and by being a 'representative' type can bypass the need to be 'distinctive', often an intuitive stumbling block in the past. This feature of the criteria seems to imply a move away from emotional responses to more quantifiable, rational parameters. This new idea has important ramifications for the assessment of the Cape Palliser area and many other similar areas in New Zealand.

(d) Conclusion.

It is interesting to note that no areas assessed to have National Park potential under the criteria have successfully gone on to achieve that status. Usually criteria are only judged useful if they fulfill a function but it may be that in the case of National Park assessment criteria the indecision of society is the key to that failure. This failure is also proof that these assessments are only part of a much larger debate on rural land use
being carried out in society presently, and is not a reason to abandon the criteria or the assessments.

4.3. A Preliminary Assessment in the Cape Palliser area for National Park Status.

In October 1977 Head Office of the Department of Lands and Survey instructed the Wellington District Office to undertake a preliminary National Park assessment in the Cape Palliser area. The instruction for the assessment was based on a request from the National Parks Authority. This request was in turn a result of recognition by the Authority's Planning and Classification Committee that all the areas being identified for potential National Park status were the traditional mountain and forest areas which were already well represented in the existing National Park system. The committee decided to convene a meeting to examine the criteria for assessing areas and to extend the criteria so that other types of landscape might be included. This change in criteria clearly shows a recognition that no large natural areas outside the South Island mountains could qualify with criteria as they existed then. A number of interested scientists and conservationists were invited to the meeting. The results of the meeting were the new criteria outlined in section 4.2.3. and directly after, areas such as Cape Palliser were specifically identified for study.

4.3.1. Preliminary Assessment Procedure.

The general procedures Department of Lands and Survey (D.L.S.) staff follow when required to undertake a preliminary National Park
assessment are contained in the D.L.S. Administration Manual, Section H 19. The main points could be summarised as:

(i) The Commissioner of Crown Lands for the District Office convenes a planning team.

(ii) The Team's first job is to establish a boundary to the area under study.

(iii) The team is then concerned with soliciting, collecting and collating existing information concerning the area relevant to the criteria for assessment. This information can come from all public and private sources available.

(iv) During the process of information gathering general public and interest group opinions on the area's status as a new National Park should be sought.

(v) The team should then analyse and evaluate the information gathered in terms of the criteria, identifying its special values or problems, and noting areas where there is a lack of information.

(vi) Following the completion of the process described in (v) a report should be made to Head Office setting out:

(a) the special qualities, if any, of the lands under study,

(b) details of relevant information, where information is lacking, and details of what additional expertise will be required to complete the preliminary assessment.

(c) Recommendations as to whether the area warrants a more detailed study for National Park status or suggestions for any appropriate status under the Reserves Act 1977.
The Department of Lands and Survey procedures were followed over the summer of 1978-79 by myself with help from staff of the Wellington District Office and staff from the Wellington Conservancy of the N.Z.F.S. in Palmerston North. The N.Z.F.S. help was sought and welcomed under policies aimed at involving the N.Z.F.S. directly when lands under their control are involved in an assessment.

4.3.2. The Study Area.

The planning team's first job was to define the area to be studied. The only guideline available was a broad reference to the Cape Palliser area in the initial National Parks Authority request and subsequently the Head Office Department of Lands and Survey instructions. There was also a large scale map (1:250,000) accompanying the instructions which had a wide circle enclosing the south-easternmost tip of the North Island.

In order to decide on the study area it was first necessary to get an idea of what resources in the general area held any potential or intuitive promise of National Park quality. The plan was to then draw them together inside a practical boundary for more detailed study. Thus the preliminary assessment began without a boundary hoping one would materialise out of attempts to become familiar with the issues and resources acting on the area in and around that circled on the map supplied. The result was an area that included within it; the Aorangi Mountains, the sea coast, the entire H.S.F.P., all remaining bush and scrub areas outside the Forest Park, the major scenic attractions outside the Forest Park and the complex of archaeological sites identified by the Anthropology
Map 7. National Park Assessment Area
Department of the University of Otago. These features were readily identifiable by approaching those organisations actively involved or concerned with the future of the area or by referring to submissions concerning the H.S.F.P. Management Plan and the Department of Lands and Survey Coastal Reserve Investigation in the area. Map 7 p 178 shows the study area. References to the Cape Palliser study area in the following sections will imply only this reduced area.

4.3.3. Information Relevant to the Assessment.

It was shown in Chapter two that the Cape Palliser area was not well covered by many of the standard land and water resource surveys normally carried out by government departments nor was the area subjected to many special surveys, excepting the flora. The results of this shortage of natural resource information or natural resource analysis was discussed in Chapter 3. Basically it was found that any definitive interpretations of the existing data were likely subject to a high degree of uncertainty or error. The question this situation raises here is whether the existing data and interpretations can be used to judge the Cape Palliser area's potential for National Park status as guided by the criteria of section 4.2.3. and Appendix VIII. The answer to the question lies with the assessing team. The assessors must draw out the key elements of the criteria, seek out the appropriate facts, get as many professional interpretations as possible on their relative merits and inadequacies and then make a judgement as to whether enough information is available to make an adequate preliminary assessment of the area. Thus though the existing data appears inadequate for comprehensive rural planning purposes it may be
adequate for work such as a preliminary National Park assessment.

4.3.4. Interpreting Existing Data Using National Park Criteria.

The key elements of the criteria might be summarised as follows:

(i) scenic beauty,
(ii) representative New Zealand landscapes and land forms not already included in National Parks,
(iii) representative New Zealand vegetation and ecosystems not already included in National Parks,
(iv) some judgement of the overall rarity or uniqueness of the other three elements or a combination of them.

The fact that portions of the Cape Palliser area subject to the assessment are man modified does not disqualify it automatically from becoming a National Park. A judgement is needed on the chances of these areas being restored to a natural state. This judgement is then taken in combination with other factors to make a final decision on the area's National Park potential.

The first four sections to follow will assess the study area under the broad headings outlined above. A fifth section will cover any other elements thought by the assessors as relevant to the overall study. A concluding section will serve as a formal recommendation on the area's National Park potential as set down in assessment procedure (vi) section 4.3.1.

4.3.5. Scenic Beauty.

(a) Specific sites – The Cape Palliser area contains three
specific land forms judged either by tenure or interest groups as scenic attractions. These are the Pinnacles area enclosed in the Pinnacles Scenic Reserve, the upper reaches of the Ruakakaputuna River where a deep gorge has been formed in limestone and the Caves near Blue Rock Stream. None of these features are considered of national significance by any public or private organisation involved in the area. They are, however, thought to be of regional importance.

(b) Coastal Areas - A recent Coastal Reserve Survey of Featherstone County (unpublished) undertaken by the Department of Lands and Survey (D.L.S.) and the District Planning Scheme of Featherston County judge many of the coastal headlands in the study area as either scenic attractions of local or regional significance. The latter group include Cape Palliser itself which is the most southerly point of the North Island. The significant judgements are based on rough estimates of the numbers of people who visit the area and the distance they travel to the sites. The judgements of scenic quality were largely based on the intuitive appeal the areas had for those doing the studies. D.L.S. significance ratings are used to set acquisition or protection priorities and also include elements of management guidelines. The D.L.S., upon completion of their surveys, seek the support of the local authority for their ideas. The D.L.S. and Featherston County Council generally agree that taken as a whole the proposed and existing coastal reserves and the coastal lands from the seashore to the first major ridge inland form a regionally important scenic attraction.
(c) H.S.F.P. - The scenic forest clad portions of the Aorangi Mountains are almost entirely enclosed within the H.S.F.P. The N.Z.F.S. and the main user groups (i.e. tramping clubs and N.Z. Deerstalkers Association) generally feel that the H.S.F.P. offers scenery of regional significance. These judgements are based on the intuitive appeal of the Forest Park. The most commonly stated reasons for the regional label are; the multitude of views from the mountain bush to the sea and coastline (see Photo 8 p.192 for such a view) and the fact that the bush covered hills are themselves scenically rare in the eastern Wairarapa Hill country. It is also apparent from visiting the area that the H.S.F.P. provides a great variety of scenery in a relatively small area.

(d) Conclusions - The overwhelming view of people interested in the Cape Palliser area's management, and its conservation and familiar with its terrain and panoramic views is that it is scenically of regional importance.

This judgement of regionality does not mean that the area's qualities are only recognised in the Wairarapa but that the area's qualities do not compare favourably with other areas judged to be of national importance. There is a large element of subjectivity in any analysis of scenic quality but this does not alter the fact that scenic beauty is a key element in National Park assessment. The fact that nobody judged the scenic qualities of the area to be of national importance is likely a true reflection of society's views on this type of issue. It may be a different story in the future or if the area was judged by people of different countries. For example, it appears very likely that such an area existing in
England would almost certainly have a national rating given the areas presently included in National Park status there. This point may be more significant in the future if, worldwide, the remaining natural areas diminish significantly.

4.3.6. Representative New Zealand Landscape and Landform.

(a) Introduction. - In Chapter 2 the geology, geomorphology and topography of the Cape Palliser area were described. The main features mentioned were: one, a series of gravel terraces of glacial origin set at different altitudes along much of the western side of the study area; two, Tertiary rock outcrops of special cultural (e.g. Maori) and scenic (e.g. Pinnacles) qualities; three, extensive faulting in the area severely fractured the rocks and formed complex drainage patterns; four, the valleys formed by the processes described in three are steep sided, wide, gravel filled and subject to heavy erosion; five, limestone formations in the northern area contain steep gorges, caves, sink holes, stalactites and stalagmites; six, a series of raised beaches, reflecting recent tectonic uplifts occur along the southern coastal plains; and seven, a Mesozoic aged mountain range running generally north to south composed of a series of narrow ridges connecting sharp peaks and reaching 900m altitude in several places.

(b) Representative Status.- None of the individual land forms or landscapes described above are unique or particularly rare in New Zealand. In combination though there is certainly a uniqueness about the whole structure and its general location on the North Island. It seems still doubtful that even this general uniqueness in combination with the few rare features in itself gives the area
potential National Park status. It is however arguable that this general type of landscape or land form is not represented in any existing National Park. If this is the case then the decisions on its importance rests with whether this general type of landscape warrants National Park status. This decision will have to be made by the National Parks Authority with a view to the rest of the country.

(c) Conclusions. - It seems likely the Cape Palliser area contains landscapes or land forms not currently included in the National Park system. It does not include any land forms or landscapes that are unique or rare from a national point of view but rather they are of a regional significance. It now remains to weigh up the representative concept with the findings of the other elements to see if the overall picture gets support for a National Park status. It was never specifically stated in the criteria that they were to be used in a combined fashion but the idea makes sense because it would be a rare area that became a National Park on the strength of any one criterion. It is also clear that other avenues are available to preserve landscape features thus drawing further support away from the need for a National Park status to be used for this purpose alone.

4.3.7. Representative New Zealand Vegetation or Ecosystems.

(a) Introduction.— In Chapter 2 the flora, fauna and ecological pattern of the Cape Palliser area were described. Little is known about the fauna and ecology of the area while the flora has been studied in reasonable detail. Dr. T.E. Druce of the Botany Division of the D.S.I.R. is responsible for much of
the interpretation work used in this section, opinions being
drawn from either his publications or personal comments.

(b) Specific Biological Features. - Generally none of
the species of plants or animals in the Cape Palliser area are
considered unique or rare to the overall New Zealand system with
the exception of the collection of cliff dwelling and coastal
plants north-east of Cape Palliser. The coastal and cliff
communities, though considered to be rare, were not thought
important enough, nor to cover a sufficient enough area, or to
be in a sufficiently unmodified condition to warrant a National
Park status (Druce as per comment 1979). It is also felt
that other tenures (e.g. scientific reserve) or management
practices within existing tenures might be more appropriate
to their unique values and active management for preservation.
Having said this it is also felt that the existing status and
management of the areas does not recognise either the rarity of
the vegetation or their inherent qualities, both needed for
their successful preservation in the future.

(c) Ecological Associations.- Some beech forest ecological
associations in the Cape Palliser area are unique not because the
species in them are rare but because their associations in
space are unique. The ecological associations that display this
uniqueness (at least to the North Island) are the products of
many varied factors, some natural (e.g. altitude, geographical
location, climate) and some directly related to man (e.g.
prehistoric burning, introduced browsing animals). The questions
that need to be answered by anyone trying to judge their importance
in the national scene are:

(i) What is the future of these plant associations under different managements?

(ii) Are these plant associations rare to the South Island also?

If the answer to the first question is that the introduced browsing animals may be essential to the maintenance of the associations then this would place their management directly at odds with current National Park policies designed to eliminate all introduced animals (usually taken as browsing species) and to restore ecological systems to at least a pre-European status. There are some recent suggestions that the rarer introduced, browsing animals might be tolerated in some National Parks but the question of sustaining plant associations rare because of the presence of browsing animals has not been raised before. It may be that a Forest Park status with its acceptance of introduced animals may better cover such a situation.

The answer to the second question is needed to help the assessors judge the national relevance of the plant associations' rarity and uniqueness and more importantly to help to answer the questions of whether these associations are already represented in the existing National Parks. Further, the fact that the associations are unique to the North Island and are not represented in a National Park does not necessarily mean they warrant National Park status. Other types of status might adequately protect the associations and representative examples might still exist on the South Island outside the National Parks.

(d) Other Biological Features.— Apart from the rare cliff and coastal plant associations and the unique beech forest associations, mainly confined to the higher altitudes of the southern Aorangi Mountains, there
exist two other groups of important biological features.

