Planted forests on ancestral land: the experiences and resilience of Māori land owners

Stephanie Rotarangi

A thesis submitted for the degree of Doctor of Philosophy at the University of Otago, Dunedin New Zealand

November 2011
Abstract:

Little research has been undertaken into the management priorities of indigenous people who have exotic species forests planted on their ancestral land. This thesis investigates two case studies in the central North Island of New Zealand, where planted forest leases exist over large areas of tribal land. In both cases, Māori families have maintained collective ownership of the land but the forest management is undertaken by a third-party entity.

This thesis draws from four fields of knowledge to investigate the experiences of the Māori land owners: forestry science, New Zealand post-colonial history, social science and resilience thinking. The study uses document analysis and in-depth interviews to identify historical and contemporary perceptions of the forests, the existence of non-negotiable cultural values for land management, and the potential for improving the forest management practices to better meet land owners’ aspirations. In both the case studies, Lake Taupō Forest Trust and Maraeroa C Incorporation, the land owners discuss the planted forest in terms of land management structure, forest management practices and non-negotiable values. The realisation of land management objectives is critically influenced by the governance, tenure and regulatory frameworks of their land. Forestry management practices are generally compatible with the land owners’ non-negotiable cultural values for their land.

Applying a resilience framework provides insights into the effectiveness of land owners’ resistance to land loss, their adaptations to land management approaches, and their contemporary goals for forest management. While the experiences of the land owners might have been expected to result in transformation, this, in fact, has not occurred and the communities have remained resilient. The concept of ‘resilience pivots’ is proposed to describe matters of fundamental and enduring importance central to cultural wellbeing which have been retained, around which other components have been adapted. The resilience pivot concept provides a novel approach for discussing resilience, adaptations and transformations of indigenous communities.

The findings of this research have been productive in several respects – in revealing the histories and lived experiences of a largely unexamined forestry sector; in developing an interview format with potentially wider application to other forest stakeholders; in proposing an extension to resilience thinking; and in recommending changes to forest management.
Firstly, I acknowledge God in heaven and I am grateful for the opportunities provided to me. Secondly, I recognise the institution which has supported me in this research process. I pause to remember all those who have gone before me and I return to acknowledge all those living who have made this research possible. I am Pākehā with Irish ancestry, my husband is of Tūwharetoa and Tūhoe descent. My name is Stephanie Rotarangi.
Acknowledgements:

As a student undertaking a PhD journey, I had a dream run: a challenging topic, enthusiastic participants, substantial logistical and financial support, outstanding supervisors, and a caring family. This thesis is the result.

Firstly, thanks to my colleagues who encouraged me to undertake this research, in particular: Peter Weir, Richard Woollons, Geoff Cameron, Sally Strang and Chris Perley. Willie Te Aho and the CNI Iwi Collective offered me the first forum in which to test my research ideas. Through this process I found the families of LTFT and MCI. My heartfelt thanks for allowing me to live in your communities and trusting me with your precious stories. In particular, I am ever grateful to George Asher and Sandy Gibbison of LTFT and Glen Katu and Sheree Maarhuis of MCI, for your amazing logistical support and friendship.

My research in the central North Island could not have been undertaken without the financial support of the Ministry of Science and Innovation, Scion and the New Zealand Institute of Forestry. I am also extremely grateful to Riley Lockett and Rebecca Hale who, after convincing their family into sacrificing an entire ski season, allowed me to live in their fantastic bach on the shores of Lake Taupō. My children and I have such fond memories of Motuoapa. Many thanks also to Tony and Janina Rotarangi for your amazing support during my field work, looking after me when I was pregnant and letting my children run riot in your beautiful homes.

To my supervisors Janet Stephenson and Hugh Campbell, and my advisors Parnell Trost and Hauiti Hakopa, your advice and wisdom has been invaluable. Special thanks to Janet for your encouragement, patience and your tireless revision. Thanks also to my fellow PhD students at CSAFE for your support and encouragement. Also to the amazing baristas at ‘The Fix’, Jade and Dylan, for your cheerful conversation, patient interest in my research and early morning kick start.

Finally, to my family – thanks Ant for letting me give up my perfectly good job to indulge myself in study, for your endless support with our children, and for forgiving me every time I forgot to bring home the milk. Thanks to my mum and dad, Josie and Paddy Enright, who have travelled every week over the last eight months and stayed overnight to help look after Kieran, Nina and Taiapo. We are all going to miss ‘Nana’s stew’ and home-baking, and Poppa’s mischief.
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Glossary of Māori Terms

Unless otherwise referenced this is the author’s interpretation

ahi kaa  sustained occupation (in relation to land rights)
hapū  pregnant / subtribe
hui  meeting
Io-matua-kore  parentless one (at the beginning of time)
twi  bones / tribe
twitanga  iwi identity
kai  food
kaitiaki  guardian
kaitiakitanga  guardianship
kanohi ki te kanohi  face to face
karakia  prayer / ritual
kaumātua  elders
kaupapa  philosophy
kāwanatanga  government / authority*
kia ora  in context of quote means “thanks”
Kīngitanga  the king movement
kōrero  talk
mahi  jobs/work/employment
mana  value / prestige / superiority
manaakitanga  kindness / hospitality
manawhenua  trusteeship of land*
marae  meeting house
mātauranga  Māori knowledge
maunga  mountain
mauriri  spiritual and physical capabilities
mihimihī  a personal introduction and tribute to those before me
mokopuna  grandchildren / descendants
noa  ordinary / everyday / free of tapu
Pākehā  non Māori / European / Caucasian*
pakeke  adult
Papatūānuku  earth / land / mother earth
papatupu  ancestral land never having European title
patai  question
Pō  darkness / night
pua kokare  flax processing centre
putea  money
rahui  restrictions
rangatahi  teenagers
rangatira  chief / aristocrat
Ranginui  sky father
ritenga  inherent laws and protocols
rohe  tribal boundary
rūnanga  tribal council
take ahi kaa  rights to the land through sustained occupation
take kitea  rights to the land through discovery
take raupatu  rights to the land through conquest
take tuku  rights to the land through gifting
take tūpuna  rights to the land through ancestral links
tamaiti  child
tamariki  children
Tane Mahuta  the god or superior being of forests (sometimes referred to as Tane in the quotes).
tangata whenua  people of the land
taonga  treasure
taonga tuku iho  treasure handed down from ancestors
tapu  sacred / protected
Te Ao Māori  Māori world view
Te Ao Mārama  the enlightened / liberated world
teo  Māori language
teina  junior relation	
tikanga  custom
tinihanga  to cheat or deceive however in the context of this thesis refers to a native forest remnant in Maraeroa C forest.
tino rangitiratanga  collective management / self determination
tūpuna  ancestor
tūrangawaewae  place of belonging
tūtū  commoner
urupā  burial ground / grave site
waahi tapu  sacred site
wairua  spirit / soul
waka  canoe
whakakaha te mauri  maintaining the health and vitality of beings
whakakoha  acts of giving
whakakotahitanga  respect for differences
whakapapa  genealogy
whānau  give birth / family
whanaunga  relationship
whanaungatanga  being accountable to each other / relationship
whare wānanga  learning centre
whenua  placenta / land

* (Ryan, 2005)
**Glossary of Forest Management Terms**

<table>
<thead>
<tr>
<th>Term</th>
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<tr>
<td>age class</td>
<td>refers to trees established at the same time of an even age</td>
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<tr>
<td>clearfell harvest</td>
<td>trees which are harvested together as part of the same operation, typically this means all the trees from the area and can be many hectares in size.</td>
</tr>
<tr>
<td>coupe size</td>
<td>the size of the harvest area, generally determined by age class</td>
</tr>
<tr>
<td>exotic forest</td>
<td>a forest comprised of species introduced to New Zealand (non-endemic)</td>
</tr>
<tr>
<td>native forest</td>
<td>a forest comprised of species that are indigenous to New Zealand (endemic)</td>
</tr>
<tr>
<td>net stocked planted area</td>
<td>physical area in hectares of trees planted for wood production (i.e. excluding areas of reserve, roads etc)</td>
</tr>
<tr>
<td>planted forest</td>
<td>forests which are as a result of deliberate tree planting, in this research forests are manipulated to enhance wood productivity.</td>
</tr>
<tr>
<td>pruning</td>
<td>removing the lower branches of the tree to maximise knot-free timber</td>
</tr>
<tr>
<td>regime</td>
<td>refers to the planned forest operations in a rotation</td>
</tr>
<tr>
<td>rotation</td>
<td>the forest cycle from preparing the land for planting through to harvest</td>
</tr>
<tr>
<td>silviculture</td>
<td>human manipulation of forest structure</td>
</tr>
<tr>
<td>stocking</td>
<td>stems planted per hectare</td>
</tr>
<tr>
<td>stumpage</td>
<td>the profit from harvesting</td>
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<tr>
<td>sustained yield harvest</td>
<td>harvest of the forest does not exceed growth</td>
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<tr>
<td>thinning</td>
<td>reducing the stocking by culling non-crop trees from the forest</td>
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List of Abbreviations

AGM  Annual General Meeting
CEO  Chief Executive Officer
CCRA  Climate Change Response Act 2002
CHH  Carter Holt Harvey Ltd
CNI  Central North Island
DOC  Department of Conservation
ETS  Emissions Trading Scheme
FSC  Forest Stewardship Council
IMPF  Intensively Managed Planted Forest
LRFT  Lake Rotoaira Forest Trust
LTFT  Lake Taupō Forest Trust
MAF  Ministry of Agriculture and Forestry
MCI  Maraeroa C Incorporated
MOU  Memorandum of Understanding
NZFP  New Zealand Forest Products
RMA  Resource Management Act 1991
TTWMA  Te Ture Whenua Māori (Māori Land) Act 1993
Chapter 1: Thesis Structure and Content

1.1 Research goals:

As a forester married to a forester – with a sawmiller for a father, a forester for a father-in-law and a sawmiller for a mother-in-law, it was likely that my research topic would attempt to address forest management challenges. My husband and children are of Tūwharetoa descent which drew my attention to the vast planted forests on Māori land in the central North Island of New Zealand. Add to the mix my mother who, before retiring, was a farmer and the reader might begin to appreciate the debates around our dinner table regarding ‘appropriate’ land use.

As an academically trained, professional forester for 15 years, perplexed by the popular opinion that planted forests have a negative effect on communities, I was encouraged by my family to investigate this issue further. What is the social and cultural impact of planted forests, and could forest management be better aligned with meeting community needs and aspirations? And, to take a particularly complex and under-researched sector, what are the experiences of Māori landowners with exotic forests planted on their lands? How might one seek to investigate and assess these experiences, and then apply findings to improve management techniques?

This thesis presents an historical and present-day enquiry into two case studies; both involve central North Island Māori who have leased their land to forest management entities. In each case the forest manager maintains the authority over the land and forest for the term of the lease, while the indigenous people retain ownership of the land and receive a financial benefit for this contribution to the partnership.

The thesis examines histories and present-day perceptions of these forest developments. The post-colonial experiences of the land owners, in particular how they have endured threats of land loss and responded to numerous challenges relating to afforestation, are investigated in terms of resilience, adaptability and
transformation. Through these lenses, potential changes to forest management objectives are identified.

Forestry management is a multidisciplinary task that attempts to cross boundaries: botanical, structural, genetic, economic, ecological, social, political, cultural, temporal and spatial. A wealth of previous research and experience has been successful in advancing intra-disciplinary forest practices. However, in the researcher’s experience, incorporating the languages and knowledge of social science into forest management remains problematic. The differing epistemologies and different interpretations of words and phrases between disciplines could be viewed as an insurmountable barrier. Indeed this is the point where much forest research into societal values stalls: forest managers are uncertain and essentially reluctant to familiarise themselves with knowledge surrounding the use of words such as “values”, “perceptions”, “worldviews” or even “stakeholders”. Moreover, forest science provides no tools with which to proceed, and some social scientists are seemingly unwilling to enter into the arena without developing specialised understanding. This thesis attempts to begin to bridge this forest/social science chasm.

The risk of proceeding forward is that it will leave both forestry scientists and social scientists unsatisfied. By necessity, the forest science terminologies used in this thesis are where possible removed and likewise, the language of social science is pared down. The hope of this research is that the forest management benefits of attempting to engage with social science will outweigh these limitations of language. Despite the difficulties associated with crossing academic boundaries, forest science supported by social science is greatly strengthened. As a forest manager, the success of my input today will be determined by how the forest is appreciated by future generations.

1.2 Research objectives:

In investigating the experiences of Māori land owners with forests planted on ancestral land, this thesis draws from four fields of disciplinary knowledge: forestry science, New Zealand colonial and post-colonial history, social science and resilience
thinking, as well as the testimonies of the land owners themselves. This creates a challenge of drawing of very different bodies of scholarship without over-simplifying each. However the outcomes are intended to be productive in several arenas, as described below.

1.2.1 Forestry science:

In forestry science, management techniques which incorporate variable social values into an inflexible forest structure are in their infancy.

⇒ This thesis aims to extend forest science thinking by exploring a process for identifying forest stakeholders, discussing methods for developing interview questions for stakeholders, revealing the experiences of land owners and providing practical forest management advice for regime enhancement.

1.2.2 New Zealand history:

The establishment of planted forests is an integral part of New Zealand’s colonial and post-colonial land use history. While historical accounts of planted forestry are the subject of a number of unpublished theses, government reports, articles and books, these accounts mostly focus on productive capacity, economic development, policy and/or business history. In other words they are articulated from a commercial-human-forest perspective.

⇒ This thesis aims to investigate the experiences of planted forests through the eyes of indigenous land owners who have an enduring relationship with the land.

1.2.3 Social science:

Since 1840, Māori have endured significant alterations to the tenure, governance and regulatory frameworks of their ancestral land. Traditional autonomous land access
through sustained occupation has been altered through a complicated raft of legislation and regulation, resulting in the present day scenario of multiple ownership, fragmented shareholdings and land alienation constraints. Little is written about Māori responses to such changes to land governance and tenure or their enduring aspirations for land which is forested.

⇒ This thesis aims to identify Māori aspirations and non-negotiable cultural values for their ancestral land and the impact of planted forest leases on the realisation of these.

1.2.4 Resilience frameworks:

The results of each case study will be critically reviewed through the theoretical framework of resilience.

⇒ This investigation aims to contribute to the maturation of the overall concept of indigenous resilience by investigating how Māori collectives endure, adapt, and/or transform when faced with change.

1.3 Research questions:

To achieve the objectives of this research, the following five questions are addressed throughout this thesis. The rationale for the research question development is described in detail in Chapter 5.

1. What do Māori land owners view as the benefits and constraints of the pre-1990 planted forests that exist on their ancestral land?

2. What cultural values do the participants express for their land and is planted forestry compatible with such values?

3. Can forest management be manipulated to improve the realisation of the land owners’ aspirations?

4. Can land owner experiences in each case study be explained in terms of resilience, adaptability, transformability, adaptive cycles and panarchy?
5. Are the social resilience indicators of Ross et al. (2010) applicable to the tribal communities in the case study areas?

1.4 Thesis style and structure:

The thesis itself is presented in four parts as outlined in Figure 1: Setting the Scene, Developing the Framework, Case Study Results and Discussion, and Drawing Conclusions.

1.4.1 Setting the scene:

The introductory chapters (1 through 4) provide the necessary background information to understand the governance, tenure and regulatory frameworks of New Zealand planted forests and Māori land. Governance, tenure and regulatory frameworks are critical aspects to grasp in order to understand to what extent forest management objectives can be achieved (Food and Agriculture Organization of the United Nations, 2011).
Governance refers to the process by which decisions are made and implemented and Chapter 2 discusses forest governance and in particular the increasing influence of social expectations on forest management decisions. This chapter closes by describing the development of the New Zealand forest sector until the mid-20th century, a time when Māori afforestation leases were considered as win-win solutions to land development.

Tenure is a term commonly misunderstood to be equated with ownership, but is more appropriately defined by the variety of conditions, arrangements and rights associated with land and resources (Food and Agriculture Organization of the United Nations, 2011). Chapter 3 will introduce concepts of Māori culture and post-colonisation legislation specific to land and its tenure. This background is necessary to realise the distinctive ways in which Māori perceive land and land use opportunities and how their actions have been constrained and strengthened by particular political and institutional arrangements.

Whilst Chapters 2 and 3 are historical, Chapter 4 brings the reader into the present day. It lays out the contemporary frameworks that define how and for what purposes forests are used, including the legislation, policy, rules and regulations that influences the case study forests.

1.4.2 Developing the research framework:

The second part of this thesis will establish the theoretical context in which this research is undertaken. Chapter 5 will position the problem within the relevant literature and introduce the five research questions and the specific reasoning behind the development of these questions. The chapter explores the lens through which the results are to be viewed. Chapter 6 will discuss the methodological frameworks and approach taken to gather the data.
1.4.3 Case study results and discussion:

The case study results and discussion will be presented in three chapters. Chapter 7 – Lake Taupō Forest Trust, and Chapter 8 – Maraeroa C Incorporation, will introduce the historical and present-day contexts of the case studies\(^1\), and respectively present the research results. Chapter 9 discusses the results in terms of forest management and resilience frameworks.

1.4.4 Drawing conclusions:

Chapter 10 draws the final conclusions of the study in relation to the five research questions. This chapter also outlines the operational learnings for forest managers and proposes ways to further develop the knowledge and application of resilience thinking to social systems.

1.5 Comments on the approach to language:

This research is based in New Zealand and contains a number of words and phrases that are specific to this country and its indigenous language ‘te reo Māori’. Where te reo Māori is used in the researcher’s text, the word will be initially translated in the text and will also appear in the glossary. However, where te reo Māori is used in quotations, the term will only be translated in the glossary (page xiv) so as not to distract from the flow of the extract. Where a dictionary has been used to translate a word it will be quoted as such, however, in the absence of such reference it is the author’s interpretation of the translation that has been used. It is acknowledged that the some of the meaning of words is inevitably lost in translation.

A second point of consideration is that this thesis contains a number of forest management terms that are specific to the New Zealand sector. In such cases it may be necessary to consult the provided glossary of forest management terms. This

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\(^1\) Figure 8 pg. 70 shows the physical location of the case study areas.
glossary (page xvi) will be used to describe the author’s interpretation of these terms and concepts used throughout this thesis. Of particular note, the term ‘planted forest’ has been adopted throughout this thesis at the land owners’ request\(^2\) to describe the forests established in the case study areas.

\(^2\) The tribal leaders in the case study regions chose to describe the forests on their land as 'planted forests’ because they interpreted the term ‘plantation’ as having negative connotations and felt it did not capture the multiple dimensions of the forests in question. Section 5.2 expands the debate on planted forest definitions.
Chapter 2:
Review of Forest Management

2 Forest management development and challenges:

2.1 Introduction:

The underlying objective of this research is to investigate how the case study land owners socially value the benefits and constraints of planted forests. This chapter will introduce the subject of forest management including its fundamental challenges and outline why social values and practices are of particular relevance for this type of land use.

The chapter is presented in two parts. The first part will discuss the variety of demands from a forest, the relevance of social views and dynamics and the extent to which forest management techniques may have evolved to address such issues. The second part will introduce New Zealand approaches to forest management, its history and development through to the 1960s.
Part I – The evolution of forest management:

2.2 Forest products: a changing perspective

People tend to characterise a forest in terms of what it can produce. Undoubtedly forests provide humans with tangible products such as food, fuel, medicine, income and construction materials. Additionally, forests products can be less quantifiable, for example environmental services, landscape vistas, contribution to crafts, myths, folklore, emotions, identity, customs, philosophy, literature, art, magic, religion and language (Agrawal, 2005; Charnley & Poe, 2007; Fortmann & Ballard, 2011; Genin & Simenel, 2011; Guha, 2006; Johann, 2007; Lewis, 2007; Meine, 1988; Nadeau et al., 2003; Nijnik & Mather, 2007; Reinbolz & Hanewinkel, 2007; Scott, 1998; Sheppard, 2001). Such social values and practices have resulted in a wide variety of forest management approaches in different countries and communities over time.

For much of history, whoever maintained control over forests had the right to determine which forest product was deemed valuable. As forest control changed, so too did the resulting forest management practices. To illustrate these kinds of contrasting philosophies of forest management, the academic literature often contrasts the values and aspirations of indigenous peoples, colonisers and governments.

Typically indigenous people managed local forest ecosystems with techniques developed over generations of environmental learning. The need for multiple forest products resulted in an array of forest management traditions being historically based, localised and diverse (Agrawal, 2005; Best, 1942; Guha, 2006). Baker and Kusel (2003) further emphasise that indigenous people view agriculture and forest management holistically; thus their perception of a forest is integrated in the landscape.

3 The researcher acknowledges that this portrayal of indigenous people is a generalisation. See The Asia Forest Network (2009) for a comprehensive study into Asian-Pacific indigenous people and their shifts in forest management in the 21st century.
In contrast, colonisers highly regarded the production of commodities that could be sold elsewhere (Agrawal, 2005; Beckley et al., 2003; Irwin, 2002; Johnson, 2007; Langston, 1995; Nijnik & Mather, 2007; Poole, 1969; Reynolds et al., 2007; Roche, 1990a). In settings such as New Zealand, these values resulted in non-forest products such as from agriculture being regarded more highly than forest products. Progress was marked by the fastest possible conversion of forest to agriculture, and rapid forest clearance was considered virtuous and proper (Roche, 1990a). As Langston (1995) states, settlers tended to set in motion faster ecological changes than the previous forest users.

Finally, governments mostly favoured perpetual forest systems in order to provide predictable supply and economic certainty (Poole, 1969; Scott, 1998). Whilst perpetual timber forests were considered achievable through scientific applications, Agrawal (2005) and Shiva (1993) argue that the application of national timber objectives led to an erasure of the multidimensional knowledge systems of forest users and forest dwellers. Certainly predictability remained somewhat elusive in the multidimensional forest ecosystem (Baker & Kusel, 2003; Holling & Meffe, 1996; Kimmins, 2008; Langston, 1995; Scott, 1998).

Whilst the indigenous people-settler-government example is generalised, it remains useful in that it highlights the key relationship between power and forest management. Typically, the controlling authority operated with sufficient power to determine which forest product(s) was preferable, and forest management practices were implemented to suit. Alternative perceptions of value held by different stakeholders may have been viewed as conflicting and were either discounted or subsumed by the forest manager. This is how forest management has been applied for most of history and indeed in many situations today (Assembe-Mvondo, 2010).

The present day scenario for some forest owners however is more dynamic and complex (Bliss & Kelly, 2008; von Detten, 2011). Escalating conflicts over forest services have been well documented (Johnson, 2007; Langston, 1995; Werland, 2008) and the result has seen forest managers jostle for position among a much wider variety of stakeholders on local, national and international levels. The relationship between forest and communities have shifted from the utilitarian view of ‘sustainable tree
harvest equates to sustainable communities’ to the more contemporary paradigm that diverse, healthy forests result in diverse, healthy communities (Kelly & Bliss, 2009). As a result the selection of forest management techniques has become less predictable, and forestry science has been called into question.

Forestry science is the methodology that, in its simplest form, aims to render forests more utilisable for people. It is within this framework that foresters aim to reconcile forest management with forest products. The following section introduces the concept of forestry science and expands on the complex and potential relationship between forest products and social values. However, it by no means encapsulates the entire complex history of forest management or of forestry science.

2.3 What is forestry science?

‘Scientific forestry’ is thought to have developed in Prussia and Saxony in the mid-18th century and in later years became associated with the German forester Dietrich Brandis, who introduced his forest management practices to the then British Empire, including the United States (Fortmann & Ballard, 2011). Although the manipulation and reservation of forests for specific products have occurred throughout history (Harrison, 1992; Perlin, 1991), scientific forestry differed in that it was essentially a state-driven initiative, whereby a forest made up of many components (habitat, game, food, fodder, medicine, shade, sense of place) was reduced to products which could be managed in perpetuity, typically timber. The difference between such early forest science principles and other forest management techniques was the belief that tree growth could be standardised, reliable and predictable. The wild, disorganised, multidimensional forest could be simplified by science to provide a predictable, profitable and constant supply of lumber.

The principles of forestry science are essentially two-fold. First, human manipulation (silviculture) such as planting, pruning and thinning, reduces the natural variability of a forest and encourages the uniform growth of highly valued species. Second, the forest is managed to produce timber consistently through time by sustained yield harvest, i.e. tree harvest must not exceed tree growth. Sustained yield harvest is the
defining principle of forestry science techniques in a number of countries throughout the world, including much of Europe, the United States, New Zealand and some developing nations (Agrawal, 2005; Langston, 1995; Miller, 2001; Poole, 1969; Scott, 1998). By the methodical application of silviculture and sustained yield harvest, the leading objective of forestry science was initially to maximise the economic benefit that could be gained from the forests. Until recent years, other forest functions associated with ecology and community were considered to be almost automatic outcomes of a sustained yield harvest, if they were considered at all.

Over time, the application of forestry science caused both unforeseen changes in ecosystems, and unanticipated reactions from communities. Langston (1995) retells how fire suppression in the inland western United States was implemented to protect the commercially valuable species Ponderosa pine (Pinus ponderosa). However, the decrease in natural fire resulted in the dominance of the faster growing and less desirable species Douglas fir (Pseudotsuga menziesii) which was particularly susceptible to insect attack in drought years. The resulting damaged understory created an increase in fuel-loading and thus fires increased in both strength and frequency. Agrawal (2005) describes how the colonial administration in 1920s India took control of vast areas of India’s forests and removed villagers’ rights of access and usage. Communities reacted in ways not foreseen by the forest managers, such as burning forests in a vivid challenge to such authority. Likewise, Gautam and Devoe (2006) detail how specialised management over Sal (Shorea robusta Gaertn. F) forests, principally for timber production and attempts to control other forest uses, resulted in persistent conflicts between local people and the government in the southern Himalayas. Scott (1998) describes in general scenarios how the simplification of a forest to produce only one demand, timber, has historically been thwarted by both nature and humans, as fires, storms and pests frustrated foresters as well as forest users who typically grazed, poached and took firewood for their own requirements. Such unforeseen results, both within and outside the forest, have led some to argue that forestry science has been applied outside the limits of its capability (Holling & Meffe, 1996; Ludwig, 2001; Plumwood, 2002; Pregernig, 2007; Scott, 1998; Shiva, 1993).

4 Hunting without permission.
The definitions and goals of forestry science have expanded over time. In 1914, Gifford Pinchot, the first Chief of the American Forest Service, defined forest science as “…the art of handling the forest so that it will render whatever service is required of it without being impoverished or destroyed” (Miller, 2001, p. 329). Fast forward to the present day and forestry science is defined as the “…art (skill), practice, science and business of managing forest stands and forested landscapes to sustain a desired balance of values that are ecologically possible over appropriate temporal and spatial scales” (Kimmins, 2008, p. 1626). Both definitions provide a fluid concept of forestry science such that as societies’ needs change, forestry management must anticipate such change. Furthermore, both definitions (to differing extents) create responsibilities for the forester and forestry science to adopt methods of management that are consistent with current and future societal values.

Importantly, history has shown that forest managers cannot under-estimate the power and legitimacy of social opinion. Adverse public judgement can and has postponed, modified or revoked a forest management programme irrespective of the forest ownership or scientific rigour behind the regime. In New Zealand, environmental groups lobbied hard from the late 1970s to suspend the harvesting of indigenous timber from government-owned lands. The result, which played out over the next 20 years, was that all native forest harvesting on state lands ceased or was phased out under accords or legislation (Foran, 2001b). Likewise, the northern spotted owl injunction in 1990 drastically reduced the timber harvest in north-western United States federal forests for two years and placed species management goals above timber production goals for the first time (Johnson, 2007).

Such examples of opinion impacting forest management are certainly not limited to state-owned forests, as examples of restrictions in private forests due to public influence are numerous (Rotarangi & Thorp, 2009). In reaction, many have questioned whether forest policies or forestry science can evolve to assist in the management of such multiple values (Johnson, 2007; Kouplevatskaya, 2007; McFarlane et al., 2003; Mrosek & Schulte, 2007; Pierce & Lovrich, 2003; Plumwood,

5 Apart from an area known as “Longwoods” in Southland, which was exchanged for an area of Māori land high in conservation value and is managed under a sustainable forest management plan.
2002; Scott, 1998; Shiva, 1993). Others argue over whether the strategy of ecosystem maximum sustainable yield, or even the paradigm of sustainability, is actually equipped to deal with future ecological and social uncertainties (Abel et al., 2006; Davidson, 2010; Trosper, 2003; von Detten, 2011).

Certainly, the rise of environmentalism and the growth of ecology as a unifying science, particularly in the last decades of the 20th century, cast a harsh light on the narrow goals, practices and environmental consequences of the commodity-focussed approach of scientific forestry. This has subsequently increased public awareness about forest values, including social, cultural and economic values (Baker & Kusel, 2003; Charnley, 2006; Grove & Edwards, 1993; Kennedy, 1985; Kimmins, 2008; Kouplevatskaya, 2007; Reynolds, et al., 2007). Today, new social expectations for forest products and services bring a new perspective to forestry science, with the wellbeing of people, communities, cultures and society added to existing goals (Donoghue & Sturtevant, 2007; Johnson, 2007). In an important recent example of this transition, in 1995 twelve countries representing approximately 90% of the world’s temperate and boreal forests formally endorsed the Montreal Process Criteria and Indicators, a framework which incorporates the resilience of forest-dependent communities as an indicator of social sustainability (Magis, 2010).

Forestry science has matured to varying degrees in different regions to include wider demands within forest management goals, but the discussion of values, and whose values are important, remains problematic. Social expectations and values are further complicated by the long-term nature of forests, with some forest life-cycles spanning a number of human generations. Some in the literature argue that forest managers can only ensure the forest system maintains flexibility, thus increasing its chances of being able to adapt to what is ecologically possible and socially feasible (Brumelle et al., 1990; Miller, 2001; Poole, 1969; Shindler et al., 2003). Others go further and suggest that forest managers should forget about anticipating the future or pursuing stability through sustainability strategies (Hahn & Knoke, 2010) and should instead use reflexive learning from failures and their subsequent adaptations as starting points to consider more resilient forest design (von Detten, 2011).
Given the long-term nature of forestry alongside the uncertainty and complexity of social values and expectations, maintaining flexibility and an ability to learn from experience in forest systems appears essential. The flexibility to maintain a wide variety of services throughout the life-cycle of the forest, the flexibility to change forest structure as required, the flexibility to involve and engage stakeholders at multiple levels of forest management, and strategies of learning through mistakes may provide necessary buffers against the uncertain future. The discussion chapter (Chapter 9) picks up this theme of flexibility in relation to the case studies.

This chapter now turns to introduce the post-colonisation New Zealand forestry model. This is a system which on the face of it appears distinct for its inflexibility and limited ability to absorb shock or failure: single-species planted forests managed with early silviculture and clearfell harvested. In this scenario, like many other forest systems, questions regarding social values, perspectives and expectations arise, but before addressing these an introduction to the New Zealand forest sector and its history is required.

**Part II – Forest Management in the New Zealand context:**

2.4 From indigenous to planted forests:

Before the time of human occupation, New Zealand’s indigenous forest resource covered approximately 21 million hectares or 80% of the land area (Roche, 1990a). Around 1840, New Zealand was approximately 50% covered in forest as shown in Figure 2 (King, 2003; Roche, 1990a). Forest cover at this time was made up of three major forest types. Most of New Zealand’s North Island, along with Westland and Southland in the South Island, was covered with podocarp and mixed hardwood forests with dominant species being rimu (*Dacrydium cupressinum*), totara (*Podocarpus totara*), kahikatea (*Dacrycarpus dacrydioides*) and matai (*Prumnopitys taxifolia*). In northern regions (north of the latitude 28 degrees south) kauri (*Agathis australis*) dominated forest cover. Mixed hardwood beech makes up the third major forest type, present at higher altitudes in both islands.
Trade in forest products existed from late in the 18th century. The commercial trade in spars for shipping dominated New Zealand’s timber industry from the late 18th century to 1840. Cook’s perceptions of the commercial value of New Zealand tree species were clear, when he observed that they: “...would produce masts that no country in Europe could produce” (Roche, 1990a, p. 14). Initially, kauri was
preferentially sought for both its timber and its gum. Other species were only seriously considered when the kauri resource became exhausted.

Prior to 1840, most of the New Zealand timber trade depended on the harvesting of indigenous forests on Māori land (Rhodes & Novis, 2002). However, a treaty signed by Māori and the British Crown in 1840, the Treaty of Waitangi, opened the way for large-scale settlement under British rule. The New Zealand government identified agriculture as the preferred form of land use from the earliest period of colonisation (Waitangi Tribunal, 2008d). Although trade in forest products such as kauri gum and timber continued, the majority of immigrants held few prospects for the management of permanent wood supplies. Compared to the deciduous hardwood forests of Britain, New Zealand’s closed canopy dense forests were viewed more as a nuisance than a prospect and in many cases were burnt to clear the way for settlement and agriculture (Poole, 1969).

Concerns about the sustainability of New Zealand’s indigenous timber resources were raised early in the country’s colonised history. However the management of New Zealand’s indigenous forests in the early years following the Treaty is described by Roche (1987, p. 19) as “regulation without control”. As the young colony established itself, regulation of forests was considered and in some cases implemented but often became subjugated into the wider concerns of the settlers who typically set about clearing land for farms and occupation.

A comprehensive historical geography of forest policy in New Zealand from 1840 to 1919 is detailed in Roche (1987). In 1874, the New Zealand Forests Act was introduced to provide a mechanism for the conservation of indigenous forests and their associated functions such as soil and water. Professional forester Campbell Walker was recruited as the Conservator of Forests to implement the legislation. Walker had wide ranging forestry experience in India and was influenced by the scientific forestry techniques of Germany and France. Walker made a case for state-controlled scientific forest management for the benefit of present and future generations, in contrast with the purely economic goals of private forestry (Roche, 1987).
However, the New Zealand Forests Act and Walker’s recommendations proved unpopular measures, which were seen to undermine the property rights of the settlers. The Act was effectively repealed only 15 months later (Walzl, 2004). The following period was one of great change in New Zealand as land settlement activity increased and continued to transform the previously forested landscape.

The timber industry was expanding alongside accelerated forest clearance for agriculture and settlement, raising concerns about the longevity of the resource from both the timber industry and the government (Roche, 1990b). In 1896, a Timber Conference was held involving a number of stakeholders in the forest sector including government and sawmillers (Roche, 1990a). Concern was expressed about the ability of New Zealand’s indigenous forests to be managed to meet demand. Attendees to the Conference acknowledged that timber consumption levels would not be sustained by traditional European-influenced styles of forest management. This was due to the slow growth of the species involved and the biophysical restrictions of the remaining forests. Typically, the more accessible forests were on fertile land which had already been cleared for settlement or agriculture.

The Conference was influential and over the following years policy was created to regulate timber harvest rates and implement export restrictions. In 1896, the Forestry Branch of the Department of Lands and Survey was established and undertook a number of afforestation experiments. By 1912, state planted forests were 7,636 hectares in extent and included several exotic species (New Zealand Royal Commission on Forestry, 1913). However, there was growing recognition within the government that forestry expertise was required. In 1912, the government appointed a forestry science graduate, W.A. Fraser, to oversee the conservation of native forest and to reduce the wastage of extracted native timber. However the appointment was short-lived as he was killed in World War I.

With the knowledge that millable native forests were dwindling, and the growing realisation that recent governance actions had not been successful, the 1913 Royal Commission on Forestry began its work. The purpose of the Commission was to inspect and describe the condition of New Zealand’s planted and indigenous forests and to make recommendations regarding future usage and demand. With respect to
indigenous forests, the Commission endorsed the creation of several climatic reserves to protect soil, water quality, prevent denudation and floods, and provide shelter from the wind, whilst also considering hunting and recreation. Scenic reserves were also recommended for preserving scenery, protecting historic places and hot springs, and for preserving examples of vegetation together with its accompanying birds and other animals. The report also recommended that remaining indigenous forests should be given an economic classification based on their millable timber and that the Lands Boards should administer such a system (New Zealand Royal Commission on Forestry, 1913).

The Commission found it difficult to establish national afforestation requirements given the lack of reliable statistics available regarding population and demand. That being said, the Commission noted several areas suitable for afforestation and that the exotic species Pinus insignis (as Pinus radiata was then known) was a tree that thrived in every variety of soil, grew rapidly and performed well as a building timber (New Zealand Royal Commission on Forestry, 1913).

The findings of the Commission were influential (Roche, 1990a). Sir Frances Dillion Bell, New Zealand’s first Minister of Forests (later to be known as the Commissioner of State Forests), believing that a timber famine was imminent, outlined a national forest policy. Permits and export restrictions were already in place, but the conservation of indigenous forests on Crown land remained politically difficult given the high public demand for land for settlement and timber. Steps were therefore taken to impose restrictions over other owners of indigenous forests, most of whom were Māori (Walzl, 2004). European settlers had already removed most of the forest cover on their own land.

In 1919, Bell issued a directive that no sale of timber or timber licences by Māori could be granted without a directive from the Governor General. Further calls were made that all Māori land with millable timber should be controlled by the state (Walzl, 2004). In 1921, the State Forest Service was established to be led by Director of Forests, Leon MacIntosh Ellis. The appointment of an experienced and technically trained forester to the newly formed Forest Service was significant, first because forests in New Zealand were beginning to gain administrative independence from
agriculture, and second because of recognition that active forest management would be required to sustain the resource. Importantly, this marked a redirection of policy away from price control and restrictions, towards a state-driven forestry programme which included resource evaluation, afforestation and research (Roche, 1990a; Walzl, 2004).

Ellis arrived in New Zealand heavily influenced by Canadian, German and French forest management. A Canadian, with war-time experience as a log procurement officer, he had been exposed to the sustained yield principles of Europe (Poole, 1998). Due to the projected demands on the resource, Ellis quickly rejected the idea of managing New Zealand’s natural forests on a sustained yield basis and redirected efforts to afforestation using species not endemic to New Zealand. The move to afforestation with exotic species is where this recently-colonised country departed somewhat from European influence over its forest practices.

2.5 Social values and/or perceptions of land use: farming versus forestry

As early as 1896, the volcanic plains in the central North Island were identified as a significant area suitable for afforestation (Chapple, 1970; Poole, 1969; Roche, 1990a). In particular, the windswept plains of Kaingaroa in the central North Island, were sought (Chapple, 1970) largely because they were unpopulated and unsuitable for agriculture. By 1911, a number of small-scale, exotic species plantings had been established around New Zealand, including some 14 million trees which would later become known as Kaingaroa Forest. Although several exotic species were trialled, it was the “…lusty infant” (Poole, 1969, p. 27) Pinus radiata with its relatively short rotation\(^6\) period that captured the imagination of early New Zealand foresters and soon became by far the most commonly planted species for afforestation. Māori were involved in the establishment of such forests, largely however, as labourers and rarely as managers or land owners (Walzl, 2004).

\(^6\) 25-30 years
In the 1920s, under the leadership of Ellis and partly as a result of returned soldiers seeking employment, exotic afforestation increased dramatically. This high rate of Government-led afforestation continued through the early and mid-1930s. At the same time, private companies began showing an interest in planted production forestry, and plantings by a number of companies boomed as forestry was promoted as a significant investment opportunity (Foran, 2001b). As New Zealand grew as a country, so too did the debate regarding appropriate land use, typically with respect to farming versus forestry.

Exotic afforestation was limited by labour shortages during the late 1940s and 1950s. Furthermore, meat and wool farming, in particular, were very buoyant during this period and tree plantings were not able to compete with their high economic returns. However, during this time the government turned its attention to developing processing options for the maturing first rotations of *Pinus radiata* forests.

By the 1950s, large volumes of planted timber became available from the 1920’s exotic planting boom. Large-scale industrial processing plants to utilise wood had been commissioned as early as the 1930’s but it was not until the 1950’s, when a private company, New Zealand Forest Products Limited, constructed a fully integrated sawmill, and pulp and paper facility, that processing investment began to become significant. A government–private sector joint venture scheme to establish a pulp and paper plant (Tasman Pulp & Paper Company Ltd) followed this in 1955 (Foran, 2001b).

By now, processing and export options were available for exotic timber giving rise to growth in the planted forest sector. In 1960, a threefold increase in planting was proposed by the government. However, the amount of unoccupied land available for either new agriculture or new forestry was now very limited and it was recognised that Crown land could only contribute to part of that target. A small farm-forestry movement was initiated in the 1950s but achieved limited success in integrating the land uses, mainly because the farming versus forestry dichotomy continued to be rife (Rhodes & Novis, 2002).
Despite governmental promotion of forestry through education and financial incentives, the obstacles to afforestation were substantial and partly driven by the prevailing attitude of the agricultural sector that forestry was perceived to be a “…waste of good land” (Rhodes & Novis, 2002, p. 31). It was within this wider context, in the 1960s, that the government turned its attention to Māori-owned land and attempted to facilitate afforestation through lease arrangements. The context and history of these leases will be discussed further in Chapter 3.

### 2.6 Concluding comments:

Expectations for forest products and services are continually varying, and managing forests in isolation from wider societal values has proven unsuccessful in the past. Numerous scholars agree that to integrate forest management and stakeholder demands is the central challenge facing foresters today. Over the life-cycle of a forest, forest control and the individual and collective human demands from forests will change, and the management of multiple values from a finite resource whilst anticipating future demands makes the role of forest management complex and unpredictable.

New Zealand’s forest sector is almost wholly based on planted forests for timber production. The majority of these forests are monocultural and planted with the exotic species *Pinus radiata*. Despite the production focus, the perspective of desirable forest products is changeable. A variety of demands exist at any given time as, individually and collectively, people show different preferences for forest types and products. Opinions may change over time and the process of assessing which and whose demands are important will be inherently subjective. This thesis seeks to contribute to the evolution of forest management to better understand and address social expectations – in this case, the expectations of Māori land owners.
Chapter 3:
New Zealand Māori

An introduction to New Zealand Māori and Māori land:

3.1 Introduction:

Māori are New Zealand’s indigenous people. Māori describe themselves as tangata whenua or people of the land. Tangata means people and whenua means both land and placenta (Ryan, 2005), the term thus capturing the inseparable relationship between people and place. Māori own significant amounts of land on which New Zealand’s planted forest estate is located. The thesis investigates perceptions of planted forests in two case studies where Māori are the owners of forested land but are not the forest managers.

This chapter sets out to introduce the Māori people and their relationship to land, as well as introducing the reader to key pieces of legislation regarding Māori autonomy.

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7 While there are no commonly agreed criteria for describing indigenous cultures, indigenous people tend to be distinguished by their strong attachment to land and place (The Asia Forest Network, 2009).
and land retention. This chapter is presented in two parts. The first will introduce the Māori people, their arrival in New Zealand, their world view and their traditional governance of land and forests. The second will outline the key legislation that has framed land use opportunities for the case study participants from the mid to late 19th century. These two parts combined will create the context from which the following chapters will detail the research topic and case study areas.

3.2 Limitations:

Articulating a cultural world view is difficult, particularly more so given the constraint of an introductory chapter. As with all ethnic groups, there are a variety of views and histories that make up the complex whole that is referred to with the term ‘culture’. Therefore this chapter is neither exhaustive nor all-inclusive. However, it will provide a brief overview of the cultural context, practices, institutions and legislative history relevant to the indigenous people who live in the case study areas. This history shapes how the case study participants perceive their opportunities and risks, and, as this thesis will go on to demonstrate, shapes their decisions particularly with respect to planted forests. It will also provide context for discussing the cultural values that remain ‘non-negotiable’ to the participants and those that are amenable to change.

Part I – The World of Māori (Te Ao Māori):

3.3 Arrival in New Zealand:

Ethnologists agree that Māori migrated from Polynesia and share strong cultural and linguistic characteristics with a number of other Polynesian groups. However, many other factors, such as the date of their migration, when and where they arrived, and how many of them left Polynesia, are all matters of contention (King, 2003). Much of this speculation is of limited relevance to this thesis, however, it is important to note that prior to their departure from their homelands Māori held a number of family
alliances (and rivalries) particularly between the ancestors of Ngāti Tūwharetoa and Ngāti Maniapoto, the iwi (tribes) of the case study regions.

The first voyages from Polynesia to New Zealand are said to have been made initially from a land referred to as Hawaiki. A significant number of further migrations from Hawaiki, collectively known as the Great Migration or Great Fleet, were undertaken perhaps centuries later in the 14th century (Te Herekiekie Grace, 1959). The exact timing and reasoning for these later departures are matters of debate, however, it is considered likely that over-population and food shortages were responsible (King, 2003; Te Herekiekie Grace, 1959).

The departure of the Great Fleet forms a vital part of Māori oral history, handed down from generation to generation. According to these traditions, the number of canoes involved in the Great Migration varies between seven and nine (King, 2003). Māori living today claim that they can trace their genealogy back to their ancestor’s waka (canoe). In the case of the participants of this research, the Te Arawa and Tainui waka carried their ancestors to New Zealand.

Oral and written traditions that describe the voyagers of the Te Arawa and Tainui waka suggest there were close genealogical links between those on board (King, 2003; Te Herekiekie Grace, 1959; Waitangi Tribunal, 2008a). For example, one tradition is that both waka set sail from the same island at the same time and the leaders on board were closely related. Another version even describes the two as being on the same waka with each name referring to the opposite sides of the double hull (Waitangi Tribunal, 2008a).

It is claimed accordingly that those on board the Tainui and Te Arawa waka held many allegiances and rivalries. Te Herekiekie Grace (1959) explains this relationship further, including the kidnapping of a Tainui priest, Ngātoroirangi, by his cousin and Te Arawa commander, Tamatekapua, prior to the vessels’ departure from Polynesia. Although the participants in this research claim their descent through different waka, they share a common history with genealogical connections, alliances and disputes that date back prior to their ancestors’ arrival in New Zealand.
The majority of the fleet involved in the Great Migration, including the Te Arawa waka, are said to have arrived first in the area later known as the Bay of Plenty (Te Herekiekie Grace, 1959). The migrants thereafter went forth to claim land either by creating alliances or waging war.

3.4 Māori world view:

Upon their arrival in New Zealand, Māori brought with them a distinct system of Polynesian values and knowledge. These further evolved over centuries of isolation from other Polynesians into a distinctly Māori philosophy (kaupapa). Awatere (2003) describes ‘whakapapa’ as the key guiding component to this kaupapa. Ryan’s Modern Dictionary of Māori defines whakapapa as “genealogy and cultural identity…” (2005, p. 355) but the concept requires further discussion because of its central contribution to Māori values and the management of resources.

In Māori custom, every creation (heaven, earth, spirits, animals, plants and humans) is connected through whakapapa. Maori creation begins with Io-matua-kore, a great nothingness or parentless one who joins with spirit (wairua) to create the universe. Nearly all creations thereafter are a result of the union between heaven and earth, or Ranginui and Papatūānuku who emerged from the ocean at a time of darkness (Pō). Papatūānuku and Ranginui parented up to seventy sons (tamariki) and tried to protect them by keeping them enclosed in darkness in their arms. The tamariki revolted from this confinement by separating their parents. Seven tamariki in particular led to the separation of heaven and earth and the liberation of the world (Te Ao Mārama).

In the researcher’s family tradition it is said that each of these seven sons possessed some of the essential qualities which epitomised the characteristics by which to live life, but none of them individually possessed all these qualities. By way of illustration, as the tamariki become independent from their parents and each other they realised their independence resulted in a decrease in standards for all. They therefore become accountable to each other (whanaungatanga) and produced the concepts of prestige, superiority and value (mana) which would enable their collective management (tino rangatiratanga).
All these relationships are legitimised by kinship (whakapapa) which links every creation back to Io-matua-kore. Every creation therefore, including plants and animals, hold rights as a family member of Te Ao Marama. Furthermore, they each possess their own spiritual, mental and physical capability (mauri) which can be enhanced or lost. The concepts of whakapapa and mauri link all creations together whether they are heavens, earth, divine, animals, plants or human. The last birth in the creation chain is humankind who are therefore responsible for the care and sustainability of their natural world.

This world view creates the obligation for Māori to maintain the well-being, of not only their human kin, but also of their natural resources as if they were family members (Awatere, 2003; Reid, 2005). This human responsibility to nurture and care for all of creation is known as kaitiakitanga (Waitangi Tribunal, 2011), and kaitiakitanga may embrace anything that is treasured (taonga) – tangible or intangible.

Kaitiakitanga continues to find centrality in Māori kin-based communities because it weaves together ancestral, environmental and social threads of identity, purpose and practice. (Kawharu, 2000, pp. 349-350)

Given that Māori are not only the guardians of the land but are also direct descendants of Papatūānuku, the reader may begin to understand the importance of land in Māori custom. Even early European authors noted that Māori shared a sentimental relationship with land that was, surprisingly, “not at all related to its ability to produce food” (Firth, 1959, p. 368). Māori describe the land as a source of identity, and its retention as being vital to their well-being. All of which is aligned with their ability to care for their ancestor in the way they deem appropriate.

When land was lost, a group of claimants explained, it ‘severed the connection between the people and their whenua, tikanga, wairuatanga, whakapapa and way of life’. ‘What lies over the land’, they said ‘is the whakapapa, traditions, and history of the people’. (Waitangi Tribunal, 2008a, p. 123)

Another aspect of Māori world view that stems from whakapapa is the preference for collectivism. The Māori language is unequivocally framed in the collective, and individual terms are uncommon. A report for the New Zealand Institute of Economic Research (2003) states that the Māori economic ideal can only be achieved through co-operative enterprise for the well-being of the community.
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The way they [Māori ancestors] conducted their lives and the respect they have for their environment and each other stemmed from whakapapa. The system of community co-operation in cultivation and sharing the natural resources inhibited any trend towards individualism and individual ownership of land. (Mead, 2003, p. 282)

These concepts, and their basis in whakapapa and kaitiakitanga, form the context for interpreting the histories, present-day values and future hopes of the case study participants.

3.5 Māori customary land tenure:

“Tenure” is a commonly misunderstood term which is often equated with ownership but more correctly refers to a variety of arrangements that allocate rights to, and conditions on, those who use land and resources (Food and Agriculture Organization of the United Nations, 2011). Prior to European influence, Māori had distinct methods of land tenure. Traditional rights were ascertained by the following four categories (take), one of which was essential to claim entitlement to the land (Riseborough & Hutton, 1997):

1. Take kitea: rights to the land through discovery.
2. Take tūpuna: rights to the land through ancestral links.
3. Take raupatu: rights to the land through conquest.
4. Take tuku: rights to the land by gifting.

In each case a fifth criteria, rights to the land through sustained occupation (take ahi kaa), was required to substantiate the claim. Smith (1942) and Kawharu (1987) describe occupation as the necessary ingredient common to all the above criteria.

In the context of land tenure, rights of use depended upon occupation, and by extension, active and responsible membership, of the landholding group. An individual’s rights therefore lay dormant in those villages where he did not live and became less important with the passage of time (Kawharu, 1987, p. 143)

The way Māori managed land and resources was in particular driven by the concepts of whakapapa, mauri and mana. Whakapapa ensured respect for the environment and enabled a system of respect for each other through co-operation in cultivation and
sharing of natural resources. This inhibited any trend towards individual ownership (Mead, 2003). Furthermore, it was a belief of Māori that if natural resources were not well cared for they would lose their mauri and would no longer be productive (Firth, 1959). The communal ethic was governed by social differentiation as determined by mana. Each Māori tribe had those with more mana such as aristocrats (rangatira) and those with less mana such as commoners (tūtūa). Furthermore, many Māori names for social structures have double meanings reinforcing the relationship between humans and the land. A tribe is known as ‘iwi’ which also means bones, a sub-tribe is known as ‘hapū’ also meaning to be pregnant, a family is known as ‘whānau’ or to give birth, and finally ‘whenua’ means both land and placenta.

Māori identify ourselves by the relationships our tūpuna formed with the lands from whence we came. We are people of this land. We are born of this land and we need to look at what we can do for the land. It is this intimate connection which gives meaning to what it is to be tangata whenua. It is a relationship which transcends arguments of ownership in the commodity sense; a relationship which reinforces a sense of belonging shared between those who have passed on and those yet to be born. It is a sacred connection; represented through the dual meanings of whenua to both nourish the people, and to nurture the growing new life of the unborn child. (Hon Dr Pita Sharples in Dewes et al., 2011, p. 4)

3.6 Māori and New Zealand’s native forests:

The Food and Agriculture Organization (in The Asia Forest Network, 2009) states that most, if not all, indigenous communities maintain a strong cultural connection with forests. As with their land, Māori maintain a close mythological, genealogical and practical relationship with native forests.

Early European ethno-botanist, Elsdon Best (1942), describes at length the relationship between Māori and forests, the raft of language associated with forests, and the knowledge Māori had of ecosystem functions. Firth (1959, p. 58) also states the “wealth of [Māori] language relating to trees, birds, shrubs, plants, stones, fish, clouds, winds and stars is truly amazing”. Firth (1959, p. 60) goes on to describe Māori awareness of the “…intricacies of biology and zoology” as being advanced. Finally, he summarises the attitude of Māori to forests as being “macro-religious”
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(Firth 1959, p. 64). Other authors also describe the detailed knowledge of Māori about forest resources including trees, fungi, edible herbs, timber, bark and its uses, oils and gums, berries and the great variety of food supplies (Williams, 2001).

For Māori, the forest was a source of both spiritual and physical sustenance. In most creation traditions it was the custodian of forests, Tane Mahuta, who was the only one of the sons strong enough to separate his parents. The descendants of Tane Mahuta include all the trees, birds and insects of the New Zealand forest.

“Whakapapa or lineage connects us all to every aspect of the universe, from the beginning of time to the very first seed that created the universe. Papatūānuku is the earth, Ranginui is the sky. We are descended from this source. Their 70 children are the original custodians of all elements of the universe. The first-born was Tane Mahuta. He is the custodian of the whole forest domain. In the succession of life, plants were followed by birds, then by fish, insects and animals. The last born were humans. In the whakapapa or genealogy humans are teina (junior) to all other animate or inanimate forms” (George Asher in Miller et al., 2007, p. 15).

Māori were not passive in their encounters with forests or forest creatures; their role of kaitaiki was not solely as the environmental guardians of the forest, but included responsibilities for the social wellbeing of the people. Māori therefore used forest flora and fauna extensively for food, and cleared forest for further cultivations and settlements. Archaeological and early European records suggest that many Māori settlements and cultivations were located near or on the bush-edge, either amongst standing trees or on the margins. Fire was used to promote food re-growth\(^8\), clear land, promote hunting and facilitate travel (Williams & Walton, 2003). Furthermore, Māori brought with them the exotic predators; the Polynesian rat and dog. As a result, a number of species extinctions and ecosystem changes occurred prior to the arrival of the European settler. In fact by 1770, it is estimated that approximately half of the New Zealand bird species were already extinct (King, 2003) and by 1840 only 30\% of the nation’s forest cover had been removed (Roche, 1990a).

The Māori relationship with land and forest was soon to evolve under the influence of European settlers. As in many other colonised societies, the balance of power was set to change with the first wave of colonists arriving in the early 1800s.