The first group is important for the fact that it retains a high degree of naturalness. There are two places in the Cape Palliser area identified by D.S.I.R. personnel (submissions to the H.S.P.P. Management Plan) as retaining a high degree of naturalness; the Tauanui Valley in the north-west of the study area and the Waitetuna Valley in the extreme south of the Aorangi Mountains. The Tauanui Valley is a remnant low altitude mixed podocarp forest giving way to beech forests at higher altitudes. The Waitetuna Valley is the best remaining example of a high altitude mixed beech-broadleaf forest giving way to pure beech and some tussock grasslands at the highest altitudes. Neither of these associations are rare or unique nationally though they are both regionally rare in condition. It is not felt that the presence of these areas will have a positive impact on a National Park assessment and in fact they show the limited nature of the natural state of the Cape Palliser bush.

The second group of plant systems thought ecologically important include remnant patches of various native species spread throughout the study area. These remnants include; stands of mixed native scrub species of various ages and states of regeneration to forest systems, remnant dryland coastal tree species usually surrounded by developed pasture, and shrub-grassland associations on the coastal plain or highest mountain areas. It is not thought that this group contains any elements that singularly or in combination would promote a National Park status in the Cape Palliser area, with the exception of the native scrub communities that are not likely represented in any National Park. However, National
Park status would only be considered for such areas if they were part of a much larger proposal where they would play only a secondary role.

(e) Conclusions. We have a very complex situation in the Cape Palliser area that has likely occurred elsewhere. The area contains some interesting ecological associations and plant communities but none which are important enough alone or in combination to warrant National Park status. The Forest Park status of some of the interesting ecological associations and plant communities seems to guarantee their preservation, while those important biological features lying outside the Forest Park, if they are not incorporated in the future, will likely disappear. Other types of preservation status could in theory protect them but management difficulties would likely make their use impractical. This may mean that if other features point to a National Park potential alone or in combination the one way to preserve the endangered biological features would be by supporting a National Park status using ecological features as part of the case. This use of National Park criteria would be completely outside its normal purpose and should only be contemplated if the Forest Park will not expand and other important criteria are met in the usual manner. This move to using National Park criteria to preserve our diminishing natural landscapes, whether so called "rare" or "unique" or not, may not be as radical as it appears. The National Parks Authority and its advisors must already be well aware that the Cape Palliser area does not measure up to the existing National Parks image but they are also well aware of the diminishing natural landscapes of the lower altitude, North Island country.
4.3.8. Concepts of Rarity or Uniqueness.

(a) Introduction. - The previous three sections cover the main fields of physical parameters and their interpretation relative to criteria used in National Park assessments. This section will look at the issues of 'rarity' and 'uniqueness' raised in these previous sections and try to judge the impact they have on the other criteria used to assess areas for National Park status.

The Cape Palliser area was found to have scenic values of regional importance, land forms and landscapes representative of the south of the North Island and flora and ecological associations generally representative of the south of the North Island. It was decided that all three of these main elements contained features that could be described as rare or unique. It was also decided that in each case the rare or unique qualities did not seem to measure up to National importance. The question that remains is whether the three elements combined from an overall structure or situation of national importance. The answer to this question is largely a value judgement that should be made by the National Parks Authority after it has studied all the elements and their interpretations. It is intended in the remainder of this section to aid this decision by discussing the problem in terms of the area's overall 'uniqueness' and 'rarity'.

(b) Concepts of Rarity and Uniqueness. - The concepts of rarity or uniqueness if applied to specific features in the Cape Palliser area always indicated a situation regionally important, not nationally important. This may not be so if the concepts are applied to the overall Cape Palliser situation.
The area is representative of the coastal lands of the south of the North Island, the eastern hills of the south of the North Island and the vegetative systems of both larger areas but forms a unique mixture of all three representative elements plus its own unique setting as a natural landscape rare in the whole of the south-eastern North Island. None of this combination of elements of the south of the North Island are contained in the current National Park system. It is likely that most of these elements are found under different types of conservation status in the south of the North Island or elsewhere but if one of the National Park Authority's aims is to have representative areas from all the major sections of New Zealand under National Park status then Cape Palliser may be such an area representing the south of the North Island. There is still the question of whether other areas in the south of the North Island are better representatives. The answer lies with two other areas more or less enclosed in the Rimutaka State Forest Park and the Tararua State Forest Park. The former being the only one of the two with a coastal area and both having many different features.

(c) Conclusions. - It would seem a wise decision to judge the Cape Palliser representative situation against the other two areas but only if the National Parks Authority decided it was the aim of the National Park system to contain representative examples of all the main regions of the country. In short the decision is outside the scope of a preliminary assessment.

4.3.9. Other Elements Important to National Park Assessment.

(a) Introduction. - There are two other elements important
to National Park assessment not included in the specific criteria but outlined in the discussion of the criteria's use contained in Appendix 8 or elsewhere in the D.L.S. Administrative Manual Instruction H 19. These elements can be summed up as follows; one, the degree of modification, subsequent chances of restoration and the size of the area being studied; and two, the relative importance of cultural features such as those involved with Maori legend, early European settlement or archaeological sites representative of prehistoric man. The former elements are specifically mentioned as relevant to National Park assessment while the latter played various roles in existing National Parks (e.g. Urewera National Park).

(b) Modification. - The Cape Palliser area has been greatly modified by prehistoric and modern man either directly or by the introduction of browsing animals. The overall degree of modification is likely greater than in any existing National Park and this must count against it. The Forest Research Institute has found regeneration rapid (Jane and Pracy, 1974) when animal pressure is reduced. See photo 9 pl92 for an example of 5 years of regeneration in logged areas. Therefore the area has a good chance of restoration under an active animal control program. The time span needed for this restoration would be very long term, possibly several hundred years, though this depends on the state at which restoration is judged complete. The Cape Palliser area is about 30,000 ha which is smaller than any existing National Park and much smaller than most. This area is only half covered by some kind of native vegetation; a very small proportion compared with other National Parks. Thus the area's small size, degree of modification and percentage of natural cover would make a positive National Park assessment
Photo 8 - Mountains to the Sea View

Photo 9 - Regeneration
unprecedented in many ways. Still the National Parks Authority personnel who commissioned the study must have been aware of these factors and it is well known that few large natural areas remain in New Zealand (especially on the North Island) that are as large as even the smallest National Parks.

(c) Cultural Features.— The cultural features of the Cape Palliser area are under study because of the role these features played in the existing National Parks and the role they play overseas in National Parks. Overseas they may be a key element in the formation of National Parks but in New Zealand they remain only a mitigating circumstance in the management of historical or cultural sites within National Parks. The Cape Palliser area contains some early European sites (e.g. a whaling station, shipwreck memorials) and Maori cultural features (e.g. Kupe's Sail Rock, Cape Palliser). These sites and features are judged to be of only local significance by the Historic Places Trust though the Maori features are part of a larger regional context encompassing the North Island east coast tribes. None is felt to be of national significance.

The prehistoric sites are different. They are considered in their entirety to be of national importance and protected under the general guidelines of the Historic Places Amendment Act 1975. Thus they are to be preserved as far as possible whether registered or not by all those responsible for the management of the land in which they occur. Appendix IX sets out the Historic Places Trust opinion on their importance and management. The sites are not generally visible above ground with a few exceptions (e.g. stone walls). See photo 10 p 194 for an example of
Photo 10 - Prehistoric Rock Wall
one of the visible features. The factor of visibility is important to the attractiveness of the area to visitors and to the management of the sites. Still, even if many more prehistoric areas were visible and attracted large numbers of visitors, the presence of the sites would not itself add great weight to decisions on a National Park status but may have caused their inclusion in a Park proposal for preservation purposes. Their location on the coastal flats, the importance of the flats scenically and as representative landscapes, land forms and plant associations may add weight to any decision to include the coastal areas in a proposed National Park.

(d) Conclusions. - The high degree of modification in the Cape Palliser area would count heavily against any decision to establish a National Park. Restoration is possible but only in the very long term. The presence of prehistoric sites in the coastal areas might add some weight to any decision to include them inside a proposed National Park but does not directly affect the question of whether a National Park should be established in the area. Alternative protective status is available to preserve the sites but they would best be served under one controlling status as they are many sites widely spaced. The H.S.F.P. already recognises the importance of preserving such sites and would shift concern easily to these areas if the Park expanded.

4.3.10. Conclusions.

This section sets out to fulfill the sixth point (vi) of the preliminary assessment procedures (see section 4.3.1.) drawing from the previous 9 sections.
(a) Special qualities of the study area - The Cape Palliser area was found to have the following special qualities:

(i) The area contained several specific sites and general landscape considered of regional importance scenically. These judgements are based on opinions from individuals and organisations familiar with the area. Chief amongst these are; the N.Z.F.S. view of the scenic quality of the H.S.F.P., the D.L.S. views of the coastal scenic qualities, the Featherston County Council's views of the reserves and coastal area's qualities and the views of Dr. T.E. Druce and Dr. G. Kelly both of the D.S.I.R. and who have worked extensively in the area.

(ii) The general landscape and land forms of the Cape Palliser area are thought to be of a regional importance in that they contain many examples of the various landscapes and land forms representative of the south of the North Island. This judgement is based on writings about the area and the opinions of D.S.I.R. scientists involved with geological, geomorphological and topographical studies in the area.

(iii) The vegetation and ecological systems of the study area are generally of regional significance being once again representative of the main vegetation associations of the south of the North Island. The exceptions to this general regional label are some high altitude beech forest associations unique to the North Island (and maybe to the South Island) and a small area of cliff and coastal dwelling plants rare as species in New Zealand. The interpretation of the biological features
was done by D.S.I.R. scientists, N.Z.F.S. personnel and Forest Research Institute scientists.

(b) Additional Relevant Information. - The following points contain some more relevant information on the suitability of the Cape Palliser area for a National Park status. Where further expertise is needed it is included in discussions of the relevant information's value.

(iv) If the qualities of uniqueness and rarity are applied to the overall Cape Palliser situation described in points (i), (ii) and (iii), the result is that the area is considered not to be unique or rare nationally because there are other natural mountain areas in the south of the North Island. It is, however, more unique or rare than either of the other two main bush covered mountain ranges to the west because it is almost the sole surviving large natural area of the south-eastern North Island hills and mountains which stretch from Hawkes Bay to Cook Strait. Thus overall it is the most unique setting for a National Park if one is proposed for the purpose of having a representative area of the southern North Island in National Park status. This representative proposal would have to be made first before the qualities of uniqueness or rarity are applied. Such a proposal would mean the Rimutaka Mountains and Tararua Mountains would have to be compared with Cape Palliser in their overall uniqueness and rarity and the other three elements described previously. This whole process would have to be initiated and judged by the National Parks Authority as it is outside the scope of a preliminary assessment of one area.
(v) Should the area be a borderline case for National Park status then the high degree of modification and low percentage of natural vegetation cover would count against it. However, if the area was thought generally suitable for National Park status the chances of restoration are good but only in the very long term.

(vi) No cultural or historic elements in the Cape Palliser area would help support a National Park status though if a Park was proposed the presence of many archaeological sites on the coastal plains might help favour any decision on the inclusion of the coastal areas in the Park if there is doubt for other reasons.

(c) Findings. - It is obvious from the preceding 6 points that the Cape Palliser area does not have features that could be individually or collectively judged to be "so beautiful or unique that their preservation is in the national interest" (from section 4.2.3.). Thus in terms of the National Parks Act the area does not warrant further more detailed study.

Similarly the Cape Palliser area does not meet many of the I.U.C.N. criteria and is contrary to some, most notably, it is largely a modified area of a size well below minimum recommended dimensions.

However, if we turn to the National Parks Authority criteria for preliminary assessment we find a different perspective. The Cape Palliser area forms the nucleus of a tract of land that
is representative of the south of the North Island scenically, ecologically and geomorphologically. No such features collectively representing the south of the North Island are contained in any existing National Park. Thus the National Parks Authority must decide: one, if it wants an area representative of the south of the North Island in National Park status; and two, if the answer to question one is yes, then is the Cape Palliser area the best representative area. It would require different procedures than those used in preliminary assessments to do this comparison. If the answer to the first question is no then the area fails to meet the main criteria as applied in this report. A third question that relates to the two above is: what other status could preserve this representative nature should it be decided that Cape Palliser was the best representative landscape of the south of the North Island but not generally of National Park quality.

The results of this section might be applied to question three as follows. The Cape Palliser area does not have qualities normally attributed to National Park status. It can also be inferred from the results of the preliminary assessment that even if the National Parks Authority decided it wanted a representative southern North Island area in National Park status and the Cape Palliser area was the best representative it still had many major faults that would count against it such as its small size and degree of modification. If the Cape Palliser area still seemed to prevail because such representative natural areas were diminishing the National Parks Authority should still assess whether the representative landscape can be preserved under another status. The H.S.F.P. status over much of the study area protects the natural landscapes within it. This status would have to expand considerably to cover
all the areas identified as regionally important by the National Park assessment and major financial allocations would be needed. These allocations would also be necessary if a National Park proposal prevails.

4.4. Other Protective Measures.

(a) Introduction. - At various stages throughout the previous section dealing with the preliminary assessment alternatives protective measures were mentioned as either potential substitutes for the National Park status or as existing protective situations. In this section we will briefly examine the extent to which these other existing or proposed types of protective status cater for the scenic, landscape, flora, fauna and ecological elements identified in the Cape Palliser area. This process is carried out as an aid in assessing the likely future of these features should a National Park status not be recommended.

(b) Scenic Beauty. - The important scenic features of the Cape Palliser area are protected or can in theory be protected by a status other than National Park. There will be many practical problems in using the alternative protective measures with the exception of Forest Park status.

Of the three specific areas of regional scenic quality only the "Pinnacles" have protection under a reserve status. The Ruakakahuputuna River Gorge may have some kind of protective reserve status along its banks but its existence is not noted on the latest legal maps. If it turns out the River has no protective status then a scenic reserve should be set up along its sides.
The Blue Rock Stream caves are on freehold tenure lands and though protected by the owners their long term future is in doubt if the owners change or their management changes. All three of these scenic areas lie adjacent the H.S.F.P. and if the Park boundary expanded to include them they would receive protective status and management at least the equal of their current status and management.

The scenic coastal headlands are or can be protected by reserve status in combination with their designation in the Featherston County District Planning Scheme. This is largely because of their size and the fact that they have little use except for recreation.

The protection of the general coastal landscape from the sea to the first ridge inland will be more difficult. In the past, road construction and housing has caused extensive erosion of the coastal landscape. The only two types of protection available for the general coastal land are Forest Park status and an appropriate zoning in the District Planning Scheme. The latter will be guided by land use policies designed to preserve the coastal features. It is likely that an expansion of the Forest Park status especially in the southern areas where it is near the sea already, would best protect the general coastal features provided policies of the Park explicitly stated this aim. The rest of the coastal lands which contain large blocks of land grazed by the owners would best be protected by statutory planning policies though this protection is not currently given.
The scenic mountain areas are almost completely inside Forest Park status and as such are protected by Park policies designed to retain the natural features. There are many small areas of natural vegetation adjacent the Forest Park that have no protective status currently. Their inclusion in the Park would give them adequate protection. They could alternatively be protected by a series of reserves but these would be impractical to manage. Statutory planning regulation might be used to protect these areas but the large numbers of owners would be difficult to approach and to police. Without the owners' co-operation regulations would not work.

In general there are several alternative measures that are or can be used to protect the scenic qualities of the Cape Palliser area. The only question that remains is whether the measures which do not use a direct reserve or Forest Park status will work.

(c) Representative Landscape and Land Forms. - The general findings of the section on scenic beauty apply to the protection of the representative landscape features. That is, the features inside the H.S.F.P. are protected, if not explicitly then implicitly, by the aim of preserving the natural character of the Park. Likewise important features within a reserve status or in areas designated on the District Planning Scheme have some protection from destruction.

The representative landscape and land form features being outside the Forest Park, the Reserves or statutory protection are subject to destruction by many types of development and land use. Because of their widespread nature, the current lack of
appreciation of their values by the public and the need to manage the whole of the features under one perspective it would be best if they were incorporated into the Forest Park where feasible.

(d) Representative Vegetation and Ecosystems. - Once again the alternatives for protecting representative vegetation and ecosystems are similar to those currently used or those potentially useable in protecting scenery, land forms and landscapes. The main ecological and vegetative features of the Cape Palliser area being inside the H.S.F.P., the scattered reserves and the designated areas have protection. Those features outside these three types of status are not protected from development or destruction by land use. The rare cliff and coastal plant community south of Cape Palliser is protected by its rugged physical setting but grazing and increased recreational use is beginning to destroy the area. This rare feature is important enough to either warrant immediate inclusion in the H.S.F.P. or an appropriate reserve status. Active management of either status will be needed to ensure the plant community's survival and because the H.S.F.P. has staff permanently stationed in the area Forest Park status would be most appropriate.

The other important remnant vegetative features outside the H.S.F.P. can best be preserved by inclusion in the Park if adjacent or nearby. The remaining isolated remnant bush stands particularly on the coastal flats and in the lower stream valleys along the Palliser Bay coastline can either be reserved under an appropriate status if large enough and/or protected by regulation and identification in the District Planning Scheme.
(c) Cultural Features. - The important cultural features of the Cape Palliser area are reserved formally, held in a protective situation under Maori tenure or protected under the Historic Places Amendment Act 1975. The European and Maori cultural sites seem secure from developments that would destroy their values. The prehistoric sites, though they have in theory the most protective status, are constantly subjected to man made and natural destructive forces. It is not practical to reserve the several hundred sites found as historical reserves though those with visible features may warrant this status to stop the most blatant destructive land uses or developments which might threaten them.

The H.S.F.P. Management Plan contains policies designed to protect and preserve any historic sites including prehistoric sites. Thus any expansion of the Forest Park to include those important sites would be a positive step in their protection. Often tree planting programmes will be needed to stop massive erosion which threatens some of the more important sites and the N.Z.F.S. by its nature is skilled in this type of work.

The identification of the prehistoric sites in the District Planning Scheme along with appropriate protective policies might help protect them in theory but an education programme involving the land owners is really needed instead of or in conjunction with such planning protection.

(f) Conclusions. - Some of the important biological and physical features identified in the National Park Assessment are being protected adequately under their current status or
statutory planning regulations. Other features identified are not protected currently. Forest Park is the most useful status to preserve those areas currently unprotected. Its usefulness is mainly for practical and theoretical reasons. Statutory planning holds great theoretical promise as a method to protect the important features of areas such as Cape Palliser but practically it has a long way to go. The use of the Reserve status in the Cape Palliser area is limited for practical purposes as the unprotected features are scattered all around the area often not connected to each other and have no legal access except through the H.S.F.P.. Thus an expanded Forest Park situation is the next best protection the natural features of the Cape Palliser area can get if National Park status is decided against.

4.5. Critique of the National Park Assessment Criteria and Policies.

Many problems with National Park assessments were raised in the preceding sections. Chief among these are:

(i) Definition of scenic, rarity and uniqueness are needed to give the assessors some guidelines on their use.

(ii) The concept of "representativeness" needs clarification with respect to physical and biological features.

(iii) A more co-operative and co-ordinated approach to the assessments is needed especially between the assessors and the scientific community.

(iv) The importance of historic sites should be touched on in the criteria.

(v) Questions of alternative protective status should be discussed in the criteria.
(vi) The methodology of collecting relevant data and interpretations of the data should be spelled out in the criteria.

(vii) The question of whether the criteria are to be used singularly or in combination needs to be clarified.

(viii) Social analysis involving the soliciting of opinions from the public and interested organisations should become a formal part of any preliminary assessment.

(ix) The actual structure of the preliminary assessment report and the techniques of presentation it might use should be better documented.

Most of these criticisms can only be eliminated through actions by the National Parks Authority though there must still remain substantial room for individual flair and initiative in many of the procedures followed and in the type and depth of social and scientific interpretation collected. The National Parks Authority needs to view these preliminary assessments in a more holistic fashion and set out its general views on the role it sees for National Park status and management in the future. Failure to do this will cause the assessors and the public to wonder why areas such as Cape Palliser even warrant a preliminary assessment, given that they are obviously not intuitively of National Park quality. In short, the National Parks Authority must make its position clear and set its priorities so that it can better assess candidate areas and give a clear indication to society of its stance on the problems of diminishing natural landscapes in New Zealand. Once it has done this it can take a leadership role in the ongoing and complex discussions outlined in Chapters Two and Three which deal with the entire spectrum of rural land use issues and options.
"The gap between our words and our deeds is not hypocrisy. It is something more dangerous: self-deception."

Lynn White, Jr.

Chapter Five —

Conclusions

5.1. Introduction

Lynn White, Jr, an historian writing in *Western Man and Environmental Ethics* 1973, reflects accurately the New Zealand situation with respect to natural landscapes: we promote natural landscape exploitation through development schemes while at the same time we extoll concern for the diminishing of natural landscapes and their heritage. We cannot have it both ways. The self-deception is that the preservation of natural landscapes is a luxury or an intangible ideal that must be set aside if more tangible ideals (economic) are threatened. In reality the natural landscapes are an integral part of our culture, touching such diverse areas as literature and agriculture and thus to diminish them needlessly or without foresight is to diminish ourselves, our options and our futures.

Chapter Five will concern itself with: one, a summary of the preceding four Chapters; two, a discussion of the need for and structure of a 'forum' that might prove useful in resolving complex conflicts such as those occurring in the Cape Palliser area; and, three, to make some comments and recommendations on the problems
facing the Cape Palliser area and on the overall problem of diminishing natural landscapes in New Zealand.

5.2. Summary of Chapters One to Four

5.2.1. Chapter One

Chapter One began by stating that natural landscapes were diminishing in New Zealand. It was proposed that this process would result in a Britain-like situation with certain natural areas preserved and all the remaining land given over to commercial productive uses. Thus, the main task facing society is deciding which of the remaining unprotected natural landscapes will be preserved and which destroyed. A secondary question relating to the main issue is what is the appropriate management status of the areas preserved? It is recognized that decisions as to the "best use" of the lands to be developed is a related and important issue, that contributes to and can draw on the results of this report.

The National Parks Authority is one of many Government and private agencies and groups heavily involved in the questions outlined above. The Cape Palliser area is the subject of a current National Parks Authority sponsored study designed to help decide if it contains sufficiently important features that warrant the protection of a National Park status. Similar studies in the past involving other areas, in spite of positive recommendations, have always resulted in no National Park status being created. It is proposed that this situation is the result of a failure to perceive the broader questions outlined above. Thus, this report will first explore the broader issues relating to the Cape Palliser area's natural landscapes and
then carry out a preliminary National Park assessment, drawing both on existing criteria and the results of the initial work. It is hoped that the first part of the report will aid anyone involved in the broader questions and not just the National Parks Authority.

Chapter One concludes with a discussion of the nature of rural lands, rural planning and resource management. All are seen as key elements in the broader questions and in National Park assessments.

5.2.2. Chapter Two

Chapter Two serves two basic ends. The first was to introduce the reader to the physical and cultural resources of the Cape Palliser area. The second was to describe for the reader the multitude of conflicts, values, views and groups acting in the area. It was hoped that these two exercises would not only help those involved with resolving the conflicts of the Cape Palliser area, but would provide a useful methodology for those involved with similar situations throughout the country. Thus, Chapter Two promotes the idea of undertaking similar exercises anywhere in the country where large areas of natural landscapes still exist. The descriptive processes followed and the constraints to information outlined, are seen as essential tools for all land use planning and, therefore, of high value in themselves. It is conceded that much more detailed physical and cultural data and knowledge of the various groups' aims would be needed if detailed land use planning is attempted; the level chosen is, however, suitable for guidelines and the broad question of National Park status.

5.2.3. Chapter Three

Chapter Three examines the range of decision-making aids currently
available to resolve issues such as those outlined in Chapter Two. These aids are discussed under the following headings: natural resource analysis, economic analysis and social analysis. Examples are taken from the Cape Palliser situation to give the discussion a practical aspect and to exemplify the strengths and weaknesses of each type of analysis.

Natural resource analysis involves data collection, interpretation, evaluation and presentation phases. The lack of data for the Cape Palliser case severely limits the latter three phases. There are comprehensive, natural-resource-based planning systems known in New Zealand that could greatly aid the decision-making process, but the financial and human resources needed for such work is likely not available nor warranted in the Cape Palliser situation. However, some principles of these systems (e.g., land units, land utilization types) could be applied with good effect by a few suitable people. The finance and staff for this work could be arranged by a coalition of land owners and the largest government and private interest groups.

Economic analysis should best be applied to those areas of natural landscape lying outside a protective status. This work would involve social welfare economics, as the analyst would be dealing with the 'public good'. The main tool of social welfare economics is benefit/cost analysis. To make benefit/cost calculations work requires (amongst other things) the use of different discount rates, while comparing different use options and may also require the analyst to approach the more intangible benefits (e.g., scenery) through the costs of preserving them. Economic analysis seemed to have no major role to play in deciding the appropriate status of natural landscapes.
already protected.

Social analysis was found to be the most complex, least-used and least-understood of the decision-making aids. It was found that there is much to be learned from studying the history of land use and settlement in any area and then applying existing legislation to the situation. Much greater use could be made of the resources of the media, the various interest groups and the key individuals living in the area under study. The social analyst should be politically aware if he hopes to make judgements that will lead to successful implementation.

Chapter Three, like Chapter Two, is intended to provide not only insight but also a checklist on guidelines to the avenues the decision-makers should explore before they make important land use decisions.

5.2.4. Chapter Four

Chapter Four is aimed at examining the National Park Authority's role in the land use planning of the Cape Palliser area.

A National Park assessment was carried out over part of the Cape Palliser area using current assessment criteria. The area examined was found not to warrant National Park status in any sense except as a 'representative' landscape of the south of the North Island. The National Parks Authority would first have to decide it wanted a 'representative' of this broad region in National Park status and then measure the Cape Palliser area against other possible candidates. Both these decisions are outside the scope of this report and outside the terms of reference offered to those doing preliminary assessments.
A critique is offered of the assessment criteria and their application at the close of Chapter Four, and it is hoped that the National Parks Authority will see its role in similar issues differently in the future. Failure to alter their role may mean they will cease to be a force in the planning of the remaining unprotected natural landscapes.

5.3. A 'Forum'

At several points during this report, mention was made of the need for a 'forum' in which the complex social and scientific questions surrounding the issue of diminishing natural landscapes could be debated. This section will explore: the need for such an institution, and the likely structure it would take. It is understood that the 'forum' proposed would not be confined to issues of diminishing natural landscapes, but would embrace the whole of rural planning.