\(^8\) Bracken (\textit{Pteridium aquilinum}) was a staple food for Māori and fire promoted its growth.
Part II – Māori land retention and legislation:

3.7 Introduction to post-colonial land tenure:

The early relationship between government, settlers and Māori shaped the context in which tribal land was retained, acquired or managed. This section begins with an introduction to New Zealand’s founding document, the Treaty of Waitangi, and then continues with two historical matters of particular relevance to this thesis. The first is the raft of unsuccessful policies attempted between 1840 and 1865 aimed at allowing various levels of Māori autonomy in governance alongside the Crown. The second is the land legislation laws of 1862-1873 which created a European-influenced system of land title and land court.

The Food and Agriculture Organization (2011) states that understanding tenure and tenure reform is critical to understanding the extent by which forest management objectives can be achieved. This chapter is essentially historical but is also aimed at affording understanding of the key changes in tenure relevant to the present day land owners in the case study areas. Land tenure change is given emphasis in this introductory section and when later this is combined with governance and regulatory frameworks, the reader will have been presented with three key domains that influence forest management.

3.8 The Treaty of Waitangi 1840:

The brief visit to New Zealand waters by the Dutch explorer, Abel Tasman, in 1642 left little lasting impact on Māori, but the visits by British explorer, James Cook, from 1769 sparked the arrival of sealers and whalers later followed by large scale European settlement. At the time of Cook’s arrival, over 800 tribal descent groups (hapū) maintained authority over New Zealand’s lands and resources (Tapsell & Woods, 2008). As settlement and trade developed, so too did the relationship between New Zealand and Britain. Eventually, many agreed that a constitutional arrangement with Britain was necessary to provide security to Māori, settlers and the Crown (King, 2003).
The Treaty of Waitangi, signed in 1840 between various Māori chiefs and the Queen’s representative, is the founding document of the New Zealand nation. The chiefs who signed the Treaty represented their local tribal areas, yet the resulting document was viewed as a covenant between Māori and non-Māori (Kawharu, 2005). King (2003) states that the document held genuine and profound hopes for the welfare of Māori but within a brief period it became largely overlooked for the next 100 years. This section serves merely to introduce the Treaty in the context of this research, with the particular issue of interest being the Treaty’s guarantee of Māori autonomy.

Following the original signing, on 6 February 1840, the Treaty of Waitangi was subsequently taken around New Zealand for signing at other centres of settlement. Two versions of the Treaty, one in te reo Māori and one in English, were circulated and signed. Unfortunately the two versions did not correspond in several key respects (McKenzie, 1985; Moon & Fenton, 2002; Stokes, 1992).

The first two Articles of the Treaty are of particular relevance to this thesis. The first Article stated that Māori would cede absolutely and without reservation their rights and powers of sovereignty to the Queen of England. Sovereignty was translated in the Māori version to ‘kāwanatanga’ or governorship, a term generally associated with less authority than ‘mana’ which implies power, dominance and control, terms generally associated with sovereignty. The second Article guaranteed Māori the undisturbed possession of their lands and resources as long as they wished to retain the land in their possession. There was a pre-emption clause that stated the chiefs would give the rights of sale to the Queen’s representatives. The Māori version used the phrase “…te tino rangatiratanga o ratou wenua o ratou kainga me o ratou taonga katoa”9, accepted as meaning unqualified exercise of chieftainship over their lands, villages and all their treasures. The third Article extended the Queen’s protection to all Māori along with the rights and privileges of British subjects.

Despite the two versions, contemporary analysis states:

...the Treaty of Waitangi envisaged one system where two spheres of authority (the Crown and Māori) would inevitably overlap. The interface between these two authorities required negotiation and compromise on both sides, and was

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9 Second Article of the Treaty of Waitangi (State Services Commission, 2005)
governed by the Treaty principles of partnership and reciprocity. (Waitangi Tribunal, 2008b, p. 173)

3.9 Māori land legislation 1840-1865:

The period from 1840 to 1865 was a period of constitutional flux as the country attempted to establish a jurisdiction that simultaneously recognised the Crown’s authority and Māori autonomy (Bourassa & Strong, 2002). The Treaty of Waitangi provided Māori with the real expectation of self-governance in co-operation with the Crown.

Following the Treaty of Waitangi there were two authorities, two systems of law, and two overlapping spheres of population and interest, as the settler State sought to establish itself alongside – and over the top of – Māori tribal politics. (Waitangi Tribunal, 2008b, p. 166)

Despite this complex situation, the Waitangi Tribunal (2008b) maintains the settler government’s task of accommodating Māori authority over tribal land was possible. The Tribunal details five practicable options with broadly similar parameters that could have provided for Māori autonomy in co-operation with a New Zealand parliament during the period 1845-1861, none of which were successfully implemented.

A full review of these options is presented in the Waitangi Tribunal report “He Maunga Rongo” (Waitangi Tribunal, 2008b) and the detail of such is not repeated here. However these options are briefly presented below and the Māori response is considered, as such political and legislative context had an enduring impact the central North Island region. The failure to implement these options led to war, which in turn changed the concept of land autonomy in the case study regions forever. This background allows the reader to build a picture of how central North Island Māori have acted collectively to endure, adapt, transform and potentially become stronger when faced with change.
3.9.1 Option 1 - Self-governing Native Districts:

Immediately succeeding 1840, the newly formed British colony of New Zealand endeavoured to establish institutions of governance, a task which proved unpopular with both settlers and Māori (Bennion, 1997; Waitangi Tribunal, 2008b). The result was two Constitution Acts; the first in 1846, which was unsuccessful and was subsequently suspended; the second in 1852, which presented the framework by which a ruling government was formed.

The 1852 Constitution Act did not address issues of uncertainty for the responsibility of Māori affairs. The post of Governor held the responsibility for representing the British Parliament as well as for directing New Zealand’s Māori policies. However, the country’s General Assembly held the power to make laws regarding the sale of Māori land. The resulting relationship between the British Crown, the Governor and the General Assembly was unclear (Wilson, 2003). The first Parliament was formed in 1854 without these issues having been addressed. On-going uncertainty led to a prolonged struggle between the Ministers and the Governor over the control and conduct of Māori affairs (Waitangi Tribunal, 2008b; Wilson, 2003).

Aside from developing the European governance structure of New Zealand, the Constitution Act 1852 envisaged that the laws and customs of Māori would be preserved in their own districts exempting them from the laws of settled parts of New Zealand. In particular, section 71 of the Act allowed for ‘Native Districts’ to be declared allowing for Māori self-governance. The power to declare such areas was reserved to the Governor, and the General Assembly would have no role or authority over such districts.

Governor Gore Browne and Governor Grey were authorised by the Colonial Government to declare self-governing Native Districts but both failed to do so.

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10 To avoid potential confusion it must be noted that Governor Grey held the title of Governor twice first in November 1845 to December 1853. Governor Gore Browne succeeded Grey and held the role until October 1861 when he was recalled by the British Government. Governor Grey then assumed office for the second time until February 1868.
(Young, 2005). In particular, Governor Gore Browne took the limited view that the Act would only apply to the pre-existing customary law of Māori and would not encompass the enactment of new laws. The General Assembly also raised concerns about the allocation of costs for the governance of Māori Districts. Accordingly, Māori Districts were never implemented (Waitangi Tribunal, 2008b).

3.9.2 Option 2 - The 1858 Rūnanga Acts:

Māori autonomy, as guaranteed by the Treaty of Waitangi, remained an issue for the controlling authority of New Zealand. In 1858, the General Assembly passed the Native District Regulations and Native Circuit Courts Acts. This legislation allowed for tribal councils (rūnanga) to operate in partnership with British officials. Furthermore, the rūnanga would be able to apply bylaws to both settlers and Māori within the yet to be instigated Māori Districts. This legislation was not adequately supported and was shelved. It later became the basis for Grey’s New Institutions (Option 5) in 1861. The result was an impasse and Māori rūnanga in the Central North Island continued to operate without State sanction (Waitangi Tribunal, 2008b).

3.9.3 Option 3 – Māori Parliament:

The Constitution Act 1852 effectively excluded Māori from the institutions of the General Assembly because it allowed Māori to maintain authority in their own districts. However, Native Districts were not declared and therefore Māori were neither represented in the General Assembly nor through their own rūnanga. Likewise, the authority of the Assembly over Māori tribal land was questionable. Meanwhile Māori directed their political energy into their own tribal or pan-tribal organisations to advance their entitlement to self-governance (Wilson, 2003).

Māori leaders noted that the British people were united and devoted to their Queen. It was a perception among Māori that it was such loyalty that made the settlers powerful. Māori therefore believed if they achieved pan-tribal cohesion under a King
they would retain their land and traditional authority (King, 2003; Potton, 1987; Riseborough & Hutton, 1997; Te Herekiekie Grace, 1959; Wilson, 2003).

With the objectives of land retention and autonomy, the case study areas’ leaders joined together with many other tribes and collectively agreed that Waikato chief Te Wherowhero (who later took the name Pōtatau) would accept the title of King. It was the belief of the King Movement (Kīngitanga) that the Māori King would have equal standing beside the Queen of England. The view of settlers, however, was that this was an expression of disloyalty to the British Crown (King, 2003). The debate on the best way forward continued and tensions between Crown and the Kīngitanga grew.

In 1860, Governor Gore Browne assembled a number of Māori chiefs in a gathering known as the Kohimarama Conference. Attended by 200 rangatira (Wilson, 2003) and lasting over a month (Kawharu, 1992), the Conference set a precedent for a Māori independent council to work in conjunction with the settler Assembly. Notably, the Government declined to invite the followers of the Kīngitanga (Waitangi Tribunal, 2008b).

Based on the Kohimarama Conference precedent, the General Assembly proposed a Native Council Act 1860 which would allow for co-operation between the parties regarding Māori policy. Māori self-governance was very nearly achieved in legislation. The infrequent nature of communications between Auckland and London is considered the main reason why this policy did not become enacted (Waitangi Tribunal, 2008b).

During this period of correspondence, Governor Grey succeeded Gore Browne and rejected the Native Council Act 1860 citing that he would not have two governments in New Zealand. Furthermore, he refused to reconvene the Kohimarama Conference as Gore Browne had planned. Grey’s position was that Māori should operate local self-government and that the Crown should operate a national Parliament to legislate for both parties.

*In any event, the experiment was not tried, and the most promising opportunity for a Māori parliament in the history of this country, endorsed by Māori and by the settler Parliament of the time, was deliberately rejected on very inadequate grounds.* (Waitangi Tribunal, 2008b p. 232)
3.9.4 Option 4 - Self-governing authority:

Despite Governor Grey’s stance, attempts to integrate the differing political regimes of Māori and the Crown continued. In 1862, Grey received instructions from the Colonial Office to recognise the Kīngitanga as the self-governing authority in the native province of Waikato. The Kīngitanga would have the authority to make local laws that would require the assent of both the Māori King and the Governor. For a time, it seemed only a matter of negotiating an agreement (Waitangi Tribunal, 2008b). Yet the relationship between the Governor and the Kīngitanga was strained. Grey met with the Kīngitanga in 1863 and told the hui (meeting) he would not support the self-governing authority and that instead he would destabilise the Kīngitanga “…till it fell” (Waitangi Tribunal, 2008b p. 234). The relationship between the parties further deteriorated.

The relevance of this failure to the case studies areas arises from two aspects. First, if the Waikato native province had indeed been instigated, the Government would have set the precedent for a Māori principal chief to lead alongside the Governor and, if implemented, was likely to lead to self-governing districts in the case study regions. Second, it was the failure to implement this partnership, alongside rising tensions over land, that later resulted in the outbreak of war which lead to the assertion of British authority over the entire central North Island region.

3.9.5 Option 5 – Grey’s New Institutions:

We turn now to the final model considered in an attempt to enable co-operative leadership between settlers and Māori. It was this option which Governor Grey instigated and the settler Assembly did agree to trial in 1861, in preference to those outlined above. Grey’s plan was to divide the Māori regions of the North Island into 20 districts, each with a district rūnanga chaired by a civil commissioner. Resident magistrates and circuit courts would complete the institutions based on the 1858 model. Notably, the institutions would be able to make bylaws and approve land transactions jointly with the Governor (Waitangi Tribunal, 2008b).
Māori would be able to lease their land after district rūnanga had decided the titles and the terms of the leases would be determined by the rūnanga. In essence, Māori land would be subjected to a tribal authority as opposed to individual title. The system was complex and not without flaws but it was adopted by many Māori, typically those outside the Kīngitanga authority. The supporters of the King Movement, the so-called ‘rebel tribes’, refused to engage in the New Institutions. This united stance particularly frustrated Governor Grey (Riseborough & Hutton, 1997). Unfortunately the New Institutions were barely set up before war intervened.

In 1863, the Crown, frustrated by its inability to destabilise the supporters of the Māori King, instead declared war on the Waikato tribes of the Kīngitanga. The tribal leaders in the case study areas were compelled to support the King. With the imminent onset of war, the New Institutions were abandoned along with all possibility of Māori self-governance for the foreseeable future.

3.10 Māori land legislation 1862-1873:

Despite the outbreak of war in the central North Island, more and more immigrants made their way to New Zealand and the General Assembly turned its attention to the increased demand for land. It was believed that if land was to pass peacefully from the hands of Māori into the rapidly increasing settler population, a tribunal would need to be formed (Smith, 1942). Over an 11-year period between 1862 and 1873 native land legislation brought about the introduction of a new tenure system, providing for the determination of Māori titles and the issue of certificate of titles to those tribes, communities, or individuals whom the court found to be owners. The legislation fundamentally transformed the way in which authority over Māori land and resources was exercised. No fewer than four major Acts were passed during this period.

3.10.1 The Native Lands Act 1862:

The Native Lands Act 1862 provided for the establishment of a land title system on Māori customary land and is described Young (2005, p. 248) by as a “turning point”
in New Zealand history. Land had to be converted into a property right that was recognisable in the English legal system. The Act also allowed the persons named on the title to dispose of their interest by sale, lease or exchange for other lands (Campbell, 1998). Customary land tenure had been dynamic and based on various “take” (in particular ahi kaa). The Court found it necessary to define a time at which it was assumed native customary title had been settled. That time was arbitrarily decided to be 1840 at the signing of the Treaty of Waitangi. The so called ‘1840-rule’ established that those who were in occupation of their ancestral lands in 1840 were awarded rights in the Native Land Court (Riseborough & Hutton, 1997).

Despite its detail, the 1862 Act was not used extensively and it was not applied at all in the central North Island region. It paved the way nevertheless for a major new policy, the Native Lands Act 1865.

3.10.2 The Native Lands Acts of 1865, 1866 & 1867:

Tenure conversion from tribal land to land available for private sale was a crucial objective of the 1865 Act. The process would involve three steps; first a Native Land Court would investigate the title; then a certificate of title would be issued; and finally the owners would apply to the Governor, who might then grant them freehold title. Māori owners could now sell the land, lease it, retain it or try to borrow money against it (Boast, 2009).

The process for determining ownership through the Native Land Court also changed under the 1865 Act. While the previous Native Lands Act of 1862 allowed for local juries and Māori judges to resolve title issues, the 1865 Act instead opted for a more English-influenced court system. The Native Land Court thus became a formal court of record, with salaried specialist judges who were assisted by Māori assessors (Boast, 2009).

In the interpretation of the 1865 Act, the Native Land Court restricted the issue of certificates of title for areas less than 5,000 acres to 10 owners, thus giving the named owners the legal possession of the land. The Court also declared that shares in the
land should be inherited by all surviving children, regardless of their place of residence\textsuperscript{11} (Riseborough & Hutton, 1997).

The negative consequences of the 1865 Act were soon evident, as the interests of many Māori owners were not represented in the sale of land. Within a year the General Assembly amended the Act with the 1866 Native Lands Act to repeal the former and again reinforce the Governor’s power to restrict the sale or leases of native land.

In 1867, Parliament passed a new Native Lands Act which attempted to ensure the owners named on the title were viewed as trustees rather than absolute owners (Waitangi Tribunal, 2008b). It again limited the issue of tribal title to 10 owners for smaller blocks (< 5,000 acres) but insisted the names of all Māori owners be recorded on the back of the certificate. For larger land blocks, the Court held discretion. If the owners wished to limit the title to 10 names the certificate of title would reflect this. If they did not consent to 10 owners, the Court would register every person with an interest in the land and the details of that interest.

Despite the intention of the 1867 legislation, the 10 named owners were still able to act without reference to the other block owners. Furthermore, the Act allowed mortgages against Māori land that any ‘male adult’ could authorise. Certainly, such measures accelerated tenure changes and undermined the Māori system of communal ownership (Boast, 2009; Riseborough & Hutton, 1997; Wilson, 2003). As a result of pressure from both Māori and concerned settlers, a commission of enquiry was established by Native Minister Donald McLean in 1873, and the main report recommended a number of changes to the Act.

\textsuperscript{11} This process was very different to Māori custom whereby land would pass to the descendants of the owners but only to those who retained their basic ties with the land and in most cases resided on the land (ahi kaa).
3.10.3 The Native Lands Act 1873:

In 1873, McLean oversaw the enactment of a new Native Lands Act. The fifth Act abolished the 10 owner rule, and required that all members of the hapū be recorded on a memorial accompanying the Native Land Court’s declaration of title (Māori Land Court, 2002). In effect, title was created that was neither customary nor freehold. Although the land remained communally owned, those whose names were on the title now held individual shares in the land and could make decisions over its sale, lease or retention (Waitangi Tribunal, 2008c).

The requirement for the memorial of titles to include all names created a new problem. The Native Land Court system required equal succession to all children which created a problematic historical legacy. With all named owners (resident or absentee) succeeding equally to all their children (resident or absentee) the system soon created uneconomic shares in land through increased fragmentation. Eventually this system of title and succession would be applied to all customary land. This resulted in the contemporary situation where blocks of Māori land have thousands of owners making economic transactions difficult (Campbell, 1998; Waitangi Tribunal, 2008c).

3.11 The Compensation Court and Rating Acts:

The saga of the administration of customary lands continued. The 1873 Native Lands Act went through at least five amendments over the following 10 years and, in 1888, a new Native Lands Act was introduced, with further legislation, including major reform, following in 1909. The Native Lands Acts successfully enabled the sale of lands where there were at least some Māori owners willing to sell. In other regions, such as those of the Kīngitanga, owners acted collectively and resisted sales. In these regions other Crown initiatives were required.

The New Zealand Settlements Act 1863 and the Confiscated Lands Act 1867 authorised the confiscation of land of those tribes were deemed to have been in rebellion against the Queen of England’s authority. For the tribes who resisted sale,
to the point of being viewed as rebellious, land was lost through the activities of the Compensation Court. Land was confiscated then reallocated to the Crown, ‘loyal Māori’ and ‘surrendered rebels’. In each case, confiscation extinguished native title (Campbell, 1998).

In 1876, a Rating Act was introduced and created rating districts, district valuation rolls and rating assessments (Bennion, 1997). The Act included rating exemptions for land which remained in native title. In practice, however, there was controversy regarding the interpretation of the Act and its exemptions. As early as 1882, Māori were alleging that county councils were actually charging rates on sections of their lands based on the local authority’s interpretation of the legality of such exemptions. The Crown promised clarity but it was slow in forthcoming (Bennion, 1997).

By 1904, legislation dealing specifically with the rating of Māori land was introduced and widely debated. The second leader of the Kīngitanga, Māori King Te Wherohero Tawhiao, among other Māori leaders, petitioned the Act be repealed. Instead the final Act cast a wide net over Māori lands which were now generally liable to full or discounted rates depending on their status of title. There were, however, some exemptions such as land that had never had European title (papatupu). Even in the major Māori land reform of the Native Land Act 1909, rating provisions remained essentially the same (Bennion, 1997). The First World War brought fresh demands that rating on Māori lands be tightened and the native Land Rating Act of 1924 proposed that the Native Land Court would have the power to decide which Māori owners should be paying and the amount. It went on to provide for rate recovery by sale of land.

Bennion (1997, p. 49) describes that the use of a local council’s power to seize and sell land was “…rarely used”; however the author goes on to note that such actions did occur. In relation to the regions being examined in this thesis, Bennion describes the King Country county council as being “…loud in their demand for rates” (1997, p. 53), adding to the belief in the case study areas that land would be lost if rates remained unpaid.
3.12 Māori land: 20th century New Zealand

After a near century of Māori land administration, land sales and ownership stabilised in 1935 and would remain largely unchanged for the next half-century (Waitangi Tribunal, 2008c). Land that had never been alienated from Māori ownership and was owned equally by those who were genealogically linked to the land, represented only 6.8% of the national land area (McAlloon, 2009).

Following the numerous Native Lands Acts, the term ‘Māori land’ referred to a particular status of land which now differs from land of other tenure in New Zealand (Carswell et al., 2004; Insley & Meade, 2007; Reid, 2005; Stephenson, 2002). In many cases the controlling legislation had a negative outcome for Māori in terms of their ability to develop their lands, and additionally much of the remaining Māori land was on less fertile and/or steeper terrain. (Carswell, et al., 2004; Gorman, 2003; Insley & Meade, 2007; New Zealand Institute of Economic Research (Inc.), 2003; Reid, 2005; Te Puni Kokiri, 1994).

The threat of land loss in lieu of unpaid rates remained over tribal leaders. The Māori Purposes Act 1950 provided local authorities further impetus to collect rates. It allowed the Land Court to appoint a Māori trustee to effect alienation (by lease) for situations where land was not being occupied, and/or cleared of noxious weeds, and/or had unpaid rates charged against the land.

3.13 Afforestation on Māori land:

In 1960’s New Zealand, the prevailing view was that Māori land was idle or non-producing (Foran, 2001a). Furthermore, Māori were faced with costs associated with land ownership such as rates owed to territorial authorities. The government saw a win-win to resolve this situation by obtaining land for exotic afforestation through engaging with Māori landowners and entering into lease arrangements. The New Zealand Forest Service would establish and manage forests on Māori land, and the profits would be shared between the government and the land owners.
Afforestation through leases certainly had merit on both sides. The government required land to meet its planting targets, and some Māori were unable to service the costs associated with their land. Leasing, however, had limitations, the most important being that the land would be alienated to the lessor for the term of the lease. Furthermore, there was little information available in the 1960s for either parties as to fair market rents or forestry land values.

In 1967, the Tarawera Forest Act set a precedent for afforestation arrangements whereby some 15,000 hectares of Māori land in 55 titles was legally joined together with 7,500 hectares of Crown land and 7,800 hectares of privately owned land, to be transferred to a new company – Tarawera Forests Limited (Gorman, 2003). Following this precedent tree planting on Māori lands began in earnest in the late 1960s and 1970s.

Most of these afforestation arrangements took the form of leases. The structure of these forestry leases varied but almost all were long-term in nature; usually between 70 and 99 years (Foran, 2001a). The arrangements for sharing costs and revenues were typically:

- an annual rental based on a percentage of the unimproved value of the land, or;
- a stumpage share arrangement whereby any rent was deferred until the time of harvest and then profits shared by an agreed percentage, or;
- a mixture of rental and stumpage.

The implementation of these afforestation leases changed the process by which decisions were made over the affected lands. The new governance situation would prove to be highly complex, as multiple actors attempted to manage multiple values in partnership. To date, approximately 147,000 hectares of planted forest have been established on Māori land under a variety of lease arrangements amounting to approximately 12% of New Zealand’s exotic forest estate (Foran, 2001a). This situation applies to the two case studies presented in this thesis.
3.14 Concluding comments:

Māori hold a diverse variety of values, views and political positions, however Māori share a cultural heritage, world view and history that predates colonisation. The concept of whakapapa as supported by kaitiakitanga creates the responsibility to act collectively and care for all creations as kin, in particular land must be managed sustainably and its wellbeing preserved for future generations.

Following the Treaty of Waitangi, conditions of traditional land tenure and governance were altered for Māori. Initially there were potentially three possible tiers for which to incorporate Māori autonomy into the colonial state. First, at the local level (Māori Districts, rūnanga, New Institutions), second at the provincial level (Kīngitanga) and finally by the acceptance of Māori leaders into the top tier of government (Kohimarama). Yet none of these initiatives were implemented. The result was a number of formal government policies and laws applied to Māori land creating a particular status of land tenure and associated restrictions.

Continued tensions over a lack of autonomy and land losses caused Māori to band together in their own social structures. Many non-Māori saw the development of such organisations, in particular the Kīngitanga, as a threat to the Crown and this, alongside frustrations on both sides over land administration, led to the outbreak of civil war in the central North Island. Following this and other land wars, the New Zealand government declared its authority over Native Districts and lands previously governed by Māori tribes were now subject to state administration.

The subsequent adoption of a raft of Land Laws and the application of the Native Land Court were a significant departure from the traditional ways of Māori land management. The application of title and succession had negative outcomes for the majority of Māori. The resulting loss of autonomy and the departure from traditional styles of management would have far reaching impacts on the decisions of Māori in the case study regions.

By the 1960s, the land that remained in Māori ownership was generally considered by non-Māori as undeveloped rural waste land. The political pressure to pay rates and
develop their land led some Māori collectives to sanction afforestation leases. In doing so they relinquished their autonomy over the land for generations. It is within this cultural, institutional and legal context that the case studies in this thesis are situated.
4 Forest sector management issues and stakeholder identification

4.1 Introduction:

As the necessary historical background has been presented, this chapter now turns to discuss the present-day management context in which this research was proposed, the evolution of the research topic, and the circumstances under which the case studies were chosen.

This study, aimed at investigating social values and expectations of planted forests, proved to be a popular and timely topic for both forest managers and land owners. To understand the sector’s interest it is necessary to explore the management and regulatory framework of this time and to reflect on some of the influential events that occurred between the inception of the project and the selection of the case studies, namely: central government intervention regarding forest regulatory frameworks, forest land use restrictions and forest ownership changes.
Such key events, coupled with the researcher’s background, influenced the premises and evolution of this thesis topic. This chapter will give context to the scene into which this research was proposed, and complete the background narrative into which the research framework can be introduced.

4.2 The New Zealand forestry sector: present-day ownership

Today, New Zealand’s native forests are mostly retired from timber production and almost all timber trade is reliant on commodities from planted forests. The planted forest industry remains of vital importance to New Zealand. Commercial planted forestry is New Zealand’s third largest export earner and contributes 2.8% to GDP. New Zealand has 1,761,291 hectares of planted forest of which 1,568,000 hectares are *Pinus radiata* (Forest Owners Association, 2010).

The New Zealand Forest Service was disbanded in October 1987 and, following a complex and controversial decision to sell government assets, New Zealand’s state forests were privatised (Birchfield & Grant, 1993). The government now owns only 2% of the country’s planted forests. Privately owned companies account for 88% of the net stocked planted area with this figure including Māori Trusts and Incorporations. A further 2% of forests are managed by the Crown but on Māori land, and the remaining 8% of the land area includes other entities such as local government and public companies (Forest Owners Association, 2010).

Māori interests in planted forestry are significant, both as commercial owners and also in relation to the land that forests are planted on. Furthermore, areas of forested land are subject to tribal claims to seek redress from historical land alienation. In particular, the Central North Island Iwi Collective treaty settlement comprising Kaingaroa Forest as discussed in Section 4.7. Subsequently, Māori ownership of forested land is predicted to reach 40% of the nation’s planted forest estate by 2017 (Miller, et al., 2007).
4.3 The New Zealand forestry sector: present-day management goals

In contemporary New Zealand, forest managers are expected to produce a diversified range of products and services including employment, public access, ecological services, habitat for endangered species and picturesque vistas. Yet demands for pulp, paper, lumber, and other forest-based commodities remain strong, creating a challenge for managers trained in forest science principles to deliver these multiple functions.

For New Zealand’s planted forests, silviculture and sustained yield harvest continue to form the basis of all forest science practices. However, the effective application of both silviculture and sustained yield harvest is dependent on the ability of a forester to predict future outcomes – such as tree growth, timber demand, forest value and forest health, fire and market risk. An issue that is particular to forest management is that most of the management decisions are made early in the tree’s 25-30 year life-cycle. In New Zealand such decisions include: which species or species genetics are suited to the site, the economic impact of any silviculture, which environmental outcome is desirable or undesirable, and which forest products (and other outcomes) will be valued by future generations.

The first three decisions are well researched in New Zealand. Modelling the effect of silviculture on growth and economic outcomes has been commonplace since exotic plantings were first trialled. In recent years, foresters in New Zealand have begun to use ecological forecasting that attempts to model the impact of silviculture and harvest on forest ecological services. Despite advances being made in these areas, all predictions are made on an assumption that it is known what will be valuable at the end of the forest’s life-cycle. Which forest outcomes and product(s) have value is strongly influenced by social perceptions, values and expectations, a subject of emerging research in forestry.

Salmon (2003) revealingly lists the major contemporary issues affecting the New Zealand forest sector as: corporate social responsibility, protection of natural forests, tackling climate change, product certification and, increasingly, the recognition and accommodation of indigenous people’s aspirations. However in New Zealand, trees
of a harvestable age today were being manipulated through silviculture from 25-30 years ago when issues such as carbon accumulation or landscape values were unanticipated, and timber yield was all important. Likewise, forests are being planted or replanted are managed today based on a limited understanding of what might be valued in the future. Furthermore in the case of this research, a further disjunction occurs because forests are planted on tribal land but managed by third parties for the benefit of both the forestry company and the indigenous land owners. Moreover, the inter-generational nature of the leases means there will be a growing number of stakeholders, some yet to be born.

Given the timelines involved, as well as the uncertainty and complexity associated with values, maintaining flexibility in a forest system is essential. New Zealand’s single-species planted forests, managed with early silviculture and clearfell rotations, are not apparent as flexible forest systems. Forest structure is determined early in the rotation and, once established, is inherently costly to change. There is one species, typically planted in one age class and, despite minor silvicultural changes such as pruning and thinning, that is the way the forest will remain for the next 25-30 years. The implications of such an apparently rigid management regime for the perceived needs and wishes of current and future generations of stakeholders are unknown.

4.4 Significant forest sector issues:

In developing this research topic in 2008-2009, there were a number of influential forestry-specific issues regarding land use regulation and land use change:

1. The rate of afforestation peaked in the mid-1990s at 95,000 hectares per annum, re-igniting planning debates about the location and intensity of such plantings. This resulted in numerous rules and regulations related to planted forest operations which, some 10 years later, led to unprecedented uncertainty within the forest sector and eventually to central government intervention.

2. The implementation of the New Zealand Government’s 2005 Kyoto commitments and 2008 Emissions Trading Scheme renewed tensions regarding land use autonomy and land use change.
3. The landmark 2008 settlement of the Central North Island Iwi Collective grievances resulted in 176,000 hectares of planted Crown forest being transferred to Māori control.

These together created a fluid management situation for New Zealand forestry in which societal, local government, stakeholder and Māori values, expectations of and engagement with forestry are in flux, and how forestry is socially valued is under question. The following sections discuss each in turn.

4.5 Planted forest regulation:

In 2011, the Food and Agriculture Organization described regulatory frameworks as a key domain that influences the achievement of forest management objectives. They define regulatory frameworks as:

“…formal arrangements that define how and for what purpose(s) forests are used and who is mandated by law to carry out particular functions. They include legislation, policy, rules and regulations for applying legislation, and operational guidelines from implementations”. (Food and Agriculture Organization of the United Nations, 2011, p. 13)

The relationship between land use change, social perceptions, values and expectations of forestry and resulting regulation is expanded below because it formed the initial rationale for the research topic.

4.5.1 Land use change and social values about forestry in New Zealand:

Planted forests have been a common feature in New Zealand’s rural landscape over the last century due to planting phases or ‘booms’ particularly in the late 1920s to early 1930s and the late 1960s right through to the 1980s. The first chapter of this thesis documented a history of forest change and social land use values up until the 1960s. A useful history of the New Zealand Forest Service policies and societies’ land use attitudes from the 1960s to the 1980s can be found in Le Heron and Roche (1985). However, as illustrated in Figure 3, it was the relatively short-lived planting
boom of the mid-1990s that was the most extensive in terms of area planted and thus landscape change.

Figure 3 – Forest planting rates (Ministry of Agriculture and Forestry, 2010b, p. 4)

To accommodate the increase in planting rates during the mid-1990s, land was most typically converted from agriculture to planted forests. During this time, such land use change caused modifications to the social character of a number of communities (Joseph et al., 2001; Parminter et al., 2005; Statistics New Zealand, 2006; Ward et al., 1996). Such changes reinforced the popular and historically-based opinion that planted forests had a negative effect on communities in terms of employment, services, depopulation and landscape (Charnley, 2006; Fairweather et al., 2000; Landcare Research, 1997; Langer & Barnard, 2002; Park et al., 2002).

This led to a handful of projects and reports that attempted to define or address community opinions of planted forestry (Fairweather, et al., 2000; Joseph, et al., 2001; Landcare Research, 1997; Makin & Smith, 1982; Swaffield & Fairweather, 2000). Much of this work was restricted to perspectives of forestry where the stakeholder was not a forest owner and where farm conversion was either proposed or had recently occurred. In these situations the stakeholders’ concerns remain centred on their opinion of appropriate land use and desirable landscape for their given community. Generally these stakeholders remained unhappy about planted forests being established and wanted more opportunity to be involved in decisions regarding
land use. Previous research shows that perceptions of land use change are often negative especially in the case of farm conversion to planted forestry (Fairweather, et al., 2000; Joseph, et al., 2001; Makin & Smith, 1982; Parminter, et al., 2005; Swaffield & Fairweather, 2000).

It was in the 1990s that the researcher began her career in forestry, initially overseeing the establishment and tending of forests including a number of afforestation projects on farm land. The negative opinion of forestry was evident in the communities I worked in and over the following years the number of rules relating to forest operations increased as regulatory authorities attempted to mitigate social concerns, particularly in the case of land conversion. Despite a number of years passing since this short-lived planting boom, local government regulation for forestry has increased in detail and context.

4.5.2 Local government regulation and stakeholder perceptions of forestry:

In New Zealand, the day to day operations of planted forests are regulated local government and documented in local regional or territorial district authority plans, which are developed in consultation with the community as a requirement under the Resource Management Act (RMA) 1991.

New Zealand has 16 regional councils, including four unitary authorities, and 73 district and city councils each with their own set of rules for planted forest activities. Planted forests over 1,000 hectares in size occur in 60 of these districts (Ministry for the Environment, 2010). The rules for forest operations across New Zealand are varied by district and location, with a continuum from ‘non-complying’ to ‘permitted activity’ status. The Ministry for the Environment (2010, p. 25) states that “the nature of the RMA means that decision-making is made closest to the community of interest”. That is, if the effects of an activity are felt locally, then it is appropriate that the rules about that activity are subject to local community consultation. This devolved decision-making process inevitably generates different rules in different locations and is influenced by the views of the stakeholders involved.
A survey of local government plans related to forestry was commissioned by central government and undertaken by Brown and Pemberton (2010a, 2010b). The reports showed that planted forests were governed by inconsistent and overlapping regulations. A further study undertaken by the Ministry for the Environment (in press) suggests the threshold by which a forestry operation is classified as ‘permitted’ in regional plans varies considerably between councils and regions. Likewise, McSweeney (2007) presented similar findings for a review of 15 district plans. By way of comparison Brown and Pemberton (2009, p. 18) undertook a similar study on the controls of pastoral agriculture in 21 district plans and consistently found “…a very low level of control” over such activities.

Strong negative stakeholder perceptions of the forest sector and the inconsistency of regulation inevitably gave rise to disputes and challenges, some of which are ongoing. The specific costs to the forest owner of such disputes vary but current examples have been in the magnitude of $10,000-$20,000 with one recent case costing over a million (Ministry for the Environment, 2010). Such costs do not include the potential delays, reduced flexibility, lost opportunity for the forest owner or costs to the local council or stakeholder (Irvine et al., 2010).

A central government review of the planted forest sector showed that such issues regarding the inconsistency of regulation pose a considerable threat to forestry investment (Ministry of Agriculture and Forestry, 2009a). Furthermore, forest planting rates had been steadily declining since the late 1990s (Ministry of Agriculture and Forestry, 2009b) causing concern at a national level particularly with respect to carbon sequestration.

The Ministry for the Environment (2010) summarised the issue of regulatory inconsistency as causing:

- Costly and time-consuming re-litigation of the same issues across the country.
- Inconsistent treatment of forestry operations both regionally and when compared to other land uses.
- Operational inefficiencies and investment uncertainty for the planted forest sector.
The Ministry has responded by investigating a range of policy instruments with the intention of providing:

... a more consistent and appropriate plantation forestry management framework, while facilitating the sustainable management of natural and physical resources. (Ministry for the Environment, 2010, p. vii)

Subsequently, the Ministry for the Environment proposed a National Environmental Standard (NES) to standardise rules regarding forestry. This process would introduce consistency to most aspect of the forest operation cycle. The development of a NES is on-going and involves the consideration and incorporation of a number of stakeholders. Yet, such a process is being undertaken in the absence of significant research into stakeholder experiences, values and perceptions.

4.5.3 The influence of uncertain regulation on the thesis proposal:

As the first chapter of this thesis outlined, a wide variety of stakeholders have considerable influence over forest management. Particularly since the implementation of the RMA 1991 and the influence of external forest certification¹², New Zealand foresters are required to incorporate the perspectives of stakeholders in ways that were not anticipated when the trees were first planted. The resulting forest management techniques are reactive and potentially costly.

The forest sector acknowledges risk in its investment due to unsupportive societal values but has few tools to assist it in ascertaining the nature of this risk. In particular, relevant questions remain such as: will a forest owner be able to harvest their trees¹³ and under what rules and conditions; will their competitors be subject to the same rules and conditions if they operate in a different location; and will the rules and conditions be based on potential environmental effects or community opinion or both?

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¹² Approximately 55% of New Zealand planted forest owners hold external independent environmental certification for their forest management operations.

¹³ The RMA has provisions for ‘existing-use rights’, i.e. the intent being that if a land use was in place in 1991 it could continue. However, these rights are legally unclear in forestry, as territorial authorities can prohibit essential forest activities such as roading.
It was in this context that the researcher first proposed a study to investigate how people value and perceive planted forests; in particular to investigate how stakeholders perceive the benefits and constraints of planted forests. At its inception the primary aim of the enquiry was to examine if opinions can be grouped or articulated in such a way that would provide guidance to forest managers and reduce the risk of investment.

It was originally envisaged that this research would focus on stakeholders who were not involved in forest ownership. Yet a formative piece of central government legislation regarding climate change, the Climate Change Response Act (CCRA) 2002, was amended in 2008 which effectively restricted the right of owners to deforest their land, thus decreasing flexibility and again increasing the overall risk of being involved in forestry. This legislation is described below as it had significant impact on the research topic. Land use restrictions – potentially resulting in planted forests in perpetuity – demarcated another interesting and under-researched group of stakeholders, those with existing forests on their land.

4.6 The implementation of climate change legislation:

Like 183 other parties, New Zealand signed the Kyoto Protocol which entered into force on 16 February 2005. New Zealand committed to reducing greenhouse gas emissions to the level they were in 1990, or mitigating excess emissions. New Zealand’s planted forest estate forms a major carbon reservoir thus supporting the country’s sequestration obligations at least until it is harvested (Ministry of Agriculture and Forestry, 2010a). A New Zealand Emissions Trading Scheme (ETS) was enacted by the 2008 amendment of the CCRA, however the details as to how it would affect forest owners remained unclear for some time.

Owing to forests’ significant capacity to store carbon, the government positioned planted forestry as the first sector to enter the ETS at the beginning of 2008. Forests were divided by legislation into pre-1990 and post-1989 forests based on their year of establishment. Owners of pre-1990 forests are compulsorily included in the ETS with the obligation to replant after harvest. If replanting does not take place, the land
owner incurs a liability (commonly referred to as a deforestation tax) for the decrease in carbon sequestration\textsuperscript{14}. If the owner of a pre-1990 forest decides to change their land use, carbon units must be purchased by the land owner at market value. In the cases where forest owner differs from land owner, deforestation can only occur if both parties agreed. To give some idea of cost, the deforestation tax for 1 hectare of central North Island forest aged 27 years old is estimated to be considerable potentially peaking at $29,320\textsuperscript{15}. Given the marginal economics of most planted forest land, the liability is considered significant enough for land owners to view deforestation as untenable, thus locking their land into planted forests.

In response to the ETS, many land owners chose to cut down their planted forest prior to the legislation taking effect. Deforestation in 2007 amounted to 19,000 hectares, some 5,000 of which was in the central North Island (see Figure 4). This level was well above the levels of deforestation in previous years (Manley, 2008). For owners of pre-1990 forests greater than 50 hectares in size, this was their last chance to remove forests from their land without significant penalty.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{area_deforested.png}
\caption{Area deforested\textsuperscript{16} in 2007 including future forecasts (Manley, 2008, p. 14)}
\end{figure}

\textsuperscript{14} Note there are some potential exemptions such as those based on forest size (e.g. forests <50 hectares can apply to be exempt).

\textsuperscript{15} Based on an estimate of New Zealand Unit carbon price post-2012 of $40 per tonne.

\textsuperscript{16} Deforestation excludes: areas harvested and replanted, or areas harvested and left to regenerate into forest species.
The effect of this legislation on land owners with pre-1990 forests on their land is of considerable importance for Māori with forest leases. The deforestation liability lies with the land owner (not the forest owner), a matter of significance to those engaged in forest leases. In the case of Māori land leased for forestry, Māori as the land owner bear the deforestation liability but have no autonomy over their land use for the duration of the lease. Furthermore, it will be costly to change land use when the lease ends, thus their lands are likely to be permanently forested. Insley and Meade (2007, p. 20) describes the impact of this legislation on Māori with pre-1990 forest as being “…disproportionately negative”\(^{17}\).

Māori, particularly those engaged in forest leases, joined together to consider the impact of the climate change legislation. During a number of hui held around the country in 2007, Māori expressed the view that they were committed to addressing climate change issues but that they were being unfairly penalised for having planted forests on their land (Ministry for the Environment, 2007). The hui raised awareness of the under-researched impact of forest regulation on the aspirations of Māori land owners.

4.7 The changing pattern of Māori forest ownership in New Zealand:

As discussed in Section 3.13, Māori land had previously been targeted for afforestation, by successful governments and private forestry companies, due to its location and the opinion that it was idle or non-productive. Therefore by the end of the successive planting booms (described in Figure 3) Māori were already considered a significant part of the forest sector (Gorman, 2003; Miller, et al., 2007), in particular as the owners of forested land. However in 2008, when the research topic was being considered, Māori representation in forest ownership increased significantly mainly due to the settlement of grievances related to the Treaty of Waitangi, as explained below.

\(^{17}\) The implication of the CCRA have been considered in negotiations of Treaty of Waitangi settlements occurring since the Kyoto Protocol was signed (i.e. the CNI Iwi Collective settlement) but not for the land owners of the case study regions.
As also discussed in Chapter 3, there are a number of instances in New Zealand’s history where the articles of the Treaty of Waitangi were not observed in practice. Such issues extended to the unlawful acquisition of land and resources. In 1975 the Waitangi Tribunal was established as the legal process by which Māori claims of Treaty of Waitangi breaches could be investigated (Belgrave et al., 2005). The Waitangi Tribunal inquiry process contributes to the resolution of Treaty claims and, in that way, to the reconciliation of outstanding issues between Māori and the Crown.

In the areas of the case studies, previous attempts by central North Island tribes to settle their Treaty of Waitangi grievances in relation to the rightful ownership of lands had failed. In 2007, iwi leaders (led by Ngāti Tūwharetoa chief, Tumu Te Heuheu Tūkino VIII) from the central North Island came together and acknowledged the only way forward was to act collectively (Central North Island Iwi Collective, 2009). The subsequent Collective – made up of eight iwi – met regularly to pursue a common goal which was the settlement of their claim to central North Island planted forest lands. The final settlement with the Crown was signed on 25 June 2008, less than a year after the Collective was formed.

The settlement involved the return of 176,000 hectares of Kaingaroa Forest with a value of $161 million. As from 1 July 2009, New Zealand’s first and largest planted forest would be returned to the iwi collective. The Collective’s vision is “to protect and promote our culture and values, by generating the income necessary for social, cultural and economic development” (Central North Island Iwi Collective, 2009, p. 17).

The importance of this to the research topic is that since the sale of Crown forests, the image held by many New Zealanders of ‘foresters’ was multi-national or corporate owners. With the central North Island settlement, forest ownership in New Zealand took a significant shift towards Māori as land owners, and with it, the representation of forest owners changed from the perception of unstable absentee owners to forest owners with an enduring relationship with the land. Furthermore, this trend of

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18 The land was effectively returned immediately and, as trees were harvested, the land would be replanted by the iwi. As the forest was replanted, both the land and trees would be owned by the Collective.
changing forest ownership is likely to increase further as future treaty grievances are settled. Seeking to understand how Māori land owners view the benefits and constraints of forests on their lands is an arena with limited research and of increasing future value to the New Zealand forest sector.

4.8 Identifying a stakeholder group to research:

The author’s initial enquiries also focused on the issue of seeking out forestry stakeholders or, more specifically, on defining what a ‘stakeholder’ is. The Forest Stewardship Council (FSC) is an independent, not-for-profit, non-governmental organisation established to promote responsible forest management via a set of robust principles and criteria. FSC defines ‘stakeholder’ as meaning “any individual or group whose interests are affected by the way in which a forest is managed” (2009, p. 13). The author acknowledges this definition may be considered unsophisticated or over-simplistic by social scientists. However, for the purposes of this thesis, the FSC definition of stakeholder has relevance. FSC’s standards are widely recognised in worldwide forest certification schemes, and are applied to over 125 million hectares of forest in 80 countries (Ministry for the Environment, 2010). In New Zealand, FSC is the most widely applied form of forest certification, with approximately 55% of the New Zealand planted forest estate maintaining FSC certification (Ministry of Agriculture and Forestry, 2009a).

Knowing how to define stakeholder does not necessarily help identify stakeholders for a particular resource. Planted forests cover 1,761,291 hectares of land in New Zealand (Forest Owners Association, 2010). For every forest there are individuals or groups of people impacted by or interested in forest operations; each with their own social, cultural and economic values and opinions. Some stakeholders are forest owners or employees, some use the forest for recreation, and some are impacted by the presence of forests in the landscape. Such stakeholder groups include farmers, small lifestyle landowners, rural communities and city dwellers, and in addition the 20,000 people directly engaged in full-time employment in forestry and first-stage processing.
The implementation of the ETS had caused considerable concern amongst some pre-1990 forest owners as land use flexibility had been constrained. From a forest owner perspective, the question of whether or not the forest should exist in a given location was now viewed in relation to the cost of the deforestation tax. The ETS incentivises the replanting of forests if penalty is to be avoided. Therefore any societal or cultural concerns regarding forest management need to be defined and if possible resolved. The paucity of research in this area results in an increased business risk. Would land owners be forced to replant a forest in spite of economic analysis or public opinion? Would they be able to harvest the forest they were obliged to plant? Furthermore, a level of uncertainty exists as to the future rules and regulation of local and central government.

The decision was therefore made to restrict the participants of this research to land owners with pre-1990 forests on their land. This was both a topic of interest to the researcher and a topic that had not been previously investigated in New Zealand.

A number of potential land owner ‘groups’ were considered. Despite previous research which suggested that it is the image of corporate-absentee owners that many stakeholders perceive to represent ‘forestry’ (Swaffield & Fairweather, 2000), the forest sector is not homogenous. It is comprised of small lifestyle owners, farm foresters, Māori land owners, joint venture partnerships, third-party investors, private forestry companies and local and central government. The Ministry of Agriculture and Forestry (2008) estimates that there are 15,123 owners of planted forest in New Zealand, of which 15,000 hold less than 1,000 hectares but in aggregate own 30% of the national planted forest estate. Some 13,000 owners have less than 40 hectares each. Each of these forest stakeholders will have their own motivations and perceptions of planted forest.

A key premise of this research is that stakeholder opinions regarding the benefits and constraints of planted forests go beyond economic factors and include social, cultural and environmental values and expectations (Hollier & Reid, 2007; Kerr et al., 2007). In several countries, including New Zealand, it has been observed that financial incentive policies designed to encourage planted forest development have not translated into significant action on the ground (Enters et al., 2003). Even when direct
financial incentives for afforestation have been provided, there have remained significant barriers for uptake such as the attitudes of land owners, uncertainty of policy and lack of information regarding management (Bayfield & Meister, 2005; Enters et al., 2004; Gerrand et al., 2002; Rhodes & Novis, 2002). Given that financial incentives do not directly correlate with increased afforestation, it was envisaged that each land owner group would have a set of motivations (or disincentives) for forest establishment. Such opinions are likely to include economic, social, cultural and environmental values that influence the land owners’ perceptions of forestry (see Figure 5).

Figure 5 - Potential land owner motivations

In the early stages of this research the following stakeholder groups were considered for case studies; small lifestyle land owners, farm-foresters, Māori land owners, forest
investors, third-party forest investors and government. Each potential stakeholder group was researched to assist in selecting a group to study. In order to assist the selection, decisions were made to identify the importance of potential economic, social, cultural and environmental drivers behind forest management decisions (see Figure 6).

These assumptions were based on personal experience and previous research such as:

- Small lifestyle land owners (Hollier & Reid, 2007; Hollier et al., 2004; Joseph, et al., 2001)
- Farm-foresters or non-industrial private forests (Deconchat et al., 2007; Gerrand, et al., 2002; Manley, 2008; Pande & Pandey, 2003; Ziegenspeck et al., 2004)
- Māori land owners (Foran, 2001a; Insley & Meade, 2007; Miller, et al., 2007; Thorp, 2003)
- Forest investors, third-party partnerships and forest industry (Manley, 2008; Parker, 2000; Poole, 1969; Roche, 1990a)
- Governments (Birchfield & Grant, 1993; Enters, et al., 2003; Poole, 1969; Roche, 1990a).

The process revealed a wide variety of potential drivers behind forest management decisions across the sector.
Figure 6 – Influences on potential land owner decisions by sector
Potentially there were a number of forest participants in New Zealand who were not absentee owners and have strong cultural and social goals as well as commercial goals, such as small lifestyle landowners, farm-foresters and Māori. However it was Māori engaged in pre-1990 forest leases that became the focus of this thesis because of the following reasons:

1. They are subject to third-party forest management over long term arrangements. In such cases it is important for the forest manager to mitigate effects on the land owners.

2. Māori owners of pre-1990 forests did not have the opportunity to opt out of the ETS\textsuperscript{19} and incur all liabilities as the land owner. Māori in this situation are likely to be forest owners in perpetuity and it is therefore necessary to define their objectives and risks.

3. Māori have a relatively defined set of stakeholders, i.e. the land owners and their descendants.

4. Collectively they are significant (and emergent) forest owners and participants in the forest sector.

5. The experiences and objectives of Māori land owners are under researched in relation to the land use of forestry.

Research could assist in understanding objectives and risks for Māori and how forest management could be adjusted to address these. This may also provide insights into mitigation potential of management for addressing values of stakeholders more generally, thus helping inform forest management and policy.

Furthermore, the context provided in the introductory chapters shows that;

1. Māori land and resources are connected to Māori people through kinship.

2. Māori land is a source of identity and its retention is vital to Māori well-being.

3. Autonomy over Māori land and its resources is highly desirable but subject to unique tenure, governance and regulatory frameworks.

4. That the forest is a source of physical and spiritual sustenance.

\textsuperscript{19} Unless they hold the land in individual title and the forest size is less than 50 hectares.
These aspects provide an opportunity to examine how forestry as a land use contributes to the resilience of the Māori owners thus creating a theoretical stream to the research which will be explored in Chapter 5.

4.9 Choosing the case study areas and contexts:

The central North Island region is New Zealand’s largest wood supply region (see Figure 7) with over 30% of the nation’s planted forest estate and over 40% of the country’s major wood processing plants (Forest Owners Association, 2010).

Figure 7 – Distribution of North Island planted forests (adapted from Ministry of Agriculture and Forestry, 2010b, p. 14)
This is also the region where the researcher had spent the majority of her career and is an area where a number of forest leases with Māori exist. It is also the location for the Central North Island Iwi Collective treaty settlement.

In order to constrain the project, the researcher decided to choose two case studies in a similar area, where planted forests were not uncommon as a land use. The reasoning was to limit differences in forest infrastructure and or physical growing environment. The central North Island region was chosen and case studies were sought.

The researcher contacted the co-ordinator of the Māori response to the ETS legislation, who agreed to culturally mentor the project. Through this relationship the researcher was offered the opportunity to present the proposed topic to a meeting of the Central North Island Iwi Collective where representatives from eight iwi were present. During the subsequent discussion the Chief Executive Officer (CEO) of Lake Taupō Forest Trust (LTFT) committed his support to the project, thus establishing Lake Taupō Forest Trust as the first case study.

The agreement of LTFT to participate in this research was significant. The forest itself is physically large (32,771 hectares), is considered high-quality in terms of resource and natural habitat (Rotarangi & Thorp, 2009), the formation of the lease was unique and includes specific cultural goals, and the relationship between the Crown and indigenous people is considered distinctive internationally (Brown et al., 2005).

The uniqueness of the LTFT lease meant that any second case study would provide a useful contrast. Lake Rotoaira Forest Trust (LRFT) is the only other large forest, with Crown partnership, in a similar forest growing region (see Figure 8). However, the forests share a common set of owners and it may not have been possible to successfully delineate between the forests in terms of views, opinions and experiences or alternatively source enough stakeholders that were not dual-owners in LTFT and LRFT.
There were, however, a number of other forest leases in the general area, with non-Crown partners. In some scenarios, the Māori land owners had been exposed to different lease partners when their partner sold the planted forest asset. Maraeroa C Incorporated (MCI) was notable in that it had been exposed to 4 different lease partners since the early 1970s. Furthermore, the management committee of the 5,549 hectare forest had recently attempted to halt such sales, both in the Māori Land Court and through the Overseas Investment Office.

The lease over Maraeroa C land was viewed as a preferred second case study because it had significant similarities to LTFT such as:

- the leases were signed approximately one generation ago,
- the regions are in a similar area for forest infrastructure (see Figure 8),
- planted forests are a common land use and well supported by infrastructure,
- the iwi involved share a similar whakapapa and post-colonial history.
Yet there are significant contrasts in their situations such as:

- their lease partners potentially have differing objectives (Crown versus private companies),
- the leases are structured differently in terms of economic, environmental and cultural objectives,
- their contrasting histories of autonomy over their land.

A meeting was arranged with the CEO of MCI and, following my presentation of the research objectives, the CEO agreed to participate in this research as was later confirmed by the MCI management committee. Thus, LTFT and MCI were selected as the relevant case studies in which to approach this research. The details as to how the research unfolded methodologically are described in Chapter 6.
4.10 Setting the Scene: concluding comments

The discussion of stakeholder experiences of planted forestry, how they are articulated, and how they can be incorporated into land use practices, is of particular relevance to forestry given the long rotation period of the crop and uncertainty of future demands for forest services. Yet such investigations are rarely undertaken, because stakeholder perceptions, values and opinions are seen as being complex, subjective and changeable. Managing forests in isolation of wider societal values has proven problematic in the past and numerous scholars agree that to better incorporate stakeholder expectations into forest management and stakeholder expectations is the central challenge facing foresters today.

In New Zealand there is a distinction between native forests and exotic forests due to the extensive planting of tree species introduced to this country by early settlers. New Zealand’s present day forest sector is almost totally reliant on planted forests. The majority of these forests are monocultural and planted with the exotic species *Pinus radiata*. Even such production exotic forests are subject to a variety of demands and considerable management challenges. The management of multiple values from a finite resource whilst anticipating future demands makes the role of forest management complex and unpredictable. Over the life-cycle of a forest, forest control and individual and collective human demands from forests will change. However, most forest management decisions and manipulation are undertaken early in the forest’s life-cycle, and in the case of New Zealand such decisions are often irreversible without significant cost. The apparent inflexibility of the forest type and regime is viewed as a challenge for forest managers wishing to anticipate societal expectations.