(a) The Need

The need for a 'forum' is based on the ever increasing complexity of society which is in turn based on the rapid spread and expanding scope of information available. There seem to be three groups involved in the current debates: the scientific community, the land-use planners and administrators and the public. Each group's needs will be discussed separately, but it is recognised that they all interact in any given issue.

(b) The Scientific Community

In the United States much debate has occurred over the need for a 'Science Court'. Seagrave (1976) sees such a court arbitrating
and clarifying issues, such as nuclear reactor safety, by "separating scientific knowledge from opinions, facts from beliefs, truth from politics ...". It is not difficult to see a similar need in New Zealand for advice on issues pertaining to rural land use. Questions concerning the scientific basis for ecological values and constraints and the geological basis for decisions on representative land forms are but two of a multitude of issues relating to decisions on the preservation or exploitation of the remaining natural landscapes. In more general areas of rural planning, scientific questions are joined by sociological questions (e.g., the effects on a region of the addition of large timber-based industries) in the debate. At present the claims and counter-claims of the scientific representatives of the competing agencies and groups are only confusing the issues (e.g., Whirinaki Forest) and serving to hold up the decision-making process. A medium of exchange, designed to answer Seagrave's questions, is needed.

Failure to provide such a medium of exchange will almost certainly result in personal decision perspectives holding sway in planning. The results will be unsatisfactory to all.

A 'forum' structured to solicit, debate and clarify scientific (including the social sciences) views on land use planning is one answer. It could not function separately from the public or land use planners and administrators.

(c) The Planners and Administrators

Planners and administrators rely heavily on the Town and Country Planning Act 1977 to supply a vehicle through which land use conflicts
can be resolved. This has proven to be a false hope in the past.

It was pointed out in Chapter One that few positive initiatives have come from the use of the Act, and in Chapter Three several major flaws were pointed out including: one, the fact that many government agencies are at odds on questions of the best land use resulting in no clear position on many issues being presented by the Government planning agency, the M.O.W.D.; and, two, the fact that tenure control is a more powerful, cultural, land-planning institution than the force of the Act. It was also stated in Chapter Three that the new regional planning structure of the Act might overcome the main problems, but this would be a very long-term hope. In any event, a need was seen now for a 'forum' in which the competing Government agencies and interested parties could debate and clarify their various positions on a specific area of policy or unit of land. The current regional planning structures do not provide this opportunity, except in the negative sense of objections to schemes and in written submissions which are often inappropriate to the scale and scope of debate needed.

It is certainly desirable that any land use 'forum' established eventually operates alongside the regional planning structures, hopefully making full use of joint facilities and staffs where appropriate.

(d) The Public

The role of a land use 'forum' would be incomplete if it only dealt with scientific opinion and government policy. It should be open to all interested groups and individuals with special emphasis on the land owners being affected by any issues under debate. Special emphasis on the land owners recognises their important role in rural planning in society, and their importance in the implementation and co-opera-
tion stages of any plan designed in the public interest, which includes their property. Support for this view comes from Mathieson (1976) who states:

"That rural communities should participate in the formulation of land use plans is accepted. Nevertheless, there are few opportunities for rural people to participate in formulating the criteria by which these plans are made. As a result, their role in implementation stages is hindered by a lack of understanding of the logic behind the planning principles. A forum is needed to bring together land holders and land administrators, at a time when land use decisions are being made, for the purpose of fusing rural ideas of land with government policies and to provide opportunities for administrators to discuss the reasons behind land use policies . . ."

Thus we have established the need for a land use 'forum' which caters for the scientific community, the planners and administrators and the public. The next avenue to look at is what is the best structure for such a 'forum'.

(e) The Structure

In the past, increasing complexity in society has most often led to the creation of new court structures. Mulholland (1979) puts it this way:

"In New Zealand, there is little by way of religious or tribal ties or tradition to control human activity and relationships. The legal system is therefore faced with the problem of providing a code of activity for human interaction."

If we take Mulholland's statement and apply it to the complex of
scientific data, government policy and human values and interests apparent in land use conflicts, such as those active in the Cape Palliser area, we see not only the need for a structure that acts as a 'forum' but the need for a code of activity to order the human interactions that will take place. Records need to be kept, hearings organised, debate to occur and order maintained if any meaningful results are to accrue. These features are common to most judicial hearings.

There are many precedents for such courts in New Zealand. There is the Arbitration Court which was established under the Industrial Relations Amendment Act 1977 to provide a forum in which industrial disputes of all kinds might be debated and resolved. There is the Maori Land Court constituted under the Maori Affairs Act 1953 for the purpose of hearing disputes and determining ownership in respect of Maori land. The Maori Land Court also plays a role in guiding Maori land use, recognizing the Maori's special relationship to the land. It may be time for all New Zealanders to claim a special relationship to the land, especially the remaining natural lands. This feeling of a relationship with the natural landscapes began with the conservation and environmental movements and is now very widespread in the New Zealand culture. Finally there is the Planning Tribunals set up under the Town and Country Planning Act 1977. These tribunals have had some success in clarifying planning philosophies and in defining terms of reference in land use disputes.

The land use court proposed here would take the Maori Land Court's concern for land use and adopt the Arbitration Court's role of mediating and clarifying social and scientific disputes. It would
not rule on Town and Country Planning issues, but the Planning Tribunals could draw on it for advice on social and scientific questions and interpretive and government policy positions.

(f) **Conclusions**

I feel that a 'Land Use Court' as described above is essential to modern land use decision-making. It must remain mainly a 'forum' for the exchange of ideas. Without such a structure or tool, simplistic solutions to complex problems will prevail. Frustrations with the contemporary situation have led to the National Development Act 1979. This represents a clear indication that the scientific and social complexities of planning have not been satisfied by existing structures. We have a clear challenge to design a workable Land Use Court.

5.4. **Recommendations**

5.4.1 **The Cape Palliser Area**

The following recommendations apply to the problems uncovered in the Cape Palliser area:

(i) The New Zealand Forest Service should expand the boundaries of the Haurangi State Forest Park, at least to take in the rare coastal-cliff plant communities near Cape Palliser. There should also be an organized and systematic analysis of the remaining natural areas outside the Haurangi State Forest Park to see if they should be incorporated in the Park or at least actively protected by other means.
(ii) The New Zealand Forest Service should form a committee to debate and discuss the many issues relating to the natural landscapes of the Cape Palliser area. This recognizes their dominance as a land owner in the area and their institutional role in protecting native forests. Other members of the committee might include the Wairarapa Catchment Board, the Rural Bank and Finance Corporation, Featherston County Council, the Department of Lands and Survey, Department of Scientific and Industrial Research, and a representative of the local farmers. This group might combine with the existing Haurangi and Rimutaka State Forest Parks Advisory Board, or take appropriate members and form a new Board for the Haurangi State Forest Park alone. This committee might function as a 'forum' until such eventuates.

(iii) The Department of Lands and Survey should pursue their ideals of coastal conservation and design an appropriate zoning for the Featherston County District Planning Scheme. Plans to purchase the main coastal headlands should proceed where possible.

(iv) The former Pinnacles Farm Settlement should be formally transferred to the New Zealand Forest Service now that the management of the coastal areas of the Haurangi State Forest Park is resolved.

(v) The 'Pinnacles' Scenic Reserve might better be managed as part of the Haurangi State Forest Park as would the Ruakakaputuna River Valley Reserve if one exists or is created.
(vi) The archaeological sites of Palliser Bay should be protected in any coastal zone designed for Featherston County by the Department of Lands and Survey, and the Featherston County Council should indicate the main sites on its District Scheme Planning Maps.

(vii) The Rural Bank and Finance Corporation should actively pursue its stated concern for various aspects of the natural landscape by providing appropriate staff to help farmers decide the details of land development schemes in the Cape Palliser areas which contain natural landscapes.

(viii) The National Parks Authority should decide if they want a National Park in the south of the North Island. If the answer is yes, then the Cape Palliser area can be measured against other possible candidates.

5.4.2 Rural Lands in General

The following recommendations are made in reference to diminishing natural landscapes nationwide:

(i) The Rural Bank and Finance Corporation should closely look at its policy concerning the development of natural landscapes, especially with regard to natural areas nearby or adjacent blocks of land with protective tenures and the desirability of adjusting its policies to suit regional differences in productive return per unit investment and in the amount of natural landscape remaining for exploitation.
(ii) The National Parks Authority must become actively involved in the debate over the future of the remaining natural landscapes whether they are National Park quality or not, especially those large areas not currently under a protective status.

(iii) The Department of Lands and Survey and the New Zealand Forest Service must get together to find ways to promote real co-operation and co-ordination in their roles as large, public-oriented land owners.

(iv) Regional land use courts should be established as soon as possible throughout the country (see Section 5.3,).

(v) Regional planning should be promoted and supported by the New Zealand Forest Service and the Department of Lands and Survey, especially in rural areas with smaller populations where resources are lacking for such work.
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<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td>alluvium</td>
<td>The non-dissolved sediment load of rivers dropped during periods of low water.</td>
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<tr>
<td>cadastral maps</td>
<td>Maps which show the subdivision, status and tenure of land.</td>
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<tr>
<td>Land Classification</td>
<td>Eight Class Land Use Capability classifications used in New Zealand to determine the capacity of land for permanent sustained production.</td>
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<tr>
<td>System</td>
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<tr>
<td>colluvium</td>
<td>Deposits of soil and rock which have been eroded from slopes.</td>
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<tr>
<td>detritus</td>
<td>Rock waste.</td>
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<tr>
<td>faulting</td>
<td>Fracturing in the earth's crust along which movement has taken place, and where the rock strata on the two sides do not match.</td>
</tr>
<tr>
<td>folding</td>
<td>The bending in rock strata caused by movements of the rock crust.</td>
</tr>
<tr>
<td>greywacke</td>
<td>A sedimentary rock which is a type of sandstone and largely composed of weathering products such as clay, chloritic and micaceous minerals.</td>
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<tr>
<td>induration</td>
<td>This pertains to the degree of hardness of rocks. Poorly indurated means that rock can be easily broken. Highly indurated means that rock is difficult to break.</td>
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<td>Term</td>
<td>Definition</td>
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<tr>
<td>interbedded volcanics</td>
<td>Volcanic material which occur between beds of different rock formations.</td>
</tr>
<tr>
<td>Late Quaternary</td>
<td>A geological time period which occurred 100,000 to 10,000 years ago.</td>
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<tr>
<td>Pleistocene</td>
<td>A geological time period which occurred between 2.5 and 1.5 million years ago.</td>
</tr>
<tr>
<td>Mesozoic</td>
<td>A geological time period which began 225 million years ago.</td>
</tr>
<tr>
<td>scree or talus slopes</td>
<td>Slopes on which rock fragments have been deposited from higher levels.</td>
</tr>
<tr>
<td>sedimentation</td>
<td>A geological process in which sedimentary rocks were laid down. Sedimentary rocks are rocks which have been deposited as beds, often as sediments, forming one of the three main types of rocks which make up the earth's crust.</td>
</tr>
<tr>
<td>Tertiary</td>
<td>A geological time period which occurred between 65 and 25 million years ago.</td>
</tr>
</tbody>
</table>
Maximum altitudes are given for some species.

Brackets round a plant name indicate that the species is not found much above 1600ft in this area.

Species not marked "uncommon" are regarded as common in at least parts of the area (above 1600ft).

Five and double numbers refer to specimens in Botany Division Herbarium, Lincoln.

N — found only in northern part of Range (see Fig. 1).
S — found only in southern part of Range.
L — found only in limestone area, Ruakokoputuna V., between 1000 and 2000ft.

No. of indigenous species: 51.
No. of hybrid groups: 77.
No. of adventive species: 83.

INDIGENOUS PLANTS

GYMNOSPERMS

Dacrydium cupressinum (2300ft max.)
Podocarpus dacrydioides (uncommon)
P. ferrugineum
P. hallii (197475)
P. sphaerocarpa (1500ft max. for adult, 2500ft for juvenile, uncommon)
P. toetara (uncommon) (209879)

MONKEY TREES AND STUDIES

Corylinia australis (2100ft max.)
C. banksii
C. indivisa (uncommon)
C. australis X C. banksii (uncommon)
(Rhegalalpia sandii)

BIRCH TREES

(Alectryon excessus var. excessus) (209351)
Aristotelia serrata
Carpodetus serratus (2400ft max.)
Eucalyptus dentata (1800ft max.)
E. hookeriana (uncommon)
(209330, 209391)
Fuchsia excorticata
Griselinia littoralis
Halocarya arborescens (1800ft max.)
Hokoriora pentalopus var. thi. scapulosa (2400ft max.) (192130-1, 209338, 209492)
Kiehlishia excelsa (2400ft max.)
(Lophomyrtus eberidis) (209332)
Macropiper excelsum var. excelsum (1400ft max.) (209339)
Melicytus ramiflorus var. ramiflorus (2400ft max.)
Metrosideros robusta (nearly extinct according to Ward;)
M. excelsa (1400ft max.) (209339)
Myrtus australis
N. solida
N. cunninghamii (2400ft max.) (209301-3)
N. leucocarpa (1400ft max., uncommon) (209419)
(N. montana) (209405)
ADDITIONS

Nothofagus fusca (not present south of Mt. Barton) (197431, 2093348, 2093671)

N. microcarpa (197430, 209366)

N. solandri var. solandri (2600ft max.) (197432-3)

H. truncata (N = from Tuanui and Dry river valleys north-westwards)

H. fusca X N. solandri var. solandri (19747)

Olearia paniculata (2000ft max.)