A number of planted forests were established on Māori tribal land which has its own set of controlling legislation. Such afforestation arrangements consists of various governance structures typically over long-term leases. Māori have a distinct set of cultural values and responsibilities, collective economic goals and a unique set of legislation pertaining to Māori land which have transformed customary land tenure. Furthermore, an important practical implication of the lease arrangements is that the tenure related to the forest land is not necessarily the same as the tenure related to the
particular trees. Another layer of complexity is applied in the form of forest regulation, a key influence on the evolution of the research topic as outlined in this chapter. The changes to and interactions of tenure, governance and regulatory frameworks have constituted the key themes in the scene-setting for this research and will continue to be referred to throughout this thesis.

What are the implications of such an apparently rigid management regime for the perceived needs and wishes of current and future generations of stakeholders? This thesis sets out to investigate this question in relation to Māori forest stakeholders, in two similar but contrasting case studies. The following chapter of this thesis reviews the literature and develops five specific research questions.
Chapter 5:

Situating this research within the relevant literature

5 Developing the research framework: a literature review

5.1 Introduction:

The previous chapters have summarised much of the literature required to set the scene for this research, with a particular emphasis on the governance, tenure and regulatory frameworks for New Zealand forest management and Māori land. In summary, the processes by which decisions are made and implemented on Māori land have changed significantly post-colonisation. In particular, the traditional rights to land through sustained occupation have been transformed through law to the current scenario of automatic succession of ownership to all named descendants.

Likewise, the variety of conditions and arrangements associated with Māori land have also changed, largely in response to threats to land loss. In the case study areas of this research, the result has been afforestation of the land through lease agreements with third-parties.
The regulation and social expectations of planted forests continues to be dynamic, leading to uncertainty within the planted forest sector over the life cycle of the forest. Further research and collaboration between disciplines is required if forests are to be managed in conjunction with social values and expectations. This thesis aims to address such concerns by examining a particularly under-researched arena and add to the understanding of the management priorities of Māori who have planted forests on their ancestral lands.

With the necessary background in place, this chapter, presented in two parts, will critically review the literature in relation to the theoretical and methodological approach to the research. The first part will establish the literature relevant to the forest type and the second part will position this research within a resilience framework. Throughout this chapter, the research questions will be developed.

Part I - Situating the forest type:

5.2 Planted forests: what’s in a name?

Despite a number of varying definitions in the literature, planted forests are usually described as being a result of artificial forest regeneration or deliberate tree planting at differing forms and scales. They can include semi-natural forests, forms of agroforestry or intensively managed forests (Kanowski & Murray, 2008). In some regions planted forests have more than a millennium of history, in others less than a century. Powers (1999) provides a detailed history of planted forests, and notes that they can incorporate a number forest types established for multiple reasons, owned by multiple entities and managed for multiple purposes.

Today, 61 countries account for 95% of the global planted forest area of 271 million hectares, with Asian countries contributing to almost half this total (75 Mha), and Asia is predicted to have the highest absolute increase in planted forests in the near future (Carle & Holmgren, 2008). “Plantation forests” are a form of planted forests which typically are single species forests, established in compartments of even age, grown at set spacing (Kanowski & Murray, 2008).
A further type of plantation forests are “Intensively Managed Planted Forests” (IMPF) which have been further manipulated usually by silviculture to enhance productivity of industrial wood (Kanowski & Murray, 2008). Currently, timber trade in New Zealand is almost entirely reliant on IMPF forests which cover a total of 1,761,291 hectares (Forest Owners Association, 2010) and Māori hold significant interests in IMPF both as forest owners and as land owners.

5.3 Planted forests: wood productivity

Typically when discussing the three types of planted forests (planted, plantation and IMPF) the inference in the forest science literature is that high timber or fibre productivity is the key management goal. Indeed, the high productivity of planted forests is such that they contribute disproportionately to the world’s industrial wood supply. By way of illustration, the Forests Dialogue (2008) estimates that there are 25 million hectares of IMPF globally, which corresponds to approximately 0.6%20 of the global forest area (Food and Agriculture Organization of the United Nations, 2011), yet these forests contribute to around 40% of the world’s industrial wood supply (Kanowski & Murray, 2008). By way of further comparison, New Zealand’s plantation forests contribute 1.1% of the world’s forest trade with an annual harvest area equivalent to 0.0009% of global forest cover (Forest Owners Association, 2010).

Unsurprisingly therefore, the literature regarding planted forests is commonly focused on aspects of productivity gain or decline (Carle & Holmgren, 2008; Egnell, 2011; O’Hehir & Nambiar, 2010; Powers, 1999; Watt et al., 2005) and how to best measure aspects of productivity (Beets et al., 2011; Merriam et al., 1995; Zhao & Zhou, 2005). Issues of productivity have recently received renewed interest, particularly in relation to the potential for carbon accumulation.

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20 Obtaining accurate forest areas is somewhat difficult; disputes arise over mapping and categorisation and there are differences in the reporting criteria and reporting timeframes. This number is derived from a 2008 estimate of 25 Mha of IMPF (Kanowski & Murray, 2008) within the FAO’s 2010 global forest area estimate of 4,033 Mha (2011).
Despite the focus on productivity in the forest science literature, management and planted forest practices today are evolving. Some planted forests are owned by multinational corporations and extend to hundreds of thousands of hectares, while others are owned by private landowners whose plantings may extend to less than one hectare. Some planted forests produce high volumes of timber while delivering social benefits and contribute substantially to biodiversity and/or environmental services (Chen et al., 2011; Gong et al., 2010; Victor & Ausubel, 2000; Zhang & Stanturf, 2008). On the other hand, there are instances where planted forests generate environmental and social costs that outweigh their benefits (Felton et al., 2010; Lindenmayer & Hobbs, 2004).

It is not the intention of this chapter to enter into the already extensive debate on the benefits, effects or constraints of planted forests; rather the purpose is to clarify that the multiple values discussed in the first chapter of this thesis apply also to planted forests. The social values and perceptions of planted forests are not unique to the forest type; rather the argument presented in this chapter is that they arise from the interactions between landscape constraints, economic goals, the cultural and social contexts of the stakeholders, and the regional, national and international governance frameworks in which they are located.

Research into stakeholder values, perceptions and expectations and the social impacts of planted forests is subject to increasing focus internationally (Burger, 2009; Gerber, 2011; Hickey et al., 2007; Kabir & Webb, 2005; Landry & Chirwa, 2011; Scott et al., 2006; Sugimura & Howard, 2008) a trend which is slow to be mirrored in New Zealand. The previous chapters have served to situate the planted forests of this thesis in the New Zealand historical, environmental and governance context, however the social context of New Zealand planted forest management is only beginning to be explored in the literature.

5.4 Is the New Zealand planted forest really specialised?

The reader has already been presented with a history of the New Zealand planted forest sector in Chapter 1 – Part II, and the reasons for this research in the context of
the present day. This section goes on to review the literature surrounding New Zealand planted forests in order to help develop the research questions.

Dudley (2005) describes the New Zealand approach to forestry as being defined by its distinctions between commercial timber and fibre forests (exotic forests) and forests for biodiversity and social values (native forests). Others in the international literature also describe New Zealand in this way (Boyle, 1999). Such forest management specialisation is even touted by some as being so successful that is known as the “New Zealand solution” to managing multiple values (Maclaren, 2001; Zhang, 2005). Such research suggests that social and cultural values either do not exist in planted forests or do not require forest management consideration, an argument that is questioned in this thesis.

New Zealand’s forests can certainly be divided into two distinct types; native forests which are largely retired from timber production, and planted forests which produce approximately 19.5 million m$^3$ of logs each year (Forest Owners Association, 2010). However beyond timber production, there is a decreasing distinction between people’s expectations of planted forest and native forests. New Zealand’s native forests are well recognised for their recreational, scenic, environmental and historic values (Department of Conservation, 2005), yet New Zealand’s planted forests are also recognised for their recreational (Forestry Insights, 2006; Thorp, 2003), scenic (Nagashima et al., 2002), environmental (Carnus et al., 2006; Darnhofer et al., 2010; Deconchat et al., 2009) and cultural dimensions (Asher, 2003). Recent international drivers such as the Montreal Process and forest certification have added new understandings and expectations to planted forest management (Fairweather & Hock, 2004). Despite this, there is very little investigation into what New Zealanders perceive to be good forest management.

Section 4.5 provided some examples of New Zealand research regarding social opinions of land use change, but the examination of stakeholder views, experiences and perceptions of planted forestry in the literature is uncommon. Notable exceptions include Fairweather et al.’s (2003) investigation into the diverse views of New Zealand forest stakeholders, which showed participants had ecological, social and economic goals for planted forests. Fairweather and Hock (2004) went on to
investigate stakeholder priorities for forest research and their results showed an emphasis on what they described as the “non-traditional topics” of forest management such as carbon accumulation (Fairweather & Hock, 2004, p. 27). Forest values in New Zealand were investigated in a series of workshops in six regions of New Zealand to provide a comparison with the Montreal Process Criteria and Indicators (Barnard et al., 2005). The participants identified a wide range of values specific to forests, of which ‘productive capacity for timber’ was but one of ten categories (others included ‘forests as an integral part of local communities’, ‘forests as providing access to recreational pursuits’, ‘forests as landscape features’ and ‘the opportunity to be involved in managing local forests’). Moreover, they found that the values held for exotic and indigenous forests were similar. Rivas-Palmer (2008) undertook research into the perspectives of neighbours living adjacent to planted forests in the Hawke’s Bay region and found that they identified environmental and social values in relation to forest operations. The respondents had positive attitudes towards community and recreational use of planted forests (e.g. roads, a place for events and landscape) as well as valuing the employment generated by the forest. Management which potentially impacted on the stakeholders’ enjoyment of these aspects was viewed negatively.

In summary, this work reveals that planted forests can have a diverse set of social values. Yet, most of the New Zealand literature recommends the need for future investigations, particularly in respect to Māori. This thesis sets out to fill this research gap by investigating the experience of Māori land owners with pre-1990 planted forest on their ancestral land. More specifically the first question this thesis will address is: What do Māori land owners view as the benefits and constraints of the pre-1990 planted forests that exist on their ancestral land?

5.5 What is known about Māori aspirations for their land?

The second chapter of this thesis provided a history of legislation related to Māori land. The current relevant legislation is Te Ture Whenua Māori (Māori Land) Act (TTWMA) of 1993 which contains provisions for land in Māori tenure (Dewes et al., 2011; Hill, 1994).
The preamble to the Act states two main principles underpinning the TTWMA, first to promote the retention of Māori land in the hands of its Māori owners, and second to facilitate the occupation, development and utilisation of Māori land for the benefit of its owners. The TTWMA is considered to have been successful in its intention to retain land in Māori ownership but less certain in promoting efficient land utilisation (Stephenson, 2000).

In effect, the TTWMA reinforced previous provisions related to the sale of Māori land, including making it subject to Crown discretion even in cases where the land owners agree. Despite land retention being a key aspiration for Māori (Dewes, et al., 2011), the loss of the freedom to sell any Māori land can impact heavily on its use and development (Asher & Naulls, 1987). For example, the inability to sell parcels of land inhibits owners’ ability to develop other areas of tribal land or repurchase land that was previously tribally owned.

There are a number of post-TTWMA publications and reports written about Māori land development, Māori aspirations for their land, and issues inhibiting land development (Dewes, et al., 2011; Insley & Meade, 2007; Kawharu, 2002b; Mead, 2003; Munn et al., 1994; New Zealand Institute of Economic Research (Inc.), 2003; Parore, 2002; Reid, 2005; Stephenson, 2000; Te Puni Kokiri, 1994). These reinforce the main barriers related to Māori land utilisation continue to be the automatic succession of shares to all descendants, and the difficulties associated with raising capital against land belonging to multiple owners.

The most recent summary of such issues can be found in the state-commissioned Te Puni Kokiri report “Ko ngā tūmanako o ngā tāngata whai whenua Māori” (2011). This report summarises the findings of six meetings around the country with the aim of discussing the aspirations of Māori land owners, and barriers or enablers to their realisation. The report summarises the wide range of aspirations into these categories (Dewes, et al., 2011, p. 5):

1. To retain the land.
2. To utilise land as taonga tuku iho within the context of kaitiakitanga and manaakitanga.
3. To develop the land.
4. To achieve a balance between viable business and cultural connections.
5. To use the land, especially for agriculture, directly rather than through lease.
6. To achieve maximum financial return in particular to build a base for future generations
7. To diversify the use of resources for best economic potential.

The report states that across the regions and irrespective of the size of the landholding, the viewpoint that the land should be retained and utilised was uniform (Dewes et al., 2011). However the research was not specific to land use types, and the report did not provide detail of any Māori aspirations for their forested land beyond presenting contrasting opinions regarding owner satisfaction of the income generated by the forest.

5.6 What is known about Māori aspirations for forestry?

There is much scope for further research on Māori aspirations for and perceptions of forestry\(^ {21}\). Typically, New Zealand research has focussed on Māori management of indigenous resources for timber (Carswell et al., 2004; Hammond, 2001), in particular with respect to the governance and values of the lands known as SILNA\(^ {22} \) forests (Devoe, 2000; Fitzgerald, 2004; Wheen, 2008; Wilson & Memon, 2010). Fitzgerald’s (2004) work on Māori land owners’ values and forest management preferences for SILNA forests showed that the largest proportion of owners made reference to the importance of their connection with the land and its contribution to their identity.

There have been limited writings on cultural views expressed by Māori regarding their experiences of planted forests (Kawharu, 2002a; Park et al., 2002) and overviews of Māori engagement in forest leases (Gorman, 2003; Miller et al., 2007; Thorp,

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\(^{21}\) The New Zealand School of Forestry lists a number of theses, reports and dissertations that may have relevance to this area of enquiry, such as Armstrong (1997), MacKenzie (1997) and Blandford (1998). However, these reports are unpublished and though lodged in the university library have been unavailable for lending from the library since the Christchurch earthquake of February 2011.

\(^{22}\) South Island Landless Natives Act (SILNA) 1906 provided for the allocation of approx 57,000 hectares of land throughout the southern South Island, to more than 4,000 Māori owners who did not have any tribal association to the land (non-ancestral lands), to compensate for their previous land loss.
Similarly, there are only a handful of opinions expressed regarding forest leases including Coombes (2003, p. 347) who likened leases to land “confiscation under a different name”, and Nuttall’s (1981) prediction that Māori owners will be disadvantaged or profoundly impacted by the proposed forest establishment.

There is no evidence of detailed investigation into how planted forest management affects Māori aspirations for their land. The second and third research questions of this thesis aim to address this research gap by investigating:

\[
\begin{align*}
\text{What cultural values do the participants express for their land and is planted forestry compatible with such values?} \\
\text{AND Can forest management be manipulated to improve the realisation of the land owners’ aspirations?}
\end{align*}
\]

**Part II - Situating the lens of enquiry:**

5.7 **A research framework:**

When investigating a potential research framework, the researcher noted several potential methodological approaches used in previous research to quantify people’s attitudes to forest resources and forest management. A summary of such work and techniques is provided in Rivas-Palmer’s doctoral thesis on neighbouring stakeholder attitudes to New Zealand’s planted forests (2008). Many of these techniques, such as principal component factor analysis and Likert-scale ranking, seek to explain point-in-time attitudes in relation to demographics and have typically been used to snapshots of non-forest owner attitudes. However, theoretical frameworks that focus on the details of ecological or social or economic domains have been criticised for failing to explain systems in their entirety (Darnhofer, et al., 2010).

This investigation required a conceptual model that might seek to explain values, perceptions and expectations in relation to the economic, environmental goals and critical cultural dimensions relevant to indigenous communities (e.g. culturally specific local dynamics, spatial connectively, language and social relationships). Furthermore, as explained in Chapter 6, a number of historical documents were made
available to the researcher that described values, perceptions and expectations over an extended period of time. Therefore, a theoretical framework was required that could investigate aspects of ecological, cultural and economic domains over an extended period of time and over a number of scales.

As discussed in detail in the remainder of this chapter, ‘resilience thinking’ has been used and developed as a framework for discussing interdependence at multiple scales. Resilience thinking has therefore been selected in this study as the theoretical lens through which to explore participants’ perceptions of forest management and the realisation of aspirations for their land. The remainder of this chapter serves to introduce two similar constructs of resilience thinking which form the theoretical framework of this thesis.

5.8 Approaches to resilience thinking: common ground and knowledge gaps

Resilience is derived from the Latin *resalire* meaning ‘to spring back’ and the term has become common in the language of many disciplines including the physical, ecological and some social sciences. A comprehensive review of the many definitions of resilience can be found in Plodinec (2009), however there is no single commonly accepted definition of resilience or agreed limits to its application. ‘Resilience theory’, ‘resilience framework’ and ‘resilience thinking’ are terms commonly used in the literature. ‘Resilience framework’ and ‘resilience thinking’ are used in this thesis because they more appropriately imply an interdisciplinary nature as opposed to ‘resilience theory’ which suggests a defined theory in a particular discipline (Stephenson et al., 2010).

The ecological and social sciences have each developed constructs of resilience from different positions. Section 5.9 below provides background to the emergence of a resilience framework based on ecological principles referred to hereafter as ‘socio-ecological resilience’ and Section 5.10 discusses the psychological- or sociological-orientated resilience principles referred to in this research as ‘social resilience’. The sections will bring together the concepts through which the findings of the research will be interpreted.
There is clear overlap between the two bodies of scholarship as well as similar knowledge gaps (Ross et al., 2010). Both sets of resilience thinking address aspects of recovery following change and both have significantly evolved in interdisciplinary application over time, in particular since the 1970s. However, the disciplines have tended to apply resilience thinking at different scales; socio-ecological resilience is predominantly applied at the regional scale and social resilience most typically discusses attributes of resilience in individuals and, more recently, groups (Ross, et al., 2010).

Until very recently the application of these frameworks continued through socio-ecological and social resilience virtually in isolation. There are limited studies that attempt convergence between, or mutual learning across, these bodies of learning (Ross et al., 2010). Both require more theoretical development in the arena of community and culture, in particular how societies are impacted by and endure crisis (Adger, 2000; Davidson, 2010) and how resilience is relevant to indigenous communities (Rotarangi & Russell, 2009).

This study has the potential to contribute to the conceptual and operational development of both constructs of resilience at the community scale. Therefore, the results from the case studies will be critically analysed under both frameworks and in doing so may contribute to the maturation of the overall concept of cultural resilience. Cultural resilience in this research is defined to be how Māori collectives endure, adapt, transform and potentially become stronger when faced with change within the context of their relationship to their ancestral land.

5.9 The emergence of a socio-ecological resilience framework: ecological origins

5.9.1 Introduction:

This section introduces the concept of resilience as it has emerged from the ecological sciences. The contemporary application of this framework has evolved beyond ecology, and in particular is applied to social-ecological systems. The extension of resilience thinking to indigenous communities is a relatively new application of this
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framework but it appears to be fruitful, given the close links between indigenous people and environment. The following sections first provide an overview of socio-ecological resilience thinking, followed by a discussion of the key concepts of resilience and finally its extension into the domain of social systems.

5.9.2 From ecology to socio-ecological:

It is common for authors who describe the origins of socio-ecological resilience to begin by paying homage to C.S. (Buzz) Holling’s paper “Resilience and stability of ecosystems” (1973). At the time of this work, defining the static equilibrium around which an ecosystem could function was a dominant focus in applied ecology (Folke, 2006; Gunderson, 2003; Peeples et al., 2006). However, Holling presented a new concept; that the interaction between stability and the ecosystem’s ability to absorb change could lead to a number of stable states. Essentially he proposed the focus of ecological research should be less about the measurement of time needed for an ecosystem to return to its equilibrium, and more on how much disturbance the ecosystem can absorb before it shifts into an alternate stable state.

Thereafter, the notion that an ecosystem could shift from one state to another became the theoretical foundation for active adaptive ecosystem management (Folke, 2006). However, the single equilibrium view continued to dominate ecology and led to a longstanding interpretation of resilience termed ‘engineering resilience’ meaning the return time after disturbance. In other words, ecological resilience was and is still discussed in terms of recovery or resistance to ecological change (Folke, 2006).

*The formal definition of resilience is the capacity of a system to undergo change while still maintaining the same structure, functions and feedbacks, therefore identity.* (Walker et al., 2010, p. 187)

However since Holling’s influential work, researchers from diverse disciplines have developed these concepts and extended the principles beyond ecology to include social-ecological systems (Adger, 2000; Anderies et al., 2006; Berkes et al., 2003; Folke, 2006), economy-environmental systems (Maler & Li, 2010; Walker, et al., 2010) and social systems (Davidson, 2010). Furthermore, the resilience concept has
evolved over the years to attempt to explain the multiple interrelations between spatial and temporal scales (Gunderson & Holling, 2002).

These extended applications of resilience, predominantly in the socio-ecological arena, have resulted in the contemporary view that ‘resilience’ is but one aspect of a system’s capacity to endure change, with ‘adaptation’ and ‘transformation’ equally important concepts in the overall framework. As opposed to recovery or resistance to change, present-day resilience thinking is concerned with a system’s persistence in the face of change and its innovation or ability to change into more desirable states when required (Folke, 2006).

Figure 10 provides a conceptual overview of this development of resilience thinking based on Folke’s (2006) interpretation of the framework’s evolution. Several other authors also provide comprehensive summaries of the emergence, development and application of resilience thinking: such as Walker et al. (2004), Gunderson (2000) and
Jerneck (2008). This section has not replicated the detail of such reviews but draws attention to the emergence of socio-ecological resilience and its extension beyond ecology. The predominant application of this framework has been to socio-ecological systems at a regional scale, where resilience thinkers have attempted to incorporate human actions and social capital into interpreting a system’s capacity for change. The extension of resilience thinking into social systems and indigenous contexts is discussed in more detail in the Section 5.9.4. However, it is necessary to first introduce the contemporary principles of socio-ecological resilience thinking.

5.9.3 Contemporary principles of the socio-ecological resilience framework:

With these evolving concepts and various applications in mind, this section sets out to introduce four general concepts of the socio-ecological resilience framework potentially relevant to the results of the case studies:

1. Systems and scales
2. Adaptive cycles
3. Resilience, adaptation and transformation
4. Panarchy

A system is a set of interacting components, the boundaries of which are defined by the focus of inquiry. For example, a system could be ecological (e.g. forest), economic (e.g. business), social (e.g. community) or the system could be integrated across these domains. A system can range in scale from within a cell to global systems. Importantly, each system has limits to how much change it can absorb before changing its identity. The system’s limits are essentially the key focus of a resilience approach. Such limits are not fixed: systems have thresholds or tipping points beyond which significant change will occur and there can also be a cascading effect across differing thresholds. A resilience perspective helps identify or explain critical thresholds that operate across domains (social, economic, biophysical) and scales (local, regional, global or spatial and temporal).

Systems tend to persist for a time and then alter, and this leads to the notion of each system having its own adaptive cycle. The theory of an adaptive cycle was based on
the view of ecosystem succession being comprised of exploitation phases (r-strategist) and conservation phases (K-strategist). Subsequent understanding of cycles (typically from the ecological sciences) has indicated that two additional phases are needed to explain the cycles between stable and alternative states (Holling & Gunderson, 2002). Walker et al. (2004) describe a system’s adaptive cycle as consisting of four functional phases (see Figure 11):

- an exploitation phase ($r$) where resources are abundant,
- a conservation phase ($K$) which is the predominant phase of a relatively stable state,
- a release phase ($\Omega$) where change is rapid,
- a reorganization phases ($\alpha$) where the system’s stable state may be redefined.

![Figure 11 – The phases of the adaptive cycle (sourced from Walker, 2009)](image)

This adaptive cycle model is a conceptually useful way of viewing the stages in which a system exists, and anticipating potential future stages. However as recent literature acknowledges, not all stages are sequential for all systems and a number of directions or detours are possible (Abel et al., 2006; Walker et al., 2006) as described by Figure 11’s bypass or two-directional arrows. When considering resilience thinking as a theoretical framework for this research, it was envisaged that the adaptive cycle model
could be applied to time-dependent data. For example in relation to the length of the forest lease contract, it was considered that visualising the land owners’ stage in the adaptive cycle may aid strategic planning for the tribal leadership as they approach a significant change i.e. at lease end.

Resilience thinking suggests a system has three possible strategies for coping with change or disturbance; resilience, adaptation and transformation (Davidson, 2010; Walker, et al., 2004). Recalling Holling’s concept of multiple stable states, it cannot be assumed that resilience is the preferable option as both adaptation and transformation can result in desirable states.

The resilience option is where the system reorganises but retains the same identity with no notable changes in structure. Resilience places emphasis on the system’s ability to recover from a disturbance-induced change.

Alternatively, the system may adapt and shift to a different state within the same regime. A common ecological example given of adaptation is a change in the species composition of a forest following an insect attack. For a social system, Walker et al. (2006) describes adaptability as the capacity of actors to manage resilience through innovation, skills, agreement and options. Social resilience is therefore more contingent on the actions of individuals and groups in comparison to the operation of ecological systems.

On the other hand, the system could transform into an entirely new regime. A commonly cited ecological example of transformation is that a forest may turn to grassland. The outcome of transformation very much depends on a system’s preparedness to change, capacity to change and options for change. Walker et al. (2004, p. 3) describes transformability as the capacity to create a fundamentally new system when the ecological, economic or social conditions make the current system untenable. Like adaptability, Walker et al. (2004) and Anderies et al. (2006) describe learning and innovation as key ingredients for enhancing the outcomes of social transformation.
In reality however, systems do not move through one singular adaptive cycle completely buffered from other influences. Therefore, discussions about resilience, adaptability and transformability immediately confront the issue of scale. Not only are the outcomes for a system determined by the interplay of resilience, adaptability and transformability (Walker, et al., 2004) but increasing adaptability at one spatial or temporal scale might increase or decrease resilience at other scales (Walker, et al., 2006). Importantly, a system cannot be understood by focussing on one scale; the interactions between scales over time are essential.

The term *panarchy* was introduced by Gunderson and Holling (2002) to conceptualise the interactions between multiple and hierarchical adaptive cycles (see Figure 12). The concept of panarchy provides an integrative model to help understand the source and role of change in a system from differing scalar influences (Holling et al., 2002). Panarchy suggests there are multiple adaptive cycles in a system, each with their own timeframe and variables and that each cycle connects to other cycles to create cross-scale dynamics.

![Figure 12 – Panarchy (adapted from Walker, 2009)](image-url)
There are various possible connections between the levels of panarchy, but Holling et al. (2002) emphasise two in particular: revolt and remembrance. They suggest that a small and fast moving lower adaptive cycle in a release phase (Ω) can force the middle adaptive cycle to enter the same phase (revolt). The large and slow moving upper system however can prevent this change through its relative stability and connections to the focal system and thus conserve the system (remembrance).

Despite the importance of acknowledging the potential connections and influences between adaptive cycles, this concept is acknowledged as being somewhat limited. These two connections are not necessarily the only possible scenarios in a panarchy model, particularly in the case of globalisation which affects the access and timeliness of feedback loops (Armitage & Johnson, 2006). The important concept to carry forward is that the scales may interact and influence each other, and similarly that outcomes can be prevented or encouraged. The benefit of the panarchy concept is that researchers working in a resilience framework can begin to conceptualise adaptive cycle dynamics and interactions (Abel, et al., 2006).

Returning to the theoretical example of the forest lease, the resulting governance situation is influenced not only by the lease but also by economic, environmental, cultural and political factors each with their own adaptive cycles and each requires strategies for change. It was therefore anticipated that the case studies may assist in understanding the concept of panarchy, namely how resilience, adaptation and transformation are not necessarily mutually exclusive.

5.9.4 From socio-ecological to social resilience?

The extension of the resilience framework into the domain of social systems has been advanced by numerous authors (Abel, et al., 2006; Adger, 2000; Davidson, 2010; Hoffman, 2008). Resilience frameworks involving humans have unique aspects which may distinguish a social system from an ecological system. In particular, Davidson (2010) identifies aspects such as symbolic constructs and reflexivity, and includes notions of human (individual and collective) agency. Much has been written about the requirement for resilience thinkers to develop their understanding of social dynamics, in particular how groups endure crisis or respond to stress (Abel, et al.,
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2006; Adger, 2000; Anderies, et al., 2006; Davidson, 2010; Walker, et al., 2006). However despite growing research, including research into how forest dependent communities incorporate change (Genin & Simenel, 2011; Miller, 2010; Pretty, 2011; Woodman, 2010), the determinants of resilience, adaptability and transformation in social systems require further investigation.

Likewise, resilience thinking which incorporates both socio-cultural and ecological dimensions, has been advanced by numerous authors investigating the adaptive capacity of cultures (Berkes, et al., 2003; Berkes & Turner, 2006; Bingeman et al., 2004; Chapin III et al., 2010; Chapin et al., 2009; Davidson-Hunt, 2006; Hayes, 2007; Parlee & Berkes, 2006; Robinson & Berkes, 2010; Turner et al., 2003). Yet, using a resilience framework to discuss tribal perceptions and response is still relatively new and its application to a planted forest situation remains an important research gap.

A number of authors discuss the benefits and constraints of applying resilience concepts to investigate the relationship between indigenous societies, land use and response to change (Berkes, 2009; Berkes et al., 2005; Berkes, et al., 2003; Moller et al., 2009; Robson et al., 2009; Rotarangi & Russell, 2009). Rotarangi and Russell (2009) suggest that when applying resilience concepts to indigenous societies, the existence of critical cultural connections, tangible and intangible, create difficulties for compatibility with current resilience frameworks. In other words, it is suggested that, particularly in indigenous cultures, the presence of core cultural and spiritual beliefs cannot be disconnected from human action. The resulting outcomes (resilience, adaptation and transformation) become unpredictable as they are not necessarily contingent on temporal (adaptive cycle) or hierarchical (panarchy) scales. It is questioned whether current resilience thinking has the knowledge or language to incorporate and legitimise and incorporate such cultural values and structures.

The on-going development of this framework requires the testing of case studies against its capacity to help understand and develop the concepts of resilience, adaptation and transformation (Anderies, et al., 2006). In March 2009, the Resilience Alliance (a research organization which explores the dynamics of social-ecological systems) convened an inaugural meeting of resilience thinkers from the ecological
side and the social side, including indigenous peoples, with the aim to develop a pathway forward for discussing how to learn with, and from, the resilience of local social systems and, where requested, to work with people of those systems to support their responses to change. Participants (including this author) shared case studies of where a combination of social, ecological and political changes had triggered a strong response from the land and resource-connected indigenous communities.

Discussion at the meeting highlighted a somewhat predictable difference in understanding between resilience thinkers from the ecological side, the social side and/or indigenous peoples. As one of the participants at the workshop, I have subsequently reflected that such divides may be underlain by fundamental challenges to the resilience framework including the ability of resilience thinking to incorporate and legitimise cultural values and structures. The nature of this research, which investigates aspects of Māori land, planted forests and land owner perspectives, has the potential to contribute to the theoretical knowledge of this challenge by exploring whether the concepts of adaptive cycles, panarchy, resilience, adaptation and transformation can be extended to the perspectives and experiences of Māori as they have endured shocks such as colonialism, land tenure changes, shifts in governance and differing land uses. The fourth research question is therefore: can land owner experiences in each case study be explored in terms of resilience, adaptability, transformability, adaptive cycles and panarchy?

5.10 The emergence of social resilience indicators: social science origins

5.10.1 Introduction:

The previous section has described how resilience thinkers have expanded Holling’s ecological principles on multiple stable states, and applied emerging concepts to socio-ecological systems, to social dynamics and more recently to indigenous societies. Yet, resilience is neither a new nor distinct concept in the social science and psychological literature. Since at least the 1940s, authors in the social and health sciences have been investigating factors which enhance and detract from well-being and the capacity of individuals to cope with changes (Manyena, 2006; Ross, et al.,
Resilience in this framework is defined as the ability to overcome adversity (Buikstra et al., 2010).

Much of the social resilience research focus, to date, has been on individual mental health. The application of resilience thinking to community, societal or tribal resilience is a relatively new extension of this framework (Ross, et al., 2010). Given the scope of this thesis, the abundance of literature related to the resilience of individuals in acknowledged, however, this section is limited to considering the more limited body of social resilience literature on a community and regional scale that may be applicable to indigenous societies.

5.10.2 The definitions of community resilience:

In the social resilience literature, the definition of community itself is widely debated. Zautra et al. (2008, p. 139) acknowledge that this debate is likely to carry on indefinitely, but usefully define community as “…the presence of sustained and substantial positive social interaction among people who share common ground”. In this research this definition of community is relevant to the characteristics of the tribes in each case study.

The definition of community resilience similarly has many versions and contributions which are well summarised in the literature:

- Norris et al. (2008) explores the literature from several disciplines to present a phenomenological theory of community resilience as a process.
- Plondinec’s (2009) summary mentioned earlier, provides some twenty-five definitions of community resilience which are differentiated by those which define resilience as an attribute or alternatively resilience as a process.
- Ross and colleagues (2010) provide a systematic literature review which identifies the various social science (and ecological) frameworks by which to understand resilience.
- More recently Buikstra (in press) examines the plethora of definitions and theories regarding resilience in psychology.
Despite the variety of definitions, the notions of risk, adversity and vulnerability are central to the concept of social resilience in this literature (Ross, et al., 2010). Furthermore, the emphasis in the social scientific literature is that resilience is a process, rather than an outcome and that communities can develop and enhance resilience (Buikstra, et al., in press; Magis, 2010; Norris, et al., 2008; Ross, et al., 2010).

5.10.3 Attributes of community resilience:

Communities have a variety of internal and external resources by which to respond to change including their economic, social, cultural, human, political, natural and built resources (Magis, 2010). This adaptive capacity has led to the construct of community capital which is prevalent in both socio-ecological and social resilience studies (Donoghue & Sturtevant, 2007; Flora & Flora, 2004; Magis, 2010).

Contemporary concepts of resilience in the social literature have seen an increased focus on the resilience, capital or adaptive capacity of communities (Ross, et al., 2010). Published research includes: community resilience in rural areas (Buikstra, et al., in press), disaster preparedness (Norris, et al., 2008), environmental change (Sapountzaki, 2007; Williams, 2009) and in relation to place (Atkinson et al., 2009). A number of authors have proposed sets of attributes that indicate the adaptive capacity of communities (Magis, 2010; Norris, et al., 2008; Ross, et al., 2010; Zautra, et al., 2008). In a similar way to the socio-ecological construct of resilience, such research suggests that adaptability is a key component of community wellbeing. This adaptive capacity is mostly discussed in terms of economic development, social or community capital, networks, information and communications, and community competence or cohesiveness (Norris, et al., 2008; Zautra, et al., 2008). Few of the studies in the social and health sciences extend resilience to acknowledge the community relationship with the environment. Where ‘environment’ is mentioned it is ambiguous, but is more likely to mean social environment than natural environment (Ross, 2011).
The omission of an environmental-community connection in much of the social resilience literature is likely to be problematic for resilience thinkers working with indigenous societies. The maintenance and evolution of the identity and culture of indigenous people and communities is premised on long and intimate connection with land, and ecological wellbeing is arguably intrinsically linked to social wellbeing (Rotarangi & Russell, 2009). This enduring relationship with land and place influences critical cultural dimensions such as the role of social relations, worldview and language, all of which are integral to the way indigenous societies understand and interact with the ecological systems to which they are linked (Guha, 2006; Kawharu, 2002b; Langston, 1995; Mead, 2003; Rotarangi & Thorp, 2009). Examining the perspective of Māori land owners of planted forests on their ancestral land requires a resilience framework that can incorporate such cultural-environmental connections.

Two notable exceptions in the social resilience literature which extend resilience to acknowledge the relationship with the environment are Buikstra et al. (2010) and Ross et al. (2010) as summarised in Figure 13. Buikstra and colleagues (2010) investigate the antecedents to the concept of resilience in the interrelated social and ecological literature, and suggest eleven resilience-promoting concepts. These extend the connections of resilience to include environmental, economic, infrastructure and support services. Ross et al. (2010) acknowledge the interplay of a variety of influences, such as cultural, spiritual, economic and environmental systems in social resilience, and identify six attributes that may influence the capacity of individuals, communities and societies to adapt, transform and potentially become stronger when faced with environmental, social, economic or political challenges (see Figure 13 & Table 1).

5.10.4 Social resilience indicators:

In summary, the social resilience literature is largely unhelpful in providing a framework to consider tribal forest relationships. However, the two studies discussed above have attempted to extend the concepts of resilience, adaptation and transformation to societies in which people have a relationship with land and resources, and do offer useful concepts. While Buikstra and colleagues (2010)
discussed resilience in a rural community, Ross and colleagues (2010) extended their discussion to a number of case studies including indigenous communities.

Figure 13 – Attributes from (Buikstra, et al., 2010) and (Ross, et al., 2010)
The social resilience attributes of Ross et al. (2010) have been selected as the framework by which to view the results of this investigation. The key purpose their 2010 study was to inform social reporting and to develop a framework for regional level social resilience monitoring. This thesis will discuss the case study findings in relation to the social resilience indicators as described below in Table 1.

Table 1 - Relevant social resilience indicators presented by Ross et al. (2010)

<table>
<thead>
<tr>
<th>Social resilience indicators</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>People-place connections</td>
<td>Strong system linkages between people and their natural environment including sense of place, stewardship and sustainable resource use patterns</td>
</tr>
<tr>
<td>Knowledge, skills and learning</td>
<td>Capacity for social learning through the creation of new knowledge, drawing on existing knowledge and use of technology, innovation and skill.</td>
</tr>
<tr>
<td>Community networks</td>
<td>People working together to solve problems reinforced by communication</td>
</tr>
<tr>
<td>Engaged governance</td>
<td>Discussed mainly in relation to the role of government but also including community partnerships and creative institutions</td>
</tr>
<tr>
<td>Diverse and innovative economy</td>
<td>Providing alternative opportunities within and between sectors including new opportunities</td>
</tr>
<tr>
<td>Community infrastructure</td>
<td>Appropriate services and facilities to support identified community needs</td>
</tr>
</tbody>
</table>

It is noted that Ross et al. (2010) also identified sets of monitoring criteria which sit under each social resilience indicator. The detail of the monitoring has relevance for management institutions that wish to enhance the social resilience of their communities, such as the case study governance structures. However, this thesis does not expand to testing the monitoring criteria in this investigation; instead the overall rationale and applicability of the above resilience indicators will be assessed, where possible, in relation to the case studies.
The limited work within the social resilience literature on indigenous communities suggests further investigation is required as to how cultures with a historical and on-going relationship with land and resources exist, adapt, transform and potentially become stronger when faced with change. Ross et al. (2010) provide the most applicable framework by which to consider indigenous resilience. To what extent the indicators are applicable to understanding resilience in a tribal-forest relationship is unknown. The final research question in this thesis is therefore: Are the social resilience indicators of Ross et al. (2010) applicable to the tribal communities in the case study areas?

5.11 Concluding comments:

The perception that planted forests are valued solely for their productive capacity is problematic, as research has shown that New Zealand forest stakeholders increasingly value the ecological and social functions of such forests. Māori desire to utilise their land for economic, ecological and social purposes. However, there is much to be learned about Māori aspirations for planted forests and how Māori aspirations may have changed throughout time and in relation to external stressors.

The framework of resilience has been selected in this study as the means by which to explore the participants’ experiences of forest management and the realisation of their aspirations for their land and tribal collective. The socio-ecological resilience literature provides a concept of resilience based on the interactions between multiple scales, yet there is limited research on communities or the cultural and spiritual dimensions to resilience. Conversely, the social resilience literature explores the resilience of individuals and has evolved to investigate dimensions of resilience within communities, yet there is little mention of the role of the natural environment-human relationship.

Indigenous resilience remains therefore a distinct knowledge gap that has not been adequately addressed in either the socio-ecological literature or in the social resilience literature. Indigenous resilience in this research is defined as being how Māori tribes endure, adapt, transform and potentially become stronger when faced with change in
relation to their ancestral land. This research has the potential to test the capacity of the socio-ecological literature to include cultural, values and human agency and likewise extend the social resilience literature to include cultures which have a long-term relationship with land and resources.

In summary, the research objective is to draw from the fields of forestry science, history, social science and resilience thinking, to describe the lived experiences of Māori land owners with forests planted on their ancestral land. The specific research questions are:

1. What do Māori land owners view as the benefits and constraints of the pre-1990 planted forests that exist on their ancestral land?
2. What cultural values do the participants express for their land and is planted forestry compatible with such values?
3. Can forest management be manipulated to improve the realisation of the land owners’ aspirations?
4. Can land owner experiences in each case study be explained in terms of resilience, adaptability, transformability, adaptive cycles and panarchy?
5. Are the social resilience indicators of Ross et al. (2010) applicable to the tribal communities in the case study areas?
6 An account of the methodological approach

6.1 Introduction:

With the five research questions defined, a methodology needed to be developed that would answer the questions in a way that could be repeatable in both case studies. The three parts of this chapter will first define the methodological framework of the thesis, including the strengths, assumptions and limitations of the research practice. The second part will discuss the research method design relevant to the individual case study areas and describe the inevitable differences in approach. The third part gives a detailed account of how the interview questions were developed.
Part I – Methodological Framework:

6.2 A qualitative approach:

This study was undertaken using qualitative research approaches predominantly in the form of document analysis and in-depth interviews. First, document analysis was undertaken to provide detail on the historical background to each case study and second, in-depth interviews were undertaken to provide both an insider perspective on contemporary cultural values and the experiences of planted forest leases. Quantitative and mixed-method approaches were considered, however a qualitative framework was chosen as the appropriate methodology given the inquiry-based approach flagged in the research questions.

There is considerable variation in the way in which qualitative research can be approached (Goodrick, 2009; Tesch, 1990) however the two following definitions of qualitative research provide insight into the characteristics that the researcher valued in the approach to investigation of cultural values in this thesis:

*Qualitative research is a particular tradition in social science that fundamentally depends on watching people in their own territory and interacting with them in their own language on their own terms.* (Kirk & Miller, 1986, p. 9, emphasis mine)

...entails immersion in the everyday life of the setting chosen for the study, that values participants’ perspectives on their worlds and seeks to discover those perspectives, that views inquiry as an interactive process between the researcher and the participants, and that is primarily descriptive and relies on people’s words as the primary data. (Marshall & Rossman, 1989, p. 11, emphasis mine)

A qualitative research approach would enable the researcher to explore tribal members’ experiences, values and aspirations in a culturally appropriate manner.

6.3 Paradigm:

In the context of this research, I considered the paradigm of constructivism to be an appropriate inquiry lens, and more specifically that knowledge would be co-
constructed through interaction between the participants and researcher (Jones et al., 2006). Given my previous involvement in the planted forest sector and aim of improving forest management, it is acknowledged the neither objectivity nor subjectivity is possible, therefore limiting other paradigmatic stances.

The researcher’s primary role in this thesis is that of interpreter between land owners and forest managers. I do not claim to be an interpreter between Māori and non-Māori philosophies, however, it is acknowledged the Māori world view and language are essential to this study. Therefore I undertook and completed further studies such as a National Certificate in Māori (Māori world view) and a Diploma in Te Ara Reo Māori (Māori language) through the course of this study. In order to further improve the soundness of the researcher’s interpretations, qualitative tools such as member checking (Lincoln & Guba, 1985) have been extensively used.

6.4  Research process: studying in a Māori context

Much has been written regarding methodological frameworks considered appropriate for a study including Māori (Jahnke & Taiapa, 1999; Smith, 1999; Spoonley, 1999; Wilcox et al., 2008). Carpenter and McMurchy-Pilkington (2008, p. 185) summarise key questions to be considered: who will undertake the research, how the research will be conducted, why particular processes should be used and what happens to the findings? The following research process set out to address these questions.

In both case studies, the researcher met twice with the LTFT and MCI Chief Executive Officers, once prior to confirming the case studies and again prior to commencing interviews. A Memorandum of Understanding (MOU) was developed in relation to both document analysis and interviewing technique. Each MOU is reproduced in Appendices A and B. Furthermore, agreement was made regarding the findings, and a social contract regarding feedback to the management committees was agreed.
In terms of a general philosophy applicable to both case study regions it was considered appropriate that; the case study tribal leaders would define their key informants (see Section 6.6), that the case study whānau would have a level of control over research process through member checking, and finally that the researcher would be accountable to the whānau through a series of written reports and verbal presentations. In each case the CEO of the case study area would have an opportunity to read the chapters that relate to their collective prior to the thesis being completed.

In terms of applying a qualitative research framework, the researcher was guided by the traditions of case study approaches (Stake, 1995; Yin, 1989) and phenomenology (Moustakas, 1994). In particular, the researcher considered the nature of comparison in case study as being important and, likewise, phenomenology’s focus on understanding an experience. However, given the emergent nature of this exploratory research, it was considered appropriate that such frameworks would be used as road-maps to guide the researcher rather than strictly applied to the design. Miles and Huberman (1994) state that research is primarily about the use of effective and warranted strategies and therefore agree that the application of a particular framework too early in the project will be constraining.

As a result of the researcher’s methodological framework the followings issues are noted:

- Intersubjectivity is present both in the interpretation of the interviewer and interviewee. This is limited by feedback through member checking.
- The results are unlikely to be extended to other scenarios. The purpose of this research is to select information rich cases and to generate understanding about planted forests rather than being about to generalise about Māori forest leases. It is anticipated that the method design may be repeatable but that the case study results will be specific.
Part II – Research Instruments and Process:

6.5 Method design:

The three methods most commonly used in qualitative methodologies are interviews, observation and document analysis (Goodrick, 2009). The researcher, influenced by experience and research aims, decided that interviews and document analysis would provide the suitable context for investigation. Despite interviewing involving a variety of forms, the researcher felt it was culturally appropriate to interview Māori face to face (kanohi ki te kanohi) whereever possible.

The methods of this thesis can be described by three structural phases:

1. Unstructured key informant interviews and document analysis to understand histories, tenure arrangements and other background.
2. A semi-structured interview stage with beneficial owners of the land, using open-ended questions that are developed following the key informant/document analysis stage.
3. An extensive process of member checking to review findings and incorporate further feedback from participants.

6.6 Stage one: unstructured key informant interviews

Key informant interviews took place first. In each case study area, the key informants were defined by the liaison people assigned to the researcher, namely the Chief Executive Officers of LTFT and MCI and their respective personal assistants. The researcher asked for a small number of information-rich participants and any documents considered relevant to the entity.

Informal unstructured interviews followed whereby the researcher introduced her whakapapa and the topic and then listened to advice and experiences of the key informants. Such an unstructured interviewing technique is considered suitable especially when little is known about the topic (Opie, 1999).
Rapport is considered an essential element of successful interviewing (Patton, 2002) and the researcher would also argue that as in these case study areas, a high level of trust is also required. At the key informant stage, the researcher was neither living locally nor known to the interviewees. In acknowledgement of such, interviews were undertaken at a location chosen by the key informant, were not recorded and the researcher was, where possible, accompanied by someone known to the key informant. Interviews with two key informants were undertaken at each case study. Typically the researcher would write journal notes immediately following the conclusion of the interviews.

The researcher also undertook a review of any documents made available to her by the key informants. Such writings were not solely in relation to this specific research, however archive documents such as hui minutes, internal correspondence and personal accounts were used to understand the histories and issues relevant to the case study areas. In the case of LTFT the document review process took approximately three months, in the case of MCI a number of weeks. In both cases, a report was provided back to the relevant management authorities summarising these documents. The purpose of these reports was first to share the researcher’s understanding of the histories, tenure arrangements and background information relevant to the case study regions, and second because this information had not previously been collated or written in this way.

6.7 Stage two: semi-structured participant interviews

Following the key informant interviews, the participants for semi-structured interviews were selected by purposive sampling which is a “…form of non-probability sampling, common in qualitative research where the aim is to generate a sample of participants who are information rich” (Patton, 2002, p. 46). The liaison assistant assigned to the researcher was responsible for choosing, contacting and arranging all of the interviews. If participants recommended other interviewees or others became interested in participating then all contact was made via the liaison assistant. This was considered the most culturally appropriate way for the researcher to obtain participants.
The researcher had little input in the selection of ‘appropriate’ participants but in both cases a variety of participants in terms of age, gender and location of residence was achieved. The key aim of the researcher was to keep talking to people until interest waned or saturation was achieved in terms of hearing the same views over and over again. The reality, however, was that inevitably time and cost constraints also played a role in halting the interviews.

While most qualitative interviews involve open-ended questions (Goodrick, 2009) interviews can be distinguished by the degree of question structure. In the case of this research the interviews were semi-structured and had key discussion points pre-established. Such themes and potential interview questions were decided following the process explained in Part III of this chapter. The interview style was informal and the participants’ responses guided the interview more than the questions. There was variation in the wording, tenses, and order of questions. Some participants asked to see the discussion points and questions prior to consenting to an interview and in other cases the researcher chose rather to respond to the participant’s ideas as opposed to completing the formal questions.

A total of 54 participants were interviewed. Interviews ranged in length from 30 minutes to over 4 hours, and all but three were taped and then transcribed in full. One participant did not wish to be taped and the other two were in locations that were not suitable for taping, such as forest ridgetops.

6.8 Stage three: member checking

Member checking involves seeking feedback from research participants about the accuracy and legitimacy of the researcher’s interpretations (Goodrick, 2009). The process of conferring with participants about the accuracy of interpretations is designed to strengthen the credibility of interpretations. This research used at least four forms of member checking.
First, the researcher provided the interview participants with a summary of her key interpretations at the end of the interview immediately following the tape being turned off. This form of member checking was particularly useful as in most cases significant informal discussion followed. The researcher made any relevant journal notes immediately after the interview had ceased.

Second, the participant was given further opportunity to provide feedback when the researcher provided the participant with their written transcript. In as many cases as were possible, the researcher also provided the participant with the tape of the interview. This was done first because the researcher acknowledged that the participant was the owner of their personal contribution to the research and second because it was anticipated future generations would value their ancestor’s oral record more than a transcript. This method of member checking had some unanticipated drawbacks, particularly in that some participants did not like reading what they said let alone hearing it. In LTFT, almost all of the thirty-five participants expressed concern or embarrassment at the way they sounded and three made extensive changes to the way they phrased their opinions. The process itself added to the researcher’s knowledge of the participants’ views but was intensive and time consuming. Of the seventeen participants in the MCI case study, only one participant provided any feedback. The difference was likely to be related to the differing approaches to the application of the methodological framework as discussed in the following section.

A third opportunity for member checking was provided when the delegates from each case study were given the chance to review the draft chapters of this thesis prior to its completion. Finally, the researcher verbally presented the results and conclusions to the management committee and Trustees of LTFT, and the CEO and forest managers of MCI. This process enabled further discussion and enhanced understanding.

6.9 Method application:

The application of the method design in the two case studies differed first owing to size, scope and chronological order, and second owing to the cultural boundaries negotiated with the key informants.
6.9.1 Size, Scope and Order:

The researcher decided to begin fieldwork with the LTFT – the larger of the two case studies in terms of owners and forest area. Furthermore, because the markets and legislation relating to forestry were in flux, it was decided that the MCI participants would be interviewed as soon as possible thereafter. This was necessary in order to constrain any difference in economic and legislative environments as much as possible.

Another key decision was that the interview questions would be the same in both studies or, more correctly, based around the same discussion points. The researcher envisaged that similarly worded questions would assist analysis strategies and overall comparability. This resulted in a research design whereby the participant interview questions were defined following the LTFT key informants stage but prior to interviews with MCI key informants. Despite the potential for issues relevant to LTFT to dominate, in reality the semi-structured interviews with MCI flowed around the issues raised by the participant, thus allowing new discussion points to be raised.

A more significant difference between the methods is that the researcher relocated and lived in the LTFT region for just over 4 months. During this time the researcher became involved in the community and had significant informal contact with a number of the participants. Conversely, the MCI interviews were undertaken over three intensive weeks and the researcher was only a visitor to the area, between Monday and Friday, for the period of interviewing. Potentially, this resulted in a difference in rapport and understanding, however given the different scales of ownership, the researcher managed to reach the aim of saturation in both cases.

6.9.2 The issue of informed consent:

The initial meetings with LTFT and MCI management provided the arena for discussing issues regarding informed consent for the participants in the semi-structured interviews. This lead to two subtle but important differences between the case study methods.
In the case of LTFT, it was agreed that the participants would not be asked to sign a research consent form at the time of interview. Instead they would be provided with written transcripts and only after these were reviewed and where necessary amended, were participants asked to sign the research consent form. This process was negotiated following the key informant interviews with the intention of building trust, in that the interviewee would not be asked to consent to their words being used further until they had seen the product and the context of their written word. Despite such intentions the reality was potentially the opposite, as the researcher believes participants felt more threatened by the consent process when faced with their written word as either trust faltered or the interviewee suggested numerous changes.

Furthermore, the consenting process following the provision of a transcription did not actually enhance their protection as all participants retained the right to withdraw from the research at any time up to submission, even after they had signed a consent form (see Appendix C).

In some cases, this process resulted in the researcher being required to make multiple attempts to contact participants bearing in mind that their contribution could not be included unless they returned a consent form. The number of attempts at making contact risked the participant feeling pressured into consenting, however, the researcher had no other means of assessing if the transcript had been received or accepted. Some participants stated that their participation in the interview should have been an indication of their consent, for example:

“*I’ll do the official thing so you can “tick” it off, but for me the consent was me saying yes to sitting down and talking to you….*”  NT16

The process of providing transcribed interviews, re-contacting all the LTFT participants, incorporating their changes and then asking for their agreement to participate took over 12 months. However, despite the obvious disadvantages regarding time and anxiety, the process actually generated a number of useful opportunities to re-engage with participants and discuss ideas. Of the 37 participants interviewed, 36 subsequently consented to their participation.
In the case of MCI, the key informants deemed it to be ethically and culturally necessary to gain consent for full participation prior to the interview commencing. In this case the participants were provided with the same level of opportunity for member feedback. However, where the interviewee did not acknowledge receipt of the transcript or made no further contact with the researcher their views have been included without change. Of the 17 participants interviewed, one provided feedback to the researcher regarding their transcript.

**Part III – Developing the interview questions:**

**6.10 Introduction to interview stage:**

The aim of the key informant interview stage was to gain entry into the communities, establish understanding and further develop methods. The participant interviews however were undertaken with the aim of informing the first two research questions and to provide data for the analysis phase of the research.

1. What do Māori land owners view as the benefits and constraints of the pre-1990 planted forests that exist on their ancestral land?
2. What cultural values do the participants express for their land and is planted forestry compatible with such values?

Given the nature of semi-structured interviewing techniques, the analysis of systematic information across the participants could potentially be a lengthy process. Therefore prior to participant interviews commencing, the researcher set about investigating method designs and analysis frameworks that would answer the research questions and also potentially be applicable to other stakeholder groups. A full account of this process is therefore provided.