O. rani (2100ft max.) (192153)

Pararaphis microphylla (209356)

Pennisetum corymbosum (2400ft max.)

Pittosporum eugenoides (2000ft max.)

P. tenuifolium var. tenuifolium (2400ft max., uncommon) (197482)

Pseudopanax arboreus

P. colensoi s.s. (found only on cliffs or as an epiphyte) (197347)

P. erxianota (2400ft max.)

P. edgerleyi (uncommon, no juvenile plants seen) (209337)

P. simplex var. hectori (19213-3)

Schickleria digita (197375)

Sophora microphylla (2400ft max.)

Weinmannia racemosa var. racemosa (197147)

DICOTABENULAE

Alseaosmia petita (uncommon)

Brenchyllostis repanda var. repanda

Carnicherea arborea var. (C. foggii

Hornia) (197434)(C. Cheesman)

Cassinia leptopoda var. leptopoda (incl. C. var. guttata

Copernicia aculeata (1500ft max.)

(209357)

C. australis

C. colensoi (incl. C. banksii) (197478, 209393-6)

C. erxianota (2000ft max.) (197344)

C. foetida (uncommon) (197367)

C. limifolia (uncommon, N)

C. limbata s.s. (197346)

C. microcarpa (197320)

C. propinqua (197329)(C. propinqua (incl. C. var. falcata)

C. robusta

C. rotundifolia (2400ft max.) (209335)

C. rubra (7400ft max.) (209342-3)

C. sp. (unnamed, included in C. parviflora by Oliver and others)

C. propinqua X C. robusta (uncommon) (209329)

Cytostachus arboreus var. arboreus

C. serratifolia (2300ft max., uncommon, S — south of Mt. Barton)

C. arborea var. arborea X C. serratifolia (2700ft max., uncommon)

Dactylorhiza fuscata var. (197491)

C. fraseri (mainly south of Mt. Barton)

C. purpurata var. (197498)

Dracophyllum ovatum (mainly south of Mt. Barton) (160520,

192156, 192129, 197480)

(Fuchsia pacemontana X F. excortica) (N — Rupekaputuna

V) (209339)
Additions

Gaultheria antipoda

G. rupinervis (incl. G. suberycymbosa) (mainly south of Whawanui) (165300, 197381)

G. antipoda X G. rupinervis (197398)

Gumbula rupinervis (1500ft max.)

Gastonia rigida (inc. G. suberycymbosa) (tree according to Wodtke; not seen by A.P.D.)

Hebe stricta var. akintaonii (200373)

H. venustula (S) (209362-4, 165299, 192437, 197395)

H. sp. (Veronica arborescens) (sometimes reaches tree size, d.b.h. up to 12in.) (192333, 209337, 209400)

H. stricta var. akintaonii X H. venustula (uncollected)

Helichrysum aggregatum (197389)

H. hybrids — see under Dicot Herbs (Hymenoxys bigelowiana, H. aggregatum; S — south of Mt. Barton)

Kunthiodendron salicarifolium

Lepidocaryum crassidens (commonly reaches tree size) (197193)

L. scoparium (197194)

Melicytus simplex (1400ft max.) (209360)

Myrmine diversiseta (N — Te Mauku Ridge) (209358)

Olearia arborescens (197495)

O. salicifolia (S — south of Mt. Barton)

Punica granatum (S — south of Mt. Barton) (197374, 192408, 197389)

P. longifolia (S — south of Mt. Barton) (197374, 192407-8

Pomaderis ericifolia) (N)

Pseudopanax macrophyllum (uncollected) (209331)

Pseudowintera colorata (197395)

Senecio gleboglossus var. (mainly south of Mt. Barton) (165371, 192408-9, 197395)

S. greyi var. millefolium (2600ft max., S — south of Mt. Barton) (190391, 197397)

Salix arctica (209332)

S. luchnathianum (N)

Urtica ferox

Monocot Lianas

(Freycinetia fauksii)

Rhipogonum scandens (1400ft max.)

Dicot Lianas

Calystegia integrifolia (1500ft max.) (209339)

Chenopodium fruticida (2000ft max.) (209339)

C. frutieri (incl. C. hookeri) (190378, 2093(0)

C. paniculata

Montevidae caulescens (incl. M. var. pendens) (1800ft max.) (192152, 209400)
Parsonia capsularis var. capsularis X P. heterophylla (uncommon)

Asplenium trichomanes (uncommon, L)

Blechnum discolor
Drymoanthus adversus (uncommon)
Gastrodia cunninghamii (uncommon)
Pratostylis alebola (uncommon)
P. graminea (uncommon)
P. irsoniana (uncommon, S—south of Mt. Barton)
Lachnagrostis sp. (unnamed; included in L. filiformis, as var. semi-glabra, by Zotov 1965) (uncommon, L)

Carex lamberthiana (uncommon)

C. virgata (uncommon)

C. spinirostris (uncommon, S-south of Mt. Barton)

C. testacea s.s. (uncommon, S-south of Mt. Barton)

C. racemii. (uncommon, S-south of Mt. Barton)

Vernicia laxiflora (uncommon)

Juncus sp. or J. effusus X. J. sarophorus (?) (uncommon)

J. antarcticus (uncommon, S-Mt. Barton)
Lucaia sp. (unnamed; included in L. pieta, as var. linosa, by Edgar 1946) (uncommon)
ADDITIONS

E. microphyllum f. microphyllum var. polyanthes (S)
E. norteroides (back—back—pedunculata var. viridis) (209309)
E. nemariformis
E. pedunculata (two forms present: one with smaller leaves — E. pedunculata s.s.; the other with
larger leaves — E. nemaroides) (former — 1933; later — 197-
368, 193337)
E. pedunculata var. decipiens (197335)
E. pedunculata var. viridis (197338)
E. pedunculata var. pedunculata (196736, 197231-3)
E. norteroides var. nemaroides var. pedunculata (trifoliate) (uncommon) (193270-30, 197-
337)
Euphorbia canadensis (Rockeckopunga)
V. lamineae, and south of Whawanui (197352, 209376)
Galium propinquum (197358, 197-
373)
Geranium microphyllum var. (197-
355)
G. setiferum var. novozelandicus
(mainly south of Mt. Barton) (209314)
Gynocephalum setiferum (197333)
G. involucratum var. (uncommon) (199301)
G. sp. sub(G. involucratum (209084)
G. subrigidum (L) (82229, 209345)
G. microphyllum var. (uncommon)
G. microphyllum var. microphyllum
(i.e. white or prennial white) (190892, 192136, 193377)
G. microphyllum (uncommon)
G. hybrids — see under Helichrysum
Gunnera monacica (197236-45)
H. australis (S)
H. australis var. pubescent (209379)
H. b. s.s. X H. aggregatum (un-
common, s — south of Mt. Barton) (167356, 179136) (E)
H. filicinata X hirsuta pubens
(uncommon) (19739)
Helichrysum involucratum X G. limosum (S)
Hydrocotyle hydrophila (uncommon, L)
Jovellana tomentosa (uncommon)

G. australis (uncommon, L) (209347, 209308) (E)
G. s. X R. filicinata (uncommon, L) (209360) (E)
Hydrocotyle microphylla
H. elatior (197314, 209356)
H. microphylla (uncommon) (197305)
H. oxycodons (Rhayodo—zamana) (209355)
Lepidium sabaudum (209391)
L. pauciflora (209396)
Limosella bicolor (uncommon, S —
west of Mt. Barton, cm)
Linum monanthes (209306 max.,
uncommon, S — south of Mt. Barton) (197381)
Lobelia anceps (L) (209350)
(Micractis argentea, ssp. flavicosta) (S
— south of Mt. Barton)
Erectula anseriflora (uncommon, L.)

Ranunculus glabrius (uncommon)

(Scandia-gemium)(S - south of Mt. Barton) (190879)

Crassula sp. (Tillaed debilis) (uncommon)

Urtica lineari-folia (uncommon, L.)

The following four species are mentioned by J. Wardle in the course of his description of the vegetation of the Range (N.Z. Jl Bot. S). The plants in question (with the possible exception of the fourth) appear to have been misidentified.

Erectula minima = B. procumbens (B. minor sect.)

Cephalophyllum procumbens = C. sp. (unnamed)

Ps. hirsutella = P. sp. (unnamed) and/or P. breviglumis s.s.

Myosotis sylvatica (uncommon)

Nertera amabilis (201857)

N. sp. (unnamed, included in N. amabilis by Allan and others) (uncommon) (201857)

Oenothera sp. var. var. (uncommon, S - near Mt. Barton) (192932)

Oxalis section

O. sp. (small, presents as fl. yellow) (197371)

Paraleche caenaracte var. (uncommon, S - south of Mt. Barton) (192490-1)

Plantago regalis var. (197372)

(F. angustifolia) (S - south of Mt. Barton) (190880)

Peal (197466)

Ranunculus hispidus s.s. (197466)

R. spuratus (uncommon, S - south of Mt. Barton) (165293)

R. glabra (192905)

R. modestus (incl. R. l. var. hesperis and R. l. var. diphylla) (197-387, 209370, 209407)

R. hybridus -- see under Helichrysum

Schizocoma triplodactylus (197368)

Selenthis bisflorus (3500 ft max., mainly south of Mt. Barton) (190930)

Senecio flavicans (190934)

S. laxus (S) (16304, 190894-4)

S. laxus var. laxus (Rackettoputuna V, linum, and south of Mt. Barton) (192949)

S. minor (= S. longiflora) (209351-2)

S. quadridentatus (209351-2)

S. triflora var. (S - Mt. Burton) (197-352, 197-352)

Eselasia concordia (190936) (209375)

Crassula sp. (Tillaed debilis) (uncommon)

Urtica lineari-folia (uncommon, L.)

Viola filicula (197578)

(V. filicula sylvatica) (S - south of Mt. Barton) (197578)

Wahlenbergia anomala (2000 ft max.) (197353)

W. gracilis s.s. (2000 ft max., S - south of Mt. Barton) (197353)

(W. sylvatica var. marginata)
ADVENTIVE PLANTS

STREPT.
Erícia hastata (N - north-western fringe of Range)
Rosa rubiginosa (uncommon, N)
Salvia verbenaca (N - north-western fringe of Range)
Ulex europaeus (N - north-western fringe of Range)

GRASSES
Agrostis tenuis
A. caryophyllea
A. pectinacea
Anthoxanthum odoratum
Cynosurus cristatus
Dactylis glomerata subsp. Festuca arundinacea (uncommon)
F. ovina (uncommon, S - south of Mt. Barton) (84874)
F. rubra
Glyceria fluviatilis
Holcus lanatus
Lotus pedunculatus
Poa annua
P. pratensis (uncommon)
Vulpia bromoides (84874)

RUDBERS AND SADDLES
Junco articulatus
J. browningii
J. ellipsus
Luzula congesta (uncommon)

SAYA Совет
Avena barbara (uncommon)
Achillea millefolium
Aphanes arvensis
 Arenaria serpyllifolia (L)
Bellis perennis
Caltha palustris
Cardamine pratensis
Carduus tenuiflorus
Centaurium erythraea
Crepis capillaries
Chrysanthemum linicellatum
Cirsium vulgare

Myosotis arvensis (uncommon)

In addition the following species commonly regarded as indigenous (and listed as such above) are almost certainly adventive:

Aegilops monachi
Agropyron sp. (A. squarrosum agg.) (sp. of grassland, lvs. hairy)
Agrostis ssp. (A. canina agg.)
Rhexia grandiflora
N. petiolata
N. pacifica
Watsonia argus (flaccidentis, marginata)

Continuum macrodactylus (uncommon)
Cowpea cuneata-ensis
Crepis campestris
Dactylis purpurascens
Epilobium densicaule (uncommon)
Erodium cicutarium (uncommon)
E. moschatum (uncommon)
Galium aparine
Geranium dissectum (uncommon)
G. molle
Glaucium flavum
Hypochaeris radicata
Lactuca serriola
Laportea canadensis (uncommon)
Linum catharticum
Lythrum hyssopifolia (uncommon)
Maculata vulgaris (uncommon)
Myosotis musculus
Pimpinella lanceolata
Prunella vulgaris
Ranunculus repens
R. repens (uncommon)
Rorippa micropetala
Rumex acetosella
R. brevifolium (uncommon, S - s. of Mt. Barton) (19413)
Sagina procumbens
Seneio jacobaea
S. vilmorinii
Silene acaulis (uncommon)
S. acaulis (uncommon)
Stellaria heathi
Turritis officinalis subsp. T. hybridus
Trifolium dubium
T. repens
T. subterraneum
Urtica urens (uncommon)
Veronica arvensis
Viola hirta
APPENDIX II

INDIGENOUS VASCULAR PLANTS IN THE VICINITY OF CAPE

PALLISER, SOUTHERN WHARIKAPUA, S.L.-1000 FT.

(Ngaruhi to Ngapotiki - N 168/9)

(unc - uncommon)

GYNOSPERMS

Podocarpus ferrugineus (unc, seedlings only)

MONOCOT TREES AND SHRUBS

Cordyline australis
  C. banksii (unc)

DICOT TREES

Alectryon excelsus var. excelsus
  Aristotelia serrata (und)
  Carpodetus serratus
  Corynocarpus laevigatus
  Elaeocarpus dentatus (incl. E. d. var. obovatus)
  Entelea arborescens (unc)
  Fuchsia excorticata
  Griselinia littoralis (unc)
  Hedy carpa arborea
  Knightia excelsa
  Macropiper excelsum var. excelsum
  Metlicope ternata (unc)
  Melicytus ramiflorus var. ramiflorus
  Metrosideros robusta - dead in 1976
  Myoporum laetum var. laetum
  Niwisse australis
  M. salicina (unc, seedlings only)
  Nestegis cunninghamii
  N. montana (Chasean 1925, as Clea montana)
  Neiolagrus salandri var. solandri (unc)
  Oleaæ paniculata
  O. tani (unc)
  Pennantia corymbosa
  Pittosporum eugenioides
  P. tenuifolium var. tenuifolium
  Pseudopanax arborescens
  P. crassifolius
  Schefflera digitata (unc)
  Sophora microphylla (incl. S. v. var. vernonii, racemosa var. paleacea, mesal)

DICOT SHRUBS

Brachyglossis repanda var. repanda
  Carmichaelia arborescens var. (C. lagophylla formis) (incl. C. hekelii)
  Cassinia leptophylla var. leptophylla
  - (incl. C. v. spelunkata, C. fulvissima, C. trifida, C. phylloleucos)
  Coprosma acerosa (incl. C. acerosa) (unc)
  C. australis
  C. callistoma
  C. lucida s.s.
  C. microcarpa (unc)
  C. propinquus subsp. propinquus (incl. C. p. var. latifolia)
  C. repens
  C. rhomboidea (incl. C. polymorpha)
  C. robusta
  C. vitacea (unc)
  C. sp. (unknown, included in C. parviflora by Oliver 1935) (unc)
Ceratopogonidae, X. c. robusta (unc)
C. r. flesus, C. flesus (unc)
C. orbiculata, C. orbiculata var. orbiculata
C. samnensis
Cephaltes fasciulata var. fasciulata
C. juniperina (incl. C. juniperina)
C. juniperina var. juniperina
Dracephalum longifolium var. (D. filifolium (incl. D. filifolium and D. filifolium var. septentrionale) (unc)
Gaillamina antipoda (unc)
Garzia lucida
Hebe effusa var. alkinsonii
H. s. var. macrocarpa
H. venustula (incl. H. bidispyrum) (unc)
H. sp. (Veronica arborescens)
H. striata var. macrocarpa X H. s. var. alkinsonii
Helichrysum aggregatum
Hymenoxys undulata, Hymenoxys undulata (unc)
Lapsana communis, ericoides var. ericoides (incl. L. communis, L. ericoides)
L. scoparium (incl. L. scoparium var. anamnemone) (unc)
Melicope simplex (unc)
Muellerbeckia ophedroides (unc)
Olearia solandri
Punicea prostrata var. prostrata
P. p. var. quadrifolia (incl. P. quadrifolia)
P. p. var. quadrifolia var. quadrifolia
Pisagirus choricarpus
Pomaderris corymbosa (Aston 1911, as P. phyllicae-folia)
Senecio greyi (incl. S. laxifolius)
Selaginella uncinata (incl. S. a. var. albiflorum)
Shoica ferox

[MONOCOT LIANES]
Freylinia la baueriana subsp. banksii
Ripogonum scandens

[BICOT LIANES]
Calytrigia turgidula
Clematis foliata (unc)
C. forsteri (incl. C. australis, C. hookeri, C. petrii (unc)
Matrosideros coleospermum (incl. M. c. pendens (unc)
M. diffusa (unc)
N. perfoliata (unc)
Muellerbeckia australis
M. complexa
M. australis X M. complexa
Parsonia capsularis var. capsularis (incl. P. c. var. echinacea, P. c. var. tosea, P. c. var. tenuis)
Rubus cissoides var. cissoides (unc)
R. squarrosus

[LYCOPods]
Lycopodium varium (incl. L. bilobati and L. hovee-zelandicum)
L. volubile (unc)

[FERNS]
Adiantum conmigahamii
A. diphyanum (unc)
Anarchopteris lanceolata
Anogramma leptophylla (unc)
Asplenium bulbiferum agg.
A. flabellifolium
A. flaccidum subsp. flaccidum
A. hookerianum
A. lucidum
A. polyodon
A. terrestre subsp. maritimum
A. t. subsp. terrestris
A. bulbiferum X A. hookerianum
Azolla rubra
Blechnum banksii
B. chambersii
B. dissectum (unc)
B. filiforme (unc)
B. fluviatile
B. vulcanicum (unc)

B. sp. (a) (B. capense agg.) (common sp.; lower pinnae reduced in length.)
B. sp. (b) (B. capense agg.) (cliff sp.; lower pinnae not reduced in length.)
B. sp. (c) (B. capense agg.) (beach sp.; lower pinnae reduced but fronds narrower than in common sp.)
Botrychium sp. (B. austrole var. millefolium)
Cheilanthes distans (unc)
C. sp. (cf. C. sieberi and C. tenuifolia)

Cleanepteriis heterophyllum
Cyclinea dealbata
C. modulata
Crepisopsis ciliaris (unc)
Histiophyllum incisa (unc)
Hymenophyllum cupressiforme (unc)
H. dilatatum (unc)
H. minimum (unc)
H. multifidum (unc)
H. sanguinolentum (unc H. villosum) (unc)
H. scabrum (unc)

Hypolepis tenuifolia

Lastreopsis glaballa
L. microsora subsp. part-angulata (unc)
L. velutina (unc)
Paeonia scabrella
Pellaea rotundifolia
Phymatodes discifolium
Polystichum richardii
Pteridium aquilinum var. esculentum
Pteris macilenta
P. tremula
Pyreosia serpens

Thelypodiopsis penniger

Corybas macranthus
C. articulatus
C. trifolius (Hoecker 1864, as Corysanthes trifolii)

Dendrobium cunninghamii

Echirina autumnalis

E. mucronata

Microtis unifolia

Pterostylis banksii

P. foliata (Hoecker 1864; Cheeseman 1925)

P. mentana (unc)

Thelymitra longifolia

Notedanthanion buchananii (unc)

N. clavata

N. gracilis

N. lanceolata

N. varede

N. sp. (unnamed; aff. N. setifolia)

Pea anceps var. anceps

P. laevis var.

Agropyron kirkii (Hoecker 1864, as Triticum multiflorum)

A. sp. 1 (A. scabrum agg.) (sp. of rocky sites; tus glabrous)

A. sp. 2 (A. scabrum agg.) (grassland sp. tus hairy)

Chionochloa beddieri

C. cheesemanii (unc)

Cordyana solida

C. tetola

Deyoexia billardierii

Dichelachne chinilla

Echinochloa ovatus

Festuca multinodis

Lacchnagoites richardii

Microlaena stipoides

P. anceps × P. laevis (unc)

Puccinellia stricta var. subarticulatis
Spinifex hirsutus
Trisetum sp. (unidentified; aff. T. antarcticum)
Zoysia minima

**SEDDGES**
Baumea rubiginosa
Carex breviculmis
C. buchananii (unc)
C. flagellifera
C. foetida
C. geminata s.s.
C. pumila
C. rauolii
C. resectans (unc)
C. secta s.s.
C. solandri
C. spinirestis (unc)
C. testacea s.s.
C. virgata

Cyperus ustulatus
Desmocleinae spiralis
Eleocharis acuta
Schoenus maschalinus
S. nitens (Heckel 1864)
Corpus antarcticus
S. cernuus
S. nasosus
S. pellsii (unc)
S. pungens

S. prolifer
Uncinia forriginea (unc)
U. leptostachya
U. uncinata

**RUSHES**
Juncus australis
J. caespiticosus
J. distegus
J. gregiflorus
J. pallidus
J. planifolius
J. sarophorus
Leptocarpus similis
Luzula banksiana s.s.
L. picta s.s.
L. banksiana x L. picta

**MONOCOT HEROES (OTHER THAN ORCHIDS)**

**GRASSES, SEDDGES, RUSHES**
Arthropodium candidum
Astelia fragans
A. solandri
Collespermum hastatum (unc)

Lemnna minar
Libertia grandiflora
L. ixioides
P. cookieam
P. lenax
P. cooksianum x P. lenax
Triglochin striatum
Typha orientalis
COT HERBS

**COMPOSITE HERBS**

Brachycome radicata var. radicata
Camisia spectabilis var. lanceolata (un)
Cantipeda sp.
Cotula australis
C. coronopifolia
C. parpusilla (un)
Craspedia uniflora var. grandis
Gnaphalium audax ss.
G. gymnocephalum
G. kerriense
G. limosum
G. sp. @! (G. luteo-album agg.) (common
sp; lvs mostly linear-spathulate to
linear, acute)
G. sp. @! (G. luteo-album agg.) (coastal
sp; lvs mostly oblong-spathulate to
narrowly oblong, rounded)
Helichrysum bellidiioides ss. (un)
H. filicaceum
Laganitera punica
Micoresia scapigera
Raoulia australis
R. glabria
R. tanueicola (incl. R. var. pusilla
and R. var. dimorpha)
Senequale hispidulus
S. lagopus
S. lautus subsp. lautus
S. minus
S. quadventriculus
Senechus kirkii

Viladimiria australis var. 246

**DICOT HERBS (OTHER THAN COMPOSITES)**

Acacia ansiliniifolia
A. novae-zelandiae
A. sp. (unnamed)
Aciphylla squarrosa var. squarrosa
Apium australale
A. filiforme
Calystegia soldanella
Cardamine sp. @! (C. debilis agg.) ("New
Petal" of Prichard 1957)
C. sp. @! (C. debilis agg.) ("Glossy Leaf" of Prichard 1957)

Carpelium uniflora
Chapapedia eliantii
C. ambiguum
Colobanthus muelleri
C. strictus
Convolvulus verecundus
Crassula meschatu (un)
C. pedunculatis
C. sieberiana

Daucus glauclidatus
Dichandra repens
D. sp. @! (cf. D. brevifolia) (fls large
up to 1 cm diam.)
D. sp. @! (unnamed) (fls small)
Disphyma australe subsp. australale
Epilobium atroplicifolium ss.

E. brunnescens ss.
E. insulare
Ekomarevanum

E. microphyllum

Enerteroides

E. nummularifolium

E. pubens

E. rotundifolium

Eryngium vesiculosem

Euphrasia convallata (unc)

Galium prepunguum

G. trifolium

Geranium microphyllum

G. sessiliflorum var. nova-zelandiae

Heirochis erecta subsp. erecta

Hydrocotyle americana

H. elongata

H. moschata

H. sp. (H. novae-zelandiae agg.) (lvs light green, shallowly lobed, hairy sllower)

Lilacopsis sp. (cf. L. lacustris)

Limosella lineata

Linum moneynum

 lobelia anceps

Mazus pumilio

Montiia ferniana s.s.

Myosotis sp. (unnamed; included in M. pygmaea, as var. minuta

(Ito, by Stirpenn and Thomson 1943)

Myosotis novae-zelandiae (Hooker 1864, as Machistax)

Myriophyllum sp.

Nototyra depressa (incl. N. cunninghamii)

Oxalis lactea

O. sp. (stems very slender; lvs yellow, usually < 1 cm diam.)

Parietaria cataractae var. (unc)

Parietaria debilis

Plantago taiouli var. (lvs narrow olliphè)

P. spakulata

P. triandra var. (P. minorae) (unc)

P. taiouli X P. spakulata (?)

Pratia angulata

Ranunculus acaulis

R. hirtus ss.

R. sp. (cf. R. glabrosilus and R. hivularis)

Rhagodia triandra

Salicornia australis

Samiiulus repens

Sagina genticulata

Schizolema trifoliolatum

Scleranthus biflorus

Selliera radicans

Spergularia media

Stellaria pantiflora (incl. S. micrura)

Urtica incisa (unc)

Wahlenbergia colensoi

W. graciliis ss.

W. marginata

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No. of species: 325. (42 vars)

RECORDS NOT ACCEPTED
APPENDIX III

The main Government Acts, Regulations and policies which relate to the administration of State Forest Parks:

(i) Forests Act 1949

(ii) State Forest Park Regulations 1969

(iii) The State Forest Parks and Recreation Areas Notice 1975

(iv) The Forests Amendment Act 1976

(v) The Forests and Rural Fires Act 1977


(vii) The West Coast Forest Policy 1978 (N.Z.F.S.)

(viii) The Wild Animal Control Act 1977

(ix) The Water and Soil Conservation Act 1967

(x) The Town and Country Planning Act 1977

(xi) The Mining Act 1971
Objectives of Management

Haurangi State Forest Park is to be managed under a balanced-use concept, with a primary consideration being the protection of soil and water values by the conservation of native tree and shrub species or the use of exotic species where necessary. Compatible secondary uses include the provision of recreation facilities (now a primary use), productive use of the land, and the preservation of unique features.