**6.11 Social and cultural values and perspectives:**

The original assumption of this research was that land owner opinions regarding the benefits and constraints of planted forests and their cultural values would go beyond
economic factors and include environmental, social and cultural aspects. In the researcher’s experience, it is common for people to express their economic and environmental opinions when discussing planted forests but social and cultural values are less commonly expressed. Interview questions needed to be developed that would not limit the participant in their focus, or restrict the discussion by poor methodological design. The researcher therefore set about investigating potential social or cultural values by asking the question: what are the potential, relevant, Māori, cultural values for land management?

The literature reveals a variety of Māori cultural values for land management (Awatere, 2003; Jollands & Harmsworth, 2007; Morgan, 2006; Munn, et al., 1994; New Zealand Institute of Economic Research (Inc.), 2003; Reid, 2005; Whangapirita et al., 2003). Drawing from this work, the most frequently cited traditional values of Māori in terms of land management are summarised in Table 2 (translation mine).
Table 2 – Māori values and land management (Awatere, 2003; Jollands & Harmsworth, 2007; Morgan, 2006; Munn, et al., 1994; New Zealand Institute of Economic Research (Inc.), 2003; Reid, 2005; Whangapirita, et al., 2003).

<table>
<thead>
<tr>
<th>Value for land management</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iwitanga</td>
<td>The land is a source of identity for the iwi</td>
</tr>
<tr>
<td>Waahi tapu</td>
<td>The people as guardians of creation and each other</td>
</tr>
<tr>
<td>Kaitiakitanga</td>
<td>The overarching approach to land management is handed down from ancestors</td>
</tr>
<tr>
<td>Tikanga</td>
<td>Authority of the land is to be retained</td>
</tr>
<tr>
<td>Kaupapa</td>
<td>Mana is related to land ownership and is acknowledged through respect and hospitality.</td>
</tr>
<tr>
<td>Mana</td>
<td>Use of Māori knowledge, rules and protocols for land management.</td>
</tr>
<tr>
<td>Manawhenua</td>
<td>The land and knowledge of the land is a treasure to be respected and handed on to future generations.</td>
</tr>
<tr>
<td>Manaakitanga, Whakakohoa</td>
<td>Māori must be able to use their land to pursue their own goals and objectives.</td>
</tr>
<tr>
<td>Mātāauranga Māori, Mauri, Tapu, Noa, Ritenga, Rahui</td>
<td>The land provides a place of standing and identity.</td>
</tr>
<tr>
<td>Taonga, Taonga tuku iho</td>
<td>Empowerment can be achieved through land management for the collective</td>
</tr>
<tr>
<td>Tino rangatiratanga, Rangatiratanga</td>
<td>Maintain the vitality and health of the land and resources.</td>
</tr>
<tr>
<td>Tūrangawaewae</td>
<td>Respect for differences and a desire for consensus in land management.</td>
</tr>
<tr>
<td>Whanauangatanga</td>
<td>The land and the resources are kin.</td>
</tr>
</tbody>
</table>
On the assumption that many of these values were likely to be held by interviewees, questions were developed that would provide opportunities for such matters to be discussed in a forestry context (Table 3).

In creating Table 3, comparable cultural values from Table 2 were grouped by the researcher as they may relate to forests in a similar manner. For example, ‘iwitanga’ and ‘tūrangawaewae’ relate to the identity created by land. Through this process, the researcher aimed to provide a ‘straight-forward’ question first, following by a potentially more complex, discussion point which could be used to generate further knowledge.

The researcher then reviewed the general discussion points not only in relation to cultural values, but to the three themes of social, economic and environmental forest values, and was satisfied that the questions could elicit a useful discussion of all these perspectives. For example the value ‘kaitiakitanga’ relates to people being guardians of creation including the land (environmental) and each other (social and economic).

The researcher then set about developing the questions to be used in a semi-structured way as a guide to the interviewing process (see Appendix D). Such questions were considered to adequately elicit potential views, perspectives and expectations of the stakeholders.
<table>
<thead>
<tr>
<th>Value</th>
<th>Direct Question</th>
<th>Discussion point</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iwi tanga</td>
<td>Tell me about your involvement with the forest? Do you visit the forest? What do you like and dislike about the forest?</td>
<td>Discuss aspects of the forest (land-use, management, governance) that affects iwi or whānau identity (i.e. generations employed, ability to access and landscape changes)</td>
</tr>
<tr>
<td>Tūrangawaewae</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kaitiakitanga</td>
<td>What are your non-negotiable values for the land and does forestry support these?</td>
<td>Discuss participant’s view of kaitiakitanga and if the forest supports such a view or otherwise.</td>
</tr>
<tr>
<td>Waahi tapu</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tikanga</td>
<td>In what ways did you or your tipuna use the land/forest? What has changed?</td>
<td>Discuss present day land use, forest management, sustainably and governance in relation to the resilience of tikanga, kaupapa, mātauranga.</td>
</tr>
<tr>
<td>Kaupapa</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mātauranga</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mauri, Tapu, Noa Rite, Rahui</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mana</td>
<td>What aspects of the land and/or forest management and/or governance do you participate in? Would you keep the land forested?</td>
<td>Discuss how the forest, forest management, governance allows the participant to satisfy their own objectives for whānau and/or iwi (i.e. employment, skill development, governance, land retention, autonomy).</td>
</tr>
<tr>
<td>Manawhenua</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tino rangatiratanga</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whakakohitatanga</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whanaungatanga</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manaakitanga</td>
<td>Does the forest support you (i.e. financially, resources)</td>
<td>Discuss opportunities for providing and how does this compare to prior planted forest establishment.</td>
</tr>
<tr>
<td>Taonga tuku iho</td>
<td>Tell me about your land and its history?</td>
<td>Discuss how participants relate to the forest (i.e. native versus planted versus farming) past and present.</td>
</tr>
<tr>
<td>Whakapapa</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whakakaha te mauri</td>
<td>What recreational activities does the forest provide?</td>
<td>Discuss participant’s view of governance, management and how the land use relates to access and mauri.</td>
</tr>
<tr>
<td>Taonga tuku iho</td>
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6.12 **Concluding comments:**

This research takes a qualitative approach in the form of document analysis and interviews to address the following specific research questions:

1. What do Māori land owners view as the benefits and constraints of the pre-1990 planted forests that exist on their ancestral land?
2. What cultural values do the participants express for their land and is planted forestry compatible with such values?

This research also aims to examine the impact of forest management on the case study participants. Therefore the data sourced from the archive documents and interviews will be analysed to answer the following research question:

3. Can forest management be manipulated to improve the realisation of the land owners’ aspirations?

Despite the researcher’s personal focus on forest management, the literature review, key informant interviews and document analysis suggest that the case study participants will discuss the benefits and constraints of planted forests not only in terms of forest management but also in terms of governance, tenure and regulatory framework in relation to their economic, environmental and cultural values. Resilience thinking is therefore applied to discuss such values and aspirations in relation to the historical and present day land management scenarios. The document analysis and interview data will be further analysed to answer the remaining research questions:

4. Can land owner experiences in each case study be explained in terms of resilience, adaptability, transformability, adaptive cycles and panarchy?
5. Are the social resilience indicators of Ross et al. (2010) applicable to the tribal communities in the case study areas?
Case Study Results – Chapter 7: Lake Taupō Forest Trust

Chapter 7:  
Lake Taupō Forest Trust

7 Ngāti Tūwharetoa Māori and Forestry

7.1 Introduction:

In the late 1960s, a 32,771 hectare planted forest was established around the eastern shores of Lake Taupō as a venture between Ngāti Tūwharetoa and the Crown. This land, its management structure, its owners, and its future constitute the first case study in this research.

This chapter is presented in five parts which detail the events leading up to the establishment of Lake Taupō Forest and present the results of the participant interviews. The first part describes the origins of Ngāti Tūwharetoa, their arrival in the Taupō district and their governance. The second part reviews the tribe’s attempts to utilise their land and its indigenous timber resource. The third part discusses the impacts of land use limitations in the region and the tribe’s eventual foray into planted forestry. Collectively these parts describe in detail the historical events relevant to
the Lake Taupō Forest not only by summarising previous literature but also providing new knowledge by incorporating the hui documents, internal reports and oral accounts that were made available to the researcher during her stay in the region. Such a detailed history is presented to assist in the exploration of the tribe’s resilience to shocks, ability to adapt and endure transformations.

The final two parts of this chapter describe the analysis process and present the results of the interviews. The LTFT results are presented in terms of the respondents’ past experiences or memories of the planted forests, present-day benefits and constraints of planted forests and the future hopes and concerns of the participants. This style of presentation is used because respondents in this case study typically discussed the forested land in terms of the past, present and future.

**Part I – An Introduction to Ngāti Tūwharetoa:**

7.2 **Limitations:**

The unique history of the Tūwharetoa people is already the subject of books (Roche, 1990a; Te Herekiekie Grace, 1959), research papers (Brown et al., 2005; Rotarangi & Thorp, 2009), government investigations (Waitangi Tribunal, 2008a; Walzl, 2004) and traditional oral accounts, some of which have been compiled over decades. This chapter will not do justice to the rich history of Taupō and its tribe Ngāti Tūwharetoa; such work is beyond the scope of this thesis. However, this section will bring together the tribe’s history as it relates to their involvement in forestry including a number of aspects not previously published.

7.3 **An introduction to Ngāti Tūwharetoa:**

Tūwharetoa is a Māori tribe (iwi) descended from the Te Arawa canoe (waka). In Māori accounts of migration, the Te Arawa waka set sail from the Polynesian land of Hawaiki, journeyed across the Pacific Ocean (Te Moana Nui a Kiwa) and landed at
Maketu on the Bay of Plenty coastline (Waitangi Tribunal, 2008a). From Maketu, the descendants of these migrants travelled throughout the Rotorua and Taupō districts and their influence spread as is recounted in the saying “mai i Maketu ki Tongariro” (from Maketu to Tongariro and beyond).

Ngatoroirangi and Tia, considered two of the Te Arawa waka’s earliest explorers, are ancestors of considerable importance and status (mana) to Māori in the central North Island (see Figure 14).

Tia’s journeys resulted in the naming of many sites in the Taupō district such as Atiamuri and Aratiatia. Of note, the name Taupō-nui-a-Tia (the great cloak or envelopment of Tia) was given to the lake itself and to the surrounding catchment, extending from the eastern watershed of Hauhungaroa range, to the western watershed.
of the Kaimanawa mountains, and from the northern slopes of Mount Tongariro to the country about the Atiamuri district (Te Herekiekie Grace, 1959).

Ngatoroirangi also journeyed extensively in this region. In Ngāti Tūwharetoa oral histories, Ngatoroirangi is responsible for many of the region’s natural features, most notably the active geothermal resource. Undoubtedly, Ngatoroirangi’s most well-known descendant is Tūwharetoa (Tūwharetoa-i-te-Aoupouri) who lived in the Bay of Plenty settlement of Kawerau. Tūwharetoa’s descendants migrated further south and eventually inhabited the region surrounding Lake Taupō as shown in Figure 15 (Te Herekiekie Grace, 1959; Waitangi Tribunal, 2008a).

Today, the Ngāti Tūwharetoa tribal territory (rohe) is one of fifteen rohe within the Te Arawa region of the central North Island of New Zealand. The Ngāti Tūwharetoa rohe accommodates fifty-four hapū (subtribes) situated around the shores of Lake Taupō. According to the 2006 Census\(^{18}\), the population of Ngāti Tūwharetoa is 34,674 representing approximately 6% of the total Māori population in New Zealand.

The iwi identity is embodied in the proverb (whakataukī):

- Ko Tongariro te maunga: Tongariro is our ancestral mountain
- Ko Taupō-nui-a-Tia te moana: Taupō-nui-a-Tia is our inland sea
- Ko Ngāti Tūwharetoa te iwi: Ngāti Tūwharetoa is our tribe
- Ko Te Heu Heu te tangata: Te Heu Heu is the man.

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\(^{18}\) This remains the latest census data, as the 2011 census was cancelled following the Christchurch earthquake on 22 February 2011.
7.4 The chiefs of Ngāti Tūwharetoa:

Males from the Te Heuheu family have maintained the chiefly line of Ngāti Tūwharetoa since the early 1800’s. Of national significance, Horonuku Te Heuheu Tūkino IV gifted the peaks of Ngāti Tūwharetoa’s ancestral mountains (Mounts Ruapehu, Ngauruhoe and Tongariro) to the government of New Zealand in 1887.
Case Study Results – Chapter 7: Lake Taupō Forest Trust

These mountains form the nucleus of New Zealand’s first National Park, Tongariro National Park, which today is also a World Heritage Park.

The gift was made at a time when New Zealand’s landscape and land ownership had undergone major transformations due to increased settler arrivals. Relative to the rest of the North Island, the Taupō area had very few European immigrants. However from the 1860s, the three mountains had been leased to settlers to be farmed as sheep runs. In the early 1870s, the government decreed that the district’s land-holdings were to be formally surveyed. Ngāti Tūwharetoa leaders feared that being further subjected to European property law would lead to both land loss and the destruction of their sacred sites. It was in this context that Horonuku approached the New Zealand Government to suggest the mountains be gifted to the people of New Zealand. This ensured the land would be protected for all time from private or individual title and treasured by generations to come (McLintock, 1966).

The actions of Horonuku Te Heuheu Tūkino IV cannot be fully appreciated without further discussing this chiefly lineage that has led Ngāti Tūwharetoa from the time of Herea to Tumu Te Heuheu Tūkino VIII, Ngāti Tūwharetoa’s present paramount chief.

Te Heuheu Tūkino I (circa 1790 – 1820) was related to powerful leaders within Ngāti Tūwharetoa, Ngāti Maniapoto and the Waikato rohe. He distinguished himself by his role as a formidable warrior in the wars with nearby Māori iwi, Ngāi Tūhoe. Whilst Ngāti Tūwharetoa already had the custom of selecting male leaders from direct descendents of Tūwharetoa, the role of chief at this time was not necessarily hereditary in the late 18th century (Hura, 2010). In the early 19th century, Te Heuheu Tūkino I went on to become the undisputed leader of the Taupō area and was later recognised for his role in unifying and protecting the iwi from its neighbours. For a short time after his death Ngāti Tūwharetoa hapū became divided but were again united by his son and successor, Mananui Te Heuheu Tūkino II.

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19 Also known as Hereara and later known as Te Heuheu Tūkino I
Notably Mananui, unlike many Māori leaders throughout the country, refused to sign the Treaty of Waitangi in 1840. In taking a stand against the sovereign Queen he stated that “I shall not abase myself by placing my head between the thighs of a woman … I am King here in Taupō…” (James Cowan (historian) in Potton, 1987, p. 125). Despite Ngāti Tūwharetoa’s rejection of the Treaty, British authorities later decreed that the Queen’s sovereignty applied legally to the whole of New Zealand. By the early 1840s, the Crown considered as a matter of law, that sovereignty had been conceded on behalf of all Māori (Waitangi Tribunal, 2008b).

Following the death of Mananui in a major landslide at Waihi in 1846, Iwikau Te Heuheu Tūkino III, another son of Herea, assumed the role of paramount chief during a time of major social change for Ngāti Tūwharetoa. The previously isolated inland iwi was now subjected to the pressure of land sales and devastating disease among Māori following European settlement. Iwikau, a feared warrior in his youth, became known for his role as a peacemaker (Potton, 1987). Heavily influenced by missionary Thomas Samuel Grace, Iwikau was instrumental in assisting Ngāti Tūwharetoa to take positive steps to retain identity in times of change. Iwikau was also notable for his endorsement of a Māori king (Kīngitanga) to unite Māori against further land losses (Potton, 1987). Iwikau did not accept this position for himself, instead supporting Pōtatau Te Wherowhero of the Tainui iwi, thus cementing a special relationship between Ngāti Tūwharetoa and the Kīngitanga (Metge, 2008).

Horonuku Te Heuheu Tūkino IV became the paramount chief upon the death of Iwikau in 1862. In an attempt to further prevent European encroachments on their land, Ngāti Tūwharetoa along with Rewi Maniapoto and Wahanui Te Huatare, two leading Maniapoto chiefs, decided to have their common tribal boundary defined (Potton, 1987). The case became known as the ‘Taupōnuiatia Case’. The Native Land Court began proceedings before Major Scannell on 14 January 1886 at Tapuaeharuru (near the present township of Taupō) and what followed were months of hearings attended by hundreds of people from a number of tribes (Te Herekiekie Grace, 1959).
The Native Land Court found in favour of the descendants of Tūwharetoa and Tia and the land in question was registered under their authority. Neighbouring iwi were not allowed to even have their cases heard. Ngāti Maniapoto objector Taonui was given no opportunity to discuss the Court’s judgement with respect to the Maraeroa lands (which are the subject of this research’s second case study). In fact he was fined for storming out of the court and later resisting the policeman who tried to return him to the court to explain his conduct (Waitangi Tribunal, 2008c). The on-going boundary disputes, in particular between Ngāti Maniapoto and Ngāti Tūwharetoa, lasted for a number of years. Today, these aspects of the Taupōnuia Case are cited as exemplifying the inflexibility of the Native/Māori Land Court (Waitangi Tribunal, 1993, 2008c).

Confronted by the full significance of a European system of land ownership, Ngāti Tūwharetoa leaders feared for the future of their sacred mountains and thus Horonuku and his son-in-law Lawrence Grace (descendant of Samuel Thomas Grace) set about making Mounts Ruapehu, Ngauruhoe and Tongariro a place of significance to the Crown, a perpetual gift to the nation to be owned by no-one and yet for everyone. The Crown agreed in 1887, noting that the land was useless for grazing and held little value for settlers other than scenic (Ruru, 2008), but the process of formalising the national park in legislation took until in 1894.

Horonuku died on 30 July 1888 and was succeeded as paramount chief by his son, Tureiti (Te Heuheu Tūkino V) who was recognised for his work within the realms of government legislation and policy and also as a strong advocate for Māori equality and autonomy (Te Huingarau-Gartner, 2010). Tureiti was a member of the Legislative Council and during World War I became a prominent recruiter of Māori soldiers. Following the end of the war, Tureiti gifted 14,164 hectares in the Owhaoko district to the Crown for soldier settlement (Te Herekiekie Grace, 1959). Following his death in 1921, he was succeeded by his son, Hoani (Te Heuheu Tūkino VI). The significant attempts of Hoani to improve the quality of life for Ngāti Tūwharetoa are described in the following section. Notably, his actions against the Tongariro Timber Company on behalf of his people took him to the Privy Council (the Commonwealth’s highest court). Hoani died in 1944 and leadership was passed to his
son Sir Hepi (Te Heuheu Tūkino VII) who led Ngāti Tūwharetoa until 1997. Sir Hepi’s leadership is credited for the iwi becoming one of the strongest and most independent in New Zealand (Frame, 2010). Economically, this was largely achieved through the use of native forest resources and the establishment of Lake Taupō Forest.

Today Ngāti Tūwharetoa is led by Tumu (Te Heuheu Tūkino VIII) who has consistently furthered the iwi in particular in pursuit of conservation, cultural heritage and education (Metge, 2008). In 2005, the New Zealand New Year’s Honours List made Tumu a “Distinguished Companion of the New Zealand Order of Merit” for his work in conservation and education. In 2006, when Māori Queen, Te Arikinui Dame Te Atairangikaahu died, Tumu again cemented the relationship between Ngāti Tūwharetoa and the Kīngitanga by playing a leading role in selecting her successor, Tuheitia Paki.

The Te Heuheu Tūkino lineage has a distinguished history in New Zealand of influencing government policy to accommodate Māori values and uniting Ngāti Tūwharetoa. Such leadership has clearly been motivated by the desire to protect Māori land from alienation and to allow iwi development at all levels. These goals remain a common thread throughout the following sections which introduce Ngāti Tūwharetoa’s lands.

**Part II - Ngāti Tūwharetoa land tenure, governance and regulation:**

The following sections draw heavily on two key reports; first, the research of Walzl (2004) as commissioned by the Crown Forest Rental Trust and second, the comprehensive Treaty of Waitangi investigation of central North Island history and land loss “He Maunga Rongo” (2009a-d). Sections from these reports which relate to the archive documents and oral histories of the participants have been summarised in the following historical narrative.
7.5 **Post-colonisation shocks: land loss and land legislation**

Historically all of the land centred about Lake Taupō, approximately 1.2 million hectares, was owned by Ngāti Tūwharetoa (Thorp, 2007). Prior to 1840, the entitlement of Ngāti Tūwharetoa to govern themselves was unquestioned (Waitangi Tribunal, 2008b). However, as detailed earlier in this thesis, after the proclamation of British sovereignty that situation changed. From the period of 1840 to 1862, many Māori attempted to govern in co-operation with the sovereign Queen. Several legislative options for Māori autonomy in co-operation with the Crown were canvassed to some extent by the government’s policy makers. All options had the potential for partnership and mutual respect between Māori authorities and the government, however none were successfully instigated by the Crown.

In 1863, the Crown declared war on the Waikato tribes of the Kīngitanga and this spawned further campaigns throughout the Bay of Plenty, East Coast, Hawkes Bay and Taranaki regions. Under the leadership of their paramount chief, Ngāti Tūwharetoa went to fight for the Kīngitanga. For the next decade, civil war engulfed the central North Island (Waitangi Tribunal, 2008b). For the most part, these land wars were fought outside the Ngāti Tūwharetoa rohe. However, the Crown’s conquest of the central North Island led to its assertion of authority over the previously autonomous Ngāti Tūwharetoa and weakened the resolve of the Kīngitanga (Bourassa & Strong, 2002). In the wake of the military conquest and subsequent settler population growth, the balance of power in the region changed significantly for Ngāti Tūwharetoa.

As discussed in Chapter 3, the 11-year period between 1862 and 1873 saw the introduction of major native land legislation and effectively introduced a new tenure system, providing for the determination of Māori titles and authority over Māori Land. The 1870s to 1900 became a period of significant land purchase with the Crown both a major participant in regulating land purchase and undertaking Māori land purchases. National land policies became focussed on ensuring large areas of Māori lands were made available for settlement and farming. Chapter 10 of the Waitangi Tribunal report “He Maunga Rongo” (Waitangi Tribunal, 2008c) details
Māori land purchases in the central North Island and shows that during these three decades just over half (52.9%) of Māori land in this region was purchased. However, the pattern of land purchase varied significantly throughout the districts. By 1900, 87% of Māori land in the Kaingaroa district had been purchased, also 60% of Māori land in the Rotorua district and 33% of Māori land in the Taupō district.

The higher retention of the Māori land in the Ngāti Tūwharetoa rohe has largely been attributed to its relative inaccessibility. However the Waitangi Tribunal (2008c) report also shows evidence of Māori in the Ngāti Tūwharetoa region as being opposed to selling their land and instead having a preference for leasing arrangements. Amongst a number of reasons, of particular importance was the desire to generate an income while retaining of the underlying authority over the land. Furthermore, the leases gave Māori the opportunity to gain experience in commercial enterprises without the outlay of capital, in particular for sheep farming. There is also suggestion that European settlers believed these long-term relationships would withstand the government volatility of the time (Waitangi Tribunal, 2008c). Therefore by 1900, large areas of the northern Taupō District were leased to European settlers as sheep farms. Opportunities for economic growth beyond the north remained limited as the remaining land was considered by settlers to be both marginal for farming and inaccessible.

7.6 The indigenous timber industry:

Towards the end of the 19th century, New Zealand’s previously lucrative trade in kauri products was coming to an end. The country’s remaining kauri forests were considered unprofitable for milling and there was growing recognition among both the government and the timber industry that the country’s kauri forest resources were dwindling (Roche, 1990a). In this context, other endemic tree species such as matai, rimu and totara were now considered serious options for trade, particularly as building timbers.
Areas of forest in the central North Island which were previously considered of low commercial value were now being viewed with national interest. A feature of this region was that sawmillers commonly purchased harvesting rights on Māori land, which did not have the same degree of regulation as state owned forests (Roche, 1990b). It was in this new operating environment that Ngāti Tūwharetoa attempted to engage with the sawmilling industry to profit from the iwi’s substantial forest resources (Walzl, 2004). Like many other Māori land owners, Ngāti Tūwharetoa realised that raising capital to undertake milling ventures themselves was impractical because of the legislative restrictions associated with Māori land. Such controls included the difficulties associated with applying mortgages to multiple-owned land, the requirement to gain written consent for ventures from multiple owners, the lack of scale associated with land holdings in small family titles and finally, the various government proclamations that dictated private ventures required Crown involvement (Walzl, 2004). Such difficulties were also coupled with a sense of disillusionment and frustration that caused many Māori to withdraw from European engagement (Te Herekiekie Grace, 1959). With no alternative commercial options, attempts were made by Ngāti Tūwharetoa to engage with third-party business partners to utilise their forested lands. With the demise of the kauri industry, the forests to the west of Lake Taupō were viewed with interest as they were considered to be highly valuable (Roche, 1990a).

In 1900, owners of forest in the Tuaropaki and Waipapa regions to the north-west of Lake Taupō leased 2,630 hectares to a private businessman, Tudor Atkinson, who later formed the Taupō Timber Company. Local Māori were paid a royalty based on the area leased and were offered employment in the milling operation. The Taupō Timber Company operated until its liquidation in 1915, however the Company was reconstructed as the Taupō Totara Timber Company in later years (Walzl, 2004).

In 1903 the Pungapunga Timber Company was established with cutting rights to 2,833 hectares of Ngāti Tūwharetoa forest to the west of Lake Taupō. Alongside private enterprise, local Māori land owners were issued shares in the Company and paramount chief Tureiti Te Heuheu Tūkino V was among the Company directors

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20 Variations in spelling: Pungapunga (Waitangi Tribunal, 2008d) and Pungapuna (Walzl, 2004).
The venture, however, encountered financial problems and failed due to a lack of expertise and capital.

As noted in Walzl (2004), twenty public and private registered companies became involved in sawmilling the west Taupō region between 1900 and 1920 (excluding the Tongariro Timber Company which is discussed in detail in the following section).

Despite some ventures being instigated by Māori, Tureiti Te Heuheu Tūkino V gave evidence to a parliamentary select committee in 1905 outlining the difficulties his people were facing as they attempted to utilise their timber resources (Waitangi Tribunal, 2008d). Tureiti asserted the multiple ownership system imposed on Māori land made it difficult for his leaders to prove they had clear consent to enter into arrangements. Furthermore, legal restrictions imposed on the alienation of Māori land further contributed to lost opportunities as Māori themselves could not accumulate or borrow the necessary funds for sawmilling investment. Tureiti also informed the parliamentary select committee that the communities involved recognised that a simple milling arrangement would not be sufficient for the tribe to successfully utilise their more inaccessible forests. Their intention was to attract a commercial partner that had the capability to establish not just a milling operation, but also a significant railway network to extract the timber (Waitangi Tribunal, 2008d).

7.7 The Tongariro Timber Company:

With so few alternative development opportunities, Ngāti Tūwharetoa leaders secured an agreement in 1906 between the land owners and the newly formed Tongariro Timber Company. This agreement gave the Company timber cutting rights in return not only for royalties but the construction of a 40-mile private bush tramway which would link the previously inaccessible Ngāti Tūwharetoa lands to New Zealand’s main railway network, the Main Trunk Line. The construction of the tramway was of major significance to Ngāti Tūwharetoa (Walzl, 2004). Correspondence to inform government of developments in 1907 and 1908 noted that the bush tramway would carry both goods and passengers and be of considerable benefit to the currently
isolated owners who were periodically living in a state of semi-starvation (Waitangi Tribunal, 2008d). For the owners involved, this agreement not only meant utilisation of 72,843 hectares of their forest resource but also that their communities, considered extremely remote, would be open for trade via the tramway. Furthermore, local Māori were to be employed in the timber felling and milling, their land would be returned to them cleared of bush as farming required, and royalties would be paid during the timber extraction.

Although leases involving royalties had been used previously in New Zealand, this agreement was unique owing to the scope of the proposed infrastructure development and the equal benefit arrangement for the 800 owners. A clause regarding royalties, called the ‘hotch potch’ clause, was a New Zealand first in that it allowed for the those whose lands were far from the tramway to equal benefits alongside those whose areas were close to the proposed tramway (Walzl, 2004). Furthermore, those whose lands were heavily forested would forgo any extra money for those families whose timber cover was sparse. In a move typical of Ngāti Tūwharetoa collective values, the iwi deliberately determined that royalties would be uniform for all those involved for the whole period of harvest.

Walzl (2004) and the Waitangi Tribunal (2008d) continue to describe the events which unfolded over the next thirty-five years. Despite the unique arrangement, good intentions and high hopes of all concerned, what followed was an agreement that stagnated and further disadvantaged the land owners by effectively locking up the land for any use. The timberlands produced no income, the tramway was not built, and the royalties paid did not cover the cost of rates and taxes that accumulated during this time.

The demise of the agreement started with the required sale of margins of this Māori-owned land to the Company for the construction of the tramway. The alienation of such areas for the purpose of the tramway was not permitted under the Māori Lands Settlement Act of 1905 which stated that the owners would require permission from the Government by way of Order in Council to sell the land. A hearing was set for
October 1906 but delayed many times until the Order in Council was finally granted in January 1908 (Walzl, 2004).

Continuing with Walzl (2004), the next bureaucratic hurdle was the removal of legislative restrictions over the land to enable a timber cutting lease to be granted to the Tongariro Timber Company. Furthermore, the practical complications associated with paying royalties fairly to a large number of owners, as per the ‘hotch potch’ clause, were being considered by the Company. During the time it was taking for these legal and practical difficulties to be resolved, the Company was able to gather more detailed information about the value of the timber areas and the costs of building the tramway. Their findings indicated that the initial timber estimates were over-valued and the tramway construction costs were underestimated. Negotiations over time frames and costs between the Company and iwi leaders continued with Crown involvement.

The Native Land Commission recommended the 1906 Agreement be modified, in particular that the Maniapoto-Tūwharetoa (later known as the Aotea) Māori Land Board be empowered to act as an agent on behalf of the owners. In October 1908, the Māori Land Laws Amendment Act was passed to recognise the Commission’s recommendations and a modified Deed of Agreement was signed between the Board and the Company in December 1908.

Despite negotiations between the Board, Company and Crown, the Company failed to make progress to fulfil the agreement. Modifications to the agreement continued and each time the owners were advised by the Board to accept them (Walzl, 2004). Documents were modified and resigned, railway routes were changed, royalties renegotiated. But as the Company continued to lack the finance to implement its responsibilities, opposition within Ngāti Tūwharetoa grew.

The Company’s struggle to secure the funding necessary to fulfil the agreement continued but was ultimately interrupted by World War I. The Company petitioned the government for a respite and a new arrangement was supported in law by the Crown in 1915 which effectively suspended the payment of royalties until 1922.
Dissatisfaction within Ngāti Tūwharetoa increased and leaders actively sought alternatives for their development objectives, including the sale of their lands. However, despite the Company failing to deliver on its promises, the iwi encountered major legal difficulties in seeking to opt out of the agreement. This, coupled with looming concerns over the future availability of indigenous timber and the resulting Crown interest in their timber resource, effectively kept the land in limbo for the next fifteen years (Waitangi Tribunal, 2008d; Walzl, 2004).

Following the end of World War I, the government embarked on a programme of purchasing Māori land for reasons such as the settlement of returned servicemen. In particular, the government intended to acquire land before its value was enhanced by infrastructure such as roading or railway networks (Walzl, 2004). In addition to land purchase for returned servicemen, the government held fears of an impending timber famine. The Crown therefore put in place the administrative and legislative framework necessary to facilitate a large-scale land and forest purchasing programme (Ward, 1956). The effects of this series of interventions in the agreement would be far reaching (Waitangi Tribunal, 2008d). Such interventions essentially came in the form of prohibition orders to prevent private sales. Early in 1918, Ngāti Tūwharetoa lands came under the Crown spotlight and proclamations prohibiting private alienations were issued over some areas. In effect, this meant that titles remained incomplete and land could not be consolidated or partitioned. Ngāti Tūwharetoa unsuccessfully applied to the Native Minister to remove these proclamations. Shortly after, more area was brought under proclamation including lands that were subject to the timber cutting rights of the Tongariro Timber Company.

Given the growing dissatisfaction within Ngāti Tūwharetoa over the agreement, the Crown believed it was timely to attempt to purchase the iwi’s lands in order to secure its timber resource. The Crown approached the Tongariro Timber Company to discuss their intentions but was unable to complete the purchase because of opposition from the Company. Correspondence continued, extensions were granted, Ngāti Tūwharetoa opposition to the agreement grew, and the Company’s financing difficulties were on-going.
While the Crown unsuccessfully attempted to purchase Ngāti Tūwharetoa land and the Company struggled to meet its obligations to the people, the Māori owners of the land were unable to receive the financial benefits they sought. In October 1924, Ngāti Tūwharetoa indicated its intent to take legal action against the Tongariro Timber Company (Walzl, 2004). As per the Native Land Amendment and Native Land Claims Adjustment Act of 1923, action against the Company could not be taken without permission of the Native Minister. Consent was not granted.

As negotiations between each party continued, the intensity of criticism grew within Ngāti Tūwharetoa to the point where it was clear that a process must begin to end the agreement. However, different priorities became apparent as each party scrambled to ensure they did not suffer any more financial loss than was necessary. Parties were divided between the options of cancellation versus variation of the agreement (Walzl, 2004). In 1927, the Aotea Māori Land Board agreed the owners were being subjected to significant hardship, and began the process of cancelling the agreement, however, the Board required government permission to do so. Finally, in 1929, Section 29 of the Native Land Amendment and then the Native Land Claims Adjustment Act was passed which enabled the Aotea Māori Land Board to cancel its agreement with the Tongariro Timber Company in 1930. In addition, the government signalled its intention to negotiate with the owners over their land and timber (Waitangi Tribunal, 2008d). By 1929, 14,186 hectares of the lands covered by the agreement were successfully purchased by the Crown (Waitangi Tribunal, 2008c).

With the agreement coming to an end, the Māori owners sought to gain recognition of their unpaid royalties along with other creditors who acted to secure their investment in the Company. In 1935, legislation was passed without consultation with the owners that one creditor in particular, the Egmont Box Company, was to be paid £23,750. This payment was to be made from the funds the Aotea Māori Land Board held on behalf of the owners (Waitangi Tribunal, 2008d; Walzl, 2004). In 1936 Hoani Te Heuheu Tukino VI, on behalf of Ngāti Tūwharetoa, commenced Court proceedings against the Aotea Māori Land Board to indemnify the land owners against the Board’s payment. In addition other claims were made in respect of negligence and breach of duty. The case was unsuccessful with the Court deciding
the Board was obliged to make the payment under the arrangement ratified in legislation in April 1935. After considering the matter for some time, Hoani Te Heuheu Tukino VI decided to proceed to the Court of Appeal and did so in 1938. Judgement against the iwi was given in October 1938 but with conditional leave to appeal to the Privy Council. The case went on to the Privy Council in 1939 where the appeal was defeated (Cambridge University Law Society, 1942).

Whilst the Tongariro Timber Company agreement was particularly large and complex, the venture highlights significant difficulties faced by the iwi. As described by Walzl (2004), Ngāti Tūwharetoa had little alternative but to initiate and participate in a joint-venture to utilise their timber resource. The owners were prepared to accept delays for the payment of royalties to ensure the venture succeeded and some were agreeable to lower prices to ensure all owners received an equal share. The owners were subjected to significant Crown intervention in the pursuit of national objectives and were prevented from seeking alternative uses for their land (Walzl, 2004). The owners lost out significantly through the company’s failure to provide the agreed royalties, access and employment. In addition, they were obliged to take on the additional expense of court action and the claims of other parties in the venture. They had, however, gained considerable experience with commercial negotiations, Crown processes and court proceedings.

Thus the agreement ended some three and a half decades later at the Privy Council. Meanwhile almost two generations of Ngāti Tūwharetoa iwi had endured a grave level of hardship and poverty. They had not received the infrastructure or financial benefits they sought. Moreover they were liable for the debts paid by the Aotea Māori Land Board, had encountered significant legal costs and lost opportunity from having their land and assets frozen for 35 years. Now with rising land taxes, the iwi was facing the impecunious situation of land alienation through economic stagnation (Walzl, 2004). Unremarkably, such effects of the agreement were to continue to be felt for some time to come.
In the early years of the 20th century, key segments within the New Zealand forest industry and government feared the country was facing grave timber shortages. The government responded by attempting to conserve areas of Crown-owned forested land and, as discussed previously, by actively promoting exotic afforestation programmes. Despite such steps it was acknowledged that restrictions to slow harvest rates would be required for non-Crown owners of timberlands, a large proportion of whom were Māori. In 1939, the Emergency Timber Regulations granted the New Zealand Forest Service the power to control both the sale of all standing timber and the production and distribution of sawn timber (Roche, 1990a).

By 1940, sawmillers in the Lake Taupō district were gradually running out of supply and began approaching the forests of the west Taupō timberlands. Likewise, the Crown’s attention refocused on such areas as those previously involved with the Tongariro Timber Company lease along with other areas of remaining forest to the south of Lake Taupō (Walzl, 2004). Because of the lease’s stagnation, such forests remained largely intact.

By 1941, Hoani Te Heuheu Tūkino VI’s Privy Council case against the Aotea District Māori Land Board had been heard and the appeal dismissed, thus opening up the way for Māori to again enter into lease agreements on their land. However, the Forest Service was unwilling to allow Ngāti Tūwharetoa to engage with private enterprise for fear of losing control of the timber resource. The Crown imposed a prohibition against commercial timber harvest within the Taupō district, for the timberlands to the south and west of the Lake.

Initially this control was kept in place whilst Crown acquisition of the land and assets was attempted. However, to the frustration of the Forest Service none of the Crown offers was accepted by the land owners. By now, Ngāti Tūwharetoa owners understood the increasing value of their timber resource and had, given their recent history, significant experience in both legal processes and business ventures. Instead Ngāti Tūwharetoa arranged a milling venture with local operators to supply the war
effort. The Forest Service, however, refused to relinquish its control over the resource. By 1943, the Crown could no longer justify the prohibition orders and again attempted to purchase the land. By now, Ngāti Ūwharetoa leaders expressed the view that the iwi had been exploited and not surprisingly the Crown’s offer was turned down. In 1943, the Forest Service released its control through prohibition orders and again for the first time in 40 years, Ngāti Ūwharetoa owners, could make their timber available on their own terms and generate employment for their families (Walzl, 2004).

After decades of having their land and forests tied up in non-functioning ventures or under regulatory restrictions, the Ngāti Ūwharetoa owners of the Tongariro bushlands had by mid-1947 taken the first steps towards the direct utilisation of one of their most important resources. One by one sawmilling rights over portions of the land were sold and the native timber milled. Land was cleared and either turned into farms or left to revert back to native forest.

During such time the newly formed Taumarunui County Council and Taupō County Council re-introduced rating levies to be applied to the Māori lands in their territories (Bennion, 1997). If rates were not paid, the owners faced their land being sold to service the debt. The iwi responded by establishing the Māori Timber Incorporation to oversee the harvest of the remaining forest resources to provide an income for both rates and the development into farms of the Puketapu, Oraukura and Hauhungaroa 2 C blocks (Asher, 1997a).

Part III - Ngāti Ūwharetoa and Planted Forests:

7.9  Māori land development schemes:

Previous chapters have discussed the New Zealand government’s preference for farming as a land use. Likewise, many Māori were encouraged to participate in agriculture on their lands but many encountered significant barriers. By 1929, attention was drawn to marginal and undeveloped Māori land whereby difficulties
raising capital and other restrictions associated with customary land had often prevented Māori from participating in the farming sector (Waitangi Tribunal, 2008d). A significant state initiative known as the Māori Land development schemes was aimed at overcoming barriers to participation, such as title and governance difficulties and a lack of capital and skills. In short, the Crown would develop land blocks it considered idle into farms and the costs would be paid off by the farm profits. Once the debt was paid, management would return to the Māori owners. According to evidence presented to the Waitangi Tribunal (2008d), fifteen Māori Land development schemes were implemented around Lake Taupō, including the Pukawa, Waituhi Kuratau, Opepe and Waipapa blocks.

In the case of Ngāti Tūwharetoa, these development schemes could be described as “too little, too late”. The owners had little ability to take advantage of farming opportunities as much of their suitable land was either still forested or had been confiscated by the Government for hydro-development schemes (Waitangi Tribunal, 2008d). Moreover, the effects of farming on the health of Lake Taupō were becoming apparent, and a number of land owners decided to consciously reject farming as a solution. Soon thereafter the iwi was subjected to restrictive environmental zoning as local government attempted to protect Lake Taupō from the effects of farming.

7.10 The eutrophication of Lake Taupō catchment:

In the 1960s there was recognition that farming was having a harmful environmental effect on the Lake Taupō catchment through increased nutrient flow. Following a directive from the Director-General of Lands, an Officials Committee Study Group was set up to consider the preferred land use of area, in particular approximately 40,000 hectares of Ngāti Tūwharetoa owned scrubland around Lake Taupō and Lake Rotoaira basins. Representatives from six local and central government departments served on the Committee. The first meeting was held in Rotorua on 17 July 1967 between the departments and subsequent meetings were held with the Tūwharetoa Advisory Council (Taumarunui 2 November 1967) and then later at Waitetoko (3
December 1967) with all the individual owners invited (Officials Committee Study Group, 1968).

The Study Group recommended that the land use in the eastern Lake Taupō catchment must be consistent with the main objectives in the Taupō County reserve proposals and subsequent reports of interdepartmental committees which were:

- Preservation of areas of natural beauty
- Preservation of scenery as a tourist attraction
- Fisheries conservation
- Protection of wildlife habitats
- Preservation of unique vegetation
- Preservation of historic sites
- Prevention of indiscriminate urban subdivision
- Prevention of soil erosion and flooding
- Prevention of water pollution.

The Group also discussed at some length the problem of nutrient flow to the lake water and although it was somewhat divided in this regard, the Group recommended that almost entire afforestation with only limited pastoral use should be employed. Here it is important to note that such a recommendation and its consequences occurred in a period of living memory among the interviewee participants and they are therefore used as a source of information hereafter.

The Officials Committee Study Group (1968) reported that the owners were generally enthusiastic about the proposal. Several participants in this research also discussed eutrophication, stating that protection of Lake Taupō was a non-negotiable in their ancestors’ conscious decision not to farm their lands.

“….there was also the environmental issues that were starting to concern us then. We also had a vested interest in the protection of the Lake, again from cultural and financial reasons because of the 1926 agreement whereby the revenue from the [fishing] licences was shared, but also the lake is taonga to Ngāti Tūwharetoa. As one of the key taonga that we always refer to in terms of Tongariro, Taupō and the people. It was very clear in those days and I think there were statements made by a number of leaders, including Hepi, that those taonga were never to be compromised.” NT1
7.11 Afforestation options:

With farming ruled out by both the owners and the Study Group, afforestation options were investigated. The iwi urgently required a commercial solution to this land. The Taupō County Council had indicated in 1954 that they were seeking an answer to the unpaid rates levied over the area (Asher, 1997a). Tūwharetoa owners at this time believed they would lose their land unless it could derive a sufficient income. This concern was cited by participants in this research as a major fear for the elders at this time.

“You know it is hard to believe the terror of the elderly people in those early days when they were talking about rates... ...it was new, you know, Māori people didn’t know what they were paying rates for.” NT2

“One of the main things was that you either use the land or you lose it, and that was the main motivator of the people, forcing our people to find something new to do with the land.” NT3

The landowners’ largest impediment to undertaking afforestation themselves was that the land could not be used for security as this was neither desirable to risk alienation nor considered tenable, as debt for forestry ventures must be serviced for 25-30 years before a cash flow is generated. With the iwi unable to finance a commercial forest development, a business partner was required (Thorpe, 2008).

The government at that time had a policy of exotic afforestation. The Forest Service targeted Māori land as a blueprint for bringing largely undeveloped land into production whilst not competing with land considered valuable for farming. By the late 1960s, the Crown had over 20 Māori land leases which covered 52,000 hectares of exotic forest (Thorpe, 2008). The Crown and Ngāti Tūwharetoa leaders entered into negotiations to investigate their common goals.

A major issue realised early on was that it would be necessary to amalgamate the 1000-plus multiple Māori ownership interests. This was for reasons similar to the barriers experienced in the early 1900s, such as the lack of capital and the importance of scale for negotiating with commercial interests. The Tūwharetoa Advisory Council agreed to make initial progress in the formation of subcommittees to this end.
Thorp (2008) recounts the mana of Sir Hepi, and other senior members of the iwi, as being instrumental in uniting the owners. Participants also shared their memories of this time. They discussed the fear of losing the land, the mana of the leadership, the protection of the lake and the collective thinking of the people as being key issues in uniting the owners.

“...[the leaders] went around all the marae in Tūwharetoa to sell the idea of people giving up their lands in Trust to trustees and to put those lands into pine trees... the challenges that were involved in making people understand that the land was just sitting there useless and from the conversion into pine trees that the land would be very useful, not only for the people of that time, but for future generations... I think part of that was determination of those elders in those days. They were determined. There was no way that they weren’t going to succeed and I think that is really one of the main impetuses for the success of the setting up of the Forest Trust.”  NT4

“It’s these big leaders... these guys had the mana and everything else to be able to effectively get a large group of people on-board in terms of, ‘This is what we’re doing. This is how we’re going to get out of those rates issues and this is going to generate some income and some employment and everything else,’ and then drove through those decisions.”  NT6

“...it was a huge undertaking at the time because you're talking about 60+ land blocks amalgamating and you've got to a different family and a lot of waahi tapu throughout that area and a lot of specific families, specific hapūs, specific areas in there for gathering your kai, wood timber products, pigeons whatever, to sort of put a lot of that stuff aside and say, ‘Right, we're going to go to one and it was always taught that kōrero was always about the mokopuna.” NT7

“...the practical simple reason why exotic afforestation started in the tribe, it was for that very simple reason, to keep our lands out of the hands of the District Council, and out of the Crown and out of big business... The underlying principle or the underlying objective out of all of this though was, or continues to be, to maintain our land ownership to protect it and to safeguard it. And so for example the structures and the strategies and the policies that the leadership of the tribe developed and implemented to ensure and protect our land was not alienated or lost to us were very much about maintaining that kaupapa.”  NT10
7.12 Lake Taupō Forest:

The Lake Taupō Forest Trust (LTFT) was established by Māori Land Court Order on the 11 December of 1968. LTFT was formed to collectively represent the owners of 58 separate Māori land titles and to negotiate a forest lease with the Crown (Lake Taupo Forest Trust, 2008). This was the first time in New Zealand history that Māori land holdings were joined together to form a combined Trust while each holding individual titles. In other words, the land titles were never amalgamated into single ownership because the owners at the time wished to retain their identification and association with these original titles. A significant agreement, however, was the desire for all owners to share in the risks and benefits of the forestry venture and to treat the forest estate as a single asset over the whole duration of its existence (Lake Taupo Forest Trust, 2005).

This led to the creation of a 32,771 hectare planted forest, the largest of the Crown’s Māori lease forests established throughout the country. The lease was signed on 5 June 1969 for a period of 70 years. The lease reflects the priorities of the Māori land owners, their attitude toward land, and their role as stewards (kaitiaki) of the land. The first three objectives of each lease stipulate the requirement to prevent erosion in order to protect the streams, rivers and lakes; to protect wildlife and fish habitat; and to protect the sacred sites (waahi tapu) on the lands. Only after these conditions have been satisfied was the objective of establishing and managing a forest on the land stated. These requirements, and in particular the recognition of the importance of protecting the rivers and lakes, have resulted in around a third of the land remaining unplanted. From the Lease Agreement Section II (Te Heuheu, 1969):

\[\text{II. The Trustees have agreed to lease the said land to HER MAJESTY THE QUEEN acting by and through the Minister of Forests (hereinafter called “the Minister”) for the purposes of “}\]
\[\begin{align*}
a. & \text{ Preventing soil erosion, reducing pollution of the waters of Lake Taupō and of the streams and rivers flowing into and out of the said Lake and minimising adverse changes in river and lake waters} \\
b. & \text{ Conserving and protecting fish and wild life habitat and other natural resources of the area} \\
\end{align*}\]

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21 48 ATK 255-285 & 310-330
c. Preserving and safeguarding the graves of the Maori people and all historic and sacred places in and around the said land and the areas of natural beauty and scenery and of unique vegetation.

d. Consistent with the above purposes establishing managing and protecting a forest or forests thereon and appraising selling realising removing and utilising the produce thereof in a manner consistent with good forestry practices so as to achieve the maximum financial yield to the Minister as forest owner and the Trustees as Lessors (all of which operations are hereinafter referred to as “the objects of this Lease”) which the Minister pursuant to the provisions of Section 15(2) of the Forests Act 1949 has agreed to do on the terms and conditions hereinafter set forth.

Rather than an annual rental, the Māori owners opted to receive a share of stumpage from the eventual harvest. As demonstrated by the formation of the Trust, and in the signing (and subsequent renegotiation) of the lease, the Māori owners again showed an ability to plan for the long-term, and to forego short term profit for future benefit.

Stumpage is defined as the profit from harvesting the trees. The percentage of stumpage payable to each party was calculated using the ‘Grainger Formula’, an unproven method named after a forest economist of the day. The formula calculates the values each party contributes, for the iwi the value of the land and for the Crown the cost of establishing and maintaining the forest. The outcome was that the iwi would get 18.5% share of the stumpage at the time of harvest with the Crown to receive 81.5%. Given the uncertainty both of the Grainger Formula and the actual forestry costs, the owners insisted on a review clause to be included in the lease which enabled each party to review the stumpage shares periodically should they consider the initial shares to be unfair (Thorp, 2008). Finally all rates were to be paid by the Crown.

The planting of Lake Taupō Forest Trust commenced in 1969 and was completed 20 years later. On average, 1,000 hectares were planted per annum, primarily in Pinus radiata. The management regime focussed on clearwood production, typically involving three pruning lifts and one waste thinning operation to provide a clear knot-free first log. Such a forestry regime is labour intensive and the potential benefits of employment for the people of Ngāti Tūwharetoa were expressed as of major
importance to the owners, although the subject of owner employment escaped the lease document.

“And during the negotiation with the forestry [the] Crown people were saying now look if you let us put afforestation on the land, there will be work for you, work for your children and your mokopunas and we are going to have production mills and what have you in the forest will be an occupation and opportunity for you and of course our old people were saying “oh how lovely!” There will be work you our tamariki and what have you so they agreed.” NT13

“...[the leader] collected us together and he told us, ‘This is the beginning of your work in your forest. You need to be part of it. It is your forest and you should be working in it and that is our vision,’ and roughly that’s how he put it, might be in different words, but my understanding was like that, was to be on-going work for us.” NT14

7.13 Lake Rotoaira Forest:

With the fate of the east Taupō lands decided, attention turned to the Ngāti Tūwharetoa land to the south and west of Lake Taupō, parts of which were also included in the Officials Committee Study Group on land use. Additionally these lands surrounded Lake Rotoaira which was a catchment of national interest owing to the state-owned Tongariro hydro-power development scheme.

The Lake Rotoaira lands are not included in this case study but their establishment and governance remains significant to LTFT, in fact some participants admitted difficulty in separating the two during our discussions. First, the lands share many common owners and trustees. Second, the establishment of Lake Rotoaira Forest was undertaken shortly after Lake Taupō Forest and in similar economic and legislative circumstances. Finally, as will be discussed further, legal action taken by Lake Rotoaira Forest Trust (LRFT) has directly impacted on the decisions made by the Lake Taupō Forest trustees.

The area in question comprised 21,853 hectares with light pumice soils that were liable to erosion. Allen (1971) advised Cabinet that the lake was susceptible to erosion and enrichment, both of which posed serious risk to the hydro-power
structures. The only suitable conclusion to protect the multi-million dollar asset was for the government to control the land-use. Cabinet was therefore invited to approve an afforestation partnership in principle and if this was not approved, the New Zealand Electricity Department should extend its policy of compulsory land acquisition in the area.

A meeting was held in Tokaanu on 19 October 1972, to advise owners of such plans. Chief project engineer, W Gibson, disclosed the land that would be compulsorily acquired under the Public Works Act for the protection of the Tongariro Power Development. He further stated that without afforestation on the adjacent areas, the Ministry of Works would double the area of compulsory acquisition.

Mr Gibson also advised the owners that the construction work for the hydro-development was coming to an end and therefore so too was the employment of approximately 1,700 local men. He expressed the view that afforestation would help avoid the “sociological upheaval” in the town by providing employment. (Brown, 1972a). Naturally, the owners’ representatives agreed in principle to afforestation, stating they would prefer to enter into a lease arrangement with the Crown (Minister of Forests, 1972).

A meeting at Waihi followed some days later on 28 October 1972 and was attended by approximately 400 owners. Newspaper reports at this time indicate that there was major discontent among the owners at this meeting (Maori Land Court, 1972), however, the official meeting minutes do not entirely reflect this. The minutes instead show owners expressed their desire for employment with some minor concerns over hunting restrictions, timber rights for the remaining native forests and the rights of their grandchildren to build houses. It was noted that some owners asked to be excluded from the agreement. It was agreed, however, that a trust be formed to act on behalf of the owners (Lake Taupo Forest Trust, 1972).

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22 By 1972 the Ministry of Works had invested $30,000,000 in the Tongariro Power Development.
The Māori Land Court met at Tokaanu on 13 November 1972\textsuperscript{23} to consider the application by the owners to vest a number of land blocks (totalling 11,736 hectares) in trustees for the purpose of negotiating with the Crown an afforestation lease. The Court envisaged that not all the lands included in the schedule would be included in the lease decision (Thomson, 1973a). Furthermore, the Court required public notification of the decision and the schedule and invited owners who desired their lands to be excluded from the lease to notify the Court of their wishes. Extensive notification was given in accordance with the Court’s decisions and the objections proceeded to be heard\textsuperscript{24} (Feist, 1977).

On 2 March 1973, the Minister of Finance gave approval to extend the afforestation scheme to include in total 19,200 hectares. In February 1973, a temporary lease covering 480 hectares was signed to allow the first planting in Rotoaira Forest. The Conservator of Forests was represented at the Māori Land Court sitting in Tokaanu on 5 March 1973\textsuperscript{25} where Chief Judge A. Todd gave his decision in favour of the larger scheme (Thomson, 1973b). The New Zealand Forest Service on 9 March 1973 announced to the country in a press release that “a major new forest” was being established in the Lake Rotoaira catchment (New Zealand Forest Service, 1973b, p. 1).

Errors in the plan presented to the Māori Land Court resulted in a number of re-hearings. In the meantime negotiations continued between the parties and the New Zealand Forest Service aiming to present a lease document to the Māori Land Court by February 1974 (Brown, 1972b). At a meeting held on the 15 December 1973, the Minister of Forests, the Right Honourable C.J. Moyle addressed the owners:

“If you recognise yourselves as New Zealanders as well as Māori you know that our wellbeing and our wealth as a nation depends on making the land work for us. Some land is better used for one thing than for another. That this land has not been cultivated earlier must show that it is not a good farming proposition. This, together with the need to protect these wonderful and now rare clearwater lakes from serious enrichment makes it clearly more desirable to be planted in trees”. (Moyle, 1973, p. 2)

\textsuperscript{23} See Tokaanu Minute Book 52/1-51
\textsuperscript{24} See Tokaanu Minute Book 52/120
\textsuperscript{25} See Tokaanu Minute Book 52/120
At this meeting the owners agreed to the formal Crown offer which constituted a stumpage share lease for 70 years from 1 April 1973 to 31 March 2043, with a peppercorn rental of 5 cents per acre to be offset against future income and a 15% stumpage share (New Zealand Forest Service, 1973a). As was legally required, a fixture was sought for the seeking of the final Trustee Order.