Specifically the objectives of management are:

(i) To protect, conserve, and enhance the vegetative cover of the Park so as to minimize soil erosion and regulate water flows;

(ii) Particular attention will be directed towards the conservation of the indigenous vegetation cover in catchments of the Ruamahanga River system, and where this is inadequate for protective purposes in the Turanganui catchment, exotic tree species will be established;

(iii) To develop the recreational potential of the Park;

(iv) To protect scientific, historic, or cultural values;

(v) Where the foregoing objectives are not compromised, productive uses of the land may be permitted.
APPENDIX V

A list of some of the Private Interest Groups Active in the Cape Palliser area:

1. Wellington Acclimatisation Society
2. Wellington Branch of the New Zealand Alpine Club
3. Wellington Archaeological Society Inc.
4. Wellington Associated Mountain Clubs
5. Wellington Surf Casting and Angling Club Inc.
6. Wellington Tramping and Mountaineering Club Inc.
7. New Zealand Deerstalkers Association Inc.
8. New Zealand Small Game Shooters
9. New Zealand Mineral Club
10. New Zealand Horse Society (Wairarapa Branch)
11. Hutt Valley Tramping Club
12. Hutt Valley Rock and Mineral Club
13. Ornithological Society of New Zealand
15. Catholic Tramping Club
16. Federated Mountain Clubs of New Zealand Inc.
17. Parawai Tramping Club
18. Tararua Tramping Club
19. Tongariro Tramping Club
20. Victoria University Tramping Club
21. Royal Forest and Bird Protection Society of N.Z. Inc.
APPENDIX VI

TABLE XI

DEPARTMENT OF LANDS AND SURVEY;
LAND SETTLEMENT BOARD

Policy:
That the prime use of high country catchments is for erosion control and water management.

Goals:
Pastoral land must be farmed in a diligent and husbandlike manner.
That all Class VIII and severely eroded Class VII land should be retired from grazing and surrendered from permanent leases.

Objectives:
The pastoral lease contains specific stock limitations. Any cultivation must be approved by Commissioner of Crown Lands.
Preparation of management plans to administer retired lands.
Approval to be granted before recreation activities can be carried out on pastoral leases. No rights will be issued over Class VIII or VIIa land.

**Policy:** Satisfy as fully as possible recreational demands providing natural systems are protected, taking into consideration the total valley system including rivers and lakes regardless of tenure.

**Goals:**

1. Maintain the forest in a thrifty condition so that the widest possible range of forest use options is kept open.

2. Conservation of quantity and quality of soil, including minimising flooding, protection of downstream values and maintaining a high quality water yield.

3. Protect indigenous fauna and their habitat.

4. Preserve scenic, aesthetic and historical values.

5. Satisfy compatible recreational demand and encourage family participation.

**Objectives:**

1. **1.1** Maintain protection from fire.

2. **2.1** Maintain forest consistent with Forest Protection Zones.

3. **3.1** Zone Ecological and Forest Sanctuary* areas.

4. **4.1** Zone Forest Sanctuary and Protection zones*.

5. **5.1** Zone a narrow strip of land along the eastern shores of the Mavora Lakes as Amenity Zone* and confine development to this.

6. **5.2** Zone if necessary this Mavora area in more detail, e.g. separate camping and picnicking.

7. **5.3** Zone the lakes to separate or exclude non-compatible pursuits.

8. **5.4** Provide limited basic facilities.

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Zoning adopted by the New Zealand Forest Service includes:

*Protection is a primary zone class in New Zealand State Forest Classification. Forest Sanctuary, Ecological, and Amenity zones are among the 20 categories that may be imposed on the primary Protection, Production and Recreation zone classes.*
suant to section 55 or section 61 of this Act; but does not include a specified departure; and “vary” has a corresponding meaning.

(2) The term “character”, in relation to the use of any land or buildings, shall be construed with regard to the effect of that use upon the amenities of the neighbourhood.

(3) The following persons shall have the right to object under section 33, section 45, section 66, section 110, and section 118 of this Act:

(a) The Minister:
(b) Any united or regional council, Regional Planning Authority, Council, Maritime Planning Authority, combined committee, or local authority having jurisdiction in or adjacent to the area to which the district or maritime scheme or application relates:
(c) Any body or person affected:
(d) Any body or person representing some relevant aspect of the public interest.

Cf. 1953, No. 91, s. 2 (1), (4)

3. Matters of national importance—(1) In the preparation, implementation, and administration of regional, district, and maritime schemes, and in administering the provisions of Part II of this Act, the following matters which are declared to be of national importance shall in particular be recognised and provided for:

(a) The conservation, protection, and enhancement of the physical, cultural, and social environment:
(b) The wise use and management of New Zealand’s resources:
(c) The preservation of the natural character of the coastal environment and the margins of lakes and rivers and the protection of them from unnecessary subdivision and development:
(d) The avoidance of encroachment of urban development on, and the protection of, land having a high actual or potential value for the production of food:
(e) The prevention of sporadic subdivision and urban development in rural areas:
(f) The avoidance of unnecessary expansion of urban areas into rural areas in or adjoining cities:
(g) The relationship of the Maori people and their culture and traditions with their ancestral land.
FIRST SCHEDULE  
Section 11 (2), (4)

MATTERS TO BE DEALT WITH IN REGIONAL SCHEMES

1. Social—
Provision for social and economic opportunities appropriate to the employment, housing, and welfare needs of the people of the region.

2. Economic—
Development of the regional economy, including growth of and balance between primary and other basic industries and service industries.

3. Natural resources and environment—
The identification, preservation, and development of the region's natural resources, including water, soil, air, and other natural systems, farmlands, forests, fisheries, mineral (including sand, metal, and gravel), and areas of value for the enjoyment of nature and the landscape.

4. Type and general location of development—
(a) The regional pattern and general form of urban and rural development.
(b) General identification of areas for urban growth including urban expansion, new urban growth, urban renewal, and areas for comprehensive planning, and of land to be acquired for any of those purposes. Determination of programmes for land assembly, development, and disposal.
(c) General identification of areas to be excluded from future urban development, including land of high productive capability, land subject to hazards such as flooding and earth movement, land with high aesthetic or recreational value, and land to separate and to enhance the appearance and setting of cities and towns.
(d) General identification of the regional pattern of industrial and commercial employment centres.

5. Public works, utilities, and facilities—
Regional needs for the provision and protection of—
(a) Drainage and sewerage facilities;
(b) Water supply, including catchment areas;
(c) Production and distribution of power and fuel;
(d) Health and educational facilities;
(e) Air, road, sea, and rail transport facilities; and
(f) Other public utilities and public works.

6. Recreation—
Regional needs for land and water based recreation.

7. Communications and transport—
Provision for communications and transport to structure and support the regional pattern of development and provide access to the resources, employment, housing, shopping, and commercial areas, and the community and recreational facilities within, and outside, the region.
8. Community facilities—
Regional needs for—
(a) Civic and commercial facilities, including conference centres and halls; and
(b) Refuse disposal sites and systems.

9. Cultural facilities and amenities—
Regional needs for—
(a) Cultural facilities, including libraries, auditoriums, museums, art galleries, theatres, cinemas, and public halls;
(b) Tourist resort areas, camps and sporting facilities, including sports stadia and racecourses;
(c) Zoological and botanic gardens; and
(d) Marae and ancillary uses, urupa reserves, pa, and other traditional and cultural Maori uses.

10. Regional programming—
In presenting policies and strategies on any of the matters listed in clauses 1 to 9 of this Schedule the scheme may indicate the scale, sequence, timing, and relative priority of development.

11. Implementation—
In presenting regional policies the scheme may indicate such of the following as may be appropriate:
(a) Levels of service and operating policies for public utilities, services, and facilities:
(b) Amount, type, and source of financial and other resources necessary:
(c) Identification of the bodies or agencies responsible for implement-
SECOND SCHEDULE

MATTERS TO BE DEALT WITH IN DISTRICT SCHEMES

1. Provision for social, economic, spiritual, and recreational opportunities and for amenities appropriate to the needs of the present and future inhabitants of the district, including the interests of minority groups.

2. Provision for the establishment or for carrying on of such land uses or activities as are appropriate to the circumstances of the district and to the purposes and objectives of the scheme.

3. Provision for marae and ancillary uses, urupa reserves, pa, and other traditional and cultural Maori uses.

4. Provision for the safe, economic, and convenient movement of people and goods, and for the avoidance of conflict between different modes of transport and between transport and other land or building uses.

5. The preservation or conservation of—
   (i) Buildings, objects, and areas of architectural, historic, scientific, or other interest or of visual appeal;
   (ii) Trees, bush, plants, or landscape of scientific, wildlife, or historic interest, or of visual appeal;
   (iii) The amenities of the district.

6. Control of subdivision.

7. The design and arrangement of land uses and buildings, including—
   (a) The size, shape, and location of allotments;
   (b) The size, shape, number, position, design, and external appearance of buildings;
   (c) The excavation and contouring of the ground, the provision of landscaping, fences, walls, or barriers;
   (d) The provision, prohibition, and control of verandahs, signs, and advertising displays;
   (e) The provision of insulation from internally or externally generated noise;
   (f) The location, design, and appearance of roads, tracks, cycleways, pathways, accesses, and watercourses;
   (g) Access to daylight and sunlight;

8. The avoidance or reduction of danger, damage, or nuisance caused by—
   (a) Earthquake, geothermal and volcanic activity, flooding, erosion, landslip, subsidence, silting, and wind;
   (b) The emission of noise, fumes, dust, light, smell, and vibration.

9. The relationship between land use and water use.

10. The scale, sequence, timing and relative priority of development.
Third Schedule

Matters to be dealt with in Maritime Schemes

1. Protection, conservation, and management of the resources of the area.

2. The preservation or conservation of—
   (a) Flora and fauna and their habitats, and stretches of coastline of scientific, fisheries, or wildlife importance, historic interest, or of visual appeal:
   (b) Structures, objects, and areas of historic or other interest, or of visual appeal.

3. Provision for the establishment or carrying out of the following facilities or activities, if appropriate to the circumstances and to the purposes and objectives of the scheme:
   (a) General recreation including bathing, swimming, surfing, and other facilities:
   (b) Recreational boating and water-skiing:
   (c) Boat ramps, jetties, moorings, and similar facilities for public, club, or private use:
   (d) Non-commercial fishing:
   (e) Commercial fishing:
   (f) Marine farming:
   (g) Wharf facilities for fishing and other commercial vessels:
   (h) Port facilities and other requirements for cargo and passenger transportation including facilities for amphibian aircraft, flying boats, and hovercraft:
   (i) Dredging and disposal of dredged material:
   (j) Navigation aids and the safety and convenience of navigation:
   (k) Reclamation, infilling, and impoundment:
   (l) Erosion and silting control:
   (m) The proving or winning of minerals including sand, metal, and gravel:
   (n) Any other facility or activity.

4. The maintenance or attainment of water quality appropriate to the circumstances.

5. Public access to and on the foreshore and water of the maritime planning area.


7. Aesthetic considerations and the preservation of views.

8. The avoidance or reduction of danger, damage, or nuisance caused by—
   (a) Earthquake, geothermal and volcanic activity, flooding, erosion, landslip, subsidence, silting, and wind:
   (b) The emission of noise, fumes, dust, light, smell and vibration.

9. The relationship between maritime activities and the activities on the adjacent land.

10. Provision for commercial, industrial, or recreational activities and the need for them to be located within the area.
IDENTIFICATION AND ASSESSMENT OF POTENTIAL AREAS FOR NATIONAL PARKS

1 INTRODUCTION

1.1 One of the prime responsibilities of the National Parks Authority is to recommend the establishment of new national parks, the enlargement of existing ones and to assess the long term needs and ultimate extent of the nation's national park system.

1.2 To enable the Authority to achieve this objective, close Authority/departmental cooperation is of paramount importance and both should take the initiative in searching out suitable areas for new parks or desirable additions to existing parks.

2 IDENTIFICATION OF AREAS FOR NEW NATIONAL PARKS

2.1 In the first instance CCLs will be required to investigate the suitability of new areas for national park status. In investigating these, the following criteria for national park areas that have been endorsed by the NPA should be used:

(a) Relatively large unmodified or largely unmodified areas of distinctive scenery or containing beautiful or unique natural features.

(b) Relatively large natural areas representing particular types of New Zealand land form, landscape vegetation and ecosystems generally.

(c) Relatively large distinctive and predominantly natural areas which include smaller modified portions capable of restoration and having the potential of contributing to the integrity of the whole park or enhancing park values.

(d) Having regard to the prime criteria, relatively large areas where the chance of restoration is good and there are no other unmodified areas of a similar type, either regionally or nationally, that could be, or already are protected.

2.2 In considering an area in terms of the above criteria the following points should be taken into consideration:

(i) Size should not be the sole deciding factor of itself but must be considered jointly with the other criteria and can vary according to the circumstances of a particular area. While no precise definition of size is considered desirable, the term "relatively large" is used to denote large related areas where the thinking is in terms of tens of thousands of hectares. This is a general guideline but should not be an inflexible rule as there can be special circumstances which warrant an exception.

(ii) Qualities of beauty, uniqueness and distinctiveness are the prime criteria but these qualities should not be considered in isolation; size and the needs of people nationally must be considered at the same time.
The selection of areas for national parks should not be influenced by the location of population centres.

(iii) In considering representative areas or features, the qualities listed above are the determining factors and if the criteria are satisfied, the duplication of landscapes, natural features or ecosystems already in a park is acceptable.

(iv) Modified areas can be considered for inclusion in national parks for administrative reasons or for the purposes of rationalising boundaries provided:

(i) the chance of restoration is good and the inclusion of this area will provide the rare opportunity of obtaining a representative landscape type or ecosystem;

(ii) where there is a good chance of restoration a smaller modified area could be included with a predominantly natural area as a national park if its inclusion contributes to the integrity of the status or would increase national park values.
Mr W.F. Carlin,
Planning Officer,
Department of Lands and Survey,
Private Bag,
WELLINGTON

Dear Bill,

CAPE PALLISER AREA: PROPOSED THESIS REGARDING
ESTABLISHMENT OF NATIONAL PARK

In reply to your letter of 7 February 1979.