The Trustee Order hearing was delayed owing to the illness of the Chief Judge of the Tokaanu Māori Land Court and following his death the matter was moved to Judge Nicholson at Wanganui26. Feist (1977) notes that as the Trustees, other owner representatives and the New Zealand Forest Service left the Court hearing on 18 June 1974 they believed an Order had been made. They anticipated that the Court would complete the sealing of the Trustee Order in due course as had been the case in LTFT. The Rotoaira lease was re-signed on 21 August 1974.

The Minutes of the Wanganui hearing, however, appeared less clear; the Judge appeared to have overlooked the fact that not all the land subject of the Trustee Order was to be included in the afforestation lease. Confusion about the area vested in the Trustees, disagreements about the area to be included and stumpage share continued to dog the Rotoaira agreement (Armitage, 1978; Feist, 1979; Hood, 1979).

Finally, in 1980, the Lake Rotoaira Forest Lease was agreed to and consisted of a statement of objectives similar to that of the Lake Taupō Forest.

“Section II: The Trustees have agreed to lease the said land to HER MAJESTY THE QUEEN acting by and through the Minister of Forests (hereinafter called “the Minister”) for the purposes of:

a. Preventing soil erosion, reducing pollution of the waters of Lakes Taupō, Rotoaira, Otamangakau and Te Whaiau and of the streams, rivers and canals flowing into and out of the said lakes and minimising adverse changes in river and lake waters.

b. Conserving and protecting fish and wild life habitat and other natural resources of the area.

c. Preserving and safeguarding the graves of the Maori people and all historical and sacred places in and around the said land and the areas of natural beauty and scenery and of unique vegetation.

d. Consistent with the above purposes establishing managing and protecting a forest or forests thereon and appraising selling realising

26 See Wanganui Minute Book 137/293-313
removing and utilising the produce thereof in a manner consistent with good forestry practices so as to achieve the maximum practicable financial yield to the Minister as forest owner and the Trustees as Lessors (all of which operations are hereinafter referred to as “the objects of this Lease”)

(Te Heuheu, 1980)

A later agreement incorporated the Waione Block bringing the final area of Lake Rotoaira Forest to 15,200 hectares.

7.14 State Forest sales:

Despite recognising the necessity of the Crown’s involvement in the forest management, the owners of the Lake Taupō Forest lands have from the outset looked forward to the day when they would own the forest outright (Thorp, 2008). In the late 1980s, the New Zealand Government clearly signalled its intention to exit the forest sector. In 1987, the New Zealand Forest Service was corporatised and the state-owned New Zealand Forestry Corporation was formed to manage the Crown’s exotic forest interests and prepare them for sale.

On 22 March 1987, at a hui in Rotorua, Māori lessors were formally given the option to purchase the Crown’s interest in their forests on a commercial basis. This disclosure was greeted with a great deal of enthusiasm within Ngāti Tūwharetoa and the Trust therefore prepared itself to purchase Lake Taupō Forest outright (Thorp, 2008). At the time it was thought the sale and purchase negotiations between Treasury and the New Zealand Forestry Corporation were nearing completion and that process would provide a good basis for valuing the Crown’s interest. However, the government’s decision in August 1988 to privatise the State Forests as soon as possible, meant that the valuations would instead be determined on the open market. In October 1990, the first State Forest sales were settled and this gave impetus to serious negotiations between the Crown and LTFT (Gorman, 1997).

The commercial returns of the New Zealand forestry sector at this time must be briefly considered. The northern spotted owl injunction in 1990 had drastically
reduced the timber harvest in the north-west United States much to the New Zealand sector’s advantage. The forestry business was buoyant and timber prices soared.

In January 1993, the parties to the Lake Taupō Forest lease were still negotiating the sale. During this time log prices had increased to the point where officials believed the value of the Crown’s interest had more than doubled (Gorman, 1997). Relationships between the negotiating parties become strained over the purchase price and a Trust offer of $80,000,000 was declined by the Crown. On 8 February 1993, Sir Hepi Te Heuheu Tūkino VII withdrew all prior offers, in spite of the Trust having spent approximately half a million dollars on professional advice.

On 10 July 1993, Sir Hepi convened a hui of all lessors of Māori Land forests to discuss actions to safeguard their interests. On 14 September 1993, Sir Hepi led a delegation of Māori Afforestation Lessors to the Prime Minister. The delegates represented the lessors of all 19 Māori afforestation leases (Gorman, 1997). The land owners stated that the process of transfer was fraught with complications and nationally no single transfer from Crown to Māori owner was achieved (Delegation of Maori Afforestation Lessors, 1993). Cabinet responded by asking officials to prepare a legal opinion of all relevant information, a process which took until 30 August 1994. Given that the Crown could not transfer the lease without approval from LTFT, the 1969 lease remained in force.

7.15 Te Arawa-Mataatua Forestry Claimants Working Group:

Despite Lake Taupō Forest not being included in the Crown’s state asset disposal plans, the sale of other Crown forests in the region remained significant to Ngāti Tūwharetoa and other iwi. Many Māori still regarded themselves as the land owners and kaitiaki, and some of whom had laid claim to ownership under the Treaty of Waitangi process. Furthermore, the recently passed Crown Forest Assets Act (1989) had opened the way for state forest to be used as compensation for successful Treaty of Waitangi claims.
Several iwi in the central North Island banded together to form the Te Arawa-Mataatua Forestry Claimants Working Party. As Potaka-Dewes (1995a) records, this working party joined together not only to ensure Māori rights were respected during the sales, but also to investigate potential purchases.

“...it is necessary to get a clean distinction between land return and the Crown Forests Assets Act from the business and commercial activity we propose. Land gives mana, but it will not provide the income to uplift standards of health, education or housing etc. That pathway takes too long so with the benefit of hindsight, we can get into the business of forestry now knowing that the land will come back under the Crown Forest Assets Act.” (Potaka-Dewes, 1995c, p. 5)

Minutes from hui documents (as recorded by Potaka-Dewes) show that speakers maintained a strong connection to the Crown-owned lands being offered for sale and favoured a show of strength, unity and consistency to assert their territorial rights (mana whenua) over the disputed lands.

“Way back in the fifties my people were seduced into setting up the forest with the promise of jobs forever. If Forestry Corp is sold to the Asians we would be absentee landowners with no say. But if we own it we will have control, the mana is ours, and employment is ours.” ("PW" Potaka-Dewes, 1995b, p. 5)

“...we are the mana whenua here, our people grew the trees, gave the land and it is our communities that have been eroded. So if this Forestry Corp is for sale we want to be part of the sale, part of the talk and involved from the start. Trees and land are the same for us. The Crown took lands for forests. We didn’t have any say in the business. Crown is moving us on a back foot. Our treaty claims are on the table and are substantial and the central North Island region belongs to us.” ("TNT" Potaka-Dewes, 1995b, p. 8)

“Our old people worked out there and were told the whole nation would benefit. 40,000 people employed were wiped out in the 1980s.” ("AW" Potaka-Dewes, 1995b, p. 9)

“The Crown needs to approach this from a Māori perspective. Papatūānuku and Tane Mahuta and both are linked to us, tangata whenua were the guardians. Don’t look at numbers and figures. Think in terms of Māori values. Don’t agree to sale without our involvement.....” ("MG" Potaka-Dewes, 1995b, p. 9)

As the working party continued to meet, their objective evolved to develop a course of action that would include where possible the early return of the land and any assets (Potaka-Dewes, 1995d). Although the working party eventually disbanded, the
process of Crown forest sales remained influential in framing Māori attitudes to leases and lease reviews, and set the precedent for pan-tribal collective action.

7.16 Lease reviews – Taupō and Rotoaira:

The first review of stumpage allocation for Lake Taupō Forest lease was due in 1989, however, both parties were engaged in discussions over the forest purchase. The review was undertaken in 1993 when the forest sector was experiencing inflated prices. The review therefore occurred at a time when minor increases in stumpage share represented large increases in profit. However, the unsuccessful negotiations over the purchase of the forest ensured the review was a subdued affair.

The review found that the New Zealand Forest Service had not kept good records of its expenditure therefore making negotiations difficult. The parties agreed to LTFT being allocated 21% of the stumpage. The next review was due shortly after in 1995 but was not undertaken.

Meanwhile, the Rotoaira Forest lease review in 1993 was more aggressive. During the consultation with owners over the establishment of the forest, Crown representatives had stated on a number of occasions that the New Zealand Forest Service would be seeking only a “modest return” from the lease. Lake Rotoaira Trustees now argued that the 85% stumpage share for the Crown was considered beyond modest. The Crown took the view that this avenue was being pursued in light of the failed LTFT purchase (Gorman, 1997).

The Rotoaira review remained unresolved with the Crown and LRFT unable to reach an agreement. The parties therefore sought arbitration in the High Court and a lengthy preparation process began with the hearing commencing in June 1997. The owners’ position was that their leaders had consistently opposed any compulsory taking of land and expressed their wish to bring their land into production to provide an income and employment for their people. Also, the owners were strongly opposed to any further degradation of Lake Rotoaira through eutrophication thus limiting their
options. Despite this, the leaders believed they had negotiated a lease of significant mutual benefit whereby the Crown would only be entitled to deduct reasonable costs and that the Trustees would be entitled to the residue of the revenue. (Asher, 1997b; Curry & Salmon, 1997; Feist, 1997; Te Heuheu, 1997). The Trustees went on to present evidence that the Crown had benefited in a number of ways by the afforestation of the Rotoaira basin beyond stumpage share, in particular by the protection of the hydro-development assets and environmental services (Curry & Catran, 1997). The Crown case was based on their responsibility to act on behalf of the nation and provide protection to the hydro-electricity network and ensure future domestic timber requirements were met. The Crown developed the stumpage sharing mechanism with the intention to recover its costs plus compound interest and believed the iwi had agreed. The Crown also considered the afforestation lease necessary for the welfare of Ngāti Tūwharetoa (Groome, 1997; Moore, 1997). Both parties extensively argued the limitations of the Grainger Formula and drew heavily on a unpublished thesis researching Māori afforestation leases (Everts, 1978).

The interim outcome of the High Court hearing was announced in October 1997. The arbitrators awarded the Rotoaira a 30% share in stumpage, twice the original amount. The Court also noted that the formula upon which the lease was based (Grainger Formula) offered no certainty for the partners, as a modest return for the Crown could affect a variety of percentages depending on market conditions (Guild & Williams, 1997). Although this was subject to appeal, LRFT’s stumpage share was eventually doubled and they were clearly considered the successful party.

7.17 The early return of Lake Taupō Forest:

Despite the Rotoaira arbitration being completed, the 1995 Lake Taupō Forest review remained outstanding. Given the recent events, both the Crown and the Lake Taupō Forest Trustees were keen to avoid any further court costs or reviews. In 1999, LTFT successfully negotiated a reduction in the lease term from 70 years to one rotation. Under this new arrangement, the area of crop harvested is returned to the land owners, and the Trust uses its share of the stumpage income to replant and manage the
following rotation. In 2020, the last of the Crown forests will be harvested and thus LTFT will take over both ownership and management of the entire resource. As part of this negotiation process, both parties agreed to forgo future stumpage reviews and fix the shares for the remainder of the lease at 65% for the Crown and 35% for the land owners. Of note, a similar arrangement for early return was negotiated for Lake Rotoaira Forest in 2002, which will see LRFT full owners of Lake Rotoaira Forest by 2025.

7.18 The management of Lake Taupō Forest:

The owners of the land are represented by the Trust. Trustees are elected from among the landowners every three years. While the forest operates as a single business, the individual land blocks on which the forests are located have retained their identity, and profits are distributed to the owners of each block based on the proportion of total land area contributed by each block. The mission statement of the Trust is “to protect the integrity and ownership of ngā taonga tuku iho (core asset of land and resources) administered by the Trust on behalf of the beneficial owners” (Lake Taupo Forest Trust, 2008, p. 1).

Today, the LTFT owns approximately half of the Lake Taupō Forest and the Crown is exiting on a yearly basis following harvest. The early return of the forest requires the Trust to immediately replant the forest and, in turn, this has reduced the ability to distribute profits to the owners. In the long-term, however, the higher returns from full ownership of the second rotation are expected to compensate. Once again the current owners, by now numbering approximately 10,300, accepted a lower short-term return for a better return for the future generation.

The forest is managed on behalf of both the Crown and LTFT by New Zealand Forest Managers Ltd, a private forestry company based in Turangi. The Trust contracts a forestry consultant to liaise with New Zealand Forest Managers on their behalf. The work of New Zealand Forest Managers is currently audited on behalf of the Trust by the company Lake Taupō Forest Management Ltd. The Crown’s interest in the forest
is overseen by the Forestry Division of the Ministry for Agriculture and Forestry and liaises with New Zealand Forest Managers on behalf of the government.

New Zealand Forest Managers are provided with management plans, agreed to by both the Trustees and the Crown, which reiterate the priorities of the original lease i.e. to prevent erosion to protect waterways, to protect wildlife and fish habitat, and to protect waahi tapu and, finally to manage a profitable forest.

The Trust now controls an area of 32,771 hectares, including the 30,084 hectares originally leased to the Crown and a further 1,987 hectares of land that was not part of the Crown lease. The land comprises 66 Māori Land blocks and two freehold blocks. Of the 32,771 hectare area, 21,750 hectares (66%) is forested. The high portion of unplanted area (34%) reflects the conservation and environmental objectives of the original lease. Figure 16 shows the settlement of Waitetoko on the shores of Lake Taupō with a recent addition of Lake Taupō Forest on ex-farm land.

Figure 16 – Aerial photograph of Waitetoko village with a single-age class area of Lake Taupō Forest (reproduced with permission of LTFT, taken by Geoff Thorp)
The Taupō District Council recently assessed areas of ‘natural values’ within the region, i.e. areas which have ecologically valuable reserves of native flora and fauna. The majority of the region is now owned by non-Māori and government (80%). The Council’s assessment determined that, excluding public conservation land, approximately 90% of the natural value areas remaining in the region are on Māori Land (Rotarangi & Thorp, 2009). In other words, 90% of the region’s natural values exist on 20% of the region’s land. While not using modern terminology for such characteristics, Māori have understood conservation values and have protected them for centuries. As stated in a 2006 report to owners “…ecological sustainability is not new to the Trust, nor to Ngāti Tūwharetoa” (Lake Taupo Forest Trust, 2006, p. 14).

At the commencement of the lease, the creation of employment opportunities for owners was an important consideration for the Trust. With this in mind, New Zealand Forest Managers undertake regular workforce surveys to ascertain what proportion of the workforce is of Māori descent and from which iwi. Approximately 200 people work in the forest excluding distribution and management staff. The current percentage of Māori in the forest workforce is 70-80%, with the percentage of Ngāti Tūwharetoa descendants being 35-45%. The survey fails to capture the spouses of beneficial owners or other Māori. While owner employment remains a significant objective for the Trust, the stumpage income stream is now well established and the main benefit to owners is recognised as the financial return from the forestry business.

Profits from Lake Taupō Forest have been distributed to owners since harvesting commenced. These are paid to landowners based on their share of ownership, with funds also set aside for initiatives including educational scholarships, marae grants, and health initiatives.

Access to the forest is allowed only for the beneficial owners and is administered by New Zealand Forest Managers. Owners are required to gain a permit to enter the forest and do so under the conditions stipulated by New Zealand Forest Managers.
7.19 The future management of Lake Taupō Forest:

The revised lease arrangement will see the last of the Crown’s lease forest being harvested in 2020. Harvesting of the second rotation crop is expected to commence at the 480,000 m³/year level from 2021, with all stumpage profits going to the Trust. The Trust’s future income will obviously vary along with the state of the markets, but the current forecast is that Trust’s share of stumpage will bring in around NZ$8 million per annum. Of this profit it is expected 50% will be required for the replanting and management of the third rotation crop, 20% for the running of the Trust itself, and the remaining 30% distributed to owners.

The Lake Taupō Forest Trust land owners acknowledge the Crown’s role in establishing the forests and assisting the collective to become involved in the industry, recognising that they did not have the financial resources or technical expertise to do this on their own (Brown, et al., 2005; Thorp, 2003, 2008). There is, however, a readiness for a greater involvement in the forestry business. In addition to the obvious contribution to their economic advancement, taking over ownership of the forests also represents a return of the land to their full control.

With full control comes full responsibility and LTFT, like many other forest owners, will be expected to produce a diversified range of products and services that incorporate not only the cultural, ecological, commercial and societal values of the present but also those of the future. Like other forest owners in New Zealand, the Trust will need to manage for a variety of outcomes within the context of a predominantly single-species planted forest, with early silviculture and a clear fell regime. Flexibility within the Trust is further reduced by the statutory and owner opposition to land sales; in effect the lands will be in Māori ownership in perpetuity.

Part IV – Lake Taupō Forest Trust - Analysis Strategies:

With the historical background in place, this chapter now turns to the analysis of the memories and contemporary opinions expressed by the participants during the semi-
structured interviews. The following section introduces the analysis process and Part V presents the results of the interviews.

7.20 Introduction to the analysis process:

The interviews produced numerous pages of transcripts potentially containing a wide range of material. Before the analysis of this material could begin, a key decision regarding relevance needed to be made. Therefore, only data that was coherent, intelligible and related to the topic were included in the analysis. Where the interviewee ranged well away from the topic, for example most commonly into informal discussions regarding the researcher’s family (whakapapa) or the weather, such conversations were excluded from the data.

The software package ‘NVivo 9’ was used to assist the researcher in particular by using ‘see also notes’, ‘annotations’ and ‘nodes’ to assist the researcher to find patterns or themes. Initially the transcripts were combed through in three phases to bring out the relevant expressions:

1. Statements were sought in which the interviewee appeared to assign significance to a matter.
2. Data were then grouped according to whether the expressed sentiments were shared or supported by the document review or by others in the case studies.
3. Finally, expressed sentiments were assigned to themes and subthemes using the node function in NVivo 9.

As part of the first combing through process, it was not the intention of the researcher to dismiss or assign relative importance to such views. Instead, this process collected all the statements that the researcher deemed relevant to the investigation.

The aim of the second stage of the combing through process was to search for any commonalities across the interview records (Sarantakos, 2005). This process involved identifying experiences, opinions and values shared by other beneficial owners or expressed previously in the document review. Such material is given
increased legitimacy by the aggregate of people attributing to it (Stephenson, 2005). By using this approach, it could be assumed the remaining data were significant not only to the participant but also to the group. However, the researcher had only interviewed thirty-seven of the ten thousand-plus beneficial owners. Therefore, if only one participant expressed a matter of significance to them, it was included in the data.

The third stage of data management involved applying themes or sub-themes to commonalities in the interview records (Davidson & Tolich, 2001). No attempt has been made to assign relative significance to a theme, instead only aspects of uniformity and diversity of perspectives will be presented.

**Part V - LTFT Results:**

7.21 **Introduction to the results:**

The participant interviews aimed to address the first two research questions of this thesis:

1. What do Māori land owners view as the benefits and constraints of the pre-1990 planted forests that exist on their ancestral land?
2. What values do the participants express for their land and is planted forestry compatible with such values?

This section reports the findings from the analysis of the LTFT interviews.

The primary research into experiences, opinions and values relation to the planted forests involved thirty-seven interviews of Lake Taupō Forest land owners using the semi-structured interview questions in Appendix D. The purpose was to gain an understanding of the range of ways they perceived the planted forest. The intention was not solely to discover the way in which participants viewed forest management but rather the variety of ways in which the interviewees perceived the planted forest. Accordingly, the premise of each interview was to see the forest through the eyes of the interviewee.
7.22 Interview participants:

Participants were sought who were 18 years or over and who were either beneficial owners of LTFT or descendants of beneficial owners. The participants were proposed by the LTFT liaison assistant and the researcher had little input into the selection of ‘appropriate’ participants. In the case of LTFT, it was considered inappropriate to collect the age of the participant or any other personal information, yet a variety of participants in terms of age, gender and location of residence was achieved.

Thirty-six LTFT owners consented at the time of interview to their views being included in the analysis. However, not all of these participants are included in the following data analysis. Typically interviews were carried out on a one-to-one basis but in a few cases, some participants chose to be interviewed in small groups. Two such participants joined group interviews but made few verbal contributions. Their contributions were removed from the analysis due to difficulties analysing their non-verbal communications. Another interviewee’s data was later removed from the group because the person was not actually a beneficial owner of LTFT. Finally a further two participants were removed from the analysis because the situation had not allowed for the interview to be taped or detailed notes to be made directly afterwards. Thirty-one participants remained of which thirty had full transcripts and one had extensive notes written directly after the interview.

7.23 Presentation of results:

The following data are presented firstly in the form of diagrams which displays the themes and sub-themes of the expressed sentiments where possible. The number of participants who clearly communicated identified themes is displayed in brackets; the number in the centre of the diagram represents the total number of participants who discussed the theme, while the outside numbers represent the total number of participants who brought attention to the sub-themes. Given that a participant might have contributed to several sub-themes, the sub-theme numbers do not add up to the theme total. Furthermore it should be noted, such numbers represent the minimum
number of participants supporting the themes and sub-themes, in other words only those participants that specifically stated such. Other participants may have implied they were in agreement, which has added to the researcher’s knowledge and confidence of the themes.

The diagrams are followed by a brief explanation including where applicable a series of quotes to illustrate each theme or sub-theme. The implications of the findings are explored in detail in the discussion section of this thesis (Chapter 9).

The LTFT results are presented under the following interrelated themes and subthemes which also represent the set of nodes created by the NVivo analysis.

1) The interviewees’ reports the motivations of the land owners who agreed to the afforestation lease:
   a) Historical hopes (income, employment, land retention, environment)
   b) Historical concerns (loss of autonomy).

2) The present-day experiences, views and opinions of the planted forest:
   a) Structure:
      i) Governance, land tenure and regulation framework (Crown, Trust, owners and regulators)
      ii) Leadership (communication, participation, management and leaders).
   b) Forest Management:
      i) Commercial value (tenure, governance and land use)
      ii) Employment (preferential land owner employment)
      iii) Forest practices (enablers and constraints)
      iv) Access (enablers and constraints)
      v) Identity (including landscape).

3) Non-negotiable cultural values relating to the land.

4) The future hopes and concerns of the land owners.

The relevant themes and subthemes will be repeated under each of the following sections to assist the reader navigate the following results (see Table 4). It is acknowledged that despite discussing the results in terms of themes and subthemes
many of these groupings are interrelated, a point which will be revisited in the discussion chapter.

7.24 **Historical perceptions of the planted forest:**

The participants of the LTFT interviews discussed the historical perceptions of planted forests from their recall of the hopes and concerns of the land owners who chose to amalgamate their lands for the creation of a planted forest. Much of the discussion centred on the participant’s memories of the period in the late-1960s when the planted forest lease was being considered, a topic which has been discussed previously in this chapter but will also be expanded in the following paragraphs.

7.24.1 **Historical hopes of the land owners:**

**Table 4 – LTFT: themes and subthemes 1) a)**

<table>
<thead>
<tr>
<th>1. The interviewees perceived the motivations of the land owners who agreed to the afforestation lease in terms of:</th>
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<tr>
<td>a. Historical hopes (income, employment, land retention, environment)</td>
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The participants were asked directly what they either recalled or they had been told about the time when the afforestation lease was being considered by the land owners. Of the thirty-one interviews included in the analysis, twenty participants specifically discussed the hopes held by the land owners who agreed to the afforestation lease (see Figure 17). The over-arching impression gained from the participants was that land owners hoped the planted forest would benefit future generations.
Of the participants who discussed the historical hopes of the land owners, the majority of respondents (11) hoped the planted forests would provide income to benefit the land owners, in particular future generations of land owners. Several participants (7) discussed the conscious decision to forego immediate financial benefit to allow for future generations to financially benefit.

[There were two] options put in front of the owners... one was to act as a landlord and get a rental from day zero, or forego that option and wait till the trees were ready for harvest... there were very few of those elders around when the Trust started giving out financial contributions, most of the decision-makers had passed on. Yet they died knowing that there would be a benefit back to them and their whānau. NT11

We don’t own land, the land owns us, and it comes back to that kaitiaki principle of protection for the next generation. So I can very much see that foresight of those in the 1960s that made the decision to go into forestry, [they] were looking at their grandchildren and the benefits that they will get out of it. NT18
A further four participants went on to state that the land owners hoped the future income would be used to finance education.

The hope that the planted forest would benefit future generations was also discussed in relation to increased access to employment (7) and improving the receiving environment of Lake Taupō (3). Likewise, a number of participants discussed the goal of the forest establishment was to secure the long-term retention of the land (6) this being essential to protecting sacred sites (waahi tapu) and maintaining cultural practices (tikanga).

...the original signatories to the lease, they’ve always said that the tikanga had to be observed, the Tūwharetoa values had to be nurtured first of all, even before any consideration of the commercial values... and they made sure that happened. NT1

7.24.2 Historical concerns of the land owners:

Table 5 – LTFT: themes and subthemes 1) b)

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<td>1. The interviewees perceived the motivations of the land owners who agreed to the afforestation lease in terms of:</td>
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When asked directly to discuss the historical concerns of the land owners regarding the establishment of the forest, only two participants volunteered such information, however, a further six participants went on to discuss concerns in relation to other questions (see Figure 18). The overall impression is that owners were concerned that the establishment of the forest would result in a loss of autonomy over the lands.
Participants discussed the historical concerns as having a long-term lease partner (the Crown) and also the amalgamated land losing the traditional hapū governance.

...people regard whānau and hapū as the core rim for the management of a tribe.. but they [the Trust] are managing for the iwi.... Nevertheless the development of the pine forest continued. NT25

Two participants described the fears the land owners had over the exposure of waahi tapu sites either by disclosure, forest operations or accident.

That information [regarding waahi tapu] is only for the whānau or the people who are connected with the area. If some of their parents have died, or some of their children have died there, the information about that place should be left to them alone. NT2

Of the eight participants who specifically discussed the historical concerns held by the land owners, six went on to discuss how the land owners accepted such risks because of the potential benefits for the future generations.

One of the main concerns that I can recall coming out of the meeting was retaining the control of the land and they were adamant they did not want to lose control of the land... they would be thinking of their children and grandchildren. NT3
More typically it was notably difficult to elicit such memories from the participants without asking the question in a number of ways. Of the participants who spoke of the late 1960s, most preferred to discuss their memories in terms of the strength of the leadership, the desire to act collectively and the hopes of the land owners.

*You know we had some good leaders at that time. We did have some good leaders and I think the people were happy to leave it to their care and they were brave. NT19*

*I remember... many of the owners placed their trust in the leadership of the Tribe. I remember my dad saying that the people would say "... if [the leaders] think it is a good idea, and that our land won’t be lost, kei te pai". NT10*

*The concerns about exotic forests weren’t expressed as such. I’m sure there were concerns, but from my recollection of the main meetings... there was no obvious opposition. NT1*

7.25 Present-day experiences, views and opinions of the planted forest:

When participants discussed the planted forests, several themes were apparent. In particular, participants discussed aspects of planted forests using terms related to governance, tenure and regulation, forest management themes and also in relation to the realisation of their values for their land. This segment of the results chapter forms the largest presentation of data.

The presentation of the analysis of the land owners views of planted forests begins with the theme in which most participants were in agreement, that the forest lease created a difficult structure by which to manage the land and resources either in terms of interplay between governance, tenure and regulation or by the activities of the Trust and leaders.
7.26 Present-day experiences, views and opinions of structure: governance, tenure and regulatory framework

Table 6 – LTFT: themes and subthemes 2) a) i)

<table>
<thead>
<tr>
<th>2. The present-day experiences, views and opinions of the planted forest can be grouped into the themes of:</th>
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<tr>
<td>a) Structure</td>
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<tr>
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<tr>
<td>iv) Access (enablers and constraints)</td>
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<tr>
<td>v) Identity (including landscape).</td>
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</table>

Interviewees associated the establishment of the planted forest with the establishment of a particular governance and tenure structure. As stated in Chapter 1, for the purposes of this thesis, tenure is described as the rights and conditions over the land and its resources, and governance is the process by which decisions are made over the land. In 1969, the land owners decided to forego medium-term land autonomy to secure long-term land retention. Whilst the afforestation lease provided specific guidelines of behalf of all land owners (protecting soil, water, wild-life and waahi tapu), a partnership between Trust and Crown would manage the land and forest on behalf of the multiple owners. It is hardly surprising, therefore, that approximately 40 years into the lease twenty of the interviewees had strong and specific opinions on governance and tenure structure. Furthermore, the participants expressed the view that their exposure to the regulatory framework was accentuated because the lease dictated the condition of their resources (i.e. land use) and by their diluted ability to make decisions over their land.

Participants typically spoke of land management structure in four ways (see Figure 19). Twenty land owners viewed the planted forest as creating a new tenure structure through the lease (the Crown) and the new governance structure of an internal
authority (the Trust) which was created when 58 hapū (the owners) agreed to manage their land as a single entity for the duration of the lease. Furthermore, because of the long-term nature of the lease, the owners viewed themselves as having limited ability to adapt to the governance of local and central authorities (the regulators). The case study participants expressed their exposure to changes in forest markets and policy as being exemplified by their complicated governance structure. It was implicit in most sentiments that the planted forest had resulted in a perceived loss of autonomy.

All but one of the references made by the interviewees regarding such structures was negative, in that the governance structure established for the planted forest was complicated and difficult. The one neutral comment was simply stating that the land
owners must now operate in a different system of governance but the interviewee did not elaborate further. All other comments overlapped and were interrelated but most can be associated to the land owner’s frustration at their lack of autonomy which they perceive to have caused them lost opportunities, detachment from the land and an inability to adapt to changes.

7.26.1 Structure - the Crown:

Of the seven participants who specifically discussed the partnership with the Crown, all spoke of this arrangement being restrictive in a way that was interrelated between tenure and governance. Participants stated that being in a partnership constrained their ability or incentive to participate in forest management decisions. In respect to all the interviews the researcher believes the majority of interviewees acknowledge the role the Crown has played in the establishment of the forest in assisting the iwi to become involved in the forest sector. However, interviewees expressed a readiness for greater involvement in the management of their lands and participation in forestry decisions.

*There’s no opportunities when somebody else is running your forests.*  NT6

*What encouragement have you got when you are told that if you find a market then you have to give them [the Crown] a share.*  NT13

*Māori owners today feel disassociated with their land in that they cannot go on there and do what they like.*  NT9

7.26.2 Structure – the Trust:

Fourteen participants specifically spoke of the uneasy fit of the Trust governance over their land. Whilst this structure applies to all Māori land, the situation for LTFT is further complicated by the recent amalgamation. In 1968, when LTFT was formed, the land owners joined together to form the Trust but retained their hapū titles. This has resulted in land owners who retain strong identification and association with their hapū land but handed governance of that land to the amalgamated LTFT.
Participants held diverse views as to whether the formation of the Trust had decreased their ability to participate or increased their participation on their land, not surprising given their differing balance of original assets and ownership. For example, a land owner of a large area with few family members is likely to perceive governance differently from a multiple owner of a smaller area of land.

*I can read. I can write. I don’t know why I have to have a Trustee to talk about my land. NT19*

*Our Trusts operate with structures that are not Māori structure and there always seems to be a state of tension like a rubber band that’s being pulled to varying degrees... [The Trustees] are doing the best they can in the structure, but the structure doesn’t work... which leaves us in a state of being a rubber band, we’re never in a state of just being relaxed we are permanently stressed and then it gives. NT16*

*A lot of our Māori-owned land that is multiply owned, you can’t really own it so you need someone to actually take the management of it and say, ‘Right, let's do this as a collective’... by forming the Forest Trust... I totally applaud that... [it has] brought it back to a collective to make decisions on how that land is managed. NT18*

7.26.3 Structure – the Owners:

Participants expressed their frustration at the automatic succession of Māori land and how this further devolved the decision making process for Lake Taupō Forest land owners. Succession is applicable to all Māori land but, prior to 1968, the 66 hapū which are now involved in LTFT operated as separate entities. The owners now number over 10,000 and this has resulted in difficulties with participation and the governance of multiple values.

*...people don’t really know how [to participate], they’re not interested. NT21*

*This is our land and if my grandmother had kept it... well then my siblings and children could have employment, but now that it is in a big pool obviously there’s a lot of values. NT15*

*... because you’ve got 300 owners in here, 500 in there, you can’t really use the land. NT18*

*...even though they may have shares and a block of land, they have shares along with another 1,000 owners and their share may only be the size of a footprint. NT9*
Māori land is continually becoming fractionated or breaking up every trust has it but exponentially we have much more. Every year it’s growing and growing... we set aside $2-2.5 million a year for annual dividends and between $400-500K goes unclaimed... but the rules are simple, we need to accumulate this in case every owner walks through the door and says give me my money... I think it is 60% of our owners get less than $100, Pākehā wouldn’t put up with that. NT10

7.26.4 Structure – the Regulators:

Nine participants clearly articulated frustration at their ability to react to external regulation in the way other freehold land owners could, given their lack of autonomy over land use and forest management decisions.

"Whether it’s [the forest] an asset or a liability.. we’ve got to be in the pine trees anyway, forever. NT22"

"We’ve got our land, then we have all these different rules and regulations that sit on top of that... so to me the issue is just being dictated by others as to how we actually use the land or if we use it, literally. NT18"

"We have to maintain the external regulatory regime as generational owners of the land with limited land flexibility... the authorities who enforce that really need to understand that there is a point of balance between the good stuff we provide and their requirement to straight jacket us into a regime that does not recognise our values. NT1"

"...we are dealing with international policies which then get interpreted by and defined by our government into national policy to deal with issues which are seen through different cultural eyes. NT17"

In summary, the participants associated the establishment of the planted forest with the establishment of a new structure controlling the land and its resources along with a new decision making process. The researcher was left with a sense of the almost impossible contradictions between the objectives of the Crown, Trust, multiple owners and regulators. The quotes presented (and indeed those left out) all show that the land owners desire a greater level of autonomy over their land or participation in its management whether at an iwi, hapū or whānau level. With the Crown exiting the partnership in 2020, the LTFT leadership will be faced with a number of opportunities
and challenges. It is not surprising, therefore, that land owners had strong opinions on their current LTFT leadership.

7.27 Present-day experiences, views and opinions of structure: leadership:

Table 7 – LTFT: themes and subthemes 2) a) ii)

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<tr>
<td>b. Forest Management</td>
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<tr>
<td>i. Commercial value (tenure, governance and land use)</td>
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<td>iv. Access (enablers and constraints)</td>
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Statements regarding leadership were discussed separately from sentiments regarding the tenure, governance and regulation structure over the land. For example, interviewees were clear in voicing separate opinions regarding the constraints of the Trust structure and the activities of the Trust itself. The focus on leadership was a surprise to the researcher as it was not considered the participants would perceive the planted forest in terms of leadership. However, it became apparent that in the eyes of the participants the planted forest was the reason for their dependence on such leaders.

Ngāti Tūwharetoa has a history of strong leadership and the interviewees had similar expectations of their Trustees. Of the thirty-one interviews included in the analysis, thirty participants commented specifically on the strength or constraints of their current leadership. The only participant who didn’t articulate strong opinions of leadership was in fact the first to be interviewed. Later discussions demonstrated that this participant did indeed have strong opinions on leadership. The viewpoints of the interviewees were diverse, with some perceiving leadership to be enabling and others
constraining. No interviewees were neutral on this topic. The viewpoints related broadly to participation, communication, management and to the leaders themselves (see Figure 20) with the overall theme being how leadership affected the participant’s identity as Ngāti Tūwharetoa.

Figure 20 – LTFT: present-day opinions of structure: leadership 2) a) ii)

Fifteen interviewees expressed opinions as to whether the LTFT leadership effectively communicated their management decisions. The viewpoints were diverse but in particular the younger participants expressed stronger views that they desired more avenues for communication. Typically the older interviewees felt uncomfortable with communication media outside the typical Annual General Meeting of owners. A
number of older participants described increased communication such as the use of newsletters, the internet or internal promotion as ‘blowing their own trumpet’.

*We just have a way of operating and that’s something that’s been instilled in me by the elders is that you get on with the job, that’s what you’re here for. You don’t jump on the soapbox or blow your own trumpet and some people can’t quite understand or support that, they think we should be out there promoting this and that... but I guess sometimes there is annoyance that they haven’t been told or they haven’t been brought into the picture* NT22

*Other media such as bi-monthly e-newsletter are also options. Those kind of things we could be doing but we tend to be one dimensional in the way we approach things. A fresh new injection of thought is needed.* NT11

Interviewees generally acknowledged that because of the lease they had little opportunity to participate in forest management or land-use decisions other than by approaching their leaders. The opinions were again diverse with some participants feeling the leadership enabled participation by being approachable (3) and others feeling they had little or no avenues for participation (6). In terms of participation there tended to be no correlation with age with both young and old having diverse perspectives.

*I always take the view you can either be the problem or you can be part of the solution... don’t just say [to the trustees] “oh you’re doing a bad job”, but go in and talk and try to figure it out.* NT18

*They do not listen to the owners of the land and there’s no opportunity for the owners of land [to be heard]... people need to be able to express their opinions at an AGM... [or] they need to have it at another forum or other hui so that people can voice their opinions or ideas.* NT6

Interviewees concerned about Trust management typically discussed it in terms of a lack of strategic planning and succession planning. Ten participants discussed at length their concerns that the leaders were not making adequate plans for the exit of the Crown as the lease partner. The researcher sensed an expectation from the land owners that the leaders should be planning to allow more owner participation in forest and land management when the lease ceases.

*Where are we going? What are, what’s the management doing for us, Tūwharetoa in 2020? ...who have we put through school? Who have they sent to University? Who are they chasing... why haven’t they gone out to the schools and [said to future land owners] we need engineers, we need people with degrees in forestry, we need all these people for the future to run our forests.* NT15
It’s almost like they’ve gone in a sort of cycle, they’ve had future planning looking outside the box, creating what is the Lake Taupō Forest Trust. Then gone into this phase of just ticking along, owners turning up, being told what’s going to happen. And now swinging back to expectation, looking outside the box again. NT12

It was notable to the researcher that when interviewees expressed concerns regarding leadership, the sentiment was never personalised. When discussing their actual leaders, words such as “integrity”, “strong” and “stable” were used. Four participants discussed the multiple responsibilities of their leaders and how there simply weren’t enough people for the roles.

I’ve seen a lot of our guys, a lot who are dead now, who have on those 7,8,9,10 hats and they found it very difficult. NT10

For the purposes of this thesis, any further enabling or constraining aspects of leadership have less relevance. For the Trust, however, feedback of these findings is an essential part of the researcher’s social contract with the iwi. The researcher has prepared a separate report to be presented to the Trustees on behalf of the interviewees.

7.28 Present-day experiences, views and opinions of forest management:

7.28.1 Forest management: commercial value

Table 8 – LTFT: themes and subthemes 2) b) i)

2. The present-day experiences, views and opinions of the planted forest can be grouped into the themes of:
   a. Structure
      i. Governance, land tenure and regulatory framework (Crown, Trust, owners and regulators)
      ii. Leadership (communication, participation, management and leaders)
   b. Forest Management
      i. Commercial value (tenure, governance and land use)
      ii. Employment (preferential land owner employment)
      iii. Forest practices (enablers and constraints)
      iv. Access (enablers and constraints)
      v. Identity (including landscape).
Twenty-four participants discussed the planted forest in terms of whether it had or had not provided significant commercial benefit. Twenty interviewees stated the amount of commercial benefit had been lower than expected with a number using the word “disappointing” (see Figure 21).

When participants expressed disappointment about the commercial value of the pine forest, sentiments were most often related to tenure and governance. The majority of sentiments were regarding tenure and related to frustration at the automatic succession of Māori land (10) with only a small number citing governance issues such as poor leadership focus on the commercial aspects of the forest (3).

My mum and dad were both from big families so the succession breaks down the shares to a small amount whereas some are an only child or an only child and they probably do very well dividends-wise, but the majority of us, say 95% get small dividends. NT7

The reality is that with multiple owned entities… because of the sheer numbers [there] will never be a meaningful return anyway…if you were to do the maths to say how much do we need to provide meaningful dividends, you are never going to get there… so you get away from all of that because it isn’t really a cultural thing anyway. NT17

Figure 21 – LTFT: present-day opinions of forest management: commercial value 2) b) i)
One participant, however, was strong in the opinion that the financial benefit of farming was preferable to forests.

_I don’t care what anyone says, I say farming is the backbone of the country. Pine is up and down [economically], I call it the Kaimanawa Ranges, one view is up here, the next is down here._ NT13

Two participants felt strongly that forest managers had too much emphasis on commercial profit at the expense of other cultural values.

_Well forestry is about making money at the end of the day and some of our most sacred places have been, how should you say it, desecrated._ NT20

_I would rather see native trees there, but then you’re not going to get any economic benefit out of it, it’s trying to get that balance… it’s hard to have that personal relationship with the tree when all you can see growing on it is some dollars._ NT18

7.28.2 Commercial value: other comments

Because of the continual and automatic succession of Māori land, a number of participants (8) did not view dividends as a practical mechanism for sharing profits. They instead chose to discuss the commercial benefit of the planted forest in terms of the multiple social benefits as opposed to a meaningful dollar value. Such social values included health and education grants (6) and also creating pride and identity through having a commercially successful organisation (2).

_I don’t see the future that dividends are going to be a way that will benefit the owners because there’s too many owners for the amount of money that’s distributed. It’s peanuts that people will get. So I think the benefits have to be in other ways like grants to the kaumatua, health benefits… education… I don’t see dividends as a practical way of sharing benefits, of passing on benefits._ NT5

_Again, I’m a small owner in all our blocks, my Dad doesn’t have big shares, they’re reasonable breeders, it reduces your shares so it is just primarily about having some [financially] successful organisations that create a lot of pride for people._ NT22

Four participants felt that the commercial focus of forest management was right, reminding the researcher that maximum financial return was a minor focus of the lease.
If you go back to the objectives of the lease, growing a commercial crop is secondary or subsidiary to the objectives of protecting the waterways, protecting the waahi tapu, protecting sites of unique vegetation. Those are the primary objectives of the lease. NT28

7.28.3 Forest management: employment

Table 9 – LTFT: themes and subthemes 2) b) ii)

2. The present-day experiences, views and opinions of the planted forest can be grouped into the themes of:
   a. Structure
      i. Governance, land tenure and regulatory framework (Crown, Trust, owners and regulators)
      ii. Leadership (communication, participation, management and leaders)
   b. Forest Management
      i. Commercial value (governance and forest management)
      ii. Employment (preferential land owner employment)
      iii. Forest practices (enablers and constraints)
      iv. Access (enablers and constraints)
      v. Identity (including landscape).

Twenty-one participants discussed the planted forest in terms of employment (see Figure 22).

Figure 22 – LTFT: present-day opinions of forest management: employment 2) b) ii)
Employment was a specific goal of the original land owners in assenting to the forest lease as discussed previously in this chapter (see section 7.24.1). Twenty-one interviewees discussed employment of which nine specifically stated that the dreams of the elders had not been realised.

NT25: I believe that this forest was put here and our elders did have the intention of the future rangatahi coming through and their grandchildren and everyone after that they would have opportunities to work in the bush and tend to the forest... but a lot of our people haven't and they're not working in the forest.

Researcher: Do you mean there has been disappointment today to see how little jobs had actually-

NT25: [Yes] but translate that to say pain and if it’s on everybody’s face today... yes that’s how people are today.

Eight of the interviewees described how they were either employed or had been employed in the planted forest. They used words such as “identity” and “pride” to describe what it felt like to be employed on their own land.

The major benefits that the forest brings the owners is employment, [land] ownership, identity and pride. It is hard to get the last two without employment. NT27

The topic in which there was diversity was whether forest managers should provide Ngāti Tūwharetoa, in particular LTFT owners, preferential rights to employment in the forest. This question was not asked specifically but was an obvious sub-theme in the discussions. The majority of the interviewees (8) felt strongly that land owners should be preferred for employment opportunities but at least four participants felt that the best person should be employed regardless of their cultural background.

Now, as I believed it growing up, I believed this was our forest. The trees, I knew, weren’t, but I knew, okay this land is ours. I was led to believe only through verbal conversation that if we were up to the right standards and the right quality that we would get employment in the forest because we were landowners... and it seems that some may think, ‘Well, that’s unfair that because you’re Tūwharetoa you are going to get the job before me,’ but I see it as that’s our land. NT15

As an owner I would like to think we have the best people in place rather than putting in a Tūwharetoa person for the sake of putting in a Tūwharetoa person. NT11
A further three participants went on to discuss their perception that forest managers had been or still are reluctant to employ or encourage land owners into forest management roles.

“Our men got very few jobs, maybe one or two reasonable jobs, the rest of them started off on the shovel and the slasher and they finished on the shovel and the slasher. NT13

7.28.4 Forest management: forestry practices

Table 10 – LTFT: themes and subthemes 2) b) iii)

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<thead>
<tr>
<th>2. The present-day experiences, views and opinions of the planted forest can be grouped into the themes of:</th>
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Twenty-seven participants specifically spoke of aspects of forest practices such as species choice, waste management and environmental services. Of these interviewees eighteen clearly expressed the sentiment that they were satisfied or enabled by current forest management practices (see Figure 23).
The results show that the participants viewed forest regimes in a number of ways which are related to forest management practices. Most expressed their satisfaction at the forest regime particularly with regard to the protection of cultural and environmental values.

*I can point to strong examples where tikanga has been exercised and that is important in a New Zealand context but also in terms of indigenous international, I there is a real struggle out there... and I take huge pride in that.* NT22

*The far majority of the land should remain in forestry, not only because of the benefits that it brings to those owners but it’s the benefits it creates for the Lake and the rivers and tributaries that run through the forest.* NT11

However, even interviewees who were satisfied also went on to discuss concerns they had regarding the forest regime of which a lack of crop species and business diversification were the most consistent concerns (see Figure 24).
Certainly there was diversity in how participants perceived the constraints of the forest regime, yet some issues related as much to governance and participation as to forest regime. The most consistent theme was that the predominantly single-species monoculture generated risk in terms of a lack of diversity. This was discussed in terms of forest practices (multiple rotations, fire, and disease) but participants went on to speak of this also in a governance sense. They perceived multiple business opportunities that could be undertaken in the tenure and planted forest regime (tourism, native plants propagation, hunting) but that they were not allowed such opportunities because of the governance structure.

*I believe that logging is not the only one thing for this forest. We’ve got this huge resource and all we’re doing is logging with it... but I believe that there’s a lot more things that we can do with our forest and we’re not. And I know people have tried and they’ve really run into a brick wall.*  

*NT15*

*I think the pine trees are fine you know, just perhaps it’s too many eggs in the one basket and a better mixed utilisation of what’s going on in the forest*
would be much better like some native [species] for cultural or rongoa medicinal purposes, just in the native strips in between the pine. NT7

Four participants discussed at length their disappointment about the amount of forest waste that was left after logging operations. Three of these participants had business ideas for this waste but stated that the governance structure would not allow their participation in such venture. Two participants discussed the placement of trees too close to housing. (Both of these interviewees were owners in a neighbouring trust where this issue is well documented, the researcher believes that tree placement may not be attributable to Lake Taupō Forest). The production of pollen, a reduction in water quality, water quantity and native bird habitats were also perceived to be forest management issues by others. One participant discussed the culture of contract workforces and how they felt this style of employment was detrimental to the community. Strong opinions regarding pest management and the issue of the use of 1080 poison were notable in their absence during the discussions, with only one participant attributing this as a constraint of the forest regime.

7.28.5 Forest management: access

Table 11 – LTFT: themes and subthemes 2) b) iv)

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<th>2. The present-day experiences, views and opinions of the planted forest can be grouped into the themes of:</th>
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<td>v. Identity (including landscape).</td>
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Sixteen participants specifically expressed the importance of maintaining access to their land. Interviewees were divided on whether the planted forest had enabled or constrained access to their land (see Figure 25).

**Figure 25 – LTFT: present-day opinions of forest management: access 2) b) iv)**

Maintaining access to the land by the owners was an important aspect of forest management with owners discussing the benefits of being able to hunt, gather firewood and food, and maintain linkages to their ancestors.

*One of the biggest benefits I think with the forest is access; you can go there hunting, you can go there fishing, you can go there and be on the land.*  
*NT28*

*My son he loves hunting in his own forest and I tell him, “yeah this is your grandfather’s hunting area’ and he loves it, he thinks it is awesome.*  
*NT29*

*This land use is something special in that it allows all your beneficiaries of your hapū, entry on to roam around the land as their tūpuna did.*  
*NT11*

In such discussion four participants compared forestry to other land uses such as farming and horticulture, noting that planted forests allow greater land owner access.

*Farming you can’t get over the fence, you’re not allowed to disturb the animals, forestry it doesn’t matter if you wander through the trees as long as you [manage] the risk.*  
*NT17*
Fathers take their boys and girls in there from a young age, there are lifelong memories forged by being out in the bush. There is something different about the bush that you don’t get with a dairy farm. That would be an interesting study, comparing the values created by different land uses e.g. forestry vs dairy. I’ll back forestry all the way. NT11

Four participants discussed the tenure aspect of the multiple land titles being managed together and how this had been beneficial (3) for providing access to a greater land base or constraining in that hapū control was no longer in place (1).

We have a commercial crop and the owners still have access to the land, probably to a greater land base than what they had in the past when the blocks were owned by individual whānau. NT28

We had to come to grips with these other people out there wanting to enter out forests who are not owners. NT20

Four participants expressed disappointment with the way the planted forest had changed access or by the way in which access was managed by a permit system.

It [the forest] removed our freedom of access across the land, not because we weren’t allowed to go through the forest, but because access was difficult and the objectives weren’t there anymore. NT25

I’ve been disappointed that it’s [getting a permit] is so hard... it’s been so difficult to get in to the forest. NT5

7.28.6 Forest management: identity

Table 12 – LTFT: themes and subthemes 2) b) v)

2. The present-day experiences, views and opinions of the planted forest can be grouped into the themes of:
   a. Structure
      i. Governance, land tenure and regulatory framework (Crown, Trust, owners and regulators)
      ii. Leadership (communication, participation, management and leaders)
   b. Forest Management
      i. Commercial value (governance and forest management)
      ii. Employment (preferential land owner employment)
      iii. Forest practices (enablers and constraints)
      iv. Access (enablers and constraints)
      v. Identity (including landscape).
Eighteen participants shared their stories as to how forest management and leadership had enhanced their identity. This theme was perhaps one of the more integrated themes whereby owners discussed the forest’s impact on their identity. The aspect of the forest that was contributing to their identity was difficult to assign to a theme and related to many of the previously discussed themes such as leadership, commercial value, employment, access but it was a new theme, landscape, that led the researcher to incorporate identity into ‘forest management’.

For these eighteen land owners, perceptions of good forest management enhanced their identity in a number of ways. For example, sixteen participants liked the fact that the forest was perceived to be well managed by strong leaders and had a presence in the landscape and that other New Zealanders knew it was owned by them.

Certainly, the forest is awesome, you know we’re proud of that. NT18

When people talk about Tūwharetoa, they talk about the mountains, the Lake and the [planted] forest. NT27

Really my thing is what the forest does for Tūwharetoa as a whole, what I see as the real value. When I see [our leaders] representing the Forest Trust, there’s a lot of mana attached to that and that’s worth a lot, a hell of a lot actually. NT30.

NT11: At the northern end of Waitahanui as you come up the hill there is a sign saying “Ngāti Tūwharetoa Tribal Lands...
NT12: I have real fond memories of coming home and seeing that-
NT11: And that is a real landmark for us-
NT12: It’s as simple as that.
(see Figure 26)
Two participants discussed how the wrong placement of trees had affected their identity in a negative way, however in both cases the participants were discussing a neighbouring forest trust.

*It blocks our views, you know, it just takes away the beauty of our countryside because I live... it's a beautiful place in there, but you know there's pine trees everywhere you look... I try and imagine it back in the day when it was farmland, you know and you see the horses going out there and lots of sheep, you know, that sort of stuff. I'd rather look at that than pine trees.* NT31

7.29 Non-negotiable cultural values for the land:

Participants were asked the question; *what cultural values are non-negotiable for your land and how does the forest affect these values?* A total of twenty-five
participants shared values for their land that were inherently important to them (see Figure 27).

Despite some differences in the specific phrases (i.e. ‘keep the land’ or ‘retain the land’) cultural values were able to be grouped into the following themes:

a) land retention (13),
b) kaitiakitanga including protection of Lake Taupō (8),
c) maintenance of tikanga (7),
d) whanaungatanga (6),
e) and/or protection of waahi tapu (3),

Participants tended to express the sentiment that land retention was paramount, along with protection of environment in particular the Lake, the maintenance of cultural customs and acting collectively.

a) *What’s really non-negotiable? In terms of the land… that we don’t lose it, we don’t endanger it in any way, shape or form. NT30*
b) The Lake is our source of mauri, we describe that as the ahuru mowai, in English it is like the womb, the sustenance of the iwi... the Lake has such an important cultural part that arguably you won’t find any words that define it that way but it was inherent in our thinking. Yes we are prepared to protect that Lake because it has significance to us as Tūwharetoa beyond any dollar value. NT17

c) It’s a legacy that has gone back nine generations and the legacy has always stood for tikanga, the protection of tikanga of Ngāti Tūwharetoa. It’s never put itself in a position where that’s compromised. NT1.

d) I want to go back to your patai about the old people’s values and those values are so important to our culture... it is us as Māori. Those groups from each part; the mountainside, below the mountain and beside the lake, those groups of people came together with the understanding that they need to plant these trees for the rest... so that thought keeps coming true, all the time, right until today and it should stay the same. NT14

e) The main things for me are waahi tapu, environmental management, not only within the boundaries or envelope in which you operate but also your neighbouring taonga such as the Lake, the rivers, the streams. And once you have done that, then you can operate a forest. NT11

Interviewees discussed the planted forest in terms of a set of trade-offs in which some paramount values were enhanced and in which other values were constrained.

If you want to have your values, then you don’t do anything, so you don’t do a lease in pine trees, you just leave it in scrub and kia ora, but then you might decide you actually need an income so we can create opportunities. NT22

In terms of land uses, twenty-two participants discussed that the planted forest was complementary to their values whilst acknowledging trade-offs, while three remained neutral on the subject. Typically, when interviewees discussed aspects of their cultural values that were constrained they referred to issues of governance structure and regulatory influence as opposed to forest management.

Taonga tuku iho just sums it all up. It’s a treasure handed down. It’s not a treasure handed to a Trust... and that’s what’s been done. They’ve handed our land, our whenua, to Trusts and it’s no worse than handing it to the Crown. It’s no worse. NT6

I grew up belonging to the land. Now I have Trusts telling me ‘the land belongs to me’ and that creates a whole new mindset. It allows you to co-modify, it allows you to do things that you wouldn’t do if you belonged to the land. NT16
If you go back to the objectives of the lease, growing a commercial crop is secondary or subsidiary to the objectives of protecting the waterways, protecting the waahi tapu, protecting sites of unique vegetation... and so huge areas were put aside basically for the good of the country. And that is another issue that hasn’t really been acknowledged. NT28

When discussing the non-negotiable values, the participants acknowledged a degree of overlap between values, for example kaitiakitanga can be discussed in terms of retaining the land, maintaining the cultural customs (tikanga), protecting waahi tapu and Lake Taupō and carrying for each other (whanaungatanga). Yet despite the differences in how participants choose to discuss values, no participant suggested the planted forest was incompatible with their values.

7.30 Future hopes and concerns:

| 4. The interviewees perceived the planted forest in terms of their future hopes and concerns. |
|---|---|

When participants discussed their future hopes and concerns they did so with the intent of providing feedback to the Lake Taupō Forest trustees. Such discussion was analysed for presentation to the Trustees but the detail is inappropriate to include in this thesis other than stating that three themes were notable.

First, participants spoke of their future hopes and concerns in much the same way that land owners in the late 1960s articulated their vision: that being any benefit must be sustained for future generations.

To ensure that we pass on to our children a real asset in the forest to assist them through their lives and their children as well. NT3

Second, that interviewees acknowledged future dividends would decrease in significance because of the automatic succession of Māori land but that they expected there would be more avenues for participation in future land management decisions following the exit of the Crown from the partnership. Some land owners had
concerns that the Trust was not undertaking enough planning to allow the smooth transition from land owner to forest owner.

Finally, no participant indicated a desire to change the land use, yet most expressed a desire for more diversification within forestry, such as tourism, secondary crops and use of waste wood, and some small areas being removed from the forest for housing.

7.31 Concluding comments: Lake Taupō Forest Trust

Ngāti Tūwharetoa leadership remain intent on retaining their tribal lands for future generations despite a number of historical sales and confiscations in the region. Examples include the gifting of Tongariro National Park, the early preference for leasing in the 19th century, and their refusal to sell land to the Crown following the demise of the Tongariro Timber Company. This has resulted in approximately 20% of the land in the rohe remaining in tribal ownership, a figure which is considered a high level of retention in New Zealand.

Ngāti Tūwharetoa leaders have also expressed the desire to progress iwi development collectively through the economic use and development of their resources. Examples of such collective thinking include the unique ‘hotch potch’ clause in the Tongariro Timber Company agreement aimed at benefitting all owners equally, the Timber Incorporations for the development of farms and payment of rates, the decision to choose a stumpage share return in the Lake Taupō Forest lease and finally the early return of the Lake Taupō Forest to the owners.

Leaders have managed their land so that future generations can continue the physical and spiritual relationship with the lands. This was clearly shown by the conscious decision of the owners to avoid agriculture once the harmful effects on Lake Taupō become apparent and also by the unique Lake Taupō Forest lease agreement that put environmental and cultural concerns before commercial profit.
Ngāti Tūwharetoa leadership has played a major role in unifying Māori both within
and outside their rohe. The leadership has also shown its ability to communicate
directly with government and pursue litigation when required. From Hoani Te
Heuheu’s Tūkino VI Privy Council appearance, to the Delegation of Māori Forest
Lessors led by Sir Hepi, to the High Court Rotoaira Forest Arbitration case, Ngāti
Tūwharetoa has engaged with the legal system to improve returns to the land owners.

The Lake Taupō Forest Trust interviews had two key purposes in the research
process. The first was to see how the participants viewed the benefits and constraints
of the planted forests in the present-day. This was achieved by generating a source of
data that could be grouped into themes and subthemes. The second purpose was to
analyse such groupings to elicit aspects of a planted forest which were perceived by
the land owners to be either beneficial or constraining.

The interviewees related that the land owners who agreed to the afforestation lease in
the late 1960s, acted with future generations in mind. They were united in their desire
for land retention and consciously decided to forgo any immediate advantage in the
hope that the planted forest would benefit future generations. Any concerns at this
time related to lost autonomy over their lands either by the amalgamation with other
hapū or by the partnership with the Crown.

The trade-off in ensuring long-term land retention was the forfeiture of medium-term
land autonomy. In particular, this decision resulted in the present-day generation of
land owners being dependent on the Crown, and the Trust making decisions for the
collective. Participants in the interviews perceived the forest in terms of a difficult
tenure, governance and regulatory structure. In their eyes the dependence on an
external partner, on an internal organisation, and on each other accentuated their
exposure to changes in forest regulation. The result for the multiple owners is viewed
as lost opportunity and in some cases a detachment from the land. Many
interviewees had ideas to improve the forest management but felt the governance
structure either provided a disincentive or disallowed them to undertake such
innovations.
The first research question of this thesis: what do Māori land owners view as the benefits and constraints of the pre-1990 planted forests that exist on their ancestral land? aimed to allow the researcher to see the forest through the eyes of the land owners. First, the land owners viewed the forest in terms of its land management structure. Typically, the combination of the governance, tenure and regulation framework was considered as constraining by the land owners. Further opinions on the constraints of the planted forest were more diverse but were related both to forest management and land management structure. A number of participants had some concerns with forest management such as a lack of species and business diversification. Other opinions were more varied; some discussed the amount of waste left behind from harvest operations, the increase of pollen, the impact on water quality and quantity and the wrong placement of trees.

In relation to the benefits of the planted forest, the participants were united in the view that they supported the existence of planted forests on their ancestral lands. Participants also revealed that the planted forest was viewed favourably in terms of sustainable management or environmental benefits, and also enabled the maintenance of tikanga and the protection of waahi tapu sites. Furthermore, participants discussed the benefits of access, employment and identity, although the opinions in these themes were diverse.

Participants were asked: what cultural values do the participants express for their land and is planted forestry compatible with such values? The majority of interviewees revealed that despite holding various opinions on the constraints of the forest, overall the planted forest is compatible with their cultural values for their land. Furthermore, the existence of the present-day non-negotiable values highlighted similarities in the historical values elucidated through the document analysis. In particular, the retention of land, the protection of Lake Taupō and the importance of acting mutually for the benefit of the collective families.

The analysis did not provide a way to capture the fine detail of the participant accounts, particularly in relation to values. However, the intention was to provide an overview of the land owners’ opinions. In the LTFT example, the planted forests are
compatible with the interviewees’ cultural values, a finding which is somewhat surprising given the forests are not native, the long-term nature of the lease and the limited land use flexibility as a pre-1990 forest owner. However, the land owners expressed, in a number of ways, the desire for greater autonomy and participation in their land management decisions particularly when the Trust becomes the manager of both the land and forest.
Chapter 8: Maraeroa C Incorporation

8 Ngāti Maniapoto Māori and Forestry

8.1 Introduction:

In 1968, a 5,549 hectare block of central North Island land known as “Maraeroa C” was returned to its Māori owners following 56 years of private control. The original land cover of indigenous forest had been harvested, territorial authority rates were due and the land required significant capital to produce an income. The Māori owners formed an incorporation known as “The Proprietors of Maraeroa C Block Incorporation”\(^{27}\) to facilitate the combined management of the land for the benefit of the descendants of the original owners.

The committee urgently needed to put in place a commercial solution for the land and therefore signed a 99-year forest lease with a private company, New Zealand Forest Products Ltd (NZFP). The lease, known as a variable-stumpage lease, allowed for the

\(^{27}\) Māori Land Court Order 7 ALWA 63 Hamilton 18 December 1970.
payment of a portion of the profit at harvest to the owners. NZFP were responsible for establishing and managing three rotations of forest.

The Maraeroa C land, its governance and its people form the second case study in this research. This chapter is presented in a similar style to the LTFT case study and is comprised of four parts which summarise the previous literature and incorporate the historical documents, internal reports and interviews that were made available to the researcher.

The first part of this chapter will introduce the people of Rereahu, the King Country region and the history of the Maraeroa C land. The second will introduce the forest lease structure, the partnership changes and the land owners’ achievements within the realms of a potentially restrictive long-term lease. This history is presented to assist in the exploration of the Rereahu people’s resilience to shocks, ability to adapt and endure transformations.

The final two parts of this chapter describe the analysis process and present the results of the interviews. The MCI results are presented in terms of the historical perceptions of planted forests, present-day benefits and constraints of planted forests as well as the future hopes and concerns of the participants. This style of presentation is used because respondents in this case study discussed the forested land in terms of the past, present and future.

**Part I – An introduction to the Rereahu lands and people:**

8.2 **Limitations:**

The unique history of the people of the Maraeroa C land is already the subject of books (Anderson, 2008; Smyth, 2008) and government investigations28 (Waitangi Tribunal, 1993) and traditional oral accounts, some of which have been compiled over decades. It is beyond the scope of this chapter to do justice to the rich history of the

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28 Waitangi Tribunal WAI630 in progress.
Rereahu people, however, it will describe the series of events relevant to the establishment and management of the Maraeroa C planted forest.

8.3 An introduction to Ngāti Maniapoto:

Ngāti Maniapoto is a Māori tribe (iwi) descended from the Tainui canoe. In Māori accounts of migration, the Tainui canoe set sail from the Polynesian land of Hawaiki, journeyed across the Pacific Ocean (Te Moana Nui a Kiwa) led by the chief Hoturoa. The Tainui canoe is said to have made landfall at Whangaparaoa, just north of Auckland, and after extensive exploration of the land the Tainui canoe and its people arrived at Kawhia (Te Hurinui Jones & Biggs, 1995). The traditional tribal boundary as recounted in general terms by the saying:

“Mokau ki runga, Tamaki ki raro, Mangatoatoa ki waenganui, pare Waikato, pare Hauraki” (from Mokau in the south to Tamaki in the north, to Mangatoatoa in the centre, from the mouth of the Waikato River in the west to all of Hauraki). (Waitangi Tribunal, 1993, Section 2 p. 1)

The Ngāti Maniapoto tribal territory (rohe) covers the northern sector of the King Country region of New Zealand or Te Rohe Potae (see Figure 28). The Maniapoto area boundaries stretch from Te Awamutu in the north, to the Waipingau Stream (south of the Tongaporutu River) and Taumarunui in the south. According to the 2006 Census, the Māori population of Ngāti Maniapoto is 33,627 representing approximately 6% of the total Māori population in New Zealand.
Within the Ngāti Maniapoto area there are seven rohe, one of which is the Rereahu lands situated around the foot of Mount Pureora. Ruakawa, a chief and descendent from the Tainui canoe, was the father of Rereahu, who was in turn the father of Maniapoto. The descendants of Rereahu settled the lands in the southern portion of the Tainui region. It is with Rereahu that the families of the Maraeroa lands commonly affiliate.

Many Rereahu families view their hapū as an independent iwi.

... his father’s dream was always to put Rereahu back up to where Rereahu should be... at the moment, Maniapoto is recognised as an iwi, but when you look at where the lands are and look at who holds the lands, it is Rereahu not Maniapoto. R1

However, Te Kāhui Mangai, the government website (http://www.tkm.govt.nz), provides a national list of iwi and Māori organisations recognised as iwi authorities for the purposes of section 35A of the Resource Management Act 1991 (RMA). At the time of writing, Rereahu is defined as a hapū of Ngāti Maniapoto.
The iwi/hapū identity is symbolised by the whakataukī (proverb):

Ko Tainui te waka Tainui is the canoe
Ko Rereahu te iwi Rereahu are the people
Ko Pureora te maunga Pureora is the mountain
Ko Waimiha te awa Waimiha is the river
Ko Maraeroa te whenua Maraeroa is the land
Tihei Mauri Ora! The breath of life!

8.4 **The survey of Ngāti Maniapoto lands:**

Prior to 1883, Te Rohe Potae was *terra incognita* to the Crown as it remained unsurveyed. The retention of Māori autonomy in this region led it to become a place of refuge for those who refused to recognise the colonial government’s authority. The independent Māori monarch and leader of the Kingitanga movement, King Tawhiao, succeeded Pōtatau Te Wherowhero in 1860. King Tawhiao had relocated to the region following the recent land wars and subsequent land confiscations in the Waikato region. King Tawhiao and his supporters remained settled on Ngāti Maniapoto lands while seeking the return of their Waikato lands. This led to non-Māori renaming the region the “King Country”, a name which remains today.

For the previous decade, the colonial administration had unsuccessf ully attempted negotiations with the various tribes living in the King Country for the purposes of surveying the region. The government sought access to the King Country, in particular, to allow for the construction of New Zealand’s main railway line and also for opening up the area to non-Māori settlement.

King Tawhiao displayed strong opposition to the government survey of the King Country region. However, Ngāti Maniapoto leaders were becoming increasingly fearful of losing tribal land to the King’s supporters and saw benefit in having their title guaranteed in the Native Land Court. The then Native Minister, the Honourable
John Bryce, shifted his attention toward negotiating directly with Ngāti Maniapoto leaders, in particular with the chief Wahanui\textsuperscript{29} (Waitangi Tribunal, 1993).

Ngāti Maniapoto leaders agreed to the survey (triangulation) of their lands in December 1883 (Craig, 1990; McLintock, 1966; Stokes, 1999). The surveying commenced shortly after and was completed by July 1884. With the triangulation of the King Country complete, land was available for Crown acquisition and following a period of Crown control, was subsequently opened up for settlement and private purchase.

8.5 The survey of Maraeroa lands:

The Maraeroa lands intersect the traditional border zone between the descendants of the Tainui and Te Arawa waka. Prior to the 1880s the Maraeroa lands were inhabited by people from a number of iwi, including Ngāti Maniapoto, Ngāti Tūwharetoa and Ngāti Raukawa. The Waitangi Tribunal (1993, Letter to the Minister's Office p. 1) describes the history of these lands as “complex”.

Chapter 7 has introduced the attempts of Ngāti Maniapoto, Ngāti Tūwharetoa and Ngāti Raukawa to have their common tribal boundaries defined. The ‘Taupōnuiatia Case’ proceedings (see Section 7.4) found in favour of the descendants of Tūwharetoa and Tia. It was recorded that Ngāti Maniapoto leader, Taonui, was not even given the opportunity to discuss the court’s judgement with respect to the Maraeroa lands. In fact he was fined for storming out of the court and later resisting the policeman who tried to return him to the court to explain his conduct (Waitangi Tribunal, 2008). Following this ruling, the Maraeroa lands were legally owned by Ngāti Tūwharetoa, a finding which was disputed by Ngāti Maniapoto.

On 27 June 1886, the Native Land Court began hearings for the investigation of title in the Aotea block, known as the Rohe Potae. Ngāti Tūwharetoa and Ngāti Maniapoto continued to dispute the boundary between the Aotea and Taupōnuiatia

\textsuperscript{29} Also known as Wahanui Te Huatare.
blocks until the titles for the Maraeroa blocks were reissued to Ngāti Maniapoto. The process is detailed in the Waitangi Tribunal Pouakani Report:

*This dispute led to litigation in the Supreme Court, petitions to parliament, and the appointment in 1889 of a royal commission to investigate matters related to the Taupōnuiatia block. The Taupōnuiatia Royal Commission reported in August 1889. One outcome was s29 of the Native Land Court Acts Amendment Act 1889 by which the Native Land Court orders made in 1887 for lands in the Pouakani block ... and the Maraeroa block were cancelled. The investigation of titles for Pouakani and Maraeroa blocks were heard anew in 1891 and new title orders were issued.* (Waitangi Tribunal, 1993 Section 1 p. 6)

The Pouakani Report (1993) goes on to describe the survey of the land incorporating Maraeroa as a jigsaw puzzle compounded by the practical difficulties of surveying bush clad land, disputed boundaries and a complex narrative of legislation. Surveys of the area began in 1886 but the Maraeroa Block was given a different spatial shape in 1891 after an analysis of the Native Land Court orders, survey plans and sale deeds revealed considerable discrepancies in areas and locations. The subsequent surveys and new boundaries created a great deal of confusion for both Māori and the Crown.

The 1891 Court hearing ordered the subdivision of the Maraeroa land of approximately 19,415 hectares into Maraeroa A, Maraeroa B and Maraeroa C blocks, however, the Minutes did not specify specific areas in all cases. Furthermore none of the subdivisions had been surveyed. Nevertheless, the colonial government began purchasing individual titles soon after based on sketch plan (Stokes, 1999).

As the purchaser, the Crown took responsibility for arranging the surveys but the costs lay with the Māori land owner. Consequently, a significant portion of Maraeroa B was acquired by the Crown in lieu of the payment of the survey costs and the remaining section acquired for public works for the construction of a state highway. In addition, the Maraeroa A block was allegedly purchased by the Crown although there is much uncertainty amongst Rereahu people as to whom the block was purchased from (Smyth, 2008). Consequently, Maraeroa C was the only remaining land left in the ownership of the Rereahu people.
Disputes about the boundaries of Maraeroa C continued with the owners suggesting the survey had excluded large areas of land owned by them. In 1911, new titles were issued by the Native Land Court but this, however, was not the end of the disputes. The Rereahu people pursued court proceedings until 1940, when the Court ruled against them and upheld the 1911 boundaries. The resulting area of land left to the Rereahu people (5,549 hectares) was considerably smaller than the original land area.

8.6 **Rereahu and Ellis and Burnand:**

Although the Rereahu people owned the Maraeroa C land they did not retain the management of it for long. In 1912, a timber licence was granted to private forestry company Ellis and Burnand. Large scale logging on the forests west of Lake Taupō began in the 1890s. Ellis and Burnand was founded in 1896 and the company had a history of operating in the area including on the neighbouring land of Tiroa (Anderson, 2008). In 1909, the company’s attention turned to the Maraeroa C lands, which were heavily forested with matai, rimu and totara.

The Waitangi Tribunal (1993, Section 15.2) describes in detail how both nineteenth century Māori and Europeans described the forest resource in the Maraeroa area prior to the impact of large-scale timber milling. Despite differences in attitudes as to whether the forest was spiritual, marketable or a nuisance, the reader is left with the impression that the forest was rich in species and somehow unique compared to other North Island forests.

\[\text{...there was the finest forest I had seen in New Zealand; the trees were chiefly Totara of gigantic size... the land was rich and level. (Waitangi Tribunal, 1993, Section 15.2, FNREF:0-86472-117-XA:15.2)}\]

\[\text{...the most infernal wood I ever saw. I was driven nearly mad first a supplejack would pull off my cap then pull my gun next tumble me over altogether (Waitangi Tribunal, 1993, Section 15.2, 0-86472-117-XA:15-3)}\]

The Maraeroa C lands had been vested in the Waikato-Maniapoto Māori Land Board under Part 14 of the Native Land Act 1909. Under the Act, the Board was empowered to grant timber licences as per Section 208. Ellis and Burnand directors
therefore approached the Waikato-Maniapoto Māori Land Board to discuss the possibility of milling the trees.

Written and oral accounts of what happened next are somewhat conflicting. The Waikato-Maniapoto Māori Land Board gathered signatures from 35 owners to consent for the licence (Anderson, 2008). However, in the researcher’s interviews, and also found in Smyth (2008), land owners suggest the timber licence was granted without the knowledge or consent from the majority.

I don’t know how they [Ellis and Burnand] got the land, I think they just took it, as far as I know it wasn’t given to them from our people... they weren’t consulted about anything. R2

Some whānau were collecting royalties and some weren’t... Ellis and Burnand were quite organised and had people in high places.. it's the same old formula you know, divide and conquer. R3

Regardless of the process, the outcome was that in December 1912, Ellis and Burnand were successful with their application and subsequently obtained cutting rights over the Maraeroa C lands for 25 years. A price was agreed on to be paid to the Waikato-Maniapoto Māori Land Board as the timber was harvested. The Board in turn paid some of the Maraeroa C owners but kept a significant percentage for administration costs (Anderson, 2008).

Dissatisfaction among the majority of the Maraeroa C owners grew. Some families had asked to be exempt from the cutting rights and to manage their own land. However, this did not always happen. Owners recalled Ellis and Burnand crossing their boundary, harvesting their timber anyway and later apologising about the ‘mistake’ (Smyth, 2008).

Ellis and Burnand would get the agreement of some people to cut a certain area...but they’d go in there and cut the other half that they’re were not supposed to and then say ‘Very sorry’. R3.

Furthermore, the owners suspected the company of short measuring the timber and hence minimising the royalties. In March 1935, the Waikato-Maniapoto Māori Land Board wrote to the State Forest Service asking them to inspect the system of measurement and logging. The investigation concluded that the Company had indeed been short measuring the logs and following a long dispute, a payment of £1,250 was
made to some of the Maraeroa C owners in 1938. The State Forest investigation also found that the company was not handing back the land to the owners after it had completed harvest (Anderson, 2008). Nevertheless, this practice continued, excluding many families from their lands and homes.

Extensions to the 1912 timber licence were granted and the harvesting of native timber was not completed until 1968, with only one area totalling 200 hectares of native forest remaining. During this time, most Rereahu families had been denied access to their lands and many had not received royalties (Smyth, 2008). A number of participants added that their families did not even know they were actually the legal land owners:

*We didn’t know we were really owners of the place and that was really, really sad because we were locked out of there. We weren’t allowed to go in and what we know today we wished we had of known then. We might have done more to try and stop it.*  R2

*We didn’t even know we were able to be on this land, when Ellis and Burnand had it, they closed the gates.*  R4

*We didn’t even know we owned the land, that’s how long it had been out of our people’s hands... one day we were standing at the gate and these guys came along in a truck and started digging out the posts, my cousin said to him “what are you doing, are you shifting the gate?”, and he said, “No, we’ve got to pull it down, we’ve got to give this land back”. And we went “Back to who?” They said “Oh to these Māoris”, and then we found out we were the Māoris.*  R3

The lands, once rich with native forests and food, were returned to the Rereahu people substantially stripped of resources. When Ellis and Burnand left the area they also dismantled much of their infrastructure, including housing and services. Furthermore, when the harvesting ceased, a number of the local processing plants also closed leaving many Rereahu people unemployed. The owners had regained access to their lands for the first time in generations, but the 5,549 hectare block quickly accrued rates and the owners saw few options for payment. Participants shared their memories of this time;

*[Ellis and Burnand] moved out, they took everything, the homes everything. They didn’t even consult with us if we wanted it, they just took everything... [the land] was just left like that, then they got a big rates bill on the land*
because it was left standing for a few years. If we didn’t do anything I think it was going to be sold, confiscated.  

The mills started closing down in 1968 and so the land stood like that from 1968 to 1970 and I think the old people got a rates bill and started to panic because nobody had any money because when Ellis and Burnand had finished all the logging and they took the water pump out of the village. They left our people with no power, no water pump. They just removed everything and left our people sitting there.  

Part II – Rereahu and Planted Forests:

8.7 Maraeroa C Incorporation:

Shortly after the Maraeroa C land was returned to Rereahu control, the land owners formed a Māori Land Incorporation structure and immediately sought a commercial joint-venture partner. The management committee, chaired by the then Member of Parliament, Koro Wētere, developed a vision to establish a planted forest. The land is well-suited to forestry but marginal for farming, and their location in the central North Island was very close to forest processing infrastructure.

Once the native forests had been felled and logged, the whole area was then given back to the shareholders, to the owners. The owners then put in place a Māori Land Corporation structure and immediately sought a joint-venture partner. The land is well-suited to forestry.  

We were called together by the people, what are we going to do with our 14,000 acres of cutover forest? It looked so costly to bring it together with our other lands which were in farms... so we formed this committee to see if we could go into forestry.  

The land came back to them without any income from the indigenous forests so they were left with no development monies and in those days you could not have money advanced from the bank based on the asset and it was difficult in those days for Māori to raise finance. So they could only do it by way of a joint-venture partner.  

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8.8 Rereahu and New Zealand Forest Products:

In 1972, Maraeroa C entered into a joint venture with New Zealand Forest Products (NZFP). At that time, NZFP was New Zealand’s largest private company and was soon to be the major forest owner in New Zealand. It owned and operated major forest infrastructure such as the Kinleith Pulp and Paper Mill some 75 kilometres from Maraeroa C lands. NZFP had a long history of growing and processing radiata pine (Pinus radiata) and had been entering into Māori lease arrangements since the 1920s (Healy, 1982).

The owners of Maraeroa C entered into a ‘variable-stumpage’ lease which was somewhat unconventional at that time. Over the 99 years, NZFP was to cover all the costs associated with the land, including rates and the costs of establishing three rotations of planted forest. However, NZFP was not required to make regular royalty payments to the owners of the land. Instead payment was deferred until production thinning or harvesting, at which time the Incorporation would be entitled to a share of the net crop value. The exact percentage of the profit was to be negotiated at the time of harvest, although the lease provided for a minimum share of 11% and a maximum of 15%. The value of each party’s contribution would form the basis for the calculation. NZFP could use materials sourced from the land (such as metal and gravel) to create roading infrastructure but if such materials were used off-site the forestry company would pay the owners. Moreover, the company made some minimal payments to the Incorporation as a contribution to its running costs. The income available from external quarrying alongside the minimal administration payments enabled the Incorporation to operate until the bulk of the income was received at the time of harvest.

Oral accounts from the descendants of those owners who negotiated the lease say that access to their lands, and the ability to obtain food and/or hunt were paramount desires for the Rereahu families when negotiating the lease. The owners were successful in negotiating satisfactory terms in the lease that allowed them to have access to their lands, some for the first time in generations. Furthermore, the owners stipulated that the only remaining patch of native bush on their land, Tinihanga, was
to be protected. Subsequently, this area remains today and is now the biggest Tanekaha (*Phyllocladus trichomanoides*) forest in the North Island.

With negotiations completed, the first planting was undertaken in 1973 and the forest establishment was completed in 1976 with a net stocked area of 4,701 hectares. The entire forest was a radiata pine monoculture. The first harvest was scheduled in 2003 based on a 30-year rotation.

8.9 **Rereahu and Carter Holt Harvey:**

For much of the 20th century, NZFP was New Zealand’s largest company with a strong asset base and a reputation as a global forest leader. However, three days of trading on the New York Stock Exchange in mid-October 1987 was about to have far reaching effects on many companies around the world, and NZFP was included. NZFP had established an investment company called Rada Corp and following the 1987 stock market crash the companies in Rada’s portfolio collapsed, precipitating a series of events that in turn would leave NZFP owing at least $800 million (Parker, 2000). In the last week of 1987, Australian-owned Elders Resources opened up talks with the struggling NZFP and by August 1988 a take-over deal was done. The company, post-acquisition, was called Elders Resources NZFP. However, by 1990 Elders Resources NZFP had run into its own financial problems and New Zealand owned Carter Holt Harvey (CHH) purchased its forest assets including the Maraeroa C lease.

The original Maraeroa C management committee believed that their lease would allow renegotiation if ownership of the forest changed. Indeed the lease states that owners are to be consulted prior to changes in forest ownership and would have the ability to renegotiate their terms. There is no record of consultation with the owners prior to the sale to either Elders Resources or CHH, however, given the world events at the time most owners recalled little opposition to either Elders or CHH becoming the lease partner. Unfortunately, in forestry time frames CHH was to be another
short-lived partner, and this was not to be the end of lease sales for the Rereahu people.

In 2000, CHH management approached the Maraeroa C management committee with a proposal to begin harvesting the first rotation of trees in 2001. This proposal was based on CHH’s required log supply and a concern that log prices were falling worldwide. The forestry company offered the Rereahu people 15% of the net profit from the harvest, the highest percentage share allowed for in the lease. The Committee rejected the proposal and sought for the harvest be delayed. The owners were concerned that the trees were immature and also needed more time to prepare their own understanding of the trees’ values (Smyth, 2008).

The management committee on behalf of the owners sought an independent valuation of their contribution to the partnership. At this time land prices in New Zealand had soared whereas forest commodities were on the downward slide. The resulting valuation stated that Maraeroa C’s share of the profits should be between 22% and 25%. The management committee was successful in securing 16.75% for the Rereahu people, with the 1.75% increase being estimated to be worth approximately $1.75 million (Smyth, 2008).

The next issue for the forestry company and the owners was how to determine the forest value upon which the percentage payment would be based. The original variable-stumpage lease provided little direction on the approach taken to value the forest. Although CHH had only recently purchased the lease, the company had a long history of forest operations in New Zealand and was experienced in market valuations. Nevertheless the owners were keen to get an independent assessment of the forest’s value. After negotiations on how the value was to be calculated, the two parties decided to test the market by putting a portion of forest on the open market for tender. CHH would provide its valuation and then the forest would be sold to a third party and the values compared.
The first woodlot sold for significantly more than what CHH had valued it at and so upon agreement from both parties, a second block of trees was tendered, again selling for significantly more than what CHH had offered Maraeroa C. CHH believed the prices were inflated and subsequently a third woodlot was sold on the open market. The winning bid was much closer to the CHH valuation but still higher.

The forestry company was faced with a challenge: continued sales should provide for a fairer valuation, however each time forest was sold, their estate was eroded, leaving less wood for their own contractors and mills. Furthermore, the owners of Maraeroa C were showing a high level of engagement and desire for active management in their forest harvest. Finally, CHH suggested that instead of paying Maraeroa C 16.75% of the forest value they would hand the management committee an equitable portion of the forest to manage. Such an arrangement is known as a ‘split-share stumpage’ agreement and thus, in March 2003, Maraeroa C became the owners, harvesters, distributors and marketers of 16.75% of the forest estate.

In 1999, and prior to the split-share stumpage arrangement, the management committee developed their first strategic plan which clearly highlighted the Rereahu families’ desire to become actively involved in the forest industry and especially on their own land. This was despite the lease clearly defining them as passive partners. In 2002, the Maraeroa C management committee established Kokakotaea Limited as the parent company to Kokakotaea Harvesting Limited. The harvesting company was a joint venture with some of the land’s shareholders and, because it had no access to its own land, it operated on the open market. However, it was the clear desire of the owners and operators to secure work as sub-contractors for the upcoming harvest of the Maraeroa C lands. The split-share stumpage lease which eventuated in 2003 guaranteed Kokakotaea Harvesting work on Maraeroa C lands for at least the next three to four years not as a sub-contractor but as an owner.

By November 2004, Kokakotaea Limited had four further subsidiaries; Kokakotaea Marketing Limited, Kokakotaea Forestry Management Limited, Kokakotaea Procurement Limited and Kokakotaea Distribution Limited. The Trustees’ dream of being actively involved in the management of the forest on their land had been
realised. Work was available for the family (whānau) and they were employed on their own land. Unfortunately it was to be a somewhat short-lived venture.

The harvesting of the first rotation of trees finished in 2006. The Kokakotaea companies had actively tried to secure future work especially on other Māori land holdings. Although they had been successful in procuring some woodlots they had been largely unsuccessful in securing long-term work. Many forest owners, particularly in the central North Island, showed a preference for larger-scale suppliers. It was these major contractors with perceived lower costs and more mobility that procured most of the work at this time.

The nature of forestry and contract harvesting at this time in New Zealand was particularly tough. In November 2003, Peter Springfield (CHH Chief Executive) confirmed that approximately 300 CHH bush workers had been laid off since May 2003. Likewise, major processing plants in the central North Island wood supply region such as Tasman Pulp and Paper, Waipa Sawmill, Mount Maunganui Wood Processing, PanaHome, CHH Pulp and Wood Products divisions also announced restructures alongside others in the forest sector such as Harvard Management, Quality Marshalling, Horizon 2 and Arbor Resources (Publicly Sourced Information, 2004). Eventually the work for the Kokakotaea companies dried up as, like many other smaller owner-operators, they failed to compete in the open market.

The lease provided for little input from Rereahu into the establishment regime. However, despite this the owners continued to negotiate with CHH management. The first rotation had been a radiata pine monoculture and the owners felt strongly that the species had not grown well at elevated levels. A decision was reached to plant the highest areas of the land in Douglas fir and the remaining 80% in radiata pine.

The owners’ involvement in the planting regime did not stop here. CHH proposed a wide stocking regime of 667 stems per hectare, a radically new establishment regime in New Zealand coined the “Millennium regime”. Within the forestry company, staff at that time were under significant pressure to roll-out the Millennium regime to all of company’s forests. This establishment regime was part of the CHH’s new vision for
forestry, based on widely spaced trees of superior genetics and low establishment costs. It was a one-size-fits-all regime for the entire country. The Rereahu owners were sceptical about the suitability of such a wide stocking for their land. The previous rotation had been planted at 1,400 stems per hectare. Even though the lease provided for no input from the owners into the forest management and despite the pressure on CHH staff at that time, the parties managed to negotiate an increase to the widely accepted forest practice of 883 stems per hectare.

The Maraeroa C management committee continued to actively seek ways in which it could support whānau members in their own commercial activities. In 2004, the management committee had established a further company “Maraeroa Holdings” which was set up to support whānau members participation in commercial activities by providing them with business planning assistance and potential financial investment. Rereahu whānau have also managed to operate a number of small businesses within the realms of the lease such as puna (Cyathea dealbata) collection, native log salvage and native plant nurseries.

Furthermore, Maraeroa Holdings conducted a number of feasibility studies itself, actively seeking ways in which it could increase dividends to its shareholders. Several schemes eventuated including hydro and wind power generation, growing the herb ginseng under the radiata pine canopy and, of major significance, the development of an eco-tourism operation at the entrance to the forest.

In 2006, at the time of forest re-establishment, the management committee negotiated to take 27 hectares of land out of the lease. The lease itself made no provision for the removal of land from the lease but CHH was accommodating. The land was at the entrance to the planted forest only a short distance off State Highway 30 and at the foot of Mount Pureora, a popular destination for tourists and locals alike. It was therefore ideal for Maraeroa C’s eco-tourism project ‘Pa Harakeke’. The plan included extensive harakeke (Phormium tenax) or New Zealand flax gardens. Also, situated in the gardens would be a café and local craft shop, a harakeke nursery and a ‘pua kokare’ or harakeke processing centre. The site would provide weaving lessons, guided tours of the close-by Tanekaha forest, the option of purchasing personalised
trees for carbon offsets and/or beautification, and the opportunity to hear and visit the sites of the Rereahu legends and a base for those wanting to mountain bike through the planted forest. The stories and legends of the Rereahu people which are an integral part of Pa Harakeke have recently been the subject of a published book (Crown & Te Ruki, 2010) and television documentary.

More importantly, however, the centre would provide the Rereahu whānau with a presence on their land which does not have a traditional meeting house (marae). Pa Harakeke would be a place for meetings and celebrations and for many a chance to visit their own land for the first time. Pa Harakeke is now a reality, as is much of the associated original vision. The researcher had the first meeting with the Maraeroa C to discuss this research at Pa Harakeke, on the 24 February 2009, the day before it opened to the public. In just a short time of visiting the Maraeroa C lands, the researcher has witnessed first-hand the entrepreneurship of the Rereahu people.

8.10 **Rereahu and Hancock Natural Resource Management Group Incorporated:**

In 2006, CHH indicated it would be selling its planted forests including those on leased Māori land. The Maraeroa C management committee joined with other Māori landholders and made financing arrangement to purchase all of the Māori leases held by CHH (a total of 43 leases). CHH declined their offer citing that it would rather have one transaction for all forests. Finding funding for such a purchase was insurmountable for Maraeroa C. The management committee along with two other Māori Trusts tried again to purchase a smaller number of leases but CHH declined. Inevitably in December 2006, all of CHH’s planted forests were sold to Taumata Plantation Limited to be managed by Hancock Natural Resource Management Group Incorporated (Hancock).

Discontent within the Rereahu people about another lease partner grew. In just over one rotation of trees they had had 4 different lease partners. Furthermore, the lease stated that the owners must consent to a sale or reassignment of the lease yet this had not occurred prior to the sale to Elders, CHH or Hancock. Maraeroa C along with two
other Māori families who had similar leases with NZFP lodged a claim in the Māori Land Court stating that the forest sale was in breach of the lease and the Te Ture Whenua Māori Act 1993. Furthermore, the group appealed to the Overseas Investment Office (OIO) to block the sale. Both actions were unsuccessful. The OIO ruled that the sale did not breach its criteria and the Māori Land Court ruled against the people of Rereahu because technically NZFP was still a company owned by Taumata Plantation Limited, albeit a shelf company.

Initially, NZFP had survived as a company largely due to circumstance. At the time of the Elder’s Resources purchase of NZFP in 1988, shortly after the Stock Market crash, Elder’s lacked the finance to purchase NZFP outright and NZFP was losing money by the minute. Therefore the directors of both companies undertook a complicated, but legal, back-door deal. In August 1988, NZFP took over Elders Resources but for all practical purposes the deal was the other way around. Elders Resources turned itself into a wholly owned subsidiary of NZFP but the junior partner took control of the company (Parker, 2000). Effectively for the Rereahu people, NZFP still operated and ‘owned’ the lease.

Naturally, when CHH purchased Elders Resources NZFP, it purchased shares in NZFP who still owned the forest and therefore still owned the lease. Likewise, when Taumata Plantation Limited entered the market, technically the lease did not change hands just the shares in the company. At the time of writing this thesis, the Maraeroa C Forest is owned by Taumata Plantation Limited but is managed by Hancock.

Part III - Maraeroa C Incorporation: The Analysis Process

8.11 Introduction to analysis:

This section reports on the findings from the analysis of the MCI stakeholder interviews. The MCI results are presented in two parts following the same analytical process and presented in a similar layout to the LTFT results. The first part will briefly examine differences in the analysis process for the interviews and the second
part will present the MCI results in three sections: the historical perceptions of planted forests, the present-day opinions and views about planted forests and the future hopes and concerns of the participants. This style of presentation has been chosen because respondents in this case study discussed their forested land in terms of the past, present and future.

8.12 Differences in data:

The analysis of the MCI interviews followed the same analytical process of LTFT with two key differences.

First, the researcher originally intended to use the same set of questions that were used in the LTFT case study. However, the MCI interviews were potentially more exploratory, because there was less historical documentation made available to the researcher and also because the researcher spent less time in the region prior to commencing interviewing. Therefore, in order for the research process to maintain flexibility, the style of the interview was more emergent in that the participant guided the interview more than relying on the pre-determined list of questions. As a result the full range of questions was not covered in any of the MCI interviews. Typically, participants discussed some issues in depth and detail, but either had little knowledge of other aspects or chose not to share their views with the researcher.

Another key difference was the length of time the researcher stayed in the area and the length of discussion. Interviews were typically between thirty minutes and an hour long (c.f. LTFT 40 minutes to 4 hours) and the researcher visited the Rereahu community for three weeks from Monday to Friday (c.f. 4 months living in LTFT community). Finally, in terms of sample size, the researcher interviewed seventeen MCI participants compared with thirty-seven LTFT owners.

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30 In 2007, the number of people listed as shareholders to the Maraeroa C lands was approximately 1,000 (Smyth, 2008).
Part IV – Maraeroa C Incorporation: Results

8.13 Interview participants:

Participants were sought who were 18 years or over, and who were either beneficial owners of MCI or descendants of beneficial owners. The participants were sought out by the MCI liaison assistant and the researcher had little input in the selection of ‘appropriate’ participants. In both cases however, a variety of participants in terms of age, gender and location of residence was achieved. The age of the participant was not requested, instead the MCI liaison assistant deemed the participant to be either elder (kaumātua) or adult (pakeke). Of the seventeen MCI owners who were interviewed, eight were kaumātua.

All of the MCI owners consented at the time of interview to their views being included in the analysis. However, one of these participants was excluded from the data analysis because he passed away prior to the researcher undertaking any form of member checking. Typically interviews were carried out on a one-to-one basis but in two cases participants chose to be interviewed in small groups. Sixteen participants remained in the analysis of which all had full transcripts.

8.14 Presentation of results:

The following sections report the findings from the analysis of the MCI interviews in terms of past, present and future perceptions. The following data are presented first in the form of diagrams which display the themes and subthemes of the expressed sentiments where possible. The number of participants who clearly communicated such themes is displayed in brackets. As with the LTFT analysis, the numbers represent the minimum number of participants supporting the themes, in other words only those participants who specifically stated such themes. Other participants may have implied they were in agreement, which has added to the researcher’s knowledge and confidence in the themes. The diagrams are followed by a brief explanation.
including – where applicable – a series of quotes. The implications of these findings are explored in detail in the discussion section of this thesis (Chapter 9).

The MCI results are presented under the following interrelated themes and subthemes:

1) The interviewees’ perceptions of the motivations of the land owners who agreed to the afforestation lease:
   a) Historical hopes (income, land retention, land not ‘idle’, environment and access)
   b) Historical concerns (length of time of the lease, length of time before economic return, loss of autonomy, increase in traffic).

2) The present-day experiences, views and opinions of the planted forest
   a) Structure:
      i) Governance, land tenure and regulatory framework (lease partner, MCI, multiple ownership and regulators)
      ii) Leadership (communication, participation, management and leaders).
   b) Forest Management:
      i) Forest practices (enablers and constraints including landscape)
      ii) Commercial value (forest management, governance and owners)
      iii) Access (enablers and constraints)
      iv) Employment (preferential land owner employment).

3) Non-negotiable cultural values relating to the land.

4) The future hopes and concerns of the land owners.

The relevant themes and subthemes will be repeated throughout the following sections to assist the reader in navigating the results. It is acknowledged that despite presenting these results in groupings, many of these themes and subthemes are related as will be discussed further in Chapter 9.
8.15 Historical perceptions of the planted forest:

Not all of the MCI interviewees were born or of an age to recall the time that the land owners signed the afforestation lease, however, some participants spoke of either their own memories or what they had been told about the time.

8.15.1 Historical hopes of the land owners:

Table 15 – MCI: themes and subthemes 1) a)

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<th>1. The interviewees perceived the motivations of the land owners who agreed to the afforestation lease in terms of:</th>
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<td>a. Historical hopes (income, land retention, land not ‘idle’, environment and access)</td>
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<td>b. Historical concerns (length of time of lease, length of time before economic return, loss of autonomy, increase in traffic).</td>
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The participants were asked about the time when the afforestation lease was being considered by the land owners. Of the sixteen interviews included in the analysis, nine specifically discussed the hopes held by the land owners who agreed to the afforestation lease as including; improved income, land retention, that the land would not be ‘idle’, that the environment would benefit and that the owners would be allowed access to their lands (see Figure 29).
Of the participants who discussed the historical hopes of the land owners, eight respondents specifically discussed the hope the planted forests would result in income for the family, in particular for future generations of land owners. Six specifically discussed the idea that the lease would secure long-term land retention.

By the time their mokopunas would grow up, they’d have something from the land, from the trees, that was the sort of thing they had in mind. R2

My mother was like, “well that’s what the old people did for the security for the next generation, ngā tupu rongo-hīrea, ngā tupu mai… it will still take care of you even after I’m dead.” R9

Their hopes were that there’d be no loss of land that was their biggest hope, that we do not lose the land. R6

Four participants discussed the hope of the land owners that their land would not be ‘idle’ and would be ‘put to good use’.

When they started developing those lands, they’ve always said... “Waihotia mā te whenua hei oranga mā te iwi”. And so you know let the land be the benefit for the people...they all had a fair knowledge of what would happen with land that was standing idle. R3

The biggest hope was doing something useful with the land... R7
I remember him believing very strongly that Maraeroa needed to be afforested. They needed to be doing something with the land and at the time the deal with [NZFP] was the best deal they could get. R1

Interviewees expressed the sentiment that the planted forest lease would be a good way to maintain owner access to the land (3) and ensure the protection of the remaining native forest (2).

Some of the things that the family wanted written into that lease was access, the ability to make food, the ability to hunt... and they wanted the 200ha native bush right in the middle of the [land] protected, no logging was to take place in there and they’ve got it so the family has protected a 200ha Tanekaha forest, the biggest in North Island, if not New Zealand. R5.

One participant remembered her tūpuna felt that the land was “desecrated” without a forest and at least, therefore, the pine forest would return trees to the land.

8.15.2 Historical concerns of the land owners:

Table 16 – MCI: themes and subthemes 1) b)

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<td>1. The interviewees perceived the motivations of the land owners who agreed to the afforestation lease in terms of:</td>
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<td>b. Historical concerns (length of time of lease, length of time before economic return, loss of autonomy, increase in traffic)</td>
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Participants were asked to share any memories of their concerns of the land owners who were considering the planted forest lease. Interviewees discussed such concerns in terms of the length of the lease, the length of time before any economic return, the loss of autonomy and an increase in traffic (see Figure 30).
Two participants discussed the length of the lease and one interviewee the time it would take before a financial return could be sought.

*We went to the New Zealand Forest Service but that agreement would take too long to develop into a forest... and as it turned out Forest Products were the only ones who could come up with the solution... and henceforth the Maraeroa C Forest was there, but I suppose our people got a little bit worried, of course we took out a 99-year lease with them, we thought that, we knew that would be quite a long time for a lease.*  

R6

One participant discussed the fear of losing the land by giving up autonomy and another participant remembered some discussion about concerns regarding forestry traffic on the community roads.

*One of the things I heard was the traffic you know, because there were a lot of communities still built up there and the impact of the traffic like the big, heavy vehicles going in there to do the work.*  

R7

Participants in this case study were more likely to discuss the decision to sign the lease in a blunt manner, simply stating that it was the owners only option and any concerns were secondary.

*They [the land owners] didn’t have a choice, just lose the land or some of it through rates and so on, so it was a good decision in my view, the only decision.*  

R5
They got a big rates bill... and if we didn’t do anything about it, I think it was going to be confiscated, so they got together with Forest Products and leased it to them for a 99-year lease... they were just thinking it going to be their land still, but let someone else work it otherwise it will get taken away. R2

8.16 Present-day experiences, views and opinions of the planted forest:

When participants discussed their present-day perceptions of planted forests, three overriding subjects were apparent. Participants discussed aspects of planted forests in terms of land management structure, forest management and also in relation their own values. Viewpoints regarding these subjects are interrelated.

8.17 Present-day experiences, views and opinions of structure: governance, tenure and regulatory framework

Table 17 – MCI: themes and subthemes 2) a) i)

| 2. The present-day experiences, views and opinions of the planted forest can be grouped into the themes of:
| a) Structure |
| i) Governance, land tenure and regulatory framework (Crown, MCI, owners and regulators) |
| ii) Leadership (communication, participation, management and leaders). |
| b) Forest Management |
| i) Forest practices (enablers and constraints including landscape) |
| ii) Commercial value (forest management, governance and owners) |
| iii) Access (enablers and constraints) |
| iv) Employment (preferential land owner employment) |

Interviewees in the MCI case study associated the establishment of the planted forest with the establishment of a particular governance and tenure structure. The forest lease resulted in a partnership with a lessee, dependency on a management committee (MCI), multiple beneficial owners and a land use that is subject to changing regulation. Despite there being diversity in the way participants discussed aspects of structure, there was uniformity in the way that people perceived structure as constraining (see Figure 31).
8.17.1 Structure – the Lessee:

Of the ten participants who specifically discussed the tenure of the lease partner, five spoke of the length of time before the right to control their land (manawhenua) would be returned to the people of Rereahu.

*And we're never going to be here at the end of the lease, you know, to see what's left. R7*
I could never understand was they’d had these leases for 90-something years oh that’s a long time, I could be dead by then... for me growing up with the knowledge that I’m not going to be there…. I hated it. R9

For me? Absolutely tragic, if the lease isn’t amended… if we can’t get time off it, I’m never going to see [the land] at its best. I can be part of the process but you almost want to see an outcome.

Five interviewees discussed their disappointment regarding the changes in lease partners from NZFP through to Hancock.

You put your trust into this agreement, into these people “Okay, now you’re going to be my friend forever because we’ve got this [lease], we’ve created a pact together”, and then the next minute you are talking to an answer phone. R7

The changeover from Forest Products to Carter Holt Harvey to Hancock, basically you’ve had all these changes. This is like a farmer having a lease to someone and then all of a sudden he changes it. R4

Some interviewees expanded this sentiment further by stating that the signatories in 1972 would have believed their agreement was with NZFP and no other entity.

The sales [changes of lease partner] weren’t part of their thinking at the time... they would have probably believed NZFP was going to be around forever... they made an agreement and they shook on that agreement, that was their law and it was binding. R7

When my old man signed the lease, he didn’t have a lawyer... he just said, no, he knew the fella he was dealing with, he knew him personally and he was a good man. R8

We did that on the basis that they would be here forever, to the end of it, but as things turned out... they [NZFP] handed the deal to someone else. R6

Five participants spoke of the lessee arrangement as being restrictive in the sense of the overriding authority of the lease partner over land management decisions.

We’re dictated to by a big company, our land is just to feed that pulp mill in Tokoroa and that’s all it comes down to, we had no say in that. R10

However, one participant went on to acknowledge that the lease partner allowed for some participation from the land owners beyond the terms of the lease.

So our joint venture partners have been accommodating, so whilst the lease doesn’t provide for it we have been able to [get back] over 100 hectares that we’ve got the use of now. R5
8.17.2 Structure – the Management Committee:

Three participants spoke of the uneasy fit of a non-Māori style of governance, i.e. the MCI management committee, over Māori land.

We should have our own framework that works for our own concerns, our own issues, our own benefits, but somehow we’ve been locked into this other system.  R7

I’d like to see the owners have more input rather than the committee saying “Well this is the best way to go”.  R6

When discussing how the MCI management committee communicated forest management decisions to the owners, one participant went on to say;

They use all this other jargon, it hard to understand and they talk in facts and figures... so you’re intimidated and you sit down.

8.17.3 Structure – the Owners:

Ten participants in the MCI interviews discussed the system of ownership of Māori land; in particular how the system applied multiple ownership to their land with the automatic succession of shares to owners. The participants spoke of how this further diluted their authority and control and ability to communicate because not only are they subject to a lease partner and a management committee but there are a growing number of owners.

That’s quite hard, not having a proper say on your land because you’ve got to get 100% of the people to disagree, otherwise you have to go with the flow. R3

Six participants shared their perception that a large number of owners lends itself to disinterest and disassociation of their share of the land, especially for absentee owners.

The problem is finding everyone who identifies with that place, who affiliates to it and getting them to understand that they do. It’s so difficult for some people who have never had land to help their identity... if I didn’t know that was my place and I belonged there, I just wouldn’t be so interested, wouldn’t identify so strongly.  R11
Well some of my children, my grandchildren are [overseas] and whether they identify with something in the middle of the North Island that belongs to them when they grow up I guess they will and there will be many, many others. They think they have a shovelful of dirt that belongs to us... is that identity? R6

8.17.4 Structure – the Regulators:

Five participants discussed their long-term commitment to forestry in terms of exposure to forest regulation. Local and central government regulation related to planted forests has changed significantly since 1972 and is likely to change again throughout the term of the lease. Land owners do not have autonomy over their land and therefore have limited ability to react to such regulation changes. Three participants talked about their land use choices being removed by regulation and one discussed his perception of a differing set of land management standards between Māori owned land and non-Māori owned land.

We don’t have a choice [to deforest], in terms of current legislation... we don’t have a choice. R5

I only wish the council, for example, would abide to the same laws that we put on our forest land. R6.

8.18 Present-day experiences, views and opinions of structure: leadership

Table 18 – MCI: themes and subthemes 2) a) ii)

2. The present-day experiences, views and opinions of the planted forest can be grouped into the themes of:
   a. Structure
      i. Governance, land tenure and regulatory framework (Crown, MCI, owners and regulators)
      ii. Leadership (communication, participation, management and leaders).
   b. Forest Management
      i. Forest practices (enablers and constraints including landscape)
      ii. Commercial value (forest management, governance and owners)
      iii. Access (enablers and constraints)
      iv. Employment (preferential land owner employment)
As was the case with the LTFT case study, the MCI participants made statements regarding leadership separately from sentiments regarding the governance structure of the land. Thirteen participants discussed leadership and how it related to their perceived ability to participate in decisions, how the leaders communicated their strategies, managed the infrastructure, and what the interviewees thought of the leaders themselves (see Figure 32).

![Figure 32 – MCI: present-day opinions of structure: leadership 2) a) ii)](image)

Five interviewees expressed the opinion that the MCI leadership did not appropriately communicate their management decisions. The views as to the reasons why were diverse but all five desired more avenues for communication.
Case Study Results – Chapter 8: Maraeroa C Incorporation

There has needed to be a group of people who are educated enough in both the Māori and Pākehā world... who have the ability to communicate with the owners and that’s the crux of everything. R1

It’s quite interesting the amount of information that isn’t made available, isn’t made clearly visible to the stakeholders... if you don’t know where to go and look for something it becomes a massive task. There has to come a time where you share, where you need to be more open. It’s not about blowing your own trumpet. It’s about sharing. R12

Eight interviewees discussed their ability or inability to participate in land management decisions in terms of how approachable they felt their leaders were. The participants were equally divided as to whether or not their leaders provided opportunity for them to participate.

The chain of command goes like this, we talk to trustees because you know, they’re nothing but representative power. So they’re no better than us, but we put them in their job because they want to be in that thing so it comes down to if enough of the owners said something and they’re clear enough and these things, well they’ll change. R15

Our last AGM it was all rehearsed you know quite clinical in some areas in that we were the little puppets. R7

Six interviewees discussed the MCI management committee, two in terms of a lack of forward planning, two as being too costly and two as providing very good management of resources and infrastructure.

We ask them, ‘After 64 years, when these leases are up where’s our plan? What’s your plan for these things, for your mokopunas, for your children and all that?’ And you find out they haven’t really thought about it. R15

There’s a few... over-fat cats. R16

I think Maraeroa C has the management structure that if it was handed back we would be able to go forward. R14

Four participants discussed the actual leaders themselves using words such as “good”, “fine” and “innovative”. Two participants described the numerous responsibilities of the leaders.

Too many hats... yeah they are spread out too thin. R7
Some participants who expressed sentiments regarding their leadership went on to recognise the constraints of the lease structure, in that the leaders themselves had very little opportunity to make change.

*Unless we are able to do it ourselves, we really can’t really change things. We can present where they’re going wrong or what they haven’t been doing, but that’s about all we can do.* R4

*Well the lease gives them the right. It’s been agreed for those years... so until it comes back into our hands, we don’t really have a say.* R3

8.19 **Present-day experiences, views and opinions of forest management:**

8.19.1 **Forest management: forest practices**

**Table 19 – MCI: themes and subthemes 2) b) i)**

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Participants expressed strong views on aspects of forest management although interviewees were not polarised and were likely to express some aspects of the forest regime positively and others negatively.

Fourteen interviewees expressed the sentiment that they were satisfied or enabled by aspects of forest management in that it is an appropriate land use, that it allows for diversification, provides reasonable environment services and protects sacred sites (see Figure 33).
Nine MCI participants either expressed satisfaction or realism at having their land in planted forests.

*It’s basically the only real commercial crop that suits the land.*  
*R5*

*There’s nothing wrong with the pine trees, they are a necessity that we need and they grow well... I’d rather see [the land] being used, utilised for something [rather] than just sitting there doing nothing, so I’ve got nothing against the pine tree side of it.*  
*R8*

In particular, five participants described how they were of the opinion that the forest is more beneficial than farming.

*I feel the shareholders benefit more from Maraeroa C [the forest] than they ever have from Tiroa/Te Hape [the farms].*  
*R14*

*The forest has been here all our life and it’s good for our animals and our birdlife... the birds won’t live on grass.*  
*R13*
Six participants discussed how the forest regime, which is non-intensive (no pruning with some areas receiving one thin), had allowed the owners to operate other businesses within the forest and increase their participation on their lands, for example: tourism, secondary crops such as ginseng and native seedlings, hydro-electricity production, quarrying, native log salvage and native plant extraction.

*We can manage the silviculture regime for parts of the forest that are suitable for growing wild ginseng... we've found a companion crop that grows well with the forest.* R5

*So I think the forestry is good... we've got our quarries so we're quite independent now.* R4

Five participants expressed the sentiment that they felt the forest regime was beneficial for the environment, in particular for waterway management, the protection of waahi tapu and the protection of Tinihanga, the remaining native forest.