1. The Historic Places Amendment Act 1975 extends its protection to all archaeological sites, whether registered under the Act or not. We also take this to mean whether recorded or not. The important point in the Act is that no person may legally damage any site if he has "reasonable cause to suspect that it is an archaeological site". According to the current interpretation of the philosophy underlying this legislation, the Trust regards all archaeological sites, whether known or unknown, recorded or registered, as being significant. The Trust is not required to have any listing or even formulation on the basis of historic or any other significance; nor does it wish to establish any such listing or classification because it has been found that once such a list is prepared there is an inevitable tendency for land owning and land managing agents to consider only those sites placed in the highest category of importance to be worthy of any protection at all.

What the Trust must do when it is considering any specific situation of site threat, is to evaluate for itself, the scientific, historical and cultural importance of the threatened site in relation to other sites in the local area, and of that area in relation to other areas. The Trust then relates this to the resources which are available to the Trust itself and to the general archaeological community, and to what it believes are its statutory responsibilities to society as a whole. The action which is finally decided upon, while based on the underlying philosophy of equality of significance, will eventually be decided as well on the basis of adjudged importance from many viewpoints, the resources available at the time, and the interests of the community at large.

2. The scientific importance of archaeological sites can be measured

5 Pipitea Street, Wellington 1, New Zealand
in several ways:

(a) in terms of the relationship of the site to previous research;

(b) in terms of its relationship to current research objectives and strategies;

(c) in terms of future research strategies and objectives. (This is the most difficult one of all as we can only "guess" a little way into the future).

(d) in terms of its relationship to other fields of study;

(e) in terms of its place in the general archaeological landscape.

Scientific significance is best (and may only be) considered in a regional context within a framework of regional research objectives. The national significance of the sites of the Palliser area appears certainly no greater but possibly no less than the sites of any other region.

Despite the considerable investment in the Palliser Bay area by the archaeological project under the leadership of Foss and Helen Leach, we still have only a very minimal and somewhat biased record of the archaeological sites in the area. The Leach programme concentrated principally on the coastal fringe and certain of the narrow river valleys. This is not an unusual state of affairs with archaeological records. It is not realistic to expect any survey to cover every part of a large survey area, and in addition, many sites for one reason or another, will not be able to be discovered by field recorders.

However, with regard to the general importance of sites in the Palliser area, it could be said that the sites of the area comprise part of one of the best archaeological landscapes of prehistoric agriculture in New Zealand. They are located in an area now marginal for the cultivation of kumara and other semitropical plants, mainly because climate and vegetation have changed significantly since the original period of occupation. Hence the sites of the area have a considerable local, and even national importance, for studying the adaptation of prehistoric agriculture to the requirements of a marginal and changing environment.

However, had the Leach programme and the later work of Mr B.G.McFadgen concentrated on aspects other than agriculture and changing environments, we might now be basing an appreciation of the significance of the Palliser area archaeological sites on quite different criteria.
3. Future land management techniques must first acknowledge that archaeological sites, their actual age notwithstanding, are fragile entities, and incorrect land management could, in a very short period of time, severely damage, or even annihilate the archaeological component of the landscape. Management must proceed from a knowledge of the precise location of sites and their nature. The Trust has an essential role to play here in making land managers aware of sites. But this does not absolve land managers from a responsibility to actively seek out sites and to include them in their management planning. And of course, land managers must realise that their activities are subject to the requirements of the Trust Act. Even relatively restricted land utilization and management activities (e.g. fencing, farm roads) may have a significant, even catastrophic, impact on individual archaeological sites Whenever land modification projects are proposed, it is necessary that the possibility that archaeological sites might be involved must be considered, and the Trust should be consulted at the earliest possible point in the planning process. As far as archaeological sites are concerned, the most acceptable land management techniques are those which preserve and modify the existing ground surface, and at the same time leave it available for future scientific investigation, and where appropriate public appreciation.

4. At the present time I would not wish to make any specific recommendations for the establishment of special reserves in the area under the Reserves Act 1977. There are sites and localities which could be considered for such reservation, but this should be a separate exercise.

5. The principal references with regard to archaeological work in the Palliser Bay area are as follows. (The bibliographies in these will lead you to everything else!)

(1) Adkin, G.L. 1955 : Archaeological evidence of former native occupation of eastern Palliser Bay, JPS 64 : 450-80


(4) Leach, B.F. & H.M. 1979 : Prehistoric man in the Wairarapa (or Palliser Bay, as I am not certain of the actual title). National Museum publication, Wellington (to be published very shortly).

I hope these comments will help you with your work. I would appreciate receiving a copy of your thesis when it is complete as it should contain much material which would be of interest to the Trust staff.

Yours sincerely,

[Signature]

J.R. McKinlay, Senior Archaeologist
BE IT ENACTED by the General Assembly of New Zealand in Parliament assembled, and by the authority of the same, as follows:

1. Short Title and commencement—(1) This Act may be cited as the Historic Places Amendment Act 1975, and shall be read together with and deemed part of the Historic Places Act 1954 (hereinafter referred to as the principal Act).

(2) This Act shall come into force on the 1st day of April 1976.

2. Interpretation—Section 2 of the principal Act is hereby amended by inserting, in the appropriate alphabetical order, the following definitions:

<table>
<thead>
<tr>
<th>Title</th>
<th>9r. Scientific investigation of archaeological sites</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Short Title and commencement</td>
<td>9t. Right of entry</td>
</tr>
<tr>
<td>2. Interpretation</td>
<td>9j. Registration of archaeological sites under Land Transfer Act 1932</td>
</tr>
<tr>
<td>3. Powers of Trust</td>
<td>9k. Listing of registered archaeological sites in district schemes</td>
</tr>
<tr>
<td>4. New sections (relating to protection of archaeological sites) inserted</td>
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</tr>
<tr>
<td>5. Protection of archaeological sites</td>
<td>9l. Rights of appeal</td>
</tr>
<tr>
<td>6. Register of archaeological sites</td>
<td>9m. Sections to bind the Crown</td>
</tr>
<tr>
<td>7.</td>
<td>9n. Offences</td>
</tr>
</tbody>
</table>

1975, No. 40

An Act to amend the Historic Places Act 1954

[19 September 1975]
Historic Places Amendment 1975, No. 40

"'Archaeological site' means any place in New Zealand or within the territorial waters of New Zealand—
“(a) Which was associated with human activity more than 100 years ago; or
“(b) Which is the site of a wreck of any ship, boat, or aircraft where that wreck occurred more than 100 years ago,— and which is or may be able, through investigation by archaeological techniques, to provide evidence as to the exploration, occupation, settlement, or development of New Zealand, being evidence which could not otherwise be made available for scientific, cultural, or historical studies:

"'Local authority' means any local authority constituted under the Municipal Corporations Act 1954, the Counties Act 1956, or the Local Government Act 1974:”.

3. Powers of Trust—Section 9 of the principal Act is hereby amended by inserting, in paragraph (a), after the words "historic interest", the words "including a register of archaeological sites”.

4. New sections (relating to protection of archaeological sites) inserted—The principal Act is hereby amended by inserting, after section 9E (as inserted by section 3 of the Historic Places Amendment Act 1963), the following sections:

"9F. Protection of archaeological sites—(1) Subject to this section it shall not be lawful after the commencement of this Act for any person to destroy or damage or modify, or cause to be destroyed or damaged or modified, the whole or any part of any archaeological site, knowing or having reasonable cause to suspect that it is an archaeological site, whether or not the site has been registered under section 9G of this Act.

“(2) On application the Trust may, subject to such conditions as it thinks fit to impose, authorise the whole or any part of any archaeological site to be destroyed, damaged, or modified.

“(3) Without in any way limiting the conditions that may be imposed by the Trust under subsection (2) of this section, where the Trust imposes the condition that a scientific archaeological investigation shall be carried out by or on behalf of the Trust before any authority is given to any person to carry
out such destruction, damage or modification, that person shall, except where the Trust is satisfied that such destruction, damage, or modification is solely for farming or agricultural purposes, be required to pay the Trust an amount equal to the cost of carrying out the investigation:

"Provided that, in the case of hardship or other special circumstances, the Trust may reduce the amount to such amount as it considers equitable or waive the requirement altogether.

"(4) The Minister may from time to time enter into an agreement with the owner or occupier of any land in order to protect any archaeological site on the land.

"90. Register of archaeological sites—(1) The Trust shall establish and maintain a register of archaeological sites and in doing so may make such arrangements with such persons and institutions as it thinks fit for the purpose of obtaining and recording the required information.

"(2) Where any archaeological site is entered in or removed from the register, notice shall be given to the owner of the land on which the archaeological site is situated.

"9H. Scientific investigation of archaeological sites—(1) Except as provided in this section it shall not be lawful after the commencement of this Act for any person or institution to undertake any archaeological investigation which may destroy, damage, or modify any archaeological site.

"(2) The Trust may conduct a scientific archaeological investigation of any archaeological site or may authorise in writing any person or institution to undertake any such investigation (whether or not pursuant to subsection (3) of section 9F of this Act) subject to such conditions as it thinks fit to impose:

"Provided that no such investigation shall be carried out except with the concurrence of the owner and occupier of the land on which the site is situated and, where the Trust considers it necessary, with the concurrence of such Maori Association within the meaning of the Maori Welfare Act 1962 as the Trust considers appropriate.

"(3) The Trust, in considering any application to conduct any scientific archaeological investigation of any archaeological site, shall take into account the purpose of the investigation and the adequacy or otherwise of the institutional and professional resources available to the applicant to enable the investigation to be satisfactorily carried out.
"9f. Right of entry—(1) Any officer of the Trust or any person authorised by the Trust may enter from time to time, during the daytime, on any land whatever, with such assistants as he thinks fit, for the purpose of locating, recording, or inspecting any archaeological site, and may do all such things necessary for such locating, recording, or inspecting, including the affixing of any pegs, marks, or poles.

(2) Before entering on the land, the officer of the Trust, or the person authorised by the Trust, shall, where practicable, give reasonable notice to the owner or occupier of the land of the intention to enter thereon, and shall, if required by the owner or occupier, produce and show the authority under which he claims to enter, or has entered, on the land.

9g. Registration of archaeological sites under Land Transfer Act 1952—(1) Where the Trust is satisfied that any particular archaeological site is of sufficient scientific, cultural, or historic importance it may forward to the District Land Registrar of the district in which the site is situated a notice that the land described therein is an archaeological site as defined in the Historic Places Act 1954 and the District Land Registrar shall note the Certificate of Title of any land affected accordingly.

(2) Where the notice affects part only of the land in any Certificate of Title, the District Land Registrar may call for such plans or other documents as he may require.

(3) Where the Trust is satisfied that it is no longer necessary for any archaeological site to continue to be so noted, the Trust shall notify the District Land Registrar of the district concerned accordingly, and the District Land Registrar shall thereupon cancel the note on every relevant Certificate of Title.

(4) In the case of any such archaeological site situated on Maori land, the Trust shall forward a copy of any notice under subsection (1) or any notification under subsection (3) of this section to the Registrar of the appropriate Maori Land Court, who shall record the effect of the notice or, as the case may be, the notification in the Court Records.

9k. Listing of registered archaeological sites in district schemes—(1) The Trust may request any local authority to record any archaeological site registered under section 9g of this Act as such in the district planning scheme prepared
under the Town and Country Planning Act 1953, and, on receipt of the request, the local authority shall so record the site in accordance with section 21 (1) of that Act.

"(2) Where the Trust is satisfied that it is no longer necessary for any archaeological site to continue to be so recorded, the Trust shall notify the local authority, and on receipt of the notification the local authority shall amend the district scheme accordingly.

"(3) The provisions of section 9F of this Act shall apply notwithstanding anything in this section or in the Town and Country Planning Act 1953.

"9L. Rights of appeal—(1) There shall be a right of appeal by any person directly affected against any decision of the Trust or any condition imposed by it under section 9F or section 9H of this Act to the Minister, and the Minister may, after seeking such advice (if any) as he considers necessary, confirm, vary, or reverse the decision so made or condition so imposed, and the decision made or the condition imposed by the Trust shall, unless confirmed by the Minister, be deemed for the purposes of this Act to be modified accordingly.

"(2) Every decision of the Minister under subsection (1) of this section with regard to any appeal shall be final.

"(3) Any appeal under this section shall be forwarded to the Minister within 28 days after the date on which the decision of the Trust or the conditions imposed by it are made known to the appellant.

"9M. Sections to bind the Crown—Sections 9F to 9L of this Act shall bind the Crown.

"9N. Offences—Every person who—

"(a) Destroys, damages, or modifies, or causes to be destroyed, damaged, or modified any archaeological site, knowing or having reasonable cause to suspect that it is an archaeological site, without the prior written permission of the Trust under section 9F of this Act; or

"(b) Undertakes any archaeological investigation of any archaeological site which may destroy, damage, or modify the site without the written authority of the Trust under section 9H of this Act; or

"(c) Is in breach of any condition imposed by the Trust under section 9F or section 9H of this Act; or
"(d) Restrains, or in any way interferes with any officer of the Trust or any person authorised by the Trust who is lawfully claiming to enter, or is entering, or has entered on any land pursuant to section 91 of this Act or removes any peg, mark, or pole affixed by any such officer or person—committed an offence, and shall be liable on summary conviction to a fine not exceeding $5,000."

This Act is administered in the Department of Internal Affairs.