*They're on the right level of not planting so close to the streams because of the light root of the pine, rather than the deep root of the native trees. I think they're on the right track making sure the waterways are kept clean.* R6

*We’re lucky to have a good joint venture partner environmentally and culturally sensitivities that are helping us to maintain the waahi tapu signage or making sure the harvesters don’t encroach without proper protocol.* R5

*A 200ha Tanekaha forest... it's a jewel in the crown really, of the forest. It stands preserved. The only people that can go through there are hunters and it's pristine.* R5

Seven interviewees discussed the aspects of forest management that they did not perceive to be beneficial (see Figure 34). When discussing the constraints of the planted forest regime, participants were not completely opposed to the land use. For example, one participant discussed six aspects of the forest regime they perceived to be negative (disregard for waahi tapu, poor environmental management, too much chemical usage, species susceptibility to wind, landscape and too much waste), yet overall this participant would support keeping the land in planted forest in the future.
Eight MCI participants expressed the sentiment that they were not happy with the way the forest regime affected the landscape. Six participants expressed this in terms of the visual aesthetic and two in terms of the near single age-class structure of their forest (see Figure 35).

*I looked up at the maunga and I can’t explain the feeling that I get, it’s just amazing and sad at the same time seeing what the land is being used for... you look at the tip and you do feel like this is part of what we knew so long ago and we need to retain it, and then it’s just like there’d be an invisible line, and there would be the British forces it’s almost like that’s what the pine is... it’s the past and present up in your face, the bastardisation of our culture. R11*

*I still mourn for that bush because it was beautiful native... and then you go in to the pines and it’s not the same. R2*

*We used to sit up there outside the house and we’d look up and I would say ‘Look at that... you know that mountain is your mother’s head and the bush is her hair,’ and I said, ‘And then you go down here... and what can you see? She’s all cut up... you’re mother’s been ripped to bits’. R7*
Other participants discussed: their disappointment about the amount of forest waste that was left after logging operations, their disappointment at particular species choices, their concern that the land was being stripped of nutrients and at the lessee’s renaming of traditional roads and tracks.

*Sometimes there’s just so much useless waste, good waste sorry. There is good waste that can be made useful.*  R7

*I was basically dead against the Douglas fir because I reckon we could have done a lot better by having pine trees.*  R4

*That land is buggered after 99-years… the nutrients, you can’t keep taking from the land, you’ve got to put something back.*  R10.

*All the roads as we knew it, they took them all away…and you think ‘Where’s so-and-so road?’ You know we had all these names for them and then none of them were the same.*  R2

8.19.2  **Forest management: commercial value**

<table>
<thead>
<tr>
<th>2. The present-day experiences, views and opinions of the planted forest can be grouped into the themes of:</th>
</tr>
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<tbody>
<tr>
<td>a. Structure</td>
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<tr>
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<tr>
<td>iii. Access (enablers and constraints)</td>
</tr>
<tr>
<td>iv. Employment (preferential land owner employment)</td>
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</table>
Thirteen participants in MCI interviews discussed the commercial value of the forest in a diverse manner (see Figure 36).

When participants discussed the commercial value of the forest, some expressed satisfaction at the commercial return of the forest, and others disappointment.

*There is still money to be made from rentals for pulp forests because they’re finding it more and more difficult to get forestry for pulp.*  R5

*My expectation was that it was going to be a great thing, it was going to be employment for our people, it was going to be money for the shareholders, but I don’t think that eventuated so that was probably a bit of a disappointment.*  R14

Five participants discussed governance aspects of the planted forest in terms of the lease, the lessee and the management committee.  Three participants discussed the way in which commercial return was assigned in the lease and how this was conducive to improving returns to the owners going forward.  This is because the
lessee’s inputs are decreasing as much of the forestry infrastructure, such as roads and processing landings, is already in place, and meanwhile the value of the owners’ input, the land, is increasing.

*We’re hoping that the second rotation will provide a better class of tree and more importantly, the inputs, the cost of establishing this second rotation a lot less, particularly with all the roading networks in. So that means their inputs will be lower and fortunately for us, land values have skyrocketed.*  

Two participants discussed their perception that the management committee and/or the forestry company had too much of a commercial focus.

*Well today a lot of these things are fiscally driven, it’s about money, making the money… why don’t we just do something for the marae, can’t we plant potatoes?*  

Three participants specifically commended the social benefits provided by dividends from the forest such as financial assistance to marae, kaumātua grants and even the visible aspect of commercial value adding to the owners’ identity.

*We think that ventures such as this sort of pave the way, there’s something out there. There’s actually something tangible that they can see that’s modern, modern yet traditional, you know. It’s a business. It’s something that people have thought about that there’s money invested into. There’s time invested into. There’s your resource you’re invested into and it’s something that you, therefore, can have an opportunity to identify with because it is yours.*  

### 8.19.3 Forest management: access

<table>
<thead>
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<th>Table 21 – MCI: themes and subthemes 2) b) iii)</th>
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<tbody>
<tr>
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<td>iv. Employment (preferential land owner employment)</td>
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</table>
In the MCI interviews, eleven participants discussed that maintaining access for the land owners was a paramount goal of forest management.

Well having access is something that I wouldn’t give up ever now... but I’m sure you’ll find that that’s priority number 1. R5

It’s that connection, that call to your whenua... my cousin says ‘I don’t know the reo like you do’ and I say ‘but you never left here’. He goes ‘oh I don’t know how to do a karakia’ and I say ‘what you are doing with your mahi is a form of karakia in itself, the old way’. R15

In relation to the forest regime, five participants discussed the lessee’s role in access management (see Figure 37).

![Diagram showing opinions on forest management: access]

Owners were at odds in their viewpoints as to whether forest management enabled or constrained access.

And one of the things about having the forest, they’re still able to come in and do a bit of hunting and firewood and things like that, which is pretty hard to get access through farms. R4

But you can’t [go] there because there’s huge hazards there you know... [there are] health and safety [issues] when they are logging an area, you have
to take safety precautions like two-way radios, high viz [high visibility clothing]. R10

8.19.4 Forest management: employment

Table 22 – MCI: themes and subthemes 2) b) iv)

| a. Structure |
|---------------|---------------------------------------------------------------|
| i. Governance, land tenure and regulatory framework (Crown, MCI, owners and regulators) |
| ii. Leadership (communication, participation, management and leaders) |
| b. Forest Management |
| i. Forest practices (enablers and constraints including landscape) |
| ii. Commercial value (forest management, governance and owners) |
| iii. Access (enablers and constraints) |
| iv. Employment (preferential land owner employment) |

Seven participants discussed their perception as to whether the planted forest provided employment opportunities for the land owners (see Figure 38).

Figure 38 – MCI: present-day opinions of forest management: employment 2) b) iv)
Seven interviewees discussed employment opportunities in the forest. Two participants discussed their perception that the original signatories would be disappointed at the employment outcomes for the people. One participant discussed the first harvest of the forest, a time when the Rereahu people controlled all aspects of a portion of the harvest area.

There was a great sense of pride at that time with the families from the region because most of the people employed came from the region or were descendants of people from the region. There was a lot of pride in being able to do your own work and not only being the guy on the chainsaw but being the guy who was selling the log, being the guy who was driving the trucks that was delivering the logs, you know, and there was a great sense of achievement, I guess, and a great loss too when we knew that the industry wasn’t able to continue. R5

There was diversity in opinion as to whether forest managers should provide Rereahu owners with preferential rights to employment in the forest. Two participants felt this should be a goal of the management committee where possible and one interviewee presented the opposite opinion.

Why are your contracting “x” to do this work? Get our people in there, get them skilled. R7

I would hope that the lands would provide work, employment for people from this area... I still feel very firmly that you do not employ anybody just because they are whānau. R1

8.20 Non-negotiable cultural values for the land:

Table 23 – MCI: themes and subthemes 3)

3. The interviewees would view the planted forest in terms of their non-negotiable values for their land.

These results in this section are presented by grouping the ways in which the participants articulated or explained their values in response to the specific question: what cultural values are non-negotiable for your land and how does the forest affect these values?
Despite some differences in the specific phrases (i.e. ‘keep the land’ or ‘retain the land’) the values were able to be grouped into the following themes (see Figure 39):

a) land retention (6)
b) kaitiakitanga including the protection of the remaining native forest (6)
c) for the land to sustain the people (4)
d) for the land to be left in a better condition (2)
e) protection of waahi tapu (2)
f) regaining manawhenua (2)
g) respect for people and relationships (1)
h) maintain the wairua of the land (1).

Participants tended to express the sentiment that land retention was paramount, as was the maintenance of kaitiakitanga. In turn, some interviewees went on to describe the importance of the sustaining the people.
I hope we never ever lose it [the land], you know, that whatever they do, they hold onto it.  R9

We don’t own our ancestor Papatūānuku, but hopefully the resources and all that she provides... Toitū te whēnua... the permanence of the land will be there... hopefully we will leave something in lieu for our next generation and that’s that permanence, that men will always die but the land will be there but it’s in what condition that we leave it during our kaitiaki, our guardianship.  R15

Number one to retain the land for the people, that’s got to be your number one.  Two, to have economic gain from it so in order to sustain the people further.  That whole guardianship, being a kaitiaki... that’s part of my vision for people to understand that they are, even over in Australia or wherever, you’re still part of this.  You’re still someone that is looking after this and that’s not only an honour but a responsibility.  R12

The protection of waahi tapu was specifically mentioned by two participants as was regaining manawhenua over the land.

Non-negotiable values?  Tampering with the urupā because there’s a few up there and that was a big issue.  R1

The permanence of the land will be there, but we tend to argue about is the manawhenua, whose authority over the whenua and to bring it back to thing and that, hopefully we leave something in lieu for our next generation.  R15

The remaining viewpoints were more diverse.

We need to be mindful that as time goes on, even with the pressures in regards to forestry and changing to pines and doing this, that and the other thing, there’s a certain wairua to your land that needs to be maintained.  R12

I’ve got my own views, that’s not about the product or the asset, it’s about the people and the relationship... it’s how you work with your partner to get your values enshrined in, not so much in the lease document, but in the way that you work together.  R5

In terms of land uses, none of the participants indicated that the planted forest was uncomplimentary to their values.  Instead participants went on to acknowledge trade-offs between their cultural values and governance structure.

The thing we’re talking about is manawhenua.  It’s manawhenua, on whose authority, whether it be the government, the forestry department, MAF, DOC, whatever, they hold that mana over that area... we can still call that our maunga though we mightn’t have the mana over [it]... we still refer to it as our tūpuna are buried there...we find out it’s our connection with our ancestors that we talk about and going back to actually the forest and the trees
The interviewees perceived the planted forest in terms of their future hopes and concerns. R15

Because I don’t know the pine whakapapa but surely it comes under Tane somewhere…It’s our perceptions or our values, of how we think it though.

Despite the research process grouping these values into themes, the overlap between values is acknowledged. For example kaitiakitanga can be discussed in terms of retaining the land, protecting waahi tapu, leaving the land in a better condition and for the land to sustain the people. Despite the differences in how participants choose to discuss values, no participant suggested the planted forest was incompatible with their cultural values.

8.21 Future hopes and concerns:

Table 24 – MCI: themes and subthemes 4)

4. The interviewees perceived the planted forest in terms of their future hopes and concerns.

8.21.1 Future hopes:

Participants were asked what they hoped the forest would provide for future generations, particularly in the next 60 odd years that remained on the lease (see Figure 40).
Five participants discussed their hope that the forest would provide funding for education and/or that education could be linked back to the land through improved access.

*I hope that the lands would provide funding to support all the marae, funding to support good educational outcomes for all those people who really want to receive an education.* R1

*What I always hope, you know our whare wānanga? I always dreamt... that we would build something there on the land that would train our people to be scientists on their own land... a lot of opportunities to develop our people into all sorts of things and they could be experts in forestry.* R3

A further four participants discussed their hope that the land would continue to sustain them and their and two participants discussed the hope that the forest would provide money to purchase more land.

*...to have some sort of economic gain from it so in order to sustain the people further.* R12
I would hope that the lands would provide the ability to purchase more land. 

R1

8.21.2 Future concerns:

The majority of participants chose to express their future hopes as opposed to concerns. However, one participant discussed concern at the potential of increased business risk if the management committee took on bigger projects and another participant discussed the concern that the Maraeroa C land would become populated with too many people.

8.22 Concluding comments: Maraeroa C Incorporation

Prior to colonisation the occupation of the Maraeroa land was diverse because the land is situated on a traditional tribal border of three tribes. In 1886 the Native Land Court awarded the title and ownership of this land to Ngāti Tūwharetoa. Ngāti Maniapoto disputed this judgement leading to litigation in the Supreme Court and the appointment of a royal commission. In 1911 new titles were issued in the Native Land Court which awarded ownership to the descendants of Rereahu. In 1912 a timber licence was granted to forestry company Ellis and Burnand.

In 1968 the Rereahu families had their land returned after 56 years of exclusion. The participants explain that many in their families did not even know they were legal land owners. They believed they were facing forfeiture of the land in lieu of unpaid rates and immediately sought a partner to develop the land into planted forests. The interviewees suggest that the land owners who agreed to the afforestation lease in late 1972, acted with future generations in mind. They saw the owners as being united in their desire for land retention and making the conscious decision to forego immediate advantage in the hope that the planted forest would benefit future generations. The participants clearly state that the land owners perceived their agreement was with NZFP and no other entity. Yet over the past forty years, the lessee has changed four
times; from the original forest partner NZFP, to Elders Resources, to CHH, and more recently to Hancock.

The variable-stumpage 99-year lease allows for little participation from the Maraeroa C owners in the management of their lands. However, the story of the Rereahu people is one of tenacity and entrepreneurialism. Despite legally having little opportunity to participate in management decisions on their own land, the Rereahu people have achieved input at almost every level. Whānau businesses were involved in the harvest, distribution and marketing of a percentage of their trees. Work for their whānau was secured for some years with profits going back to the committee for distribution to all shareholders. Secondary businesses, such as native log salvage, punga collection and native plant germination, continue to operate within the forest. The management committee also used the money raised by the forest harvest to actively support partnerships with whānau who wished to make their commercial businesses elsewhere. Of major significance: the Rereahu people have negotiated a permanent presence on their land by opening their eco-tourism venture, Pa Harakeke.

The MCI interviews had three key purposes in the research process. The first was to see how the participants expressed opinions as to the benefits and constraints of the planted forests. The second purpose was to analyse such elicit the land owners’ non-negotiable values for their land and ascertain the effect of the planted forest on these cultural values. The third purpose was to explore such issues in a potentially contrasting case study or lease situation to LTFT, one in which the land owner had little input into land management decisions (which will be discussed in Chapter 9).

The first research question was: what do Māori land owners view as the benefits and constraints of the pre-1990 planted forests that exist on their ancestral land? In response, the participants revealed the combination of governance, tenure and regulatory framework was viewed as constraining by the MCI land owners. Particular limiting aspects were the length of time of the lease, the authority of the lessee over the land and the potential future changes in the lease partner. Furthermore, the owners’ dependency on their internal management committee, the multiple ownership of Māori land and the external regulation of forests, had the effect of owners
becoming disassociated with the management of their ancestral land. A further issue of concern for the Rereahu participants was the effect of the forest on the landscape, in particular because of its location on the slopes of the ancestral mountain, Pureora, and also because of the near single age class structure of the forest. Other constraining aspects of the forest were discussed but opinions were more variable. These included species choice, the amount of forest waste left following harvesting, the management of waahi tapu sites, the forest management company renaming roads in the area and the forest nutrient management.

The interviewees also discussed benefits of the planted forest, in particular the ability to diversify within the forest infrastructure. Ventures such as tourism, secondary crops (ginseng and native seedlings), hydro-electricity production, quarrying, native log salvage and native plant extraction were undertaken. This flexibility alongside the protection of environment services and waahi tapu was viewed favourably by participants. Furthermore, some participants also discussed the benefits of access, employment and commercial value. Accordingly, none of the participants would favour changing the land use in the future.

Despite various opinions regarding the constraints of the forest many interviewees considered planted forests as compatible with their expectations and non-negotiable values, a finding which is somewhat unexpected given the limited participation offered to land owners in the lease structure. In relation to the second research question: what cultural values do the participants express for their land and is planted forestry compatible with such values? the participants revealed non-negotiable values which highlighted similarities with their ancestors who agreed to the afforestation lease. In particular these values included the retention of land, the protection of the environment, including the remaining native forest, and the importance of acting mutually for the benefit of the collective families.
Chapter 9: Discussion

9 Discussion of Results

9.1 Introduction:

The analysis of the interviews set out to address the following questions regarding the interviewees’ views on land use:

1. What do Māori land owners view as the benefits and constraints of the pre-1990 planted forests that exist on their ancestral land?
2. What cultural values do the participants express for their land and is planted forestry compatible with such values?

The responses of the case study participants are reviewed in relation to forest management techniques in order to answer the following research question:

3. Can forest management be manipulated to improve the realisation of the land owners’ aspirations?
Resilience thinking was chosen as the theoretical framework to further investigate the nature of values, perceptions and expectations of forestry. The land owner experiences in each case study are explored in terms of resilience frameworks, thereby tackling the remaining research questions:

4. Can land owner experiences in each case study be explained in terms of resilience, adaptability, transformability, adaptive cycles and panarchy?

5. Are the social resilience indicators of Ross et al. (2010) applicable to the tribal communities in the case study areas?

This chapter is presented in four parts. The first will revisit the theoretical approach in light of the results and highlight potential strengths or limitations. The second and third parts will respectively explore the results from each case study. Given the contrasting forest scales and management structures, and the distinct ownership histories and contemporary circumstances, it was considered more culturally appropriate to investigate each narrative in turn. Also, this process will allow an investigation into how two examples of a social-ecological system have behaved over a lengthy period. The final part will provide a comparison of the case study scenarios and review the combined findings for forest management and resilience thinking.

Part I - Revisiting the theoretical approach:

9.2 Challenges to the theoretical approach:

The interview material from the forty-seven participants revealed a variety of themes and sub-themes related to planted forests on ancestral land. At this stage of the research process, there are a number of legitimate ways by which to discuss these results. First, however, three key decisions are required;

1. Determining the most appropriate scale at which to examine the results.
2. Revisiting the responses from the participants, assessing if the research questions and/or initial topic of enquiry adequately represent the narrative.
3. Addressing the potential strengths and limitations of the theoretical framework in light of the responses of the case study participants.
9.2.1 A cross-scale approach:

A key decision was whether to undertake a high-level examination across all themes or instead investigate the participants’ responses in fine detail. A cross-scale approach was determined to be more appropriate, as explained below.

First, it is acknowledged there was variability in the semi-structured interview process both within and between case studies. The intention to ‘see’ the forest through the eyes of the interviewee, meant the interviews were emergent and the researcher was led by the participant. This design does not suit a fine detail comparison of interview responses, because not all questions were asked in all cases. However, given the exploratory nature of this research a degree of flexibility in the design was required.

Second, the results presented in Chapters 7 and 8 have shown that the land owners in both case studies view the forest in governance, tenure, regulatory, leadership, forest management and cultural contexts. A fine detail approach might fail to explain the system in its entirety. By way of illustration, considering the forest management scenario in terms of forestry practices alone, there appears to be limited flexibility for the land owners, yet when the overall situation is considered including the historical, human and cultural agency, an innovative and adaptive picture emerges.

Finally, maintaining a cross-scale view of this data is expected to provide more insight to these case studies as opposed to a fine-detail approach (as explained in Chapter 5) and is more relevant to contributing to the evolution of resilience thinking.

9.2.2 Relating the results to the initial topic of enquiry: forest management

The initial intention of this research was to review the contemporary opinions expressed during the semi-structured interviews with a clear focus on forest management. The data collected shows that, despite the contrasting lease arrangements, the forest is viewed through similar high-level themes:
1. Land management structures (governance, tenure, regulatory frameworks and leadership).

2. Forest management decisions (commercial value, employment, forest regime and access management).

3. Non-negotiable cultural values.

Together these themes portray how, after some decades of experience, Māori affiliate with planted forests and have incorporated them into their sense of place. The results suggest that despite difficulties and disappointments, the Māori land owners consider planted forests as an appropriate land use, consistent with their environmental considerations and cultural values. However, none of this can be adequately explored by discussing forest management priorities or practices. Instead, the results illustrate that in both case studies the participants ‘saw’ the forest in a way that was intimately connected to their political (governance, tenure and regulatory framework), institutional (trust and management committee), and cultural context (values and history).

At this point of the research process I was faced with two key challenges, both of which required me to extend the research focus beyond the scope of my professional experience. The first was somewhat straightforward: despite my personal interest in forestry, I needed to incorporate the fact that the majority of participants viewed the forest in terms of governance, tenure and regulatory frameworks. The data presented in Chapters 7 and 8 suggest that the interplay between these three is the critical aspect by which to understand forest management objectives.

The second challenge was more complex. The political and institutional frameworks still fail to adequately explain the overall experience of the case study participants. The interviewee quotes show that the contemporary responses to these themes were often intimately connected with historical opinions and/or cultural values. The participants therefore choose to explain or justify their present-day position by drawing on their historical knowledge and enduring cultural values. At this stage in the research process, I experienced the same reluctance that I have observed in many of my professional colleagues when facing the challenge; how to discuss forest
management in an intergenerational context of political, institutional and cultural frameworks?

Consequently, the discussion section of this thesis needs to focus on the interplay of the themes and sub-themes presented in the results section, and must seek to improve the views and experiences of the land owners by investigating how the themes and subthemes connect with and influence each other.

9.2.3 Relating the results to the theoretical framework: resilience thinking

This chapter must also examine to what extent the land owner experiences in each case study can be explored in terms of resilience thinking. In light of the results and the interplay of themes, this immediately confronts the issue of scale and connections: resilience ‘of what’, ‘to what’?

The initial topic of enquiry was intended to focus on the social-ecological system of a culture-land-forest relationship. However, the historical data and interviewee responses in the case studies describe the cultural resilience of Māori. This creates a somewhat different research focus: an investigation into how Māori collectives endure, adapt, transform and potentially become stronger when faced with change within the context of their relationship to their ancestral land.

Revisiting the interview results clearly shows that the political (governance, tenure and regulatory framework), institutional (trust and management committee) and cultural contexts (history and values) are the key features that drive the response to change. This chapter must therefore evaluate whether resilience thinking has the language to discover and discuss the nature of cultural resilience in political, institutional and ecological contexts.

A key problem may occur because both sets of resilience thinking assume that human agency, governance and cultural values are an integral aspect of the overarching social-ecological system. Therefore the analysis frameworks detailed in Chapter 5
tend to be applied at the scale of the social-ecological system. It is more acceptable therefore to consider the overall system’s behaviour, rather than abstracting the role of human agency, governance or cultural values in resilience. This research set out to investigate a social-ecological system (the behaviour of the planted forest-Māori social-ecological system) but the narratives lend themselves towards the investigating the role of political and cultural institutions in driving the system’s behaviour.

This creates a challenge for proceeding forward using the knowledge and language of current resilience thinking, especially when investigating the role of history and cultural values in land use decisions and expectations. Resilience thinkers are divided as to whether the frameworks legitimise the role of cultural influences. It is also unclear whether the concepts such as adaptive cycles and panarchy can or should be applied to cultural resilience.

At this stage of the research, it became clear that the results needed to be viewed using resilience thinking in an emergent way. The analysis of the historical data was fundamental to develop an understanding of the connections between the views, experiences and expectations of the land use and the land owners’ resilience. For example, when the results were considered over time, each case study narrative displayed clear examples of cultural resilience, such as the retention of land in the case study areas despite major threats and challenges to ownership. Therefore, this discussion chapter will begin by exploring the historical narratives in turn to develop understanding as to how these social-ecological systems have worked throughout history and presently, as planted forests on Māori land and subject to Māori values.

**Part II – Indigenous resilience: Lake Taupō Forest**

This case study will be explored in the sequence presented in Table 25. This section is presented chronologically and the nature of the social-ecological system is examined as the key points from the historical account and present-day expectations of land owners are reviewed. In particular, the results are explored to reveal the response of the land owners to challenges and crises. Through this approach, the
Case Study Results – Chapter 9: Discussion

nature and behaviour of the planted forest-Māori social-ecological system is discovered.

Table 25 – LTFT: case study discussion

<table>
<thead>
<tr>
<th>The Lake Taupō Forest case study is explored in terms of:</th>
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<tr>
<td>1. Historical elements of resilience, adaptation and transformation</td>
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<tr>
<td>2. Present-day issues of commitment amongst participants</td>
</tr>
<tr>
<td>3. Present-day opinions of forest management and options to improve the realisation of owner aspirations for their land</td>
</tr>
<tr>
<td>4. Overall insights for resilience thinking</td>
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<tr>
<td>a. Socio-ecological resilience framework</td>
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<td>b. Social resilience framework</td>
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9.3 LTFT historical elements of resilience, adaptation and transformation:

9.3.1 Response to challenges and crises: land retention and land autonomy

Drawing from the key points in historical narrative of Chapter 7 it is shown that the majority of the land owners of Lake Taupō Forest have, since the arrival of Tia and Ngatoroirangi, remained intent on retaining land for future generations. Historically, all of the land centred about Lake Taupō, approximately 1.2 million hectares, was tribally managed by Ngāti Tūwharetoa. The 1870s to 1900 was a period of significant land purchase in the central North Island, yet by 1900 Ngāti Tūwharetoa had maintained ownership over 67% of its land base. Compared with Māori land retention at the same time in neighbouring districts\(^{36}\) this figure is considered substantial. Today 20% of the land in the Ngāti Tūwharetoa area remains in tribal ownership, a figure which is also high in present day New Zealand\(^{37}\). For the owners of land in this case study, their land has remained in tribal ownership despite post-colonial stresses.

\(^{36}\) c.f. nearby Kaingaroa Māori tribal land retention in 1900 was 13% (Waitangi Tribunal, 2008a)

\(^{37}\) Nationally land retention is 6%.
In post-1840 New Zealand, land retention and land autonomy have not necessarily gone hand in hand for Māori. The historical events documented in this thesis describe the changing tenure and governance of land ownership and clearly portray the response of Ngāti Tūwharetoa to such rearrangements.

From 1840 to 1861, New Zealand’s administrators attempted to establish a number of co-management regimes that would accommodate Māori autonomy yet allow the Crown to establish its authority. None was successfully implemented. The outbreak of war in the Waikato in 1863 effectively led to the Crown asserting its authority over all the lands in the central North Island. The following 11-year period between 1862 and 1873 brought about the introduction of a new tenure system for Māori land owners which fundamentally transformed the way in which authority over Māori land and resources was exercised. Land was now a commodity that could either be retained for multiple beneficiaries or could be sold.

Despite being major owners of a highly desirable commodity, Ngāti Tūwharetoa acted quickly, innovatively and collectively to resist land loss. In 1887, when faced with losing tribal land by sale to pastoral farmers, Horonuku Te Heuheu Tūkino IV gifted the tribe’s ancestral mountains to the Crown, effectively relinquishing the tribe’s autonomy over such sacred areas but ensuring the land was never lost into private ownership. When Tureiti Te Heuheu Tūkino entered into an agreement with the Tongariro Timber Company in 1906, he attempted to progress iwi development collectively whilst effectively securing tribal land ownership for the duration of the agreement.

In the process of securing the retention of their land, Ngāti Tūwharetoa found their ability to manage their land was challenged. When the Tongariro Timber Company agreement finally ended, the owners were faced with a changed political environment. By now the government had asserted its authority over the owners’ timberlands with the 1939 Emergency Timber Regulations. During this time the Forest Service unsuccessfully attempted to purchase the Ngāti Tūwharetoa timberlands. Despite years of poverty the tribe’s leaders and people stood united and refused the Crown’s offer. In 1943 the Forest Service released its prohibition orders and Ngāti Tūwharetoa
owners regained their independence over their land and its resources. For some it was the first time in living memory.

In these examples, the tribe has remained resilient to land loss by adapting their land management to changing circumstances. Tenure was adapted in the case of co-ownership of Tongariro National Park with the Crown. Governance was adapted through co-management with the Tongariro Timber Company and finally the regulatory framework of NZFS was resisted through cooperation within the tribe.

Despite land autonomy being a highly desirable Māori cultural value (see Chapter 3), in the LTFT example the land owners adapted to numerous challenges and crises by evolving tenure and governance arrangements. Such adaptations or sacrifices were clearly made to pre-empt land loss, but decisions were also made collectively to ensure no family group would be disadvantaged or privileged at the cost of others (see Figure 41).

![Figure 41](image)

In this social-ecological system, this historical data suggests that land retention was a pivotal aspect of resilience as evident by a strong cultural bond to place. Walker and colleagues’ (2010) define resilience\(^{38}\) as the capacity of a system to undergo change

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\(^{38}\) see Section 5.9.2 p. 86
while retaining the same structure, functions and feedbacks. Relating this definition to the case study, if the ancestral land is retained the LTFT families maintain their identity and their cultural context. For the families of LTFT land retention is an integral concern of significant importance, strongly embedded in cultural wellbeing. The historical data clearly shows the adaptation of tenure and governance situations in response to threat to land ownership. The cultural value of maintaining autonomy over the land is therefore adapted in order to protect the families against the alienation of their ancestral land (see Figure 42).

![Figure 42 – LTFT resilience and adaptation: land retention and land autonomy](image)

9.3.2 **Response to challenges and crises: land use**

The land owners in the Lake Taupō Forest case study were not only required to adapt their tenure and governance structures but also needed to transform their natural environment in order to protect themselves against further threats to land loss.

It could be argued that once the control over the land was returned to the Tūwharetoa owners, following the Tongariro Timber Company agreement’s collapse and the end of the Forest Service prohibitions in 1943, that the natural resources were not well managed by Māori. Almost immediately upon return of land control, many owners
set about instigating the fastest removal of the indigenous tree cover possible. By the late 1940s, the indigenous forest on the western side of Lake Taupō was mostly clear-felled with the financial return being shared between the land owners and a third-party timber merchant.

This action by the land owners is curious in that it also implies an adaptation or even transformation of cultural values. As explained in Chapter 3, Māori maintain a close mythological, genealogical and practical relationship with indigenous forests. But, despite being both custodians and direct descendants of the forest, Māori were prepared to remove the native forest cover seemingly for financial benefit. On the face of it, at this point in time, it appears commercial gain was more important to the land owners than the relationship between people and land cover.

However, poverty was neither new nor a shock to the people of Ngāti Tūwharetoa. The Waitangi Tribunal (2008b) documented the early 20th century owners as living in a state of semi-starvation. Furthermore, the owners had endured decades of having their land and forests tied up in non-functioning ventures or regulation, whilst all around them most native forests had been converted to agriculture. When the New Zealand Forest Service offered them a solution to this poverty by way of land and/or forest sale, the land owners collectively refused. Why then, did the owners act quickly and decisively at this point of time to engage in commercial land use?

The inclusion of the historical, social and political context, allows us to interpret the role that cultural resilience plays in this decision. The land owners in this case study regained land control at a time when central government was urging Māori to use their land for the national good by way of development for agriculture. Such conversions were viewed as both virtuous and proper in New Zealand at that time, a sign of the country’s progress. These ideals were deeply embedded in the Māori Purposes Act of 1950 which provided the clear indication that if Māori did not use their land, they would lose control of it. In this situation, Ngāti Tūwharetoa realised that land ownership was threatened. The tribe acted quickly and communally, and the native forest was harvested in order to prevent the sale of the land.
When discussing the cultural resilience of the LTFT families to crises and challenges, it is apparent that land owners maintained their land ownership by adapting their land’s governance and tenure structures and transforming their land cover. When the action is viewed in relation to the cultural value of retaining the land, it becomes clear that in a system where people are strongly attached to place, the land can be transformed in an ecological resilience sense, but at the same time be resilient in a cultural sense (see Figure 43).

Figure 43 – LTFT transformation: land use

9.3.3 Response to challenges and crises: the protection of Lake Taupō

The historical data and cultural narratives of Ngāti Tūwharetoa identify a strong cultural bond with the waters of Lake Taupō. The iwi identity is intimately connected with Lake Taupō (as shown in the tribal proverb presented on page 122). However, it was in the 1960s that the tribe faced a major crisis in relationship to the health of their lake. This proved to be a moment in time that changed the nature of the peoples’ relationship with their land, their environment and with each other.
In the 1960s, there was recognition of the harmful environmental effect of the conversion to farming on the Lake Taupō catchment. Some interviewees shared their memories of this time and stated that their ancestors consciously decided to forgo further farm development. Some described the protection of the Lake as a paramount objective of their ancestors, a sentiment which was also noted by the Officials Committee Study Group tasked with convening the solution to increased nutrient flow (see Section 7.10). The Group recommended that afforestation by planted forests was the only desirable land use for the eastern shores of Lake Taupō.

The land owners immediately acted collectively to seek a solution. They considered the option of undertaking afforestation themselves; however they were not prepared to risk using land as a security for capital as this might end in alienation. Therefore, LTFT was formed to collectively represent 58 separate Māori land titles and an afforestation lease was negotiated with the Crown.

Despite the urgency of the land owners to enact a solution to protect the waterways of Lake Taupō, two unique outcomes were achieved. First, the afforestation lease was negotiated to reflect the priorities of the land owners. The first three management objectives for the planted forest were to prevent erosion reaching waterways, to protect wildlife including fish, and to protect sacred sites. The fourth objective, a profitable forest, was subservient to the first three criteria. Second, the land owners made a conscious decision to act collectively with each of the 58 hapū agreeing to share in the risks and benefits of forestry. For some land owners this meant converting their working family farms into planted forest, for others this meant cutting down their native forest to allow the afforestation of exotic species. Despite significant Crown pressure to amalgamate their land holdings, hapū leaders did not. Instead, they agreed that while authority over land could be adapted, land ownership should not. They therefore decided to manage their land as a single asset, for the benefit of the Lake, while each hapū maintained their legal ownership. As with land retention, the health of Lake Taupō was pivotal in the decision to adapt tenure and governance and transform the ecology.
The recollections and historical statements in this case study highlight the importance of the health of Lake Taupō in maintaining cultural resilience. Figure 44 shows both land retention and the health of Lake Taupō as pivotal tribal values, around which land autonomy has been adapted while land use has been ecologically transformed.

Figure 44 – LTFT resilience: the health of Lake Taupō

9.3.4 *Response to challenges and crises: collective action*

A key theme throughout this historical discussion has been the desire of the land owners to equally progress the collective, mostly at a pan-hapū level, and to provide for the wellbeing of the land owners some yet to be born. Examples include:

- The hotch potch clause in the Tongariro Timber Company agreement,
- Pan-hapū collective refusal to sell land to NZFS,
- Māori Timber Incorporation to oversee pan-hapū land development and rates payment.
- The formation of LTFT.
In terms of building and maintaining cultural resilience, this collective approach proved to be fundamental in responding to challenges and crises quickly, and often resulting in unique arrangements negotiated at a time of crisis.

However, in the participant interviews it was noticeably difficult to elicit memories from the participants about the concerns of the land owners at this time. Instead most preferred to discuss the strength of family ties and of their leadership in uniting them to act collectively for the future benefit of all. Their trust in leadership and desire to act for the collective benefit appears throughout the narratives as an important cultural trait which enabled a capacity to respond to circumstances.

Notably, this commitment to collective wellbeing extends beyond the families of the case study area, with the LTFT families playing major roles in the afforestation and arbitration of Lake Rotoaira Forest, the collective action of the Te Arawa-Mataatua Forestry Claimants Working Group and the Central North Island Iwi Collective landmark settlement of planted forests. This action for the collective wellbeing of Māori present and future is also presented as a further pivotal value (see Figure 45).

Figure 45 – LTFT resilience: collective wellbeing
9.4 LTFT present-day issues of commitment:

This section now expands this concept of pivotal cultural values by discussing the results from the interviews in relation to the question: *what cultural values do the participants express for their land and is planted forestry compatible with such values?*

When the present-day participants discussed their cultural values for the land, the interviewees used words or phrases like land retention, kaitiakitanga, tikanga, whanaungatanga and waahi tapu (see Section 7.29). In a similar stance to their ancestors, no participant was prepared to offer the view that they would risk land alienation or compromise the health of Lake Taupō. With respect to collectiveness, the interviewees strongly supported maintaining a collective focus, although there were nuances of opinion relating to the scale of such focus (i.e. hapū vs iwi) and one participant implied there was too much contingency planning for the collective, in respect to setting aside unclaimed dividends for missing owners. Interviewees also insisted that future generations be cared for both financially and environmentally.

The protection of waahi tapu and maintenance of tikanga were also explained as key cultural values however there was less evidence in the archive documentation or the interview data as to how these values had been maintained or adapted during periodic challenges and crises. Overall it was considered that the planted forests were compatible with cultural values and interviewees did not wish to change the land use in the future, although a number offered suggestions for improvement.

The discussion of cultural values for land management was intended to shed some light on the nature of values and how Māori affiliated with the planted forests or incorporated them into their culture. The contemporary interview results suggested that, despite the land owners identifying constraints and disappointment with the land use, the planted forest overall was compatible with their culture and none would advocate changing the land use in the future. The framing of this question however, did not reveal how or if Māori were re-interpreting their viewpoints or values in
relation to their land use, nor did it allow for any discussion as to how cultural values connect with and influence each other.

In this case study however, the difficulties associated with understanding the role of contemporary values was alleviated by the inclusion of historical data. Despite there being some diversity in each individual’s response, the present-day issues of commitment have a striking similarity to the historical perspective of their ancestors. The contemporary interviews supported the past viewpoint that the land must be retained, the owners must act collectively with future generations in mind, and that the natural environment, in particular the health of Lake Taupō, must not be compromised. The cultural values of the present-day owners show consistency with the fundamental values as their ancestors, in particular land retention, the health of Lake Taupō and collectiveness.

The existence of enduring and pivotal cultural values creates a useful way to conceptualise the role of culture in a social-ecological system. Values are vital and also integral to the social-ecological system, as most resilience thinkers agree. These highly influential values can be abstracted and conceptualised as attributes that influence the overall system’s behaviour. The changes in the ecological and political systems can be contrasted with a core of unchanged cultural values. The three enduring values can be seen as ‘resilience pivots’, around which governance and tenure were adapted, and ecologies were transformed. Importantly, existence of the resilience pivots has retained cultural identity in the face of huge social and ecological changes.

9.5 The concept of ‘resilience pivots’:

When the historical and present-day narratives are combined, it is noticeable that certain challenges have provoked radical responses. For example when land ownership, the health of Lake Taupō and/or the wellbeing of families were threatened, the social system responded quickly and coherently to maintain or protect these values. Land owners were and are prepared to re-interpret their viewpoints and values.
in order to protect the ‘ground rules’: retain the land, protect Lake Taupō and ensure all owners share the benefits and risks collectively.

I have chosen to describe these enduring concepts as resilience pivots. A resilience pivot is a matter of fundamental and enduring importance central to cultural wellbeing. Other socio-cultural or ecological adaptations or transformations may occur, but the resilience pivots remain as central and possibly integral to cultural resilience.

In this case study the three resilience pivots identified were based on cultural values but they are the product of number of influences and experiences. Resilience pivots emerge as commonly-held core issues of importance that endure despite (or because of) the interweaving of ancestral and lived experiences, including:

- Legislative policy (colonisation, Māori land legislation and forestry regulation)
- Human agency (strong leadership and governance)
- Ecology (land use and land use impact).
- Culture (values and history)

The following section will future explain the nature of resilience pivots by exploring the present-day views, opinions and expectations of planted forests. In particular this section seeks to answer the question: can forest management be manipulated to improve the realisation of the land owners’ aspirations?

9.6 LTFT present-day experiences and opinions of planted forests:

In Chapter 7 the present-day opinions about the planted forest could be grouped into interrelated themes and subthemes. Two overarching themes were apparent: land management structure and planted forest management decisions. This section explores these two themes in more detail.
9.6.1 Land management: an on-going trade-off?

When the Lake Taupō Forest Trust participants discussed their present-day perceptions, views and understandings of the planted forest, the management structure themes of governance, tenure, regulatory framework and leadership were clearly apparent. The participants’ views on these themes were relatively uniform, with the participants agreeing that the forest lease created a complicated or difficult operating structure.

The LTFT interviewees expressed the view that the structure and processes by which they must manage their land, affected both their ability to participate in land management decisions, and to manage their future by limiting their ability to react to changing circumstances. Participants were divided as to whether they believed constraints were the result of having a lease partner, a Trust, multiple land owners and/or by the actions of forest regulators.

The trade-offs for maintaining the resilience pivots (land retention, the health of Lake Taupō and collectiveness) were evident, the most common being:

- the process by which decisions over their land are made (governance),
- the variety of conditions, arrangement and rights that exist over the ancestral land (tenure),
- the land owners’ limited and diluted input into the frameworks that define how, and for what purposes, forests are used for (regulatory framework).

Most interviewees acknowledged the limitations associated with the complicated structure of Māori land in joint ventures, yet they typically wanted more ways to participate in the management structure of their land. Interviewees offered numerous diverse suggestions as to how the management structure could be improved. For some, this was as dramatic as reasserting hapū control, for others it was simply requesting more pathways of communication or opportunities for education to build identity. The owners’ suggestions for improvement to the management structure could be summarised by the word ‘participation’, as they were all related to opportunities for multiple land owners to participate in land management decisions.
and opportunities on the land. Despite there being differences in expectations as to how much participation should be afforded to the land owners, the interviews showed they were prepared to continue to adapt viewpoints on tenure and governance; shifting from a desire for land autonomy, towards some more opportunities to participate in land management.

Returning to the idea of the resilience pivots, the traditional view of land autonomy (tino rangatiratanga, manawhenua) has been perhaps necessarily referred to as various preferences for forms of participation, while land retention, collective action and protecting the waters of Lake Taupō have remained firm. In the historic analysis, adaptations have typically come about as a result of threats to the core, yet here the interview responses are for their leadership to act proactively to enhance land owner participation. Adaptive leadership strategies that allow more avenues for participation may also bring the owners’ experience of the use of the land for forestry closer to their resilience pivots, thus increasing their satisfaction of their land and its resources (see Figure 46).

![Figure 46 – LTFT adaptation: from ahi kaa to participation](image-url)
9.6.2 How did the participants discuss forest practices?

Somewhat surprisingly, given the research focus, the participants had relatively little to say about forest management in comparison to management structure. They did, however, discuss their perceptions of forest management in terms of commercial value, employment, forestry practices, access and identity. On balance, the interviewees were satisfied with forest management. Issues that required improvement were linked to the management structure of their land, in that the current governance, tenure and regulatory situation restricted their forest management objectives.

When discussing the realisation of forest values, the interviewees displayed a preparedness to adapt their objectives for the collective good. For example, the owners who agreed to afforestation expected their descendants’ financial and employment situation would be greatly improved. The interviewees expressed disappointment at the lack of commercial dividends provided by the forest but most acknowledged this was largely due to the sheer number of beneficiaries. A number of participants appear to have adapted their expectations and chose to discuss their satisfaction at sharing the forest income for collective benefits such as health and education grants.

Likewise, the amount of employment generated by the forest was described by participants as disappointing and participants remained divided as to whether land owners should be preferred employees of the forest over non-Tūwharetoa. Yet they acknowledged that working on their own land was a privilege that could not be afforded to all owners and some therefore choose to discuss how their identity was enhanced by being associated with a financially secure, well managed forest.

Interviewees alluded to participation or involvement in an integrated way throughout their discussion of forest management topics. By way of illustration, forest management strategies that enabled participation (access, business diversification) were sought. The majority of interviewees were satisfied at their level of access to their ancestral lands and discussed the importance of such to their wellbeing. Those
who were not satisfied wanted more frequent and unrestricted access to their lands. The main concern people had regarding forest practices was that the lack of business and diversification discouraged opportunities for owner participation in secondary businesses. Allowing more avenues for participation would improve the owners’ perception of the land use, in particular through secondary businesses that are compatible with the planted forest regime.

Figure 47 – LTFT resilience pivots and present-day adaptations

Whether the participants perceived that the planted forest affected their opportunity to participate in land management decisions to a greater or lesser extent than other land
uses remains unclear. With respect to access, some acknowledged the benefits of forestry over other land uses (farming, horticulture) in allowing the owners access to their lands.

Figure 47 portrays aspects of values, practices and outcomes that have been adapted by the land owners in relation to the resilience pivots. This figure reinforces the sometimes subtle, sometimes radical, set of adaptations Māori owners have made to the circumstances partially forced on them. Yet the interviews showed that despite disappointments, there is widespread acceptance of past decisions and current judgements. Even interviewees who expressed a number of constraints related to the forests, still supported the existence of planted forests on their lands. For the future, no interviewees wished to change the land use, although a number offered suggestions for improvement. In the present day and the foreseeable future, planted forests are considered compatible with the resilience pivots.

9.6.3 What would a better forest regime look like?

This research began by considering how to manage forests in a flexible way to take account for future societal needs. The research aimed to ‘look forward by looking backwards’ in relation to social expectations of forestry, and examine past and present Māori experiences and expectations of planted forests.

The findings show that the people of Tūwharetoa have strong bottom lines for forest management: the land must not be alienated, Lake Taupō must be protected, and the forest must provide benefits for the collective. The owners, on balance, appear satisfied with the present forestry practices, in particular their ability to access their land. The planted forest is compatible with their cultural values and no participant would wish to change their land use in the future. However, forest management practices that enable more participation (communication, education, access, secondary crops or businesses) would increase the owners’ satisfaction of land use.
On the face of it, there are limited opportunities to change forest management to improve the realisation of owner aspirations for their land given the forest system is relatively inflexible. The forest is essentially a single-species planted forest, with early silviculture and a clearfell regime. Furthermore, given that the forest was planted before 1990, the owners face significant deforestation costs if they choose to change land uses. Future land use is further constrained by the land’s location in the catchment of Lake Taupō where eutrophication remains a potential issue. However, despite these limitations, the owners still envisaged opportunities for improvement within the constraints of the forest structure. As a land use, in comparison with farming and horticulture, forestry was viewed as having the flexibility required for land owners to meet and enhance their aspirations. The research now turns to discuss how the participants discussed forest management and look for areas of adaptability or improvement.

It is evident from the results that increased owner participation, representation, deliberation or empowerment is likely to enhance the owners’ satisfaction about the planted forest. Most owners were indeed satisfied with the current forest management and secondly, they acknowledged the limited flexibility in governance and forest structure. However, the researcher has four suggestions to improve the forest regime:

1. **Information flow:**

   The researcher proposes that the long term nature of forestry is a potential barrier for owner participation through understanding. The Trustees are required to communicate ever-changing financial, environmental, social and regulatory conditions to a large number of owners. It is possible that most owners do not understand the multiple factors integrated into a forest management plan, but better information might improve the owners’ perception of participation. Currently information is disseminated formally at Annual General Meetings, through periodic newsletters and through informal conversations. Tribal leaders and forest managers should discuss further culturally acceptable options to improve information flow.
2. **Diversity in regime:**
   In the New Zealand context, Lake Taupō Forest is an intensively managed forest, typically involving three pruning lifts and one waste thinning operation. Such a forestry regime is labour intensive which provides increased employment but also requires disturbance and re-disturbance over the forest. An area might be intensively revisited over the first ten or so years of growth. This potentially limits the scope for secondary businesses to operate such as tourism, waste wood salvage or secondary crops. If certain areas of high demand exist (e.g. for tourism) forest managers might consider a less intensive silvicultural regime in such areas thus allowing secondary businesses to operate undisturbed. Likewise, Lake Taupō Forest has 34% of the land area unplanted, in waterway reserves or flora and fauna reserves. This land is essentially undisturbed by forest management and could provide areas for secondary businesses within environmental and cultural constraints.

3. **Owner potential for participation:**
   Many owners have business ideas but feel the governance structure does not allow participation. By way of illustration, one interviewee expressed the sentiment that it was pointless bringing his new business ideas to the table (the Trust) because all profits would have to be shared with the Crown (lease partner), he would financially benefit from a resource that was not his alone (multiple owners) and the Council had removed his land use options anyway (the regulators). While there is no easy solution for such issues of governance, some interviewees expressed a desire for the Trust to provide a forum to owners to develop their business ideas and work through such issues. Many felt that individually they did not have the skills to build potential into the forest but desired more opportunity to discuss these issues collectively.

4. **Building identity and pride:**
   The planted forest provides an influential visual aspect of the Taupō landscape. Some participants felt that the forest aided their identity because of its presence in the landscape, the perception of strong leadership, good financial and environmental management. Identity might be an aspect of
forest management that has the potential to be enhanced. Suggestions from participants included a variety of ideas such as: more forest signage, webcams for absentee owners to view their forest, a room or display at the trust offices dedicated to the forest’s history, and more education and/or forest visits for Ngāti Tūwharetoa children. Forest managers and tribal leaders could investigate culturally acceptable ways to enhance identity and pride.

9.7 LTFT overall insights for resilience thinking:

In analysing the LTFT case study, the identification of matters of cultural significance that endured while others changed, led to the notion of resilience pivots. The existence of these pivots and their role in cultural resilience helped differentiate historical and contemporary adaptations and transformations. It is evident in this case study that certain values or attributes act as pivots for cultural resilience, whereas others may be highly desirable but are adaptable or transformable. Three LTFT resilience pivots were elucidated through this investigation however further research may reveal the existence of others. The planted forests have also been shown to be compatible with the resilience pivots and therefore considered an appropriate land use, consistent with environmental considerations and cultural values. Planted forests on Māori land have been successfully incorporated into cultural identity, including the participants’ relationship with land and sense of place.

But does this way of describing and conceiving cultural resilience have any alignment with the two bodies of resilience theory: the socio-ecological resilience framework or the social-science framework? What are the benefits and constraints of discussing culture in current resilience framework and does the concept of resilience pivots offer new and emergent ideas for legitimising the role of culture in resilience thinking? The following section examines the LTFT findings and addresses the remaining two questions:

- Can land owner experiences in each case study be explained in terms of resilience, adaptability, transformability, adaptive cycles and panarchy?
9.7.1 Resilience, adaptation and transformation:

A key difficulty arose in extending the ecologically derived socio-ecological concepts of resilience, adaptation and transformation to the LTFT results. The socio-ecological framework provides definitions for distinguishing resilience, adaptation and transformations. Recalling the literature presented in Section 5.9.3, ‘resilience’ is defined as when a system may reorganise itself but retains the same identity, ‘adaptation’ is when the system shifts to a different state within the same regime, and ‘transformation’ results in an entirely new regime. Here, it is assumed that the socio-ecological system is the unit of analysis responding to shocks and pressures. However it is also assumed that resilience is but one option, with adaptation and transformation also having the potential to result in desirable states.

However, extending this concept of multiple stable states to the results presented in Chapter 7 is less definitive. The LTFT narrative describes cultural resilience in response to political, legislative and institutional shocks. The resilience pivots provide insight as to the definition of cultural resilience and what actions (value adaptations and ecological transformation) are undertaken to maintain cultural resilience. However, the narrative implies that the cultural resilience of Ngāti Tūwharetoa is the only desired state. It was not clear in the study as to whether resilience pivots had changed over time, whether other pivots existed, or what outcome would result from a pivot being adapted or transformed.

Despite these limitations, this narrative has laid the groundwork for an approach which might seek to integrate the concepts of cultural resilience into the wider social-ecological system by abstracting resilience pivots and investigating their role in the stability and potential reorganisation of the entire system. Further research, testing and refinement is required to develop further understandings.
9.7.2 Adaptive cycle:

In the LTFT case study, it was clear that some values or valued attributes were adapted in order to protect resilience pivots. These adaptations can at least partially be conceptualised by the ecological notion of adaptive cycles (see Figure 48).

![Figure 48 – LTFT the concept of adaptive cycles](image)

Applying the adaptive cycle framework to cultural values adaptation is useful in that it reinforces the concept of selective value change over time in relation to the enduring resilience pivots. This is particularly evident with the traditional cultural value of land autonomy, which has been adapted through a number of cycles. From the owners desiring traditional land tenure (ahi kaa), through to land autonomy following the Treaty of Waitangi (manawhenua), to commercial partnership (forest lease), right though today’s concept of being able to participate in land management decisions.
Another example of cultural adaptation is the apparent acceptance of the current generation to the planted forest landscape. The interviewees described the landscape as identity-building suggesting that the forests have been incorporated into their way of thinking and of relating to land. While the landscape and land use have changed, some cultural fundamentals have not.

While the concept of adaptive cycles may be applicable to the adaptation of values and cultural resilience, this research did not capture the fine detail of value change over time and therefore cannot extend recommendations to the details or sequence of the adaptive cycle phases (i.e. r, K, Ω and α).

The ecologically-derived concept of adaptive cycles has the most applicability in the LTFT scenario as a visualisation tool for leaders when considering phases of stability and potential reorganisation in their management system. For example, visualising the leaders’ stage in the adaptive cycle of land management, may aid their strategic planning as they approach the upcoming change in governance circumstances when the Crown exits the lease. For example, in the late 1960s the leaders entered a new governance system (r), an innovative and highly adaptive phase where the afforestation lease was agreed to and the planting of Lake Taupō Forest began. Following the agreement to an intergenerational lease, the owners advanced into a long phase where the governance situation became inflexible and the structure rigid (K). Applying an adaptive cycle to this future scenario suggests that in terms of the governance system, the owners are approaching a collapse or release (Ω) phase when the Crown exits the lease followed by a re-organisation (α) phase (see Figure 49).
The ecologically-derived body of resilience theory suggests that during this phase conditions change rapidly and the outcomes are crucial for the future resilience of the system. The analysis of the interviews suggests there is much expectation that the owners will be afforded more participation in the upcoming Ω and α phases. The reality however, is likely to be different. The Crown exiting the lease in 2020 will not necessarily alleviate the governance issues of Trust management, multiple ownership, forest regulation, or alter physical forest structure and its associated management.

During the α phase, resilience to further shocks is likely to be low and the capital cost high (Abel et al., 2006; Walker et al., 2004), as the multiple owners jostle for position in an adapting system of governance.

A number of different models of tenure and governance could arise following the end of the lease. LTFT might become land owner and forest owner as expected, or potentially hapū owners may withdraw their lands from Trust, leading to a situation again where the forest owner (LTFT) is not the land owner (the hapū). If the latter scenario is considered in relation to the resilience pivots – the desire to act collectively and the desire to maintain the health of Lake Taupō by maintaining forest cover – there is the potential that resilience pivots might be challenged, perhaps creating a radical response.
Whichever scenario plays out, following the people of LTFT as they negotiate their way through the upcoming Crown exit from the lease will provide further insights for resilience thinking. Furthermore, visualising their stage in an adaptive cycle in relation to resilience pivots may aid the leaders in strategic planning.

9.7.3 Panarchy:

To date the land owners have been successful in absorbing shocks to their resilience pivots of land retention, protecting Lake Taupō and collective action because of their agency, in particular, their leadership. The interviewees’ emphasis on the multiple scales of management structure has shown however that tenure, governance and regulation are now viewed as constraining. While it is clear that the land owners’ ancestors and leaders had an ability to adapt to new circumstances, present-day owners express frustration at their lack of opportunity to adapt.

The panarchy model can be used to visualise how local cycles interact with other scales such as commercial or national scales, each with their own slow and fast moving adaptive cycles. The interviewee focus on governance, tenure and regulations (see Figure 19, page 168) highlights that the land owners view their connections to a number of other scales as constraining. The differing values of the different parties (Māori, companies and government) all play roles in enabling or affecting cultural resilience at the relevant scales of panarchy.

An important concept with panarchy is that the scales interact and influence each other but these connections are unpredictable. The concept of resilience pivots may offer insight into the resilience dynamics of panarchy and the role of connections (see Figure 50). With respect to this case study, the resilience pivots of land retention, Lake Taupō and collectiveness are integral at the land owner scale. Although it is untested in this thesis, it would be useful to extend the resilience pivot concept beyond the scale of the land owners and search ‘pivots’ at other scales (lease partners, local government, central government) to see the extent to which these accorded with or are different from the land owners’ pivots.
The protection of Lake Taupo provides an interesting example of synergies between scales. The health of Lake Taupō and its surrounding waterways is a priority for the land owners (cultural value), a priority for the forest managers (through the lease objectives), a local government objective (to prevent eutrophication) and national objective (also to protect water quality and hydro-electricity generation infrastructure). Potentially the objectives of these nested scales are aligned and therefore threats to this resilience pivot are unlikely with current knowledge and understandings. Likewise, the land retention resilience pivot is protected by law in New Zealand which restricts ancestral land alienation and therefore future shocks to land retention are unforeseen. However, there is little synergy between the spatial and temporal scales when it comes to Māori acting collectively beyond the traditional hapū unit. This resilience pivot has endured despite local cycles, company cycles and national policies. Yet collective action is seen more and more with Māori entities, as shown by the CNI Iwi Collective settlement, which indicates potential future greater alignment for this resilience pivot.
9.7.4 People-place connections:

Lessons from the LTFT case study can also contribute to the emerging knowledge base regarding indigenous cultures by discussing the social-science attributes of community resilience such as those developed in by Ross et al. (2010). However it is acknowledged that the LTFT case study represents a unique set of land tenure and governance and the ability of these research findings to extend to the social resilience indicators is limited because the interview process did not extend to ask specific questions regarding all the social resilience indicators and criteria..

However, human-environment interdependencies are well recognised in the social sciences and it is useful to revisit these relationships with resilience pivots in mind. The aspects of the human-environment relationship repeatedly raised in this case study were land ownership, the health of Lake Taupō and that the land must be managed for current and future generations. A fourth matter was the protection of sacred sites (waahi tapu). Other aspects of people and place appeared to be adaptable and even transformable in relation to the resilience pivots, for example land use and landscape.

Notably, the LTFT model of management has a strong social component (collective action) of equal importance to environmental stewardship. This model of management places emphasis on being guardians to the environment and to the people. In the final presentation of results to LTFT, the Trustees discussed the three resilience pivots as representing the ‘true kaitiaki model’. They explained this in the sense that the social and environment wellbeing are inextricably linked. For the people of this case study human-environment interdependencies and balance between environmental and social wellbeing were highly important. This has particular relevance because New Zealand’s regulatory agencies tend to consider kaitiaki to represent environmental guardianship, with social well-being given less consideration, if it is considered at all in regulation.

A potential problem with using people-place connections as an indicator of social resilience (in this case cultural resilience) is that it is not clear if the existence of
strong attachment to place makes the families in this case study resilient or vulnerable to social-ecological change. In the case of LTFT, the connection to the land has maintained their cultural core but has increased their vulnerability to regulatory frameworks:

- Māori land legislation dictates the multiple succession of shares to all descendants.
- Eutrophication of the Lake Taupō has restricted the surrounding land use.
- The TTWMA restricted the ability of Māori to sell any land, which may have been desirable to raise funds to develop or repurchase other areas of tribal land.
- Lake Taupō Forest holds 90% of the natural value areas in the Taupō district, the protection of which is regulated by local government.
- The implementation of climate change legislation exponentially affected Māori land owners in forest leases with pre-1990 forests on their land.

As discussed in the previous section, in this case study many adaptations have been made to the realisation of other values in order to protect certain aspects of connection between people and place. This study certainly supports the existence of people-place connections (in particular the connection between people and land as opposed to people and land use) but cannot extend the findings to suggest whether this aids or detracts from overall social resilience.

9.7.5 Knowledge, skills and learning:

Ross and colleagues (2010) suggest that individual and group capacity to respond to local needs and issues is an indicator of social resilience. In the case of LTFT, their resistance to land loss, despite mounting and reoccurring pressure, is certainly enabled by their ability to respond and act for the collective. Yet as the interview responses reveal, enhanced communication to the land owners would improve the participants’ sense of participation and understanding of forest management.
This supports the findings of Ross et al. (2010) and of other resilience theory researchers, that acting in co-operation with each other (Davidson, 2010; Sengupta, 2006), strong reflective leadership, and learning from previous experiences (Anderies et al., 2006; Scheffer et al., 2003; Walker, et al., 2004) all reduces the time between problem and solution. Acting for the common and future good has enabled Ngāti Tūwharetoa to maintain core resilience pivots, adapt other values and encourage transformability where required. It is this capacity – preparedness to change, capacity to change and options for change – which allows adaptation and transformation where required whilst maintaining the overall resilience of the tribe.

9.7.6 Community networks:

Community networks (Ross, et al., 2010) or social networks and support (Buikstra et al., 2010) are described as processes and activities that build and support people and groups in a place. In the LTFT example the existence of activities (e.g. number of community groups, festivals, sports) was not investigated, however, the desire to act collectively was demonstrated. Furthermore, the findings revealed numerous examples of the tribal networking ability, they are open and react quickly for the collective, and have a defined mandate for land management with consistent resilience pivots.

9.7.7 Engaged governance:

Ross and colleagues (2010) present engaged governance as an example of collaborative processes for regional decision making and make strong links, in their examples, between the government and the community. Others in the literature also state that issues of resilience confront issues of governance in that the ways by which societies share power, shape their ability to understand, participate, react and benefit from their circumstances (Anderies, et al., 2006; Lebel et al., 2006; Olsson et al., 2006).
In the situation of LTFT however, governance is not simply the purview of the state. Instead it involves the potential interactions of over 10,300 beneficial owners guided by eleven elected trustees, who are in partnership with a forest management subsidiary of the Crown and are subject to forest management rules and regulation. The interaction of so many actors immediately and inevitably confronts the ability to realise aspirations for land, for example, what should the forest provide and for whom? Interviewees suggested the collaborative process of so many stakeholders was difficult and affected the realisation of their aspirations for their land. Furthermore, participants clearly desire more avenues for participation in land management decisions.

In this case study, knowing the stakeholders and their institutional arrangement is important to understanding and enhancing resilience but a more appropriate monitoring framework in this case would extend to issues of tenure and regulatory frameworks.

9.7.8 Diverse and innovative economy:

The findings of this case study show that some of the interviewees viewed the lack of diversification of the planted forest negatively, not just in terms of species but also in the opportunity for secondary businesses within the forest (tourism). However, the regional economy of this community was not studied, nor was the range of businesses that the Trust has involvement with. The owners’ view on the capacity for innovation within the Trust was mentioned, with some participants desiring more avenues for business ideas and communication between the Trust and the land owners. Most often the opportunity for new businesses was discussed in relation to participation on the land, another means of connecting to the land, or being on the land.

9.7.9 Community infrastructure:

This research did not extend to examining aspects of community infrastructure, such as services or facilities to support tribal needs. The participants did maintain that
employment was valued as being of major importance by those who signed the lease and by the present-day participants. Like employment, business diversity was spoken of. However business diversity was mostly discussed in relation to the connection with ancestral land; that it was working on the land, as opposed to simply having a job that was considered ideal.

9.7.10 LTFT and resilience thinking: closing comments

The two resilience bodies of theory (socio-ecological and social) proved useful extensions to this discussion, particularly as visualisation models for identifying potential threats to resilience pivots in management and commercial arrangements. In particular the LTFT example supports the Ross et al. (2010) view of people-place relationships and the need to appreciate these dynamics more explicitly when considering cultural resilience. In particular, connection to land and care for land and environment acts as ‘pivots’ of resilience, fundamental to other social-ecological processes.

The LTFT narrative describes how people, their cultural values and land affiliations have been affected by long-term commercial forest leases. Despite the limitations in applying these results to the resilience theories, in particular those associated with scale and scope, the discussion contributes to the maturation of the overall concept of cultural resilience. That is, how Māori collectives endure, adapt, transform and potentially become stronger when faced with change within the context of their relationship to ancestral land. The following part of this chapter extends these ideas to the Maraeroa C story.

Part III – Indigenous resilience: Maraeroa C story

The Maraeroa C case study provides further insight into how indigenous groups endure crisis or respond to stress yet retain cultural resilience. The following section summarises the key knowledge gained from this case study. The structure is similar
The Maraeroa C case study is explored in terms of:

1. Historical elements of resilience, adaptation and transformation
2. Present-day issues of commitment amongst participants
3. Present-day opinions of forest management and options to improve the realisation of owner aspirations for their land
4. Overall insights for resilience thinking
   a. Socio-ecological resilience framework
   b. Social resilience framework

Table 26 – MCI: case study discussion

<table>
<thead>
<tr>
<th>The Maraeroa C case study is explored in terms of:</th>
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<tbody>
<tr>
<td>1. Historical elements of resilience, adaptation and</td>
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<td>transformation</td>
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<td>2. Present-day issues of commitment amongst</td>
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<td>participants</td>
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<td>3. Present-day opinions of forest management and</td>
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<td>options to improve the realisation of owner</td>
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<td>aspirations for their land</td>
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<tr>
<td>4. Overall insights for resilience thinking</td>
</tr>
<tr>
<td>a. Socio-ecological resilience framework</td>
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<tr>
<td>b. Social resilience framework</td>
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</tbody>
</table>

9.8 MCI historical elements of resilience, adaptation and transformation:

9.8.1 Resilience pivots: land retention, collective action, protection of remaining native forest

The land on which Maraeroa C Forest is located has a complicated history of ownership. Traditionally the land was the tribal border of the Rereahu people (Ngāti Maniapoto), Ngāti Raukawa and Ngāti Tūwharetoa. Post-colonisation, land ownership was disputed particularly between leaders of Rereahu and Ngāti Tūwharetoa.

Title was originally granted to Ngāti Tūwharetoa but was disputed and, following litigation, new title orders were issued to the people of Rereahu in 1891. However, Rereahu leaders maintained that the new title orders did not incorporate all their tribal land. Nevertheless the Maraeroa lands were partially surveyed and boundaries were declared.

A great deal of confusion remained among the Rereahu people as to the accuracy of such surveys and their resulting legal landholdings. The tribal leaders remained intent
on pursuing clarity and took their dispute to the Supreme Court, still the land owners remained confused about their legal holdings leaving them vulnerable to land loss. The Crown purchased land based on nothing other than sketch plans and then confiscated land in lieu of surveying costs and acquired land for public works. By 1911\(^{39}\), only 5,549 hectares of the original 19,415 hectares comprising Maraeroa was left in Rereahu ownership. A year later, the remaining area had been leased to Ellis and Burnand, and the Rereahu people were excluded from their lands for the duration of the licence to harvest native timber.

<table>
<thead>
<tr>
<th>Circumstance</th>
<th>Pre-colonisation</th>
<th>Treaty of Waitangi</th>
<th>Implementation of land title</th>
<th>Vulnerability to land sales and confiscation</th>
<th>Prevent land sale or loss in lieu of rates</th>
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<tbody>
<tr>
<td>Action</td>
<td>Tribal entitlement</td>
<td>Potential for co-management with Crown</td>
<td>Define tribal boundary</td>
<td>Supreme Court litigation</td>
<td>Ellis and Burnand</td>
</tr>
<tr>
<td>Tenure &amp; governance adaptations</td>
<td>Sustained occupation</td>
<td>Evolving concepts of land ownership &amp; management</td>
<td>LAND RETENTION</td>
<td></td>
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</tbody>
</table>

Figure 51 – MCI adaptation: land tenure and governance

Figure 51 portrays the historical circumstances under which land ownership and management was altered post-colonisation. Yet the actions of the Rereahu people in their Supreme Court litigation show that despite, or maybe because of, suffering significantly from land loss, land retention was a core value central to cultural wellbeing (see Figure 52).

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\(^{39}\) Court action was pursued until 1940 when the court ruled against the tribal leaders and upheld the 1911 boundaries.
For the next 56 years, the Rereahu people had very little control over their land and resources as the land use was transformed from native forest to cutover. In 1968, Ellis and Burnand exited the area taking with them much of the community’s infrastructure (housing, water and electricity). Some participants expressed shock and surprise upon realising they were the legal owners of the land, suggesting that the concepts of tenure and governance had evolved almost beyond recognition. Furthermore, many had lost employment with the end of the indigenous timber harvest, their land was stripped of its trees and, like their neighbours in Ngāti Tūwharetoa they were liable for rates.

Despite the late 1960s being a time of potential vulnerability, the Rereahu people acted quickly and formed a Māori Land Incorporation with the purposes of seeking a commercial joint-venture partner. There was less historical documentation available for the MCI case study, making the existence of remaining resilience pivots more difficult to elucidate. However, oral accounts from the descendants of those owners who negotiated the lease with NZFP clearly describe that acting collectively to secure land retention (including access to the land) was the paramount desire for the Rereahu families. Furthermore, but to a lesser extent, some participants referred to the
protection of the remaining patch of native forest of Tanekaha forest called “Tinihanga” as being of significance to their ancestors (see Figure 53).

Rereahu were successful in negotiating an afforestation lease that would secure land ownership, protect Tinihanga and financially benefit future generations. The trade-off, however, was that they handed control of the land over to a third party for 99 years with very few guidelines for management and that access for the families – whilst being maintained – would be restricted by the forest operations.

The lease itself does not provide for input from the Rereahu people into any aspect of forest management. Yet the owners displayed an ability to negotiate, particularly with CHH, and subsequently participated in many aspects of forest management. First, at the time of the harvest, instead of receiving a share of the stumpage, the Maraeroa C management committee negotiated the return of control of 16.75% of the forest estate. They therefore became the owners, harvesters, distributers and marketers of timber, creating whānau employment and participation. Thereafter, the owners negotiated a change in species composition in the forest re-establishment resulting in a mix of *Pinus radiata* and Douglas fir being planted. Second, for the areas of planted pine, the land owners negotiated a stocking increase from 667 stems per hectare to 883
stems per hectare. This was negotiated in the face of substantial corporate pressure to standardise establishment regimes across the country and with no legal entitlement in the lease to even participate in such decisions. Third, Rereahu managed to negotiate the exclusion of 27 hectares of land from the lease on which to develop an eco-tourism complex. In addition to the economic advantages of such an achievement, the owners cemented a physical presence on their land. Further achievements have been the development of a number of small businesses such as native log and puna salvage, a native plant nursery, hydro and wind power generation schemes and the production of secondary crops such as ginseng. Notably, all of these innovations have been adapted to operate successfully in a production forest where the right to access can be interrupted by forest operations.

Despite believing that their agreement was with NZFP, by 2011 Rereahu had endured four lease partners (NZFP to Elders Resources to Carter Holt Harvey (CHH) to Hancock). The most recent change in lease partner (from CHH to Hancock) in 2006 caused the land owners great frustration, but the Maraeroa C management committee saw the opportunity to secure land autonomy and negotiate out of the 99-year lease. The leadership acted promptly and made the financing arrangement to purchase all of the 43 Māori leases held by CHH. CHH declined, citing that they would prefer to sell their entire forest estate in one transaction. The management committee persisted and unsuccessfully attempted to purchase a smaller number of Māori leases, just theirs and that of their neighbours.

Returning to the concept of resilience pivots, this suggests the traditional view of land autonomy is highly desirable but continues to oscillate through cycles and iterations around the values of land retention, collective action and protecting the remaining native forest (see Figure 54).
9.9 MCI present-day aspects of commitment:

When the present-day participants discussed their non-negotiable values, some specifically expressed the sentiment that land retention was paramount. No participant ever suggested otherwise. The interview participants also used words like kaitiakitanga, and collective statements like ‘leaving the land in a better condition for future generations’. They included values such as the preservation of waahi tapu. Beyond such goals, participants suggested the land must sustain the generations of people to come. To a lesser extent there was discussion about regaining manawhenua, maintaining respect for people and relationships in all aspects of the lease.

In relation to the historical perspective, there was less opportunity in this case study to provide a direct comparison of values for two reasons. First, there was less written historical documentation regarding values and history to compare to the interviews and second, because the Rereahu people’s recent association with the Maraeroa C land had been interrupted in particular by the Ellis and Burnand timber licence.
Nevertheless, this research suggests that land owners today share similar resilience pivots as their ancestors, particularly land retention and collective action.

9.10 **MCI present-day experiences and opinions of planted forests:**

Chapter 8 has presented the present-day themes and subthemes of land owner perceptions. Two overall themes were present: the land management structure and the planted forest management practices. This section explores these themes in more detail.

9.10.1 *Land management: an on-going trade-off?*

Discontent at the management structure of the land was a theme expressed throughout the participant interviews in terms of tenure, governance, regulatory frameworks and leadership. In fact, the MCI interviewees expressed their concerns in much the same way as the LTFT interviewees (lease partner, MCI, multiple ownership and regulators). The participants also expressed their frustration at the issues of having a management committee, multiple ownership and regulators in much the same way that Ngāti Tūwharetoa owners expressed concern. The participants went on to express similar subthemes of leadership showing that they valued communication and participation.

A point of difference was that the MCI participants’ concerns extended to the timeframe of the lease and the potential to endure new lessees. The MCI interviewees therefore expressed their frustration at not seeing an end to the lease in their life time and not having the potential for multiple lease partners going forward. However, instead of this situation leading to low levels of owner input and inflexibility, it seems to have provided the impetus for Rereahu leaders to react with innovation and persistence. Rather than looking to a future where governance constraints do not exist, the owners have in a sense increased their resilience by adapting to the long-term constraints of their situation through innovation (see Figure 55).
9.10.2 How did the participants discuss the forest practices?

The Maraeroa C forest is managed on a framing regime, therefore once the trees are successfully established there is little silviculture or manipulation. When the participants discussed forest management, they did so in terms of forest regime, commercial value, access and employment. On balance the interviewees were satisfied with the forest practices and none expressed the view that the planted forest was incompatible with their values. As with the previous case study, discussions regarding forest management were not typically the focus of the interviews. Forest practices were typically a side line issue in relation to management practices such as governance, tenure and leadership.

When the forest regime was discussed, some participants expressed the sentiment that the forest was an appropriate land use, but also that forest management allowed for innovation and diversification and was beneficial to the environment. A contrary opinion was that the forest had a negative effect on the landscape closely related to its near-single age class structure.
In regard to the commercial return provided by the forest, slightly more owners expressed satisfaction than disappointment. Some owners went on to acknowledge that the lease structure was conducive to improving returns in the future. Participants also mentioned the various social benefits provided for by the forest. On balance the owners were happy with their level of access to their lands although again the perspectives were divided. Interviewees also discussed the importance of employment to the pride and wellbeing of the owners but remained realistic in their expectations as to what the forest could provide Rereahu owners.

Figure 56 (over page) displays the various iterations of the land owner views, and opinions in regard to innovation, commercial and employment benefits and of the land use, in relation to the resilience pivots of land retention, collective action and the protection of Tinihanga.

The remaining discussion of land use constraints was more diverse and influenced by one participant who listed six negative aspects of the forest regime. Such issues extended to chemical usage, too much forest waste, wrong species choices, nutrient management and inadequate protection of waahi tapu and environmental services. One further issue was the renaming of roads and tracks by the forest company.
9.10.3 What would a better forest regime look like?

The people of Rereahu interviewed in this research have clear instructions for leaders and forest managers: land ownership must be maintained, the land must be managed in an environmentally sustainable manner and the forest must be managed for the collective benefit of future generations. The majority of owners were satisfied with the approach to forest management and no participant would change the land use in the future, however any forest regime that would decrease its visual impact on the landscape is likely improve the owners’ satisfaction.
Surprisingly, the near-single age class forest with very limited silviculture, allowed for a high level of flexibility for land owner businesses and forest access. The less intensive forest regime, allowed the forest to maintain a wide variety of services throughout the life cycle of the forest, such as secondary crops, mountain biking and a tourism venture. Acknowledging that most owners were indeed satisfied with the forest practices and the limitations associated with governance and forest structure, the researcher has three suggestions for improving forest management:

1. **Visual impact:**
   The near singular age class of this forest results in major landscape changes at harvest and the bluntness of the forest structure causes impact during other times in the forest’s lifecycle. This is a notoriously difficult issue to resolve in terms of forest management as there are major costs associated with altering the forest structure, such as changing species composition or delaying harvest. Moreover the area is mountainous and the forest is visually prominent. Yet forest managers and tribal leaders may wish to consult owners to seek possible solutions. One such solution could be to leave edge trees around the tribe’s tourism site to buffer such landscape changes, or simply to provide more information explaining upcoming landscape changes to the owners. The researcher acknowledges the difficulty in addressing this aspect of forest management and it is therefore essential that any forest regime changes should require consultation and mutual agreement.

2. **Return the traditional names to the forest infrastructure:**
   One participant articulated disappointment the arbitrary renaming of roads within the forest. Returning the traditional names to forest roads is potentially a simple and respectful proposition for forest managers to explore with tribal leaders.

3. **Information flow:**
   Participants in this case study also sought more avenues for communication and participation. As with LTFT, tribal leaders and forest managers could seek to improve owner understanding through increased communication.
However, unlike LTFT, this forest regime is less intensive and harvest is not continuous which simplifies the amount of information that needs to be disseminated. Despite these differences, communication of forest management plans is important as new generations of owners attempt to understand and evaluate their land use.

9.11 MCI overall insights for resilience thinking

9.11.1 Resilience, adaptations and transformation:

Despite these limitations described in Section 9.7.1, lessons from the MCI case study can further contribute to the knowledge of resilience and indigenous cultures, in particular to the concepts of resilience, adaptation, transformation. However, there was less historical documentation by which to discuss the interplay between resilience, adaptation and transformation. The evidence collected in this thesis suggests that land retention and collective action are resilience pivots in the Rereahu case study. Present-day participants also provided supporting evidence to the archive documentation in their reference to the protection of remaining native forest in particular the area known as Tinihanga, suggesting the existence of the third resilience pivot.

Land autonomy on the other hand, remains highly desirable as shown by the recent attempt to purchase the forest, but is subject to change. Most participants adapted their expectation from land autonomy through to ways of participation through innovation and persistence (Kokakotaea, negotiating regime changes, secondary businesses). Land use has been transformed over the post-colonial period but is not considered in isolation from the resilience pivots, with owners indicating that planted forests are compatible with their non-negotiable cultural values.
9.11.2 Adaptive cycle:

As with LTFT, the concept of the adaptive cycle is useful in the MCI case study as a theoretical device, in particular, for leadership to visualise their stage in the adaptive cycle. For example, in relation to their intergenerational forest lease, the land owners are currently in a long conservation phase (K). The adaptive cycle may be conceptually useful to visualise how innovation may change the direction or sequence of the phases (see Figure 57).

![Figure 57 – MCI adaptive cycle: visualisation tool (adapted from Walker, 2009)](image)

9.11.3 Panarchy:

As with the LTFT case study, the concept of resilience pivots may offer new insight into the resilience dynamics of panarchy and the role of connections and influences. However, like the LTFT case study the multiples nested scales of this system remain untested in this thesis, it would be useful to extend the resilience pivot concept beyond the scale of the land owners and search for synergies or hindrances with the lease partners and local government or central government policies, particularly with respect to land management.
9.11.4  People-place connections:

As with LTFT, the ability of these research findings to extend to the social resilience indicators of Ross et al. (2010) is limited because the interview process did not extend to asking specific questions regarding all the criteria. However, the concept of resilience pivots certainly reinforces the close connection between people and land (land retention) and people and environment, a key difference being the Rereahu people did not have sustained occupation of their lands.

The confusion surrounding rightful ownership of the land in the early 1900s left the Rereahu families vulnerable to land loss. Subsequently, the Rereahu people entered a long phase (58 years) of being alienated from their land, although some were employed in the extraction and processing of the native timber. It is even apparent that the people-place connection was transformed because some in the next generation did not know they were rightful owners of the land. Yet, when handed back land ownership, they acted collectively to secure land retention, protect the remaining native trees and maintain owner access in the long term, thus supporting the recognition of human-environment interdependency or more specifically people-place interdependency. As with LTFT, the resilience pivots have social and environmental components, strengthening the connection between environment and people.

Many adaptations have been made in relation to the realisation of values (land autonomy, land use) in order to protect the resilience pivot of land retention. The discussion regarding the negative impact of the forest in the landscape suggests strong attachment to place in the MCI case study.

9.11.5  Knowledge, skills and learning:

When control over the land was returned to the owners, they were soon to encounter another threat to their land ownership – unpaid rates. Despite only recently being handed back the land, the people of Rereahu worked collectively by forming the Incorporation to negotiate a commercial solution for their land whilst ensuring that
access would be maintained and the only forest remnant preserved. The findings of the MCI case study support the findings of Ross et al. (2010) that acting for the collective and learning from previous experience are indicators of social resilience.

9.11.6 Community networks:

The presence or absence of community networks was not investigated in this research. However, the people of MCI went through a period of increasing vulnerability through loss of land and social capital, and when faced with crisis the owners displayed the ability to adapt quickly and act collectively.

9.11.7 Engaged governance:

The events documented in this case study show the people of Rereahu have increased their resilience by securing land retention, developing their social capital and improving their financial capital by generating an income from the land. They have also enhanced their characteristics of general resilience through diversity (secondary businesses), overlapping leadership (they act collectively) and openness (they react quickly to opportunities). The interviewees’ focus on governance has shown that the participants believe these characteristics remain important qualities for present-day Rereahu (see the subthemes of communication, participation, management and leaders).

However, the owners in this case study do not envisage a future without a lease partner and have no control over potential changes in lessee. In this case study the opportunities to improve forest management appear limited, particularly because the people of Rereahu are not likely to become forest owners in the near future, but also because of the regulatory constraints on land use and the inflexibility of a low investment pulp regime.
Despite having very little recent history of governance or legal right for participation in forest management, the Rereahu leaders have managed to negotiate a number of innovative solutions which allowed increased participation on their lands. A number of secondary businesses were established and the MCI management committee proved persuasive in terms of negotiating forest management conditions. When CHH announced its intention to sell its forest estate, the owners took the opportunity to regain autonomy. They acted quickly and resourcefully to secure the finance to purchase the lease from CHH however this initiative was ultimately unsuccessful.

9.11.8 Diverse and innovative economy:

Despite the lease providing them with no opportunity for participation, the owners persisted and negotiated resilience through multiple business ventures, participation in the forest regime and securing a physical presence on their land. The Rereahu people have essentially progressed from a state of vulnerability to a state of resilience by adapting the planted forest scenario to suit their multiple needs, thus enhancing their future ability to withstand future shocks or, in other words building resilience.

The land owners in this case study have very little control over forest management or governance or flexibility within each scale. Yet the Rereahu leaders have successfully focussed on improving their situation within such constraints through diversification and innovation. Any successes appear to have been driven by the Rereahu people’s leadership and ability to act collectively as opposed to any level of control over governance or forest management. In particular, their ability to learn, cope, innovate, adapt, negotiate, and experiment within such constraints has in turn increased their ability to absorb future shocks.

9.11.9 Community infrastructure:

This research did not explore aspects of community infrastructure. The participants did maintain that employment was an important aspiration of those who signed the
lease and the present-day management committee provided business diversity which in turn provided a connection with the land.

**Part IV – A comparison of the case studies findings**

9.12 **Scope for combined learning:**

All research involves compromise about scope and focus and there are limitations when comparing the results of case studies. In this thesis, such limitations extend to the limited number of case studies, the research design and the different circumstances of the participants. The time and effort required in gaining access to case study areas and in building rapport with participants have resulted in the views of only two case studies being investigated. Despite the questions being decided *a priori*, the interviews were emergent and the topics driven by the participant. As a result the direct comparison of questions and answers is not possible. There are differences in the scale and sample size of each case study which add to the limitations associated with their comparison. Therefore, the following section serves to briefly highlight some key similarities and differences between the perspectives of the land owners in each case study.

Despite the case studies differences in size, scale and lease structure, there were many apparent similarities that emerged in the findings:

1. Both groups discussed the forest in terms of governance, forest management and values. The participants acknowledged complicated governance owing to the number of stakeholder interactions and regulatory constraints. Yet both sets of interviewees were, on balance, satisfied with the management of the forest.

2. In both case studies, the interviewees articulated similar issues of commitment; that land ownership must be retained, that the environment must not be compromised, and that they must act collectively for the benefit of the
owners. The participants’ ability to see the relevance of their world view within the new and novel context of a planted forest highlights their adaptive capacity.

3. A key aspect of resilience in both cases was the tribal leaders’ ability to adapt to changing circumstances in governance and the peoples’ desire to act for the collective good. In both case studies, the owners reacted to major crises with little financial resources or reserves.

4. Paying attention to the cross scale interactions of the land owners’ experiences as opposed to focussing on the fine detail of themes provided the most insight into long term solutions.

Conversely, there were some differences in the perceptions of the benefits and constraints of the forest:

1. Surprisingly, the low input silvicultural regime of the Maraeroa Forest appeared to afford more opportunity for diversification of secondary businesses then the intensive pruning and thinning regime of Lake Taupō Forest.

2. Some LTFT owners appeared to draw identity from the forest landscape whereas the Rereahu families found the landscape created by the forest constraining, an outcome likely to be directly attributable to the differing age class structure of the forests.

3. The Rereahu people saw no end in sight for the lease agreement and therefore focussed their energy on enhancing their resilience by diversification within the current constraints. LTFT, however, looked to becoming land and forest owners in the near future and sought opportunities to manipulate their future forest management to accommodate their complex situation of governance and tenure – potentially a transformative situation.
9.13 The case studies in resilience frameworks:

While this research does not propose to have the breadth or generality to extend the findings to other similar situations, the combined findings of the case studies support the propositions made by others in the resilience literature: that resilience is enhanced by the presence of common cultural values, and can be improved by human agency, leadership, and collective action. This section revisits a number of concepts in the literature introduced in Chapter 5, with a particular emphasis on those authors who have extended resilience thinking to social scenarios.

9.13.1 Common cultural values:

Pretty (2011) states that there are a limited number of common cultural factors present in highly resilient communities. These include defined social structures, the presence of internal beliefs and adaptive policies and management. The case studies similarly reveal a number of internal beliefs, the most enduring of which have been given the description of resilience pivots. In both case study scenarios the owners worked hard to maintain the pivots by adapting their social structures, policies and land management.

The resilience pivot concept enables cultural adaptive social factors (structures, adaptive management) which support resilience to be identified and differentiated from those that are integral to the system’s ability to endure change. It also enables recognition of how resilience pivots are connected to and influence the tangible and intangible attributes of social-ecological system.

9.13.2 Human agency, leadership and collective action:

Human agency is discussed a distinguishing feature of social systems that can alter the patterns of resilience, adaptation and transformation (Davidson, 2010; Peeples et al., 2006). Furthermore human agency cannot be viewed in isolation from
connection to land and environment (Ross, et al., 2010) and, as this research highlights, human action and agency is strongly influenced by key historical events and social learning. The owners in these case studies have been shaped by a long change cycle of colonisation, law and tenure changes. However, it is notable in both case studies the land owners were united by strong leadership, and that they shaped their own destiny through active engagement with government, law, forest companies and innovative businesses. The concepts of resilience, adaptability and transformation provide useful tools for examining and explaining such narratives (Abel, et al., 2006; Anderies, et al., 2006; Walker, Anderies, et al., 2006), however in the case studies the inclusion of historical information enhanced the explanatory power of resilience thinking.

A number of authors discuss human agency in relation to the role of leadership, in particular that leadership that is open to learning and innovation is an essential component of adaptability and response to change (Anderies, et al., 2006; Folke, 2006; Ross, et al., 2010; Scheffer, et al., 2003; Walker, Gunderson, et al., 2006). This thesis supports this literature and additionally reinforces that leadership is greatly enabled by owners co-operation or collective action (Sengupta, 2006). Collectiveness in both case studies allowed the tribal leaders to act decisively in response to change and persevere despite significant challenges. Furthermore, leadership in the present day would be further reinforced by enhanced communication as supported by the indicators developed by Ross and colleagues (2010).

9.14 Concluding comments:

This research aimed to investigate the experiences of indigenous land owners with forested ancestral land. The Māori land owners in both case studies engaged with the planted forests in terms of political, institutional and cultural structures. The opinions expressed regarding governance, tenure and regulation were similar and most of the participants agreed the political and institutional structures created a framework that reduced the ability of land owners to realise their aspirations for their land.
Opinions regarding employment, commercial value, access and forest management were more diverse. When the themes were viewed in isolation some owners suggested changes or improvements to the forest management regime but when considered in relation to their non-negotiable cultural values, the land use was considered compatible and they would not seek to change the land use in the future.

Considering the flexibility of the owners in relation to their history, allowed the researcher to develop a greater understanding of future forest management improvements. In the case studies, adapting to different circumstance of land management has been an on-going challenge. Traditional land autonomy (ahi kaa) has progressed through a number of adaptive cycles to the present-day scenario where owners are searching to find a number of new and innovative ways to participate in land management. Forest management solutions which are tailored to alleviating owners’ concerns over land management structure are likely to improve the overall satisfaction of the land use. Examples such as improving communication and allowing secondary businesses will increase owners’ satisfaction of their land by empowering their representation and deliberation. Resilience pivots emerged not only as an expression of enduring values but also as critical actions for land managers. In other words, tribal leaders and forest managers must manage the forest to; retain the land, protect Lake Taupō and provide collective benefit through financial return, employment, identity and land owner access.

Adding the historical perspective to the present-day interviews results provided meaningful insights to resilience thinking. The combined learning from the case studies supports the existence of resilience pivots which in turn assist the resilience thinker in considering the role of human action in maintaining cultural integrity in the face of change. Resilience pivots are defined as key system components around which other system components (in this case other cultural values) adapt and transform in order to retain the system’s integrity. By maintaining these components which are essential to its identity, the system can be characterised as resilient.

When considering the socio-ecological resilience concepts such as adaptive cycles and panarchy, the concept of resilience pivots was helpful in crystallising the
determinants of cultural resilience. The adaptive cycle and panarchy models were useful for conceptualising potential shocks to cultural resilience such as the upcoming governance changes or the influences of other spatial and temporal scales (companies and policies).

Likewise, the social resilience indicators of Ross et al. (2010) proved relevant in the case study scenarios. In particular understanding the human-environment-place relationship was strengthened when considered in relation to the resilience pivots. Notably some owners discussed the combined resilience pivots as an accurate depiction of kaitiaki: ancestral, environmental and cultural elements in balance.

Finally, when considering the resilience of a culture to external shocks and cycles, resilience pivots provided a conceptual process by which to discuss the nature of cultural resilience in a social-ecological system. For example, at this point in time, the planted forest-Māori social-ecological system is also considered resilient because it is viewed as compatible with the resilience pivots.
10 Concluding comments

10.1 Introduction:

This research set out to investigate the experiences of Māori land owners with forests planted on ancestral lands. The findings have been productive in several respects – in developing interview questions for forest stakeholders; in establishing histories and tribal experiences of planted forests; in enabling the development of theories of socio-ecological resilience; and in informing forest management.

In this chapter, the findings are drawn together from several angles. In Section 10.2, the validity of the research process is discussed. Section 10.3 draws conclusions on the land owners’ perception of the forests, on the existence of non-negotiable cultural values for land management, and on the potential for improving forest management practices. Section 10.4 concludes with the research’s contribution to explaining cultural resilience and responses to change.
10.2 The research process:

A research process was required by which to investigate land owner views and expectations of planted forests in a cultural context where an enduring relationship with land existed. Beyond this, the nature of this research had many angles; and it would have been possible for the results to have focussed on a number of intra- or inter-disciplinary aspects. However, the key aim was to discover the nature and range of social dynamics, experiences and views expressed in relation to planted forests on ancestral land, and how these interacted with forest management and governance processes.

Contemplating the literature related to cultural values provided a useful background when framing the interview questions. One research strategy would have been to have pursued a design framework with a high degree of question structure. Such an approach could have further investigated the existence and role of the cultural values cited in the literature. However, at the outset an emergent semi-structured approach was chosen that would neither constrain the interviewees’ interpretation of the research questions nor their thinking on planted forests. Taking this more flexible option proved revealing, and key to the evolution of this resilience pivots concept.

In order to be culturally sensitive to the participants, this research process was developed in conjunction with tribal leaders from both regions. This resulted in two similar but somewhat distinct method applications, in particular with respect to informed consent and member checking. In both cases, the semi-structured interview participants were selected and contacted by the liaison assistants of the trust and incorporation. This was considered the only culturally appropriate way for the researcher to obtain participants. Despite the researcher having little input into the selection of interviewees, in both cases a range of age, gender and location of residence was achieved. Furthermore, when interviewees recommended other participants or others became interested in taking part; all such requests were arranged by the liaison assistant.
With the interviews completed and analysed, the application of resilience frameworks to the results provided a useful model to describe the themes and subthemes in relation to a variety of scales, including their historical context. Resilience thinking provided a way of linking different sources of information and the relationships between them within a wider theoretical model. Importantly, the concepts of resilience, adaptation and transformation provided a conceptual tool for viewing the case study experiences and generating awareness about how social dynamics, views and understandings influence each other, and how human action could change outcomes.

A key challenge of this thesis was the risk of drawing from previously unfamiliar disciplines. A related limitation was the exploratory nature of this research which meant it was unclear at the outset which theoretical paradigm would best explain the results. This led to the resilience framework being applied to the findings retrospectively: an approach that is acceptable in the context of social scientific enquiry but less familiar to forestry science. The narrative of the case studies, lent itself to an in-depth discussion of resilience, adaptations and transformations and the application of models such as adaptive cycles and panarchy. However, the applicability of the research findings to a specific set of social resilience indicators could only be tentative. This is because this research process had not originally inquired into some indicators such as community infrastructure or economies.

Because of the breadth of this research process and its limited basis in two case studies, further research, testing and refinement is required. It would be useful to test the applied aspects of this research – such as improving forest practices in relation to land management structure, and developing the conceptual aspects in more detail – such as further development of the resilience pivot concept in relation to other case studies. Despite all these limitations this research has laid the groundwork for an integrated approach to understanding land use expectations and, in doing so, has opened up a range of research opportunities to apply, test and refine such an approach.
10.3 **Operational outcomes:**

This thesis began by asserting the need to incorporate social expectations and views into forest management, in the context of the variable nature of forest demands and the temporal constraints of changing a forest structure. The subsequent chapters presented the reader with a seemingly impossible forest management combination: indigenous land owners, intergenerational forest leases, third-party forest managers, an inflexible forest structure characterised by single-species planted forests managed with early silviculture, clearfell harvested and subject to a high level of national, regional and local regulation. Yet, the thesis ends where it began – attempting to incorporate land owner aspirations into forest management.

A key aim of the research process was to discover the nature and range of social views and understandings expressed in relation to planted forests existing on ancestral land. This was articulated by the initial research question: *What do Māori land owners view as the benefits and constraints of the pre-1990 planted forests that exist on their ancestral land?* As shown in Chapters 7 and 8, the Māori land owners in both case studies perceived the planted forest on their ancestral land similarly and cognate themes were apparent. Both the Lake Taupo Forest Trust and Maraeroa C Incorporation owners, generally perceived the forest in positive terms, and discussed the planted forest in terms of land management structure, forest management practices and non-negotiable cultural values.

Typically, views on the land management structure were uniform. The majority of references made in relation to tenure, governance and regulatory framework were negative insofar as the structure was considered complicated and difficult. The participants who spoke of their leaders or trustees did so in a positive manner, yet they desired systems which would allow for more owner participation and better communication. Even though the lease timeframes and conditions were contrasting, and the scales of ownership and forest establishment distinct, the nature of views was similar.
The range of views and understandings that related to planted forest management practices revealed similarities across both case studies, with their forests viewed favourably by the land owners in most respects. None of the participants in these interviews suggested they would change the land use in the future. There was concurrence within and between the case studies in relation to which aspects of the forest management regime were either enabling or constraining. In the Lake Taupo Forest case study, for example, land owners indicated that the forest regime enabled the realisation of their cultural and environmental values: significant subthemes included sustainability, protection of tikanga, waahi tapu sites and environmental services. The Maraeroa C Forest owners discussed the appropriateness of the land use towards the realisation of similar values namely: environmental services, land utilisation, and the protection of waahi tapu and the remaining native forest. In both case studies, the forests provision of a balance of social and environmental services is valued by the participants and, as discussed further below, is considered by the land owners to resonate strongly with kaitiakitanga.

However, in terms of forest practices, two notable points of difference between the case studies were apparent. First, the Maraeroa C Forest owners suggested that the forest regime allowed the owners a high level of participation through secondary businesses, whereas the Lake Taupo Forest land owners suggested the lack of diversification in the forest structure and the lack of business diversification was concerning. Second, some Maraeroa C Forest land owners discussed the negative impact of the forest on the wider landscape, while conversely a number of Lake Taupo Forest owners alluded to the forest’s presence in the landscape as identity building.

Both case studies revealed a range of opinions related to the forests’ commercial value, access and employment practices. The total array of sentiments related to such sub-themes tended to be diverse, but at the same time the participants acknowledged the relationship between the land management structure and the forest management practices. Put another way, the participants expressed a sense of realism that tenure, governance and regulation strongly influenced and constrained forest management practices.
Because planted forests are long-term crops, it is important to consider how forest management goals might change over time. When asked: *what cultural values do the participants express for their land and is planted forestry compatible with such values?* the participants in the research revealed a similar range of cultural values both within and between the case study areas, and also in relation to their ancestors. The cultural values articulated in this research support the range of aspirations for Māori discovered by other authors, in particular, land retention. Other values also related to guardianship and included concepts such as kaitiakitanga, whanaungatanga, protection of waahi tapu and cultural practices.

It is notable that the non-negotiable values and resilience pivots revealed a balance of social and environmental values and that, in these case studies, planted forests are considered a land use capable of providing a number of environmental and social services. However, while the land use is compatible with such values, most participants viewed the supporting governance, tenure and regulatory framework associated with the forest as not enabling their aspirations for the forest, particularly in the social arena, where many owners desired increased opportunities for owner participation in land management.

The existence of key non-negotiable cultural values (and resilience pivots) has implications for tribal and forest management and is highly applicable at the conceptual and applied level. At the conceptual level it provides tribal leaders with a ‘way of thinking’ in particular with relation to planning. At an applied level it potentially provides forest managers with a ‘way of doing’. The forest itself was, in all cases, compatible with the participants’ core cultural values but any changes to forest regimes must also be considered with these non-negotiable values in mind.

The third research question was: *can forest management be manipulated to improve the realisation of the land owners’ aspirations?* With the management of the planted forest and the non-negotiable cultural values of the participants being complementary, the research focus turned to improvements in forest management practices that may alleviate constraints caused by land management structure. In both case studies,
forest management practices that increased the owners’ sense of participation could alleviate some of the concerns over constraints of tenure, governance and regulation. Despite the relative inflexibility of the forest regime, the research findings have revealed a number of future forest management scenarios to be considered as discussed in Sections 9.6.3 and 9.11.3.

All research involves compromise around scope and focus, and therefore there are limitations in applying the research findings to other scenarios, however, at a conceptual level, the findings from this research support the proposition that New Zealand’s planted forests are subject to a diverse set of social values as introduced in Chapters 2, 4 and 5. Furthermore, the interviewee focus on land management structure supports the argument that tenure, governance and regulatory framework are the critical aspects by which to understand forest management objectives.

These research findings also challenge the claims that land use change from farming to forestry has a negative impact at the community scale (Section 4.5), that New Zealand’s planted forests are specialised for timber and are therefore exempt from significant social expectations (Section 5.4), or that Māori owners will be profoundly disadvantaged by engagement in forest leases (Section 5.6).

10.4 Academic outcomes:

This research has produced a number of key academic findings which cross the boundaries of forestry science, New Zealand history, social science and resilience thinking.

The first valuable outcome of this research was in describing a process which can elucidate and incorporate social values and expectations into forest management. This investigation into the views and expectations of forest stakeholders has enhanced forest management by providing insight into enduring cultural values and providing a number of future scenarios for regime enhancement.
A further key value of this research was in collecting the environmental and social histories of families involved in these afforestation leases. As the Lake Taupo Forest Trust story has presented, the families have historically and innovatively withstood numerous threats to land ownership. Likewise the Rereahu families have defied the constraints of their lease through innovation and business diversification.

The case studies in this research simply could not be explored without using social science techniques to reflect on land use values and expectations. This research has extended social science into forest management by the describing a limited number of common non-negotiable cultural values relevant to planted forests. The existence of such enduring values proved useful for interpreting and describing land owner aspirations for their ancestral land.

The application of the two bodies of resilience framework to the case study findings represented the final stage of research, as articulated by the research questions:

- Can land owner experiences in each case study be explained in terms of resilience, adaptability, transformability, adaptive cycles and panarchy?
- Are the social resilience indicators of Ross et al. (2010) applicable to the tribal communities in the case study areas?

Despite acknowledging that the ability of this research to test models of the two theories was limited due to scale and focus, the concepts were of relevance to the case studies. The models of adaptive cycles and panarchy (Holling & Gunderson, 2002; Walker et al., 2004) provided useful conceptual frameworks for considering system stages and responses. Likewise the social resilience indicators of Ross et al. (2010) were found to hold relevance for the land owners, in particular the recognition of a human-environment-place relationship.

Initially both the resilience frameworks were limited in that neither provided a way to adequately conceptualise the cultural resilience in a social-ecological system. By the inclusion of historical information, the concept of resilience pivots is offered as providing a new way forward for discussing the cultural resilience. In this research, resilience pivots are presented as central system components around which other
system components oscillate. They provide understanding to connections between scales because they allow aspects of culture to be abstracted and conceptualised thus enhancing the ability of resilience approaches to incorporate and legitimise cultural knowledge.

Resilience pivots were not only useful for describing the ability of communities to resist or adapt to change, they also provided a way of navigating the complexity of forest management. Describing the resilience pivots provides tribal leaders and forest managers with a new way to conceptualise which land management goals are essential to every decision, which are adaptable, and which are transformable.

Previous researchers have suggested that forest managers should focus on maintaining the flexibility of the forest system to incorporate future unpredictable values. This investigation also supports a focus on flexibility; in this research flexibility is represented by the values that were adapted by the families in order to protect the resilience e.g. land autonomy. By describing a forest system in terms of values which are pivotal, adaptable or transformable, foresters will be better informed in their management of multiple demands from a forest.

10.5 Conclusions:

This research set out to address questions regarding perceptions of planted forests and provide frameworks for understanding and linking multiple forest values. A key research gap was identified in relation to the viewpoints of Māori land owners engaged in forest leases. In such cases, the land owners are committed to planted forests in the long term and the researcher was interested in which aspects of planted forest management the land owners viewed as enabling or constraining.

Through engaging with the literature of forestry and other disciplines, and drawing on historical documentation and the views of land owners, two key outcomes have been achieved, both of which relate to forest management. First, this research has trialled a process for interviewing and analysing the views, understandings and expectations of
forest stakeholders. The findings show that despite the contrasting afforestation leases, the land owners in both case studies perceived planted forest management favourably. However, issues of governance, tenure and regulatory frameworks were viewed as constraining.

Secondly, the longitudinal examination of each case study revealed histories of resilience, adaptation and transformation. The extension of resilience thinking to indigenous communities is a relatively new application of these frameworks. A particularly profitable outcome of this research has been the extension of resilience frameworks to include the concepts of resilience pivots. The existence of resilience pivots adds understanding and depth to the conditions of persistence, re-organisation or collapse in a cultural context. Also, the existence of these core cultural values has implications for forest managers and tribal leaders in that they provide direction for management. The pivots are the core around which adaptations or transformations can occur in order to retain resilience. In these case studies, the investigation into adaptations disclosed a series of tribal trade-offs regarding land autonomy and this led to recommendations as to how forest management might improve the owners’ realisation of values through increased participation.

At the outset of this project, I asked a key informant to explain the actions of his tribal leaders in maintaining the resilience of his people. He simply answered “kōrero maunga”. He then interpreted this as climbing the ancestral mountain to ask the ancestors for guidance and, by returning to the cultural core, gaining insights into the past, present and future actions of the people. The findings of this research provide a new way of having that conversation.
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Memo of Understanding

between

Stephanie Rotarangi and Lake Taupo Forest Trust

1. Stephanie Rotarangi (SR) is undertaking doctoral research at the University of Otago using Lake Taupo Forest Trust (LTFT) as a case study.

2. Any information provided by LTFT will not be reproduced by SR without prior agreement from delegated LTFT representatives.

3. SR will provide LTFT with written drafts of any material that is to be included in her PhD. LTFT will provide timely comment.

4. SR will provide LTFT Trustees with a verbal summary of her findings.

5. Any photocopies of LTFT archives will be shredded by SR upon completion.

Signed on _______ day of _______________ 2009

By _______________________________

Stephanie Rotarangi

And _______________________________

Amy Walker (LTFT)
Memo of Understanding

between

Stephanie Rotarangi and Maraeroa C Incorporation

1. Stephanie Rotarangi (SR) is undertaking doctoral research at the University of Otago using Maraeroa C Incorporation (MCI) as a case study.

2. Any information provided by MCI will not be reproduced by SR without prior agreement from delegated MCI representatives.

3. SR will provide MCI with written drafts of any material that is to be included in her PhD. MCI will provide timely comment.

4. SR will provide MCI Management Committee with a verbal summary of her findings.

5. Any photocopies of MCI archives will be shredded by SR upon completion.

Signed on ______ day of _____________ 2009

By _______________________________
Stephanie Rotarangi

And ______________________________
Glen Katu (MCI)
DISCUSSIONS ABOUT PLANTED FORESTRY ON MAORI LAND
INFORMATION SHEET FOR PARTICIPANTS

Thank you for showing an interest in this project. Please read this information sheet carefully before deciding whether or not to participate. If you decide to participate, many thanks, you will be contacted for an interview. If you decide not to take part there will be no disadvantage to you of any kind and I thank you for considering my request. If you agree to an interview, this information will be clearly explained to you verbally before we begin and if you are no longer happy to participate there will be no disadvantage to you of any kind.

What is the Aim of the Project?
This project aims to investigate how planted forestry relates to Māori resource management values and concepts. This project is being undertaken as part of the requirements for the degree of PhD at the University of Otago.

What Type of Participants are being sought?
Beneficial owners of the Lake Taupo Forest Trusts who are over 18 years of age.

What will Participants be Asked to Do?
Should you agree to take part in this project, you will be asked to participate in an interview.

The interview will be informal and discuss any aspects of planted forestry, the land and your relationship with the land. In the event that the line of questioning does develop in such a way that you feel hesitant or uncomfortable you are reminded of your right to decline to answer any particular question(s) and also that you may withdraw from the project at any stage without any disadvantage to yourself of any kind.

Can Participants Change their Mind and Withdraw from the Project?
You may withdraw from participation in the project at any time and without any disadvantage to yourself of any kind.

What Data or Information will be Collected and What Use will be Made of it?
Participants will be audio-taped and transcripts of the interview will be written up by the interviewer. Transcripts of your interview will be made available to yourself to check over. Transcripts will be used to ascertain how planted forestry enables or constrains Māori values. Participants may be contacted for a second interview so that the interviewer can check the assumptions she has made.

The results of the project may be published and will be available in the University of Otago Library (Dunedin, New Zealand). Every attempt will be made to preserve your anonymity but the name of the Trust to which you are an owner will be used. You are most welcome to request a copy of the results of the project should you wish.
The data collected will be securely stored in such a way that only those mentioned below will be able to gain access to it. At the end of the project any personal information will be destroyed immediately except that, as required by the University’s research policy, any raw data on which the results of the project depend will be retained in secure storage for five years, after which it will be destroyed.

Reasonable precautions will be taken to protect and destroy data gathered by email. However, the security of electronically transmitted information cannot be guaranteed. Caution is advised in the electronic transmission of sensitive material.

What if Participants have any Questions?
If you have any questions about this project, either now or in the future, please feel free to contact either:-
Stephanie Rotarangi (student) or Janet Stephenson
Department of Geography Department of Geography
(021) 222-9317 (03) 479-9241

This study has been approved by the University of Otago Human Ethics Committee. If you have any concerns about the ethical conduct of the research you may contact the Committee through the Human Ethics Committee Administrator (ph 03 479 8256). Any issues you raise will be treated in confidence and investigated and you will be informed of the outcome.
DISCUSSIONS ABOUT PLANTED FORESTRY ON MAORI LAND
CONSENT FORM FOR PARTICIPANTS

I have read the Information Sheet concerning this project and understand what it is about. All my questions have been answered to my satisfaction. I understand that I am free to request further information at any stage.

I know that:
1. My participation in the project is entirely voluntary;
2. I am free to withdraw from the project at any time without any disadvantage;
3. Personal identifying information will be destroyed at the conclusion of the project but any raw data on which the results of the project depend will be retained in secure storage for five years, after which they will be destroyed;
4. In the event that the line of questioning develops in such a way that I feel hesitant or uncomfortable I may decline to answer any particular question(s) and/or may withdraw from the project without any disadvantage of any kind;
5. Publications arising from this work may use selected quotations or narratives from your interview to illustrate the findings. Every attempt will be made to preserve your anonymity if you so wish but the name of the Trust to which you are an owner will be used;
6. Participants acknowledge that issues of intellectual property and ethics have been discussed and approved by the Trust of which you are a beneficial owner.
7. The Foundation of Research, Science and Technology has funded the research.
8. The results of the project may be published and will be available in the University of Otago Library (Dunedin, New Zealand) but every attempt will be made to preserve your anonymity if you so wish.

I agree to take part in this project.

I wish/do not wish for my identity in the written text to remain anonymous.

........................................................................................................
 ..................................................................................
(Signature of participant) .................................. (Date)

This study has been approved by the University of Otago Human Ethics Committee. If you have any concerns about the ethical conduct of the research you may contact the Committee through the Human Ethics Committee Administrator (ph 03 479 8256). Any issues you raise will be treated in confidence and investigated and you will be informed of the outcome.
1. Tell me about your involvement with the Trust. Tell me about your land and its history.

2. What values are the non-negotiable values you have for your land?

3. Does forestry support those values?

4. Do you think your values are different from your tipuna?

5. What do you remember/know about the land before it was in plantation forest?

6. What do you remember about your tipuna or whanau opposition to the forest establishment…. Likewise their support.

7. What has changed since the plantation forest has been established?

8. Does the forest support your whanau to make a living?

9. Does the forest provide opportunities for manaakitanga and how does this compare to prior plantation forest establishment?

10. Does the forest support your view of kaitiakitanga and how does this compare to stories or your experiences prior plantation establishment?

11. Do you visit the forest?

12. Discuss aspects of the forest that help define Tuwharetoa or whanau identity (i.e. generations employed etc)

13. Does the whanau have opportunity to participate in forest management or land use decisions? How does the whanau get forestry education, training, skill development, experience?

14. What aspects of forest management do you participate in?

15. Discuss forest and whanau whakapapa, linkages, historic and present.

16. How does the forest contribute to your values and your ability to satisfy whanau objectives?

17. Discuss forests contribute to wairua, hingaro or tinana health?

18. What recreational activities does the forest provide for your family?

19. Would you keep the land forested?

20. What is the forest going to provide for your children